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THE PRINCIPLES AND PRACTICE  
OF  
EARLY AND INFANT SCHOOL  
EDUCATION.

BY

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MUSICAL ANALYSIS," "PRACTICAL ARITHMETIC,"  
"SCHOOL GRAMMAR," ETC.

*INTRODUCTION BY*

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## PREFACE.

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THE present work is designed especially for the use of Students attending Normal or Training Schools ; in whose course of professional study, as is well known, the Art of Teaching holds a prominent place. It bears the double title, "On Early and Infant School-Education," because the principles of early education are substantially the same in whatever sphere it is carried on, and the method of the Infant-School can only be satisfactorily understood when viewed as a result of these principles with certain modifications. Whilst, therefore, it is a directory for the Infant School, it is much more : if its execution correspond in any degree to its plan, it exhibits the method that must be adopted, more or less, by every teacher who has young children in his school. [There is no existing work in the English language, so far as the writer is aware, which exhibits the subject of this volume with that just proportion of principles to practice necessary to constitute a suitable text-book. The current manuals, excellent as some of them are in many respects, are almost exclusively occupied with details of the routine of teaching.

The work consists of four parts.—The First Part is devoted to a consideration of principles. In the endeavor to lay the psychological basis—which is the only natural or possible one—for the practice of the art, the features which have been constantly aimed at are simplicity and conciseness ; at the same time, it is hoped, that the requisite ac-

curacy of thought and language has not been lost sight of. The scope of this Part will show that the writer entirely dissents from the opinion—which has been freely expressed by some whose opinions should carry authority on this subject—that the art of teaching may be adequately taught empirically; that is to say, without any reference to the groundwork of principles on which it rests.

Part II. treats on the subject-matter of instruction in early School-Education. This is not arbitrary or conventional, but necessary and of universal propriety. Its various components stand in a determinate relation to each other; and, whether viewed individually or in this mutual relation, are evidently suggested, with respect to their time, manner, and extent, by a consideration of the child's constitution. This Part should therefore be studied with a constant reference to Part I., on which its conclusions are founded. It has been considered of importance to give examples of lessons under almost every department of instruction. Regarding these it may be remarked, that what has been aimed at is, not to give the very words that may be supposed to constitute the lesson,—for the attempt to do so, though very common, is quite futile,—but merely to suggest an appropriate train of thought for each, and to show how the illustration should be introduced. Practical teaching cannot be learned from book, even from the most exact "photography" of lessons: it must be learned, like any other art or profession, by imitation of good models and by practice under the eye of a master.

Part III. exhibits those features of Teaching and Management which are of general application in early School-Education. School-management is particularly dwelt on, in respect that it is frequently overlooked, and undue prominence given to the mere act of teaching, which yet bears rather on the intellectual than on the moral well-being of the school.



Part IV. treats of what may be called the externals of school and school-management. Whilst the importance of these by themselves is by no means to be exaggerated, it is certain that without a due appreciation of the power which belongs to them in their own place the machinery of the school will not work smoothly, and consequently the general character of its discipline will not be the highest attainable. Every one knows that, the younger children are, they are the more under the influence of external circumstances; and therefore tact in the regulation of these is no mean qualification of the teacher who has to do with infants or young children. In this Part the school-building is described with sufficient minuteness to show what a comfortable school is; and there are exhibited in detail all the helps necessary to an efficient school-organization. The teachers of infant-schools under inspection will likewise find the substance of the statutory obligations which the Minutes of Council have laid on them.

The Appendices will be found useful.—In Appendix B will be found all the information which the teacher needs to have regarding the symptoms and preliminary treatment of the disorders to which young children are liable. It may seem to some to be rather more minute than is necessary; but, as the symptoms of indisposition and disease may naturally be expected to show themselves frequently for the first time during school-hours, and as they are known in the experience of all teachers to have done so, it is fit that the teacher, more especially the infant-school teacher, under whose charge may be placed a very large number of children of tender age, for a considerable portion of the day, and in circumstances not always favorable to health, should have such an amount of medical knowledge as this Appendix offers.—Appendix D is quite essential to any infant-school manual.

The writer has, as in duty bound, availed himself of the

principal sources of information to which he had access, which will be found specified in their proper place in the notes: at the same time, he deems it just to say that he is much more indebted to his own observation. In so far as he has adopted the ideas of others, he has only done so after having seen them verified in the school-room; so that he may say generally of the treatise that all the doctrines inculcated in it have been repeatedly tested in their actual working and results.

On the whole, the present work is offered to both teachers and students in the hope that it will be found a tolerably complete manual of method for early and infant school-education. And, perhaps, whilst specially designed as a text-book for the professional student of the art of teaching, it may not be without instruction to all who are engaged, or who take an interest, in the education of the young, whether in the home-circle or in any other.

A volume corresponding to the present, devoted to the consideration of method in more advanced school education, will complete the Writer's design in undertaking the work.\*

EDINBURGH, *September*, 1857.

JAMES CURRIE.

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\* Since published—"Principles and Practice of Common School Education."

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## INTRODUCTION TO THE AMERICAN EDITION.

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BY SUPT. CLARENCE E. MELENEY, A.M

THE increasing demand for "Currie's Early and Infant-School Education" is an encouraging sign, and its republication here will gratify a large number of students of Elementary Education who are eager to master the principles as well as the methods of teaching. The book fills a place that is not occupied by any other educational work yet published, and it will be found especially valuable to Normal Training Schools as well as to Reading Circles.

As indicated in the author's preface, and as a glance at the work will show, the plan is to lay before the reader the principles of psychology in as simple and comprehensive a manner as possible, and to direct the educator in applying the appropriate material and the correct methods for the proper development of all the powers of the child.

The subject of Early and Infant Education is one in which not only educators but all parents and members of school boards should be interested. The public-school system unfortunately has not yet embraced that large class of children designated by Currie as being in the second stage of infancy, from four to seven years of age. But the time is coming, *it must come*, when the state will recognize, as some cities have done, the obligation to include these little ones in the free public-school system.

There is no more important knowledge for a parent to be possessed of than the knowledge of his child, of his faculties and powers, and the proper methods of development, and he should realize the importance of training from infancy. It is also necessary that parents should comprehend the teacher's work and understand the ends to be arrived at by all the processes of the school. For them a work on Early Education is especially valuable. When a community does come to realize the importance of systematic training, by skilled teachers, of children during the infancy period, then will be seen one of the greatest movements in educational progress. The issue of an American edition of a work upon this subject is one of the means by which it is hoped our people may become aware of the great importance of early training.

The author's plea for the establishment of infancy schools is one that should reach the heart of every lover of little children. Where are the homes, either in higher or middle classes of society, where the child is guided and taught by correct principles of education? How many parents have the time or the inclination to provide suitable occupation for the little ones? Fortunate, indeed, are the children whose parents realize the necessity and are blessed with the means of placing them in the care of teachers who have ability and the true spirit, and happy indeed are the little waifs in some of our great cities who have been found and cared for by the Free Kindergarten and Sub-Primary Associations.

The mission of this book is to educate teachers, those who are preparing themselves for the work, and those who are anxious to enlarge their knowledge by professional study. While apparently designed for the elementary teacher, it clearly develops the fundamental principle upon which *all* true teaching is based. No teacher is competent to instruct and train children who does not know the principles upon which his art depends. He may instruct, but his work will

be in vain if he does not comprehend the true end of instruction. He may impart knowledge and make a fine exhibition of his pupils, and yet the knowledge and the method of acquiring it may have been fruitless and even injurious to the permanent well-being of the pupils. His methods may be in accordance with custom, and yet at variance with principles and wholly worthless as means of developing power or true character.

It is not an uncommon experience to meet teachers who think the principles of education apply only to primary teaching, and that elementary teachers are the only ones who should be expected to study works on education or attend teachers' meetings. This is a great error. The teacher of advanced work needs to thoroughly understand the best methods and their relation to principles. Unfortunately there is some very poor teaching in our highest grades, and a great deal of poor teaching in advanced institutions of learning. One of the greatest misfortunes to the profession is the letting loose upon the academies and high schools of the country every year swarms of "college boys" who have not the remotest idea of methods or principles of teaching, but who are possessed of a mistaken sense of their profound scholarship and consequent ability (?) to teach in "any position to which they may aspire," in "testimony whereof" the kind-hearted professors "have no hesitation" in stating that the youth is "well qualified to fill in a satisfactory manner any educational position to which he may be called," and congratulate "any board of education that may be so fortunate as to secure his services." This idea that a knowledge of a certain curriculum of studies is the only requisite qualification for a teacher, promulgated by the most learned men of the country, and believed and acted upon by all fresh college graduates, and, strange to say, made the only basis for the granting of teachers' certificates, has done much to prevent teaching from becoming a profession. But the day

is coming, and not far distant, when the professional training of teachers will be regarded as necessary as the professional education of the clergyman, the physician, and the lawyer.

This valuable book recognizes the threefold nature of the human being, and shows the relation and interdependence of the physical, the intellectual, and the moral. It exhibits the child as he is, *active*, full of life, energy, love of play, capacity for work; *happy*, enjoying life and activity; *social*, needing company and giving help and sympathy; possessed of sensibilities, having a will of his own, and gifted with intellectual faculties capable of development and growth. It explains how these faculties are to be exercised, and suggests the proper subjects of instruction. Says the author, "The exercise of the senses is a great part of the work of early intellectual education." "The child's constant, intense, and successful activity with things indicates the method of training proper to his earliest years." "The training of theceptive faculty is the greater part of the intellectual business of the infant school." "A rich and ready conception is the soil out of which grows a sound judgment."

The author's view of moral education may be understood from the following quotations:

"Conscience is within the moral sphere what consciousness is in the intellectual." "Thus in our threefold relation to God, to our neighbor, and to ourselves, it tells us of certain duties: to God, love, reverence, obedience; to our neighbor, benevolence, justice, sincerity; to ourselves, purity, patience, humility."

A few words are necessary regarding the proper age for children to begin school work. The author defines infancy as the period from birth to the end of the seventh year, and later states that "the most suitable age for admission to the infant school seems to be about four years." In Part II, the subjects of instruction are treated in detail. This would naturally imply that children of four or five years of age are



capable of doing the ordinary primary-school work. But this is not the author's intention. The work outlined here is intended to cover a period extending over three or four years, and these subjects must not be undertaken until the child is prepared for them. The author intends the first years to be employed in exercises suited to the tender years of childhood; thus he says: "From the principles laid down in the foregoing pages, it will appear that physical exercises for the healthy growth and relaxation of the body; exercises of observation, conception, and imagination, for the mind; and moral and religious lessons for the cultivation of the heart, are the principal engagements of infancy, and therefore of the infant school." "The instruction should be carried on through the medium of familiar conversation," thus continuing "the process the parent has begun." "The teacher presents to him *things* of which he already knows something." Later, "the child should be prepared for learning to read rather than engaged in reading." "Lessons of different kinds, i.e., occupying different senses, should follow each other" (Chap. I., Part II.).

In regard to the length of sessions, the author says, "Children in the infant school are not capable of much tension, either mental or bodily." "The hours of school attendance should not be long, never exceeding four daily." "Whatever children can do in school they will accomplish within these hours."

The leading educators of to-day are agreed that the time has about arrived when the Kindergarten should be incorporated into the public-school system, and thus admit children at four years of age.

Mr. Currie was evidently unfamiliar with the Kindergarten, and this work shows that he felt the need of it; in fact, it seems to foreshadow it. He tried to supply its place with his lessons in object-teaching, which lacks system and is more or less vaguely set forth. With the Kindergarten as

the foundation, the author's plans and methods, based as they are upon true principles of teaching, cannot fail to be of the highest value to the teacher who would proceed in accordance with sound educational philosophy.

CLARENCE E. MELENEY.

PATERSON, N. J., September, 1887.



## PART I.

# PRINCIPLES OF EARLY SCHOOL EDUCATION.

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## CHAPTER I.

### INTRODUCTION.

The three periods of Elementary Education. 1. IT is common to distinguish three periods in elementary education: infancy, extending from birth till six and a half or seven years of age; childhood, from that till the twelfth or thirteenth year; and youth, from that again till the sixteenth or seventeenth. The limits of the periods may vary in particular cases; but the periods themselves are naturally suggested by so many distinct phases in the child's physical and rational being. Infancy is that period in which the organization of the framework through which the mind acts on the world without is incomplete; childhood commences with the completion of this organization, and continues as long as animal enjoyment is the chief consideration of life: the period of youth unfolds itself when the mind begins to feel interest in its own exertion, and to be somewhat self-sustaining in its operations, meeting the educator, as it were, half-way. If one of these periods be overlooked, or not used in the way that its characteristics demand, elementary education is so far imperfect or vitiated. On the other hand, if education be extended beyond the last of these periods into early manhood, this fourth period is marked by self-

application, the teacher doing little more than guiding the pupil to proper subjects in proper order, and inspiring him with the love of study: this is the period of special professional education.

The Family the natural sphere of the Child's Education during the first or Infancy period. 2. During the first or infancy period, the family circle is the natural scene of the child's education. It is essential, not only to the infant's happiness, but to its life, that it be, individually, the object of an unceasing and tender solicitude. Where can it receive this but in the family, or in some circle which shall be to it as the family? There it remains till its body gain strength, till its mind be organized, till its character become strong enough to be intrusted to the promiscuous multitude of the school. Not that the parents are its sole educators during this period. In its earliest years, the child cannot be reached at all by direct instruction. But nature herself is then busy in its education; she provides means and incitements for it to exercise such powers as it has; impressions from things without are constantly flowing into its mind before words have any meaning for it, and this even from its birth. The parents' duty, at this period, is to remove all obstacles from this free play of its faculties. But when the infant advances, acquires the power of language, and enters a wider sphere of observation, the words of the parent must accompany and enlighten the impressions it imbibes from its external circumstances. Over the whole period, the home circle is the natural headquarters and regulator of the child's impressions, and it must take the responsibility for the kind of influences to which the plastic mind of infancy is subjected.

Grounds of the modern Infant-School system. 3. Let it be supposed that every family were in circumstances to undertake this most important part of its duty. Let there be the opportunity, the ability, the disposition, to do it. Let the

family avail itself of its singular advantages for this work : *i. e.*, let ardent self-denying love be the indwelling spirit of the process ; let there be a patient adaptation of each part of the work to the peculiarities of each child ; let there be a consistence of all its parts, arising out of a most intimate knowledge of the child's nature ; then it will be granted that we should not interfere with the parent in his work, nor tempt him in any way to give it up to others. But let there be a state of society where the opportunity, the ability, and the disposition of this work are wanting, and where, consequently, the work is left undone ; let there be families together, where the parents must labor for their daily bread, till their strength is exhausted, their minds dimmed, and even their affections weakened, by lassitude ; or where from their own ignorance they have neither a full sense of their responsibility, nor any, the slightest, acquaintance with the means or method of educating the child ; or even, as we may suppose, where the sacred precincts of the family circle are tainted by the presence of vice, so that the child breathes the atmosphere of vice and misery all day long ;—it is surely a benefit to that society, a blessing to those children, that they be removed to some other sphere, where they may receive impressions that shall fill the void in their minds, and, if need be, struggle with their miserable impressions of home. Or, to make a less extreme supposition, let there be a state of middle-class society, where parents have but an imperfect knowledge of the principles of infant-training, but where sound principles are in circulation, an institution which assembles infants for a few hours daily to occupy them in a rational way must still be deemed a social benefit. A better general culture is imparted to the children than if they remained entirely at home ; whilst there still remains ample room for each family to educate its own, as far as it is competent to do so. Such are the grounds of the modern infant-school system.

Relation of the Infant School to the Family School and the Common School in respect of time, and the considerations which determine this.

4. The first or infant period of training may thus fall into two parts: in the one, the family is the only source of influence; in the other, the child may be subjected also to the influence of the infant school. Custom is not uniform as to the division of the period. It is well understood, indeed, that the infant school has fulfilled its functions to the child at six and a half or seven years: it is the time at which he should be received into the infant school that is still unsettled. The same considerations which make the whole system of infant schools a necessity, which compel the teacher to take the child off the parents' hands at all before the end of infancy, often also compel him to do so at the earliest possible period. The power of education, it is rightly said, is inversely as the age of the child; the younger he is, the more susceptible is he of external influence; so that at three he is more easily moulded than at six or at nine. Who would surrender the infant even of two to the influences of an unblest home? What teacher would not be willing to take the child even at that age from the parent, though knowing full well that he is not its fittest guide and teacher, when he reflects on the destiny to which his refusal may consign it? Yet it is most desirable there should be an understanding as to the limits of the infant-school period; nay, quite indispensable to the success of the training; for children at two require a different treatment from those of four or of six. They have not got their senses in full operation, or their faculty of language at their command; they are little more than physical beings, and they need a physical superintendence. The school suited for them is a nursery; their superintendent should be, not a teacher, but a nurse. The separation should be made, if for no other reason, yet for this, that the same training will by no means prepare proper superintendents for both. The most suitable age for admission to the infant school seems

to be about four years, certainly not under three and a half: which may be thus justified. Before a child can be profitably subjected to mental exercise of the least continuous sort, or can profitably associate with others like itself, it must have acquired a certain range of notions, a certain use of its outward faculties or senses, and a certain power over the means of intercommunication by language. Thus, its eye must be trained to distance, its ear to discriminate sounds, its hands to handle, and its emotions to pleasure and pain. Without this the teacher has no means of communicating with it; a state which is quite tolerable and regular in the family; but quite unsuitable to the large group of children forming the infant school. At the age of three and a half or four, the child has got a sufficient stock of fundamental experiences to enable it to become a member of the infant-school society. Children below this age, unable perhaps to speak, or walk, or observe such things as a teacher has to show them, should be in a separate seminary, call it baby-school or nursery, which must have its own special equipments. It is the infant school as now limited which forms the subject of this treatise.

Relation  
of these in  
respect of  
method.

5. The precise relation of the infant school to its precursor, the family school, on the one hand, and to the common school on the other, is a point of the utmost importance to be clearly apprehended. Did we view the infant school as only a branch of the common school, our whole notion of its training would be vitiated. In that case the same branches of instruction would have to be taught in it, the same development of the individual mind to be aimed at; and the great recommendation of the infant school would be the alacrity and closeness with which it could tread on the heels of the common school with its reading, its ciphering, its grammar, its geography, and the like. And, worse still, that radical error, which has vitiated so

many efforts in infant education, the confounding of education with a little intellectual instruction so-called, an error which threatened to choke the whole system when it had barely seen the light, would be confirmed in us, to the utter perversion of our labor. [We are to view the infant school rather as falling under the family school; its training, so far from being a forestalling of the work of the common school, as bearing the image of the family training.] Accordingly, we must look to the family circle for many of our principles, as well as for the spirit and temper of our procedure. The enlightened inspiration of the mother and the science of the infant-school teacher do not differ materially in their manifestations, widely as they differ in the way by which the principles of each are attained. Shall we view this agreement as an disparagement to our principles? Nay, rather let us view it as their confirmation and their glory. If we were to say, then, that the result of the infant school is to place its numerous occupants, at the end of their attendance on it, in the same advantageous circumstances as those in which they would have been found had they enjoyed a good family-training over the same period, we shall not indeed be stating the exact truth, but we shall not be very far from the truth. That is the design, but it is not fully attainable; the numbers in the infant school prevent it from being so. There are not the same means as in the family of suiting the instruction to individual capacity and temperament; there is not the same scope for the spontaneous manifestation of feeling and activity; and it would perhaps be unfair to conceal that the infant school does, necessarily we may say, contemplate a hastening of the child's development to a certain small extent beyond the limits prescribed by the laws of its organic growth. This evil we would willingly avoid were we not prevented by the necessities of the social system which have led to the establishment of such institutions. In so far as the disad-



vantages which we have just enumerated, and which are inherent in its whole system, will allow, the infant school must, as we have said, model itself on the family school.

Necessity  
of limiting  
the Infant  
School for  
its own dis-  
tinctive  
training.

6. Let it be stated again that the infant school, as we have defined it, should not be disturbed by the presence of foreign elements; either of children under the age for joining with profit in its exercises, in which case it partakes of the character of a nursery; or of children above the proper age, who are put into avowedly to be hastened on in their reading so as to enter the common school as soon as possible, in which case it is made a preparatory, and so far ceases to be an infant, school. It is further very injurious to retain in it pupils who have outgrown it; injurious both to the school and the pupils themselves. The symptoms of their having reached this stage of progress are easily discernible. There is an evident flagging of interest in the infantine exercises; their bearing towards their comrades changes, becoming careless, haughty, calculating; and the nature and tone of their questions and answers betray an experience of things beyond what characterizes the infant. All these circumstances betoken the presence of a degree of self-consciousness which proclaims that they are now ready for a more advanced discipline. The infant school has difficulties enough of its own to contend with; let us have it in freedom to meet these at full advantage.

## CHAPTER II.

## PHYSICAL LAWS.

**Mutual dependence of Body and Mind.** 7. OF the principles which regulate infant-school education, those have the first claim on our attention which direct us (1), to guide the pupil's health; and (2), to maintain unimpaired the happiness which nature has provided for his tender state.

The part of the bodily frame most intimately related to the mind is the brain. The nature of the relation is hidden from us; but of the fact itself there are the clearest proofs. When the brain is perfectly formed, intelligence but glimmers; as the brain progresses in organization, the light of intelligence grows clearer: when the brain is hurt or permanently deformed, the light is dimmed or quenched. The brain seems to be the medium through which mind and matter, the world within and the world without, recognize each other. Its function is to receive impressions from without, raise them into consciousness, and so present them to the mind; and, in turn, to transmit the thoughts and wishes of the mind to be carried into action by the appropriate bodily organs. They are to each other as monarch and minister, dependent on each other for activity; the one governing, but through the other.

**State of the Brain in Infancy.** 8. Infancy is the period in which the brain is only attaining its full organization. If not quite complete at the end of the period, it is comparatively so; this much, at least, is certain, that it has grown remarkably, and that its size relative to the development of the other bodily organs is very much greater than in the

adult.\* During infancy, then, it is soft in texture, very sensitive and irritable, and consequently easily injured; so that everything and every process which might interfere with its natural growth must be scrupulously avoided.

9. The brain is acted on in two ways; through the body, or through the self-activity of the mind. How the Brain is acted on from without. In the former case, impressions are conveyed to it through the nervous system, which pervades the entire physical structure.\* Different nerves have their respective functions, as the nerves of sight running inwards from the eye, of hearing from the ear, of feeling from all parts of the surface of the body. These convey impressions to the brain, and so call it into action whenever suitable objects are presented to them, as a picture, a sound, or a touch. Their action will vary in intensity with the strength of the stimulus, and must be strictly guarded. In the delicate state of the infant brain, a strong glare of light has been known to impair the sight, and a sudden crash to injure the hearing. Suppose that in the infant school a flood of light pours in on the faces of the children, or that their eyes are strained to follow the words in a printed lesson-book, or that noise and disorder prevail in school, aggravated perhaps by the harsh tones of the teacher, or that there is an excessive crowding of the children together, causing uneasiness and lassitude;—in these circumstances there can be no doubt that the nerves are irritated, and that the atmosphere of the school is altogether wanting in that serenity needed for the healthy growth of the brain. And it is to be specially noted—for it is apt to be overlooked—that the moral influences at work on the children may produce this effect no less than the physical; indeed, the action of these cannot at this period be separated. A prevalent state of fretfulness or of fear irritates the nervous system, and through it the

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\* See p. 195.

brain; so that a discipline in which bad temper and arbitrary violence are elements is a crime committed against the child's physical as well as moral well-being.

Just proportion of mental exertion to the amount of physical being, the primary law of infant education.

10. The brain is also stimulated through the self-activity of mind; a process which must be very carefully watched. Successive stages of physical development have successive phases of mental working corresponding to them. The natural order and manner of these mental operations cannot be departed from with impunity. Let there be in the infant school, contrary to all the indications of the child's nature, an energetic excitement of reflective power, let there be a strong pressure put upon him to acquire knowledge, as an adult acquires it, by reading, or let even his observation be taxed beyond his power of attention, the result must of necessity be injury to the mind, and to its organ the brain; just as any bodily organ is injured when exercised beyond the limit of its strength. The brain does not bear out such mental operations; it is disturbed; and the seeming operations are themselves fallacious, hollow, unreal. Infants may be urged through them to unhealthy and premature development, as plants may be forced in a hot-house. But the question is not, whether they can be so, but whether they should be so. Present bodily injury, perhaps open disease, future mental mediocrity, perhaps imbecility, are the inevitable consequences of perseverance in this system. Infantine precocity is not the path to eminence in manhood; few who have been its victims have reached, fewer still gone beyond, mediocrity; the melancholy majority have had the light both of mind and of life quenched ere they arrived at mature years. In the school the effects of the forcing system may not lead to these serious results, as its action is spread over a wide surface; but this does not remove, though it may lessen, its pernicious tendency.

Well-regulated activity necessary to the healthy growth of the brain.

11. In what has been said, it is not implied that the child is not to have regular exertion. Absolute quiescence, either of bodily or mental function, leads to stagnation and weakness of the organ. It is frequent, regular, well-proportioned exercise, while the organ is yet growing, that matures its organization, and gives it power as well as the disposition to activity. So far from mental action being in itself injurious to the infant, it is as necessary to its physical growth and well-being as physical activity is to mental.\* In point of fact, the intense activity which marks the infant state, though it appears to us as merely animal vivacity, is based on its mental activity.

Influence of the other bodily organs on infant education.

12. We have dwelt hitherto on the state of the brain in infancy; because the laws which it suggests are, of all the laws of physical education, those which most strongly influence the teacher's work. But the state of the whole bodily frame must be attended to: it is weak, and, so far as it falls within the teacher's province to do so, he must do what he can to strengthen it. The elements of its growth are proper food, pure air and sufficient light, and adequate exercise. The first lies entirely beyond his cognizance: the second and third are partially within it. The infant is very susceptible of injury from impure air and imperfect light; whilst the absence of motion will reduce it to a state of languor incompatible with any mental exercise whatever.\* In the case of adult persons it is recognized that voluntary motion is necessary to give a proper impulse and tone to the performance of the vital functions. Instinct supplies the place of will in the infant; in his restless, ever-varied motion we see a provision of nature for his healthy growth. If then in school we take from him to a great extent his power of spontaneous locomotion, we must compensate for it with periods of exercise both in school and out of it; and the younger the child, the more of

this does he require. The more delicate the susceptibility, the greater is the effect produced by any violation of the laws of health. The whole mental activity of the infant is often brought to a standstill by some slight and easily prevented physical inconvenience. It can hardly be necessary to add that, as the infant is liable to more sudden fluctuations of health than the adult, the symptoms of these should be known by the teacher ; otherwise the child's conduct will be often misconstrued.

**The external symptoms of mental and bodily uneasiness.** 13. It is fortunate that all the symptoms of unhealthy physical action are so easily discernible to any one who looks for them, The child's countenance is a mirror on which are reflected all the clouds which pass over its mind. Every sensation received by the brain marks its traces there ; ease and discomfort, excitement and languor, happiness and misery, intelligence and perplexity, health and sickness, irritation and serenity, may be read there with but slight experience, in "the paleness and blush, the frowns and smiles, the tears and bursts of laughter, the sighs and cries, the changes of countenances and inflections of the voice which are the natural signs of the desires, emotions, and thoughts within." The countenances of the children are the compass by which the teacher must steer his course. He should know how to read its indications, and should keep a vigilant eye on its changes ; he may read there both of the passing breeze and of the settled storm.\*

## CHAPTER III.

## THE LAW OF HAPPINESS.

Nature intends the periods of infancy and childhood to be periods of enjoyment.

14. NEXT to the law of life and health, we must consider the law of happiness. The two are intimately bound up with each other; for in infancy life is happiness. Nature plainly intends this early period to be one of enjoyment; she scatters the flowers round the child's path in boundless wealth. Just as by the impulses of instinct she provides that infinite motion needed for life and health (§ 12) which the adult must owe to his own free will, so does she secure to the child, who cannot yet choose for itself, a proportion of happiness, acute if not deep, ever-recurring if not steadily uniform, such as the adult cannot hope for without constant forethought, watchfulness, and self-denial. Temporary pains it has; but a continuously painful state, a settled care, is unknown to it. With admirable elasticity it throws off a load of grief which would seem at first about to rend its heart.\* The child's happiness is spontaneous; it is not dependent even on its parents. It extracts joy from everything around it which stimulates its senses. "Pleased with a rattle, tickled with a straw," is not less a poetical than a philosophically accurate statement of its case. For it decks the veriest trifles in all the colors of its active fancy, which change with every change of posture; so that life is a panorama of endless length. Leave the child alone within reach of anything it can handle, a stone, a bit of stick, or of paper; what pleasant work it makes for itself! how it turns and tosses them, for an hour together! how in-

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\* See p. 195.

dependent it is, how little it needs our help for its enjoyment ! Watch it in the fields, the garden, the street, by the sea-side, the river, or the wood ; it looks, and touches, and wonders, and shouts, even in a delirium of delight. And you must look, and touch, and wonder, and shout along with it ; it will compel you ; everything must be happiness around it. Put it with companions whom it knows (§ 19) ; they scrutinize and work with each other just as they treat things. The first feeling of strangeness worn off, they read each other's looks, and feel each other's experiences. Pass through a group of them when thus absorbed, and they will turn on you, fasten perhaps on your hands or your dress, dance before you, jump after you ; so that you shall not avoid seeing that they are happy, and are making you subservient to their further enjoyment. Let it be in the most unfavorable circumstances—would that these were less common !—in circumstances which make mature years miserable ; let it be besmeared with the dirt, or pallid with the sickliness of our lanes and alleys, its natural joyousness still struggles through. It is happy even in its rags : these are not to it, what they are to us, the signs of misery. While we wonder at the incongruity between its external circumstances and its feelings, we cannot but admire the beneficence of the great law of infant happiness.

Benefits of  
this provi-  
sion.

15. We may well suppose that this lavish distribution of happiness over "the budding time of life" is for wise purposes, and we can see that it is. The calm serenity that springs from it is not less necessary to sound physical growth than it is to all mental and moral training. On the one hand, the constant presence of irritation excites the nervous system, and is thus the germ of bad temper ; on the other, when the heart is thus preoccupied with some strong affection, there is no room to foster in it that principle of love on which all moral train-



ing rests, or any of those generous feelings which will in due time grow into virtues. Then as to mental training, suppose the ends of it could be attained under such conditions, their value would be a poor compensation for moral deformity ; but they are not attainable ; settled discomfort preying on the child's feelings will twist altogether its mental action. Let the child dwell face to face with misery, and its rational nature drinks the cup of poison ere it awakes to the full consciousness of life. We shall see plainly discernible in the looks and actions of the youth and of the man malignity of temper, deadness of feeling, low cunning, and unscrupulousness ; nothing ingenuous, nothing benign, nothing really intelligent do we discover. And he shall want that beautiful and elevating ideal of happiness, the great legacy which childhood leaves to manhood, which at once prompts our strivings after happiness in life, and is the emblem of a purer happiness hereafter. We have seen the plant blighted when the biting frost nips its sensitive shoots : such is childhood passed under the wintry gloom of misery instead of the sunshine of happiness.

Practical  
influence of  
this consider-  
ation on early  
education.

16. The practical consequence of these considerations is not too strongly expressed, when it is said, "that what the Creator, in his beneficence, plainly intends, we are bound by all means in our power to promote ; or, in other words, that it is nothing else than a religious duty to make the happiness of infancy and childhood our main care in whatever relates to early education."\* Parents and teachers zealously profess to do this ; but, as experience shows, their zeal is not always according to knowledge. The only education which carries the child's happiness along with it is that which consists in the judicious prompting and regulating of its natural activity. The directions of this activity we are not to determine from our own speculations ; we must allow nature to teach us, and we

must seek for her teaching by observing the infant character. In the family circle the child's happiness is perhaps most frequently thwarted by the excess of affection over knowledge in the parents, which leads them to insist that it shall occupy itself in their way instead of in its own. In the infant school, the causes that tend to this result are more varied, though individually less intense, in their operation. They are of two kinds, moral and professional. To the former belong faults of temper and disposition in the teacher. If he be gloomy, morose, fretful, inconstant, uninterested in their pleasures, continually saying "No!" the children cannot feel at ease. They feel the depressing influence, not only directly, when they come in contact with himself, but indirectly in their intercourse with each other; for the class is a mirror which will faithfully reflect the temper of its guide. If, however, there be no lack of cheerful temper and bearing, and the children still come short of the happiness they should feel, we must look for the fault to the manner in which they are engaged. Though we do not give the child its happiness, we can very easily vex it. It is naturally active, intensely active: if we choke up the channels of its activity, if we refuse it the means of activity, and condemn it to sit in harassing quiescence, we shall make it miserable. On the other hand, we may misdirect its activity: we may turn its energies out of their natural course into one devised by ourselves. And we may think its hilarity and its freaks useless, a waste of time, and set it to tasks which we judge more rational, instructive, becoming. This strained work has no attractions for it however. The child cannot be happy when treated as a little man. We cannot, of course, in the infant school give it the same scope for that spontaneous motion which is the chief charm of its early activity in the family; and we must accustom it somewhat to the idea of work. Without losing sight of this idea, without confounding work with amusement by pretending

them to be the same,—a pretence neither truthful nor prudent,—we may still make its work interesting, by observing what it delights in. If we give it room for the exercise of such powers as it possesses, it will only be too glad to exercise them. We must maintain the child's activity as the very soul of our operations; so shall we maintain its happiness. If the exigencies of society make it advantageous that it should surrender in part its natural liberty to us, we should let it feel the restraint as little as possible. If we take from it its happiness, what have we to give it as equivalent? Not our laws, our wisdom, our pleasures, or even our anxieties on its account.\*

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## CHAPTER IV.

### SOCIAL CHARACTER OF THE INFANT SCHOOL.

A good social relation necessary to the child's happiness and education.

17. THE most obvious peculiarity of the infant school is that the child is educated in it not individually but as the member of a numerous society. We know the almost boundless influence which children have upon each other, especially when they are of the same standing and engaged in the same pursuits. It is a power in the school as great as that of the teacher himself. Where it is exercised to promote the common comfort, the circumstances of the school are favorable to the child's happiness; where used with an opposite design, there is a blank in his happiness which nothing can supply. Children suffer no misery like that which they deliberately inflict on each other, when actuated by the spirit of mischief. Our provision for the child's happiness is incomplete, therefore, till we have considered the social aspect

of the school. Unless this be healthy, moral training is impossible.

**18.** Whatever be the circle in which the child is being educated, a good social relation must be cherished. It is the presence of this that gives the family training much of its power. For how does it act? The love and the authority which conjointly preside over it lead to mutual affection and confidence amongst the members of the little circle. Each one has a thorough knowledge of his comrades, and is known of them, so that he acts without any sense of restraint or need of fear, knowing the good disposition of all towards himself. There is thus produced a natural freedom and a transparency, which show the child as he really is, and which give ample opportunity to the parent for confirming the right and correcting the wrong. Such is the state of a well-regulated family; indeed the extent to which this state is present may be taken as the test of the moral discipline prevailing in it. If this be not the social aspect of the family, it is greatly stripped of its training power. For it has been rightly said that to bring up the children of a family as separate individuals instead of as a community, by supplying the wants of each in such a way as to render each independent of the other, by giving separate occupations and places to each, and so recognizing no common feelings and wants, is a sure way to drive back into the breast all the generous feelings, and to draw forth selfishness in their place. The considerations now urged may be thought to show that a single child in a family is not in such favorable circumstances for education as when he is one of a number.

**19.** Much more is a good social relation to be cherished in the infant school in proportion to the room there is for the social feeling to act.

Its power  
in family  
training.

Method of  
establishing  
it in school.

When the infant leaves that smaller circle, which had, as we may suppose, one mind and heart, in which he was less a unit than an integral part, whose members sympathized with him and appreciated him, and were not given to balance their interests very scrupulously against his or to be very exacting of their rights from him; he joins this larger circle of strangers, beings like himself, who may in their various home-circles have had equal attentions lavished on them, whose interests are different from his, it may be, opposed to them. He is now but one of a group of equals. It is clear there must be an adjustment of mutual rights and duties. He finds everything new; he has no room for that unrestrained interchange of feeling, that mutual identification to which he has been accustomed. Strangeness and distrust beset him; even suspicion and fear. These must be cast out; he cannot be educated whilst he thus shrinks within himself, locking up his affections within his own breast. This can be done only by introducing the contrary principle of love. "There is no fear in love; but perfect love casteth out fear." Love implies confidence, and confidence implies experience and knowledge of the society in which he is placed. If the infant remain apart then, or even if he continue the member of one small fraction of the society, a class of six or seven, he does not gain the experience he is in need of. His weakness and fear continue. He sees strength about him, and perhaps affection too, but he knows not how they regard him, and how he is to regard them. The whole society must be subjected to simultaneous impression, feeling, and action. All the members of it must come in contact; must respond to the same impulses; be conscious of certain, the same, labors; feel the same kind of dependence; be thrilled with the same hopes; enjoy the same rewards. How can the teacher establish this community of heart but by gathering them all before him, addressing them all as having an equal interest in his care and love; binding them

to each other by binding each to himself; stimulating their minds into gentle, natural action on the same subjects that interest all; carrying their observation and imagination along the same track, and getting them to supply each other's defects according as the temperament and circumstances of each enable him; making them engage in the same physical actions, of which prompt harmony is the very soul; shedding in upon their consciences the same sacred light of moral and religious truth, and calling them all to judge of the actions that occur every day within their own little circle? By this oft-repeated simultaneousness of thought, action, and emotion, the mass becomes welded together, takes on one stamp, breathes one spirit. Each becomes familiar with the length and breadth of the society; the confidence and self-abandonment of home are reproduced; the child's heart is again opened. This is that state of feeling so much spoken of as "the sympathy of numbers," a conventional expression, but one which indicates what is, in the first instance, an absolute necessity to any training at all, and what, when established, is a lever of irresistible power in the hands of him who can wield it.\* When the school collectively has come to have a soul which the teacher knows how to stir up, when he can lay his hand upon its pulse and feel how it beats, then has he training power; not otherwise. It should be well noted that this training power is not a thing resident in the teacher alone; it lies in the society which forms the school. The teacher's duty is to form it and guide it. It is a power capable of great things; available in every direction of activity; at once the stimulus and the guide to progress. And when in the exercise of his prerogative he brings it to bear on the faults or excellencies of the pupil, it is instantly felt and acknowledged. The effort to acquire it is the teacher's first trial, the establishment of it his great triumph.\*

Simultaneous Action a necessity of the Infant School.

20. Such is the foundation of that simultaneous action with which, under the name of collective lessons or gallery lessons, we are so familiar in the infant school. We thus see that it does not rest on the ground of expediency alone. It is not adopted because it is a convenient means of occupying all the children, whom there would otherwise be difficulty in finding employment for from lack of assistance; for it prevails where these are present in abundance. Nor is it adopted to save time; for, though it does economize time to give a lesson to eighty or a hundred at once instead of taking different sections in succession, it prevails where there is ample time to spare. It rests on the higher ground of necessity. It is of the very essence of the infant-school system, springing immediately from the root of it, and embodying a first principle of its existence.

Exercises in which it is suitable.

21. This simultaneous action is a very large part of the whole action of the school, perhaps one-half. It includes, as has been already indicated and as will be shown in detail afterwards, various kinds of lessons and exercises. Wherever the common nature and common intelligence of the children are to be brought into play, simultaneous action is the proper medium; exercises of attainment, on the other hand, in which the child is acquiring some instrumentary branch of knowledge, require sectional and, as much as possible, individual action. Such is the principle of distinction.

## CHAPTER V.

## INTELLECTUAL TRAINING—THE SENSES OR PERCEPTIVE FACULTY.

Necessity  
of a knowl-  
edge of the  
principles of  
Education to  
the Teacher,  
and how it is  
to be at-  
tained.

22. ALL education must proceed upon a knowledge of the nature of those who are to be subjected to it. For how can it pretend to cultivate that of which it knows nothing? It might recognize certain faculties in operation, but others which ought to be active, yet are dormant, it would not notice; it would meet with obstacles to progress which it could not remove, errors of conduct to which it could apply no remedy; it would give the preference to these motives which we most easily obey, rather than to the highest. Its method, not founded on any principles, would be a thing of accident; at best a combination of expedients with no consciousness of one purpose; if right at any time, right only by chance; most probably a confusion of methods, undoing at one time what is doing at another; feeble and irregular, as wanting both the power to mould and the beauty to attract. Mere empirical teaching, it is true, may not be altogether barren; by closely following prescribed laws we may do much good. But we must do very much less than if we comprehended the ground and spirit of these laws; whilst many cases must arise which the prescription does not provide for. Besides, making every concession, it is surely better to be a conscious than an unconscious agent; to be rationally adapting means to end in our profession, than following a routine which we do not understand, however much we have faith in it. Nor, in urging the infant-school teacher, amongst others, to ac-



quire some knowledge of the nature which in so tender a state is committed to his care, do we make any unreasonable demand. He may not plead in bar of this claim the youthfulness of his charge; this rather strengthens it, since earliest influences are the strongest, and had therefore need to be correct. A scientific knowledge is not necessary; it is not the business of education to investigate or speculate on the nature of man. It rejects all that is uncertain, and all that has no practical bearing; it looks to mental science for well-established results, not concerning itself with the means by which these are obtained. A moderate degree of study will give him all the knowledge of this sort that he needs; whilst a moderate amount of observation and experience will enable him to verify it.

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**23.** The five senses of sight, hearing, touch, taste, and smell, are of very unequal importance in the intellectual economy, some contributing much more to our stock of mental images than others. The impressions made on the mind by each of them are perhaps equally vivid at the time. Thus the taste of salt, or the smell of a rose, is as definite as the handling of a sponge, the hearing of a sound, or the sight of a tree. But the impressions of taste and smell are hardly to be recalled by the mind apart from the objects that cause them, however familiar these objects may be; more easily, still not vividly, do we recall abstractedly the impressions of touch, whilst those of hearing and of sight come back on the mind, in the absence of the objects, with remarkable clearness. Sight, especially, has this property; which, taken in conjunction with the greater scope there is for the activity of this sense, makes it the largest contributor of all to the materials of our thought.\* If we think of a rose, or of salt, or anything in which the smell or the taste is the

Functions,  
and relative  
importance,  
of the Senses.

most prominent attribute, we are not indeed quite unconscious of either of these, but it is not by them that we summon the object before us. It is the object as perceived by the sight that instantaneously presents itself. A classification of the senses presents them in three groups: there are first the lower senses of taste and smell, which have been described as "practical rather than theoretic, subserving the most important purposes in the economy of animal life, providing pleasures as well as selecting suitable sustenance for the body, aiming, in brief, at our physical comfort and welfare, rather than the development of our intellectual nature." Sight and hearing form a second pair, "which stand more closely connected than the others with the intellectual powers, so that they fix the mind's attention more directly upon the object affecting them, and make us less sensible of the corporeal affection apart from the objective cause."\* The remaining sense of touch is peculiar, in that it combines the characters of both the pairs already mentioned, and can, to a great extent, supply their place. Its two modes of activity must be distinguished: the one is the voluntary exercise of touch, which is really an intellectual operation, designed to acquire an idea of an object; the other is the passive, or receptive, exercise of feeling, without, it may be, either design or even accompanying will. The one ranks with the higher, the other with the lower senses.\* The conceptions which in early years the mind forms through the former or muscular-tactual sense (as it has been termed for distinction's sake) are very numerous. It will be evident from the foregoing considerations that in education it is the three senses of sight, hearing, and touch in its limited sense, with which we are chiefly concerned; and this conclusion, which we arrive at from their relation to our conceptions (as will appear more fully in the next chapter), might be drawn in another way, namely, from the consideration that these are the senses which alone the

teacher has the means of regularly training in early education.

Exercise of the Senses a large part of early education.

24. That the exercise of the senses is great part of the work of early intellectual education, appears from two considerations. In the first place, it is through them that consciousness first arises in the child: otherwise expressed, they are the link by which merely physical activity is joined to mental, and in their action we discover the first indications of the child's intelligent constitution. It seems to be quite correct to say that the first harmony he perceives between sight and touch, the first verification of the one by the other, is the birth of his intellect. In the second place, in the exercise of the senses the infant finds in great part his natural activity; they are the platform on which his whole mind acts during this period, the starting-point for all the trains of thought he indulges in, and the terminus to which these all return. Follow him in imagination for a day; what use does he make of his freedom? He has got something in hand, a stone or a bit of paper, or anything else, which for the time is his property, to be looked at and turned, set up or thrown down as he wills, and which his rich fancy has made a thing of value and interest for him. Or he associates with some animal, or he handles some flower, or some shell, or some familiar domestic object, noticing with evident curiosity their various properties of number, color, form, size, and the like. He observes intensely: such is his instinct. Thus the development of his senses goes on rapidly; so that, when he presents himself to us at four years of age for education, he is in full possession of them, has a considerable knowledge of things already acquired through them, can recognize what we submit to them, and is fond of using them from the scope they give to his activity.

25. The senses, like all our functions, may be carried to a high pitch of perfection by exercise, frequent and long-continued. One man can discern objects in the horizon where to another nothing is distinguishable, as the seaman a vessel, or the trapper his game; one man recognizes, as musical, sounds so high or so low that to another they are mere noise, or a difference between sounds which to the general ear appear identical; whilst another will, by his finger-points, pronounce most unequal and unpolished a surface which to ordinary observers seems perfectly smooth.\* No one regards such power as the end of the cultivation of the senses in elementary education; it is the result of professional education, just as much as it is so for the mechanic to have skill with his tools. The culture of the senses presents two aspects, which we must discriminate. According to the one, the end in view is to increase their power or acuteness; according to the other, it is to exercise the perceptive faculty upon the various qualities of things, so that these may become distinct mental images or materials for thought. The latter is the chief end in education, but the former is by no means to be lost sight of; indeed it cannot be. Without affecting any extreme development of the senses as an animal power—which is impossible, and, were it not so, would be of little use—there is still much that the child should observe which he cannot do without training. If with untrained sight he look at colors, he does not accurately distinguish them; if he see a number of miscellaneous forms, say lines on a board, he cannot tell their divergence from the straight; if he see a group of things together, he cannot make an approximate estimate of their number; if with untrained hearing he listen to an incorrectly-toned melody, he is not offended, nor does he derive the pleasure he is capable of doing from perfect tune. It is a fallacy to suppose that he will come by such power by mere

The object  
of their culti-  
vation.

growth of bodily frame, without specific exercise for the purpose.

Influence of this consideration on the work of the Infant School. 26. The child's constant, intense, and successful activity with things indicates the method of training proper to his earliest years. He must be largely occupied with objects that may be submitted to his senses, and the manner of instruction must imply a comprehensive exercise of these. Things which he can see, hear, or handle, must be introduced, and his perceptive power really exercised upon them; no single available opportunity for this being omitted, because it is seemingly trivial. It may be trivial, so far as the actual amount of information in one particular case is concerned; but it is important, from its bearing on the child's habit of observation and on his inclination to observe. Nothing will give this most valuable habit and inclination short of frequent *bona fide* contact with things.\* Thus scope must be found for sight to convey to the mind the various sensations of which it is the channel; both the simple sensations, such as of light, weak or strong, of color, brilliant or dull, harmonious or discordant; or those which, from the fact of motion conjoining with sight to produce them, are called complex,† such as of form, whether indicated by things at rest, or traced out by things in motion, of size or dimension, of position, of distance, and of solidity. The hearing must be practised in the discrimination of the kinds and qualities of sounds; as of musical and non-musical sounds, of sounds rhythmical but not musical, *e. g.*, of the voice in speech; of the loud and the soft in sounds, of the high and the low, the long and the short, the well-tuned and the ill-tuned, the clear and the muffled, the distinct and the indistinct, the joyous and the sorrowful: whilst the touch must contribute to the child's imagery both through the simple medium of muscular action, as in

giving the sensation of weight and lightness, or the complex medium of the muscular-tactual action, as in giving the sensations of hard and soft, smooth and rough, elastic and firm, brittle and tough, cold and hot. This principle of cultivating the perceptive power will explain the peculiar aspect which infant-school education presents. It will explain why the common object-lesson, in its various directions, has so large a place in the instruction; why lessons on color, form, etc., are insisted on as part of the course, why singing is so favorite an exercise; why pictorial illustrations are so needful; and, generally, why the concrete is regarded to the exclusion of the abstract.† It will explain why his instruction proceeds from the single simple whole, as it appears in nature, inductively. The materials of thought must come prior to thought itself. We reverse this process, if we begin with classifications, and definitions, and general terms, which are the result and the expression of much thought.

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## CHAPTER VI.

### THE CONCEPTIVE FACULTY.

**27.** THIS is the faculty which retains, reproduces, and forms into ideas the impressions of which the mind becomes conscious through observation. It subjects the perceptions to a process of organization; whereby the qualities which are apprehended individually by the perceptive faculty become variously combined, so as to constitute the higher unities of separate existence, as, *man, horse, tree*. Education must regulate and strengthen it, by presenting for its reception

The Conceptive Faculty in relation to Education.

the qualities and attributes of the things that lie about us on every side; the just and connected apprehension of which is necessary before we can interpret the appearances of varied beauty, which nature wears throughout her myriad aspects, or the mingled beauty and utility of the objects devised by art. We have now to consider the qualities that mark the educated conceptive faculty, and the means of imparting these.

**28.** It was indicated in the previous chapter that the ultimate end of the cultivation of the senses is to construct an ideal furniture worthy, from its variety and magnificence, of the noble palace of the mind. The primary character of the educated conceptive faculty, therefore, is richness or fulness of store. He who has this has an inexhaustible treasure from which he can draw endless allusions and comparisons to strengthen and illustrate his own thoughts; whereby his discourse shall contrast favorably with the meagre illustration which a poorly stored conception with so much labor constructs. Next to richness, this faculty should have clearness and strength; clearness, that our ideas may be distinct and tangible, so far as they go; strength, that we may have them deeply imprinted on the mind. These two qualities often go together, but not always. The character of clear-headedness, or definiteness in conception, is quite distinct from that power of intense realization, by which its possessor receives impressions fully and firmly, like a stamp deeply struck into the heated wax, so that consciousness readily recalls them, and feels much of the pleasure in recalling, which it found at first in forming them. These two qualities, when present in their highest degree, are natural gifts; but, in whatever degree one is possessed of them, a well-directed elementary education may increase their activity and power,

Qualities to  
be cultivated  
in it.

29. To give richness to the conception, we must daily exercise it in discriminating the properties of things, singly and in their endless admixtures, till we go over in order the whole range of familiar things. A few examples will show the nature of the process. Suppose the lesson to be on "A Tree," the child's conception of it, by the help of his senses, will progress somewhat as follows:—

Process of  
furnishing  
the Concep-  
tive Faculty  
exhibited—  
Abstraction.

## TREE.

*Its Place*, . . . in the ground, in fields, gardens, etc.  
*Its Form*, . . . upright or bending, wide-spreading above, with waving motion, etc.  
*Its Parts*, . . . Root: below ground, branching, etc.  
 Trunk: round, solid, pillar-like, firm, dark, rough, knotty, etc.  
 Branches: thin, round, tapering, flexible, etc.  
 Leaves: heart-shaped, oval, etc.; soft, green, yellow, etc.  
 Blossom and fruit in their seasons.

*Its Sound* (in motion), Rustling, gentle, violent, &c.

## GLASS.

*Color*, . . . . . Light, stained, clear, transparent, obscured, etc. }  
*Form* (in windows), Square, round, oval, lozenge-shaped, etc. } *Sight.*  
 Thin, light, hard, brittle, cold, sharp, etc. *Touch.*

## SEA.

*Taste*, . . . . . Salt, unpleasant, cold, etc. . . . . *Taste.*  
*Size*, . . . . . Large, broad, deep, etc. }  
*Color*, . . . . . Green, blue, clear, sandy, etc. } *Sight.*  
*Form*, . . . . . Surface: plain, wavy, smooth, foaming, etc. . . . . }  
*Sound*, . . . . . Dashing, murmuring, gentle, violent, etc. *Hearing.*  
 Cool, refreshing, etc. . . . . *Touch or feeling.*



These tables exhibit a progress with which the infant-school teacher is very familiar, and the design of which should be well understood lest it be misapplied. The process is one of *abstraction*; and the end in view is the cultivation of the conceptive faculty through the descriptive part of language. Each feature in the object is verified by the senses, and is lodged in the mind by its name.\*

**The same—**  
**Generaliza-**  
**tion.**      30. The complement of this exercise is one of generalization. Names are not given to things individually, nor as the result of individual experience of them. Names are general terms, that is, are given to species and genera after a wide observation of the agreements and differences of the individuals. Thus, "dog" or "palm-tree" is the name of a class marked by certain specific agreements and by certain individual differences. The characteristics of the *thing* that must be present to our minds before we can understand the *term* are not numerous; but there is no limit upwards to the number of characteristics we may attach to the thing. Thus, the elements of the definition "dog" and "palm-tree" are few, so that no one can plead difficulty in understanding the terms. Nevertheless, the conceptions which different persons form of the things differ widely in fulness. Our conception of the "dog" may be that of the naturalist, which is one; or of the shepherd, which is a second; or of the huntsman, which is a third; or of the watchman, which is a fourth; or it may be, more or less, a combination of these. Our conception of the "palm-tree" may be that of the naturalist, which is one; or of the Arab, which is another; or of the merchant, which is a third; or of the traveller, which is a fourth; or it may include all these. The terms are to us what we are taught to think into them.\* To take the same examples as before: the child's conception of "Tree," "Glass," and "Sea," will progress as follows:—

## TREE.

- (1.) Grows in the earth, has life, but no motion.—(Naturalist's conception.)
- (2.) Used for building houses, schools, etc., and for making furniture.—(Builder's conception.)
- (3.) Cultivated for fruits, and requiring attention as to soil, tending, etc.—(Gardener's conception.)
- (4.) A beautiful object in a field or garden, either alone or in a forest, for its cool shade, etc.—(Poetic conception.)

## GLASS.

- (1.) Materials: sand, potash, soda, etc.—(Chemist's conception.)
- (2.) Made in furnaces, and by blowing, etc.—Glass-blower's conception.)
- (3.) Used in houses, etc.—(Builder's conception.)
- (4.) Used for instruments, *e.g.*, telescopes, spectacles, etc.—(Natural philosopher's conception.)

## SEA.

- (1.) Highway for ships, commerce, etc.—(Merchant's conception.)
  - (2.) Scene of adventures, shipwrecks, etc.—(Sailor's conception.)
  - (3.) Supplies food from its living swarms.—(Fisherman's conception.)
  - (4.) Its waters and air invigorate health.—(Physician's conception.)
- etc.                                      etc.                                      etc.

The two processes of abstraction and generalization, though they have been described separately, are carried on together. Thus, a lesson on the "Tree," or on "Glass" or on "the Sea," as given to a gallery, would comprise both the outlines that have been exhibited under each.

**Rationale** of Illustration or "Picturing-out." **31.** This process of exhibiting the realities for which words stand is characteristic of the infant school throughout. It is used not only in the express lesson on things, but in all lessons; for the children's stock of words is small, must be enlarged, and can only be effectually enlarged in this way. New words which occur

either in reading or in speaking must have their contents spread out, as it were, like a scene to be looked at, and in as bright colors as may be. Everything which can deepen these colors must be employed; not only vivid oral description, but representative gestures, and delineations on the board. This is the process which has been expressively, if not very elegantly, designated by the term "picturing out;" a process available not for figurative language alone, as has been sometimes supposed, but for the plainest and most literal statement.\* These considerations form the ground of the difference between the explanation and the illustration of terms afterwards to be insisted on.

**Attention as related to clearness and strength of conception.** 32. In speaking of the cultivation of clearness and strength in the conceptive faculty, it is to be observed that these will depend, in part, on the manner in which we observe things. If we observe them long, minutely, repeatedly, but especially with our whole mind, our conception will be the clearer and stronger. The teacher's object, then, must be to increase the pupil's attention, both in respect of continuousness and of force or concentration, with due regard, of course, to the limits imposed by the child's nature. It is of very great importance to establish this power, and in the right way, seeing that on it depends to a great extent one's mental character, and the part he will perform in life—whether he shall have that steady habit of persevering thought by which he may accomplish almost anything, or that fitfulness and desultoriness of effort which will end in accomplishing nothing.\*

**Attention as an instinct and as a voluntary act.** 33. When the child enters the infant school, his power of attention is very weak; nevertheless it exists. It comes to him with consciousness itself; for he has often been in a position in which some

strong sensation has suspended his whole being, in which, fascinated by the appearance of some person, or some trifling object, his imagination has yielded itself to a long train of images; so that the teacher has not to create the power, but only to direct it. This early attention, however, is mere in-ance the child does not seek to attend, but only, in accord-  
 stinct; with the law of its being, to find activity and pleasure. The attention which it is the business of his first education to call forth is a voluntary act; his own will must bend his mind towards an object with a certain purpose. Here, accordingly, there is a point of contact between mental and moral training. The child's attention can only be secured by giving him proper motives to attention, as will now be shown.

**34.** The second condition necessary to clear-  
 ness and strength of conception, especially the  
 latter, is emotion. Our impressions are always  
 deeper the more our sensibility is excited.  
 Many which it is important we should retain pass away be-  
 cause of our listlessness at the time of their occurrence, even  
 though they are quite clear; others of trivial consequence  
 remain indelibly with us, unaffected by lapse of time, from  
 their occurring to us whilst in an excited state.\* The opera-  
 tions of intellectual life, by themselves, are but shadows;  
 feeling alone gives them substance and permanence. To  
 deepen the child's conceptions of what we present to him,  
 therefore, we must work upon his feelings; and we can do  
 so to a great extent. We can thrill him with joy or curi-  
 osity, with compassion, sorrow, or indignation, on any occa-  
 sion we will, by the manner of our address; and all these  
 reelings arouse his interest in what we address to him.  
 Whilst, by our general treatment of him in school, we can  
 keep him serene, pleased with himself, and free from irritat-  
 ing influences, which, if allowed to prevail, bar the channels

Emotion as  
 influencing  
 strength of  
 conception.

of access to the mind. This state of sympathy and curiosity is the only sufficient guarantee of attention. Authority and compulsion, which act through fear, will not secure the kind of attention we wish. The child must be a consenting party to his own mental engagements, and under proper guidance he will eagerly be so. Curiosity is one of the instincts of his rational nature; not equally given to all, but entirely denied to none. Sympathy is the air on which he breathes. Let him see his teacher in earnest, interested in the lesson, cheerful and pleased, and his heart will respond. He will desire to share in his teacher's engagements, that he may partake in the pleasure he sees to result from them.†

Obstacles  
to the habit  
of attention.

35. The obstacles which the teacher has to contend with in establishing the habit of attention vary with the temperament of the pupils. In very young children inattention results from weakness of mind, not permanently inherent, but the weakness that necessarily precedes the habitual exercise of the mental functions.\* There are very few who continue to be disqualified for attention by mental weakness. For these cases the teacher has no remedy; but it will be prudent to let the pupil be as little conscious of his defect as possible, especially to refrain from anger and contumely, where sympathy rather is due.—Some children are inattentive from slowness of mental action, requiring a greater stimulus to arouse them. Caution is needed that we may not misinterpret and wrongly treat this peculiarity.—Others are inattentive from timidity. Their delicate sensibility receives a shock from the bustle around them, or from the animated interpellation of the teacher addressed to themselves. This is greatly aggravated if their previous experience has given them grounds for fear. Any other than a gentle and encouraging treatment will crush the exertions of these pupils.—Others are inactive from their vivacity. They are quick

at catching up the points of a lesson, and so shrewd in guiding themselves by the teacher's manner, that with all their inattention they generally manage to answer when challenged. They find time to carry on two trains of thought together; one connected with the lesson, the other either in the way of discourse with their neighbor, or of fancies of their own. The teacher must frequently address these pupils individually.—Others again are inattentive from sluggishness of temperament. They slumber through the lessons, showing no interest in what is going on, and taking in few impressions. This want of sensibility is a great defect in mental character. The danger to the pupil lies in the possibility of the teacher not seeing any way to kindle it. Fortunately, it seldom applies to all directions of activity; each individual has generally one engagement at least which interests him, through which his teacher should approach him. Of a pupil who shows the same torpor in everything there is little hope.—These considerations show that the teacher must not expect all his pupils to march abreast, and that his measures should be adapted to different temperaments. A quick perception to distinguish these, with a good judgment to make allowance for them, is one of the highest intellectual qualifications for the teacher's office.†

**Manner of  
guiding the  
attention.** 36. The teacher who has discernment enough to seek to establish attention upon the motives of curiosity and sympathy is not likely to forget that these are very delicate, and need to be discreetly appealed to. He will understand that the child, with all his love of activity, will have his preferences for certain kinds of things above others. He will understand that he should not attempt with the class what he is not likely to succeed in; that he should not put a strain on their motives by which their power shall be diminished, but that he should cease his daily instruction whilst there is yet an impulse in

their minds to go on; and that he must allow a certain latitude to their own spontaneous action, listening to them as well as speaking to them. But these, and other considerations connected with the manner of teaching, will be noticed more in detail hereafter.

**37.** The training of the conceptive faculty is the greater part of the intellectual business of the infant school. The means of training it are endless, while the effects of such training are most influential on the whole mental character. A rich and ready conception is the soil out of which grows a sound judgment. The cause of error in our judgments lies as frequently in the want of materials on which to base them as on the want of power to compare them when acquired. When the teacher busies himself, therefore, with the conceptive faculty, he may be assured that he is taking the most effective means to cultivate the judgment. And it is a great mistake to hasten on the child to use the *forms* of judgment before his mind is stored with materials to which to apply them, under the impression that we are teaching him to think.\* There is thus produced a false maturity of judgment, which is as disagreeable to the intelligent listener as it is pernicious in its effects on the child.

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## CHAPTER VII.

### THE REASONING FACULTY OR SENSE OF RELATION.

**38.** THE faculties hitherto considered are those by which the mind gathers in the materials for its operations; there remains a faculty of a higher nature, which, from its property of associating, com-

Nature of  
the higher  
faculty.

paring, and inferring, gives us all the knowledge we have which truly deserves the name. At what time it begins to act we can scarcely tell; it grows up almost insensibly from earliest infancy. It is variously designated; sometimes judgment, sometimes thought, more commonly the reason. We shall not call it by this name, however, which is commonly confined to the more intricate operations of the faculty, or, at all events, is so suggestive of these as likely to lead to misconception of what may be expected from the cultivation of the faculty in the tender period we are considering. It will be preferable to use some term suggestive of the nature of its earliest operations; and we have chosen for the purpose the term "sense of relation."

39. The function of the reasoning faculty is, The associating principles by which it works in Childhood. in the first instance, to trace the relations that may exist amongst our conceptions. It will be sufficiently accurate to describe the associating principles by which it does so as fourfold, viz., of Order, of Resemblance, of Ratio, of Causality. The first exercises itself on the relation between things in respect to time or space, as between the events of to-day and of to-morrow, the succession of seasons or of periods, an action performed in a place and the place itself, the position of the school from the church, of England from Scotland: the second, on the relation of likeness in respect of quality, as between paper and snow in color, a dog and a wolf in appearance or habit; the third, on the relations of number and quantity, as between two and four, a foot and a yard, an ounce and a pound; the fourth, on the relation of mutual dependence by way of cause and effect, as between fire and heat, the fall of a ring and the sound it occasions, wrong-doing and suffering. These associating principles operate over the whole range of the conceptions, linking not only one with one, but two with one, or three with two,



and so on through all degrees of complexity. It is the exercise of these principles on suitable objects and in suitable degree that constitutes the cultivation of the reason. What these objects and that degree are, for the period before us, is now to be pointed out.

The sense of order or succession in time and space. 40. The simplest of all the relations, and one which is implied in all the rest, is that of order in time or space. When two things are observed together, simultaneously or consecutively, there is established by this fact a connection between them in the mind, which grows stronger as the observation is repeated. In the greater part of its conceptions the child has no other associating principle to work with; but, to the extent that it is available, it is strong and satisfying—a result due probably to the keenness of its desire for activity and the freshness of everything in its eyes. To it, therefore, he owes the most of his acquisitions: the words in learning to read, for instance, or the multiplication table. But it is limited in its power. Thus, with respect to space, he apprehends well the relative position of things under his eye, their distance and direction from each other, or he can construct for himself an image of a scene similar to one under his eye; so that the lesson on such a subject is in every way suitable. But the moment it assumes a geographical aspect, his sense of relation fails him. If we pass beyond the description of his neighborhood, or of a natural object, as a sea, a forest, or a river, he does not follow us. He cannot distribute his conceptions by measurement over the earth's surface. The network of countries, with their names, has no meaning to him: we may be ourselves conscious that this is a very complex thing to apprehend. He is in a similar position with respect to order in time. He lives in the present, and within certain limits this relation is quite satisfactory to him. But what is last year or last

month, or even, if he be very young, what is yesterday to him? There is nothing in his consciousness which connects the past with the present, the present with the future. It is to no purpose to throw his mind back a century, or two, or ten, and to distinguish events by their dates. It is to no purpose to conduct him along a sequence of story, in which time is the chain. When we put one link into his hand, the former links disappear. We can only use the "long ago," and the "short time since," just as in speaking of place we use the "far away," "the cold countries," or "the hot countries."

**41.** If we observe the rise of the second associating principle in the child, we find that it is generic resemblance that first catches his eye, rather than the sameness of individuals. An infant roaming in a meadow will point to the daisy and the dandelion, not for their difference at first, but for their resemblance. And if the first animal with which he becomes familiar be the horse, he will extend its name to the cow which passes him. The sense of resemblance, however, does not long continue to be so rude in its operation and so easily satisfied; in a short time, he will point to the things he before referred to for their resemblance as instances of difference. The sense of difference seems posterior to that of resemblance, and to rise up as a consequence of it.

**42.** This sense is a very important point of contact presented by the child's reason to our educative processes. Opportunities for stimulating it occur so constantly, that the manner in which they are used is taken as the test of the character of infant teaching. If we watch a good lesson, we shall find that it is the frequent incidental comparison that makes it either interesting or useful. This holds not only in cases where both the compared things have been observed, as, *e.g.*, when

The sense  
of likeness  
and unlike-  
ness.

How it is  
cultivated in  
teaching.

in a lesson on the sheep we compare its covering to that of the dog, when in a lesson on the sea we compare its waters with those of the neighboring lake, when in a lesson on the form of the cone we compare it to the outline of a bell or of a spire, or when in a lesson on a leaf we compare its color to that of grass; but also in cases where only one has fallen under observation, as when in a lesson on the camel we give an idea of its size, or of its feet, by comparing it with the horse, or when in a lesson on rice we compare it in appearance with corn. The latter process is the well-known one of referring things strange to things familiar, of proceeding from the known to the unknown. The effect of the comparison is all the more striking and stimulating, when it is seen to connect things which are at first sight very dissimilar; as when in a lesson on the sheep we illustrate the necessity of shearing before summer by our own practice of wearing lighter clothes at that period for the same reason—when in speaking of the coverings of birds we compare the overlapping of their feathers to throw off the rain to the arrangement of tiles on a house-top—when in a lesson on bread we show how the material we eat is what in autumn waved before the wind in the yellow fields, or when we suggest the likeness of the outline drawn on the slate to the common cart-wheel or spinning-wheel. At a somewhat later date, comparison may include the properties of things as well as things themselves; not, however, till the pupils have had considerable practice of the conceptive faculty by abstraction. Thus in a lesson on glass, on mentioning that it is transparent, or brittle, or smooth, one may ask for other things that are transparent, brittle or smooth. The long and regular continuance of this search for resemblance not only compacts the elements of their knowledge such as these are, but will give the habit of looking for resemblance everywhere, which is the foundation of a habit of reasoning.

**Limits of its exercise.** 43. The exercise of which we are speaking derives its charm from its being casual in a lesson which in the main appeals to the conceptive faculty. We must not deliberately overwhelm the pupil with comparisons: this is to destroy the character of the lesson. It might seem that the end in view would be best served by the continuous comparison arising from such lessons as these;—the cat and the dog, the swallow and the sparrow, the foot of the horse and that of the cow, the rose and the lily, rain and snow, the Arab and the Icelander, the tidy and the untidy boy, and the like. But it is not so; another element comes in here—that of series—which the infant mind can hardly contain. Such lessons are to be introduced with caution, and only among the elder pupils. For the same reason we must avoid hasty classification. A child can perceive resemblance between two or three objects, but is slow to perceive it over a multitude. Hence, the terms applied to divisions and subdivisions, *e.g.*, in natural history, as vertebrate and invertebrate, ruminant, carnivorous, and such like, are little more than mere sounds to him. The teaching must proceed inductively; yet nothing is more worthless than an induction that does not rest on the strongly-realized conception of many individual cases.

**Sense of Analogy or the likeness of relations.** 44. Analogy, or the likeness of relations, implies that two pairs of things are present to the mind. In its simplest phase it seems to melt away into mere resemblance; but in the general case it is more difficult to trace, so that it is within the child's grasp only to a certain extent. The most familiar instance of it is that presented by figurative words. When we speak, *e.g.*, of the face of the clock, the proportion is implied that dial is to clock as face is to man. The "smiling sea," the "faithful earth," the "rosy morn," the "happy home," the "gilded mountain-tops," the "silvery moon," the "dark mantle of

night," the "babbling brook," are all examples of analogical expression, which fall quite within the teacher's vocabulary, attractive to children from their picturesqueness, and instructive from their fulness of meaning. No small part of the moral instruction of the infant school is given through analogy. The numerous object-lessons that deal with animals seldom conclude without yielding some practical instruction bearing on the conduct of life. Thus, "the little busy bee," "the prudent ant," "the gentle and harmless lamb," "the generous dog," "the patient ass," are personifications of recognized appositeness. Scripture emblems also, and secular maxims or proverbs on which so much instruction of the same kind is grafted, are analogies: *e.g.*, "The Lord is my shepherd;" "All flesh is as grass." So are the fable, the anecdote, and the story of any kind. The practical application of such lessons implies the comparison of our circumstances with those suggested in the subject. It must be stated, however, that the tracing of these analogies is perhaps the most common instance of failure in infant-school lessons; a failure which arises sometimes from vagueness and febleness in stating the analogy, but generally from a too great expansion of it.\*

Sense of  
Ratio, or re-  
lation in num-  
ber and quan-  
tity.

45. The sense of relation with respect to number and quantity is largely cultivated in the infant school in connection with objects. The lessons on number are only the expansion of the child's own ideas, which we may call natural, since he shows himself in possession of them as soon as he can observe at all. The lesson on form does the same service to his notions of size and extent by requiring him to estimate these in their various applications; thus he makes lines of the same length and width, bisects lines and figures, and so on. The means used for verifying to his eye his operations in number exercise his ideas of number and quantity con-

jointly, *e.g.*, a row of balls doubled or halved, a yard as made up of three feet, a square foot as made up of square inches, and the like. It may be observed that in this instruction analogy is mixed up with ratio; necessarily indeed, for we cannot avoid implicit statements of proportions, as when we say that 4d. is the third part of 1s., and a foot the third part of a yard.

46. The relation of causality, in its simplest form, suggests itself very early to the child. It springs from the perception of uniform succession. Thus, if he has struck his hand repeatedly on the table, he will see that the action cannot be performed without noise as a consequence; and accordingly to enjoy the noise he performs the action. He contents himself on the first instance with observing the connection; not caring to examine it till a later period. The order of his inquiries is, first, what? then, how? lastly, why? The first is made invariably; the second, and still more the third, casually. We must not, therefore, think of carrying him along a stream of casual connection. It is a mistake to judge of an infant-school lesson by the number of "whys" that occur in the questioning, to view such questions as the crowning evidences of tact, or the absence of them as the indications of failure. In truth, the practical effect of such questions is not to make the children think, as is commonly supposed, but more generally to stop their flow of thought. There is no lack of proper occasions for the teacher pointing out this connection, but it must be done sparingly and with judgment. Thus, to proceed from cause to effect;—What happens when light is applied to sealing-wax? when the tallow mould is dipped into cold water (in candle-making)? when an animal, as the dog, is always treated with harshness? when trees are planted too closely together? What may be expected when the clouds are black and heavy? when one

runs too fast in coming to school? Suppose the pupil is brought with a proper impulse up to the point, in their respective lessons, at which these questions may be put, he may be expected to answer them from his own observation of some similar case before. So, when we proceed from effect to cause;—Why do we use glass for windows? wood for tables and chairs? Why do we put shoes on the foot of the horse? why do we make a cart-wheel with spokes? why has the camel a water stomach? why is a ship made long and sharp at the bow? Of this relation, in common with those of resemblance and of ratio, it may here be remarked that their influence on the child's acquisitions is more powerful than that of mere order or succession, so that, the more we can bring them to bear within the prescribed limits, the better we furnish the conceptive faculty and the more we aid their memory.

The whole sense of Relation in infancy limited to the sphere of observation.

47. It is necessary to guard most stringently against the exercise of the higher mental faculties in the infant period of education. It may now be explicitly stated, therefore—what has been assumed throughout this entire chapter—that the tracing of the various relations is performed in connection with the observing faculty, the whole process lying within the sphere of the intuitions of outward things. In the terminology of the common theory of separate faculties, the working of the higher faculty, the Judgment, is viewed as lying within the sphere of the Understanding. On that account, we have used neither of these terms. Speaking strictly, the understanding is taken to denote the capacity of logical process, or formal thought. Its activity is found in the comparison of terms, the statement of their agreement or disagreement in propositions, and the deduction of further propositions therefrom. The understanding uses terms apart from the images which first suggested them,

having either allowed the connection to drop out of sight, or possibly never having formed it. It deals with them as symbols of logical equivalence, and not as the symbols of intuitions.\* The cultivation of the understanding, therefore, is no function of the infant school, where we have to deal, so far as the intellect is concerned, only with outward realities and their relations.† (§§ 31, 32.)

Defects of  
the teaching  
which disre-  
gards this  
law exempli-  
fied.

48. Suppose that a lesson is to be given on "Joseph's meeting with his brethren," and that the questioning is cast as follows:—Who was Joseph? What country did he belong to? Where was he living at this time? Where was Egypt? What kind of people lived in it? Who was the king? What state was Joseph in at this time? How had he been raised so high? Who raised him? Why was he made so great? Why did his brethren come down to him at this time? What is a famine? What kind of country was Egypt? What is the meaning of fertile? What made it so fertile? Had Egypt any corn to spare? How do we know? How was it saved from the famine? What were the names of his brethren? Who was the youngest? Was he with them? Why not? How could he be in danger going to Egypt? What did the brothers do when they saw Joseph? Did they know him? What did he do? Why did he receive them in that way? What is a spy? How did they feel? How did they show him they were not spies? etc., etc. This lesson is good enough of its sort, and simple enough too; but it is not an infant-school lesson, because it is addressed to the understanding merely, dealing with terms and not with images, making deductions from propositions without giving the means of verification which observation affords. The logical character—the implied reason and consequent—excludes the descriptive and imaginative. The impression made by the lesson, therefore, even although the



questions be answered, will be as slight and unsubstantial as the process is uninteresting.\*

**General characteristics of Method in the infant school with reference to the higher faculty.**

49. From all the foregoing considerations, it follows that in the infant school there is no "scientific method;" there is no single subject of instruction carried on continuously and in regular order, each step resting on the previous one and leading to the next, so as to offer in its sequence a mental discipline over and above what is afforded by its individual parts. This synthetic procedure belongs to the upper school. The infant school aims at educating especially the perceptive and conceptive faculties; in so far as it cultivates the reason, it does so simply by applying the principles of association to the action of the perceptive faculty. It is immaterial, therefore, with what classes of things the pupil is occupied. Animals, plants, objects, are all equally useful if they are equally interesting: we do not at this stage recognize the test of prospective practical utility. And it is in vain to urge as a fault against our method that it is confused or flighty. Its desultoriness is no disadvantage, if we secure our chief aim of activity and cheerfulness. Moreover, it is orderly and rational within its own limits, for it is the method of nature in the early life of the child. We need not attempt, then, to convey systematic knowledge in the faith that we have a peculiar power of simplification. We may introduce simplification upon simplification with most elaborate ingenuity, but after all we are only doing well what should not be done at all. Besides, we shall not attain the end we have in view; our work will have all to be done over again. Reserving this expenditure of labor for a stage in the pupil's progress which will recompense it, let us leave to the infant his natural freedom, fitfulness, and variety; otherwise, we are like a person trying to lift a

chain of glass, which breaks asunder at every two or three links by its own weight.\*

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## CHAPTER VIII.

### THE IMAGINATION.

**50.** AN associating principle of a different kind from any that have yet been named is that by which the mind constructs for itself new images out of materials already in its possession ; this is imagination, commonly so called. Children, even infants, are strongly imaginative ; great part of the pleasure they derive from the contemplation of objects arises from their wandering over the many fields of mental images which they construct for themselves, in connection with what they are handling.\* The way by which this peculiar activity is exercised in school is by requiring them to realize scenes of which we give a description. The materials for such scenes are various ; as single objects, parts of natural scenery, and scenes from life. The means of giving these descriptions are linear or pictorial representation, but chiefly language : the latter may serve the end alone, though it should invariably be supported by the former, when that is practicable ; the former, though clearer and less circuitous so far as it goes, can never, for our purpose, dispense with supplementary description in language. The manner of the description is to give some general notion of the whole outline of the object or scene which shall serve as a groundwork, and then to fill in the details ; if a number of details be presented before there is such an outline to refer them to, the mind is apt to lose itself.

**Its exercise exemplified.** 51. Substituting for glass some substance, such as mercury, which there may be little opportunity for showing to the class, but which must be described, the following outlines, as compared with those in § 29, will show the difference between the lesson which appeals to the simple conception or idea-forming faculty, and that which exercises the imagination :—

**PALM-TREE.**—A tree as tall as the tallest of our trees—with a straight unbending trunk—of cane-like form—bare till towards the top—and then having a tufted crown of majestic leaves interspersed with fruit generally growing in clusters—the clear blue sky overhead—the scorching heat around—sometimes the spring of water near the base—the verdure that breaks the arid waste of the desert—the Arab resting to refresh himself on his journey.

**MERCURY.**—The image must be constructed by borrowing various ideas, and organizing them so as to form a new whole ; the idea of—

- a metal—from iron, tin, or some other ;
- fluidity—from water ;
- brilliancy—from silver ;
- smoothness—from still water, glass, or the like ;
- melting, freezing—from lead and water ;
- weight—from lead ;
- etc.,        etc.

**THE SEA.**—The mass of waters, far as the eye can reach—calm, clear, green—reflecting the clouds that sail above it, and smiling in the beams of the sun—many a white sail spread to the breeze on its surface—the sea fowl overhead—the islets or rocks dotting its surface—the landscape that girds its shores, black with the mould of spring, or yellow with the waving corn of autumn.

Or, in storm, we should draw the howling of the wind—the thick black clouds rushing along overhead—the darkened sky—the lashing of the waves and spray—the laboring bark—the anxious hearts on board and at home—the fearful shipwreck, etc., etc.

Field for its  
exercise—  
natural ob-  
jects and  
scenery.

52. In like manner should we carry the child's imagination over all the phenomena of nature and art, the sugar-field, the tea plantation, the process of any trade, the barren desert or the fertile valley of Egypt, the snowy home of the Laplander and his reindeer, the wild prairie of the Indian and his buffalo, the bush of the Caffre and his lion,—not by stating in a dry, didactic, however connected, way, the facts of the case, but by such a highly colored picture as shall call forth the emotion of the pupil. And we should not clip the wings of his imagination by too hastily placing the pictures of these objects or scenes before him; this at once throws it into a groove from which it cannot get out. Let us rather give him scope for his imagination to work, and then the means of comparing his mental image with an actual picture: this will interest him more.

The same—  
scenes from  
life.

53. Scenes and incidents from life afford excellent materials for the exercise of this faculty. The very dolls and playthings of the infant, and the playmates of the child, are the heroes of many a drama; the limited space which constitutes their little world is a stage on which the curtain is constantly rising and falling. Of everything that belongs to them it may be said that "thereby hangs a tale." If the teacher doubt whether such stories have attractions for them, let him take his place before his gallery, tell his pupils what he is about to do, and, according to their age, speak to them or read to them from some of the nursery tales, or a fable, or an adventure by sea or land, or some domestic scene; or let him discuss some incident connected with their own amusements. Let him read or speak with sympathy and tact, and their eyes will sparkle with delight; they will appreciate it and reproduce it long after many subsequent lessons of a more commonplace sort have faded from their memories. Indeed they

will probably never forget it ; it remains in their minds, always fresh, always beautiful, to be imaged again and again by them, the sure anchor of some strong moral impression, which is all the more felt by them that it is not inculcated as formal doctrine.

54. The exercise of this faculty is singularly neglected in school ; yet there can be no doubt of the benefit arising from it when given in due degree. It has been suspected, looked on as dangerous, and proscribed. And why ? because many allow it to tyrannize over them. But the cultivation of the faculty in youth, so far from fostering this, is the only way to prevent it. Where no plants are reared in the rich soil, weeds must spring up. If we train it in youth, it will, like the other faculties, be able to guide itself in mature years. It is unwise to restrain its action entirely, especially in young children. Education is a positive process ; it restrains the propensities from what is bad, not by prohibitions, but by giving them a bent to what is good. So, the exercise of the imagination, morality being always regarded, can have no other than a salutary influence. But it is sometimes said that it is better to occupy children with what is *useful*. This is the fallacy that has played such havoc with the liveliness of young minds in these later times. What is useful for the man may be far from being so for the child. If we stimulate the child to activity, that is what is useful : if we give him an impulse to attention and to the acquisition of knowledge ; if we furnish fit food to his instincts, and give to each faculty the pure delight of easy and natural exercise ; if we store his mind with rich and sunny images, which will not unseldom flit across him in after years with all their pleasant associations ; we attain a result in his intellectual education compared with which no other deserves in so high a sense to be esteemed as useful,

It is of vital importance, then, to have the imaginative element restored to that place in the education of the child from which a short-sighted and pernicious prejudice has temporarily displaced it; and there is no reason for withholding from the children of the infant school what all enlightened parents of the wealthier classes are so justly careful to provide for the home education of their own children.\*

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## CHAPTER IX.

### MORAL TRAINING—THE FEELINGS.

**The scope of Moral Education.** 55. WE have certain moral powers which, equally with our bodily and intellectual, depend on education for a proper direction to their activity and fruitfulness. The function of these powers is to discern, to feel, and to will what is right. The knowledge of good and evil is part of every man's nature, just as is the knowledge of light and darkness; not depending for its existence on any external circumstances of time, place, rank, or even education. All education assumes it, just as it does the sense of sight in presenting objects to the eye, or the sense of relation in comparing them. To it the written Word makes its appeal. Conscience is within the moral sphere what consciousness is in the intellectual; not so much a distinct power as the condition of all the powers. This indestructible principle testifies to man the obligation of right. (1.) It convinces us of the existence of a Supreme Being, who is at once the source and the end of all good, who is also a lawgiver, and whom, therefore, we are bound to love and obey; recognizing as the highest expression of duty that "first and great commandment," "Thou shalt love the Lord thy God with all thy heart and soul and

strength and mind." (2.) Its existence in ourselves involves a belief of its existence in our neighbors, who are thus seen by us to be subject to the same laws and experiences, and between whom and ourselves there is a mutual obligation to promote each other's good; so that it recognizes as "the second commandment, which is like unto the first," "Thou shalt love thy neighbor as thyself;"—"Whatsoever ye would that men should do unto you, do ye even so unto them." (3.) It approves or condemns our own conduct, whose springs lie deep hidden in the recesses of the heart, and whose real character is often very different from that which it presents to the world; so that it is, indeed, what it has been called, the voice of God within us. "If our heart condemn us, God is greater than our heart, and knoweth all things; if our heart condemn us not, then have we confidence toward God."\* Thus in our threefold relation to God, to our neighbor, and to ourselves, it tells us of certain duties; to God—love, reverence, obedience; to our neighbor—benevolence, justice, sincerity; to ourselves—purity, patience, humility.\* It is the business of moral education to strengthen the power of conscience, which it does by cultivating these feelings; for they are the channels by which it draws in the elements of health, and by which also it manifests its vigor. Thus it is kept in contact with the daily conduct. Between the knowing what is right and the doing what is right, there are two steps; we must feel it, and we must will it. To know is not to feel and to will; to know and to feel is not to will and perform; to know, to feel, and to will, result in action. On the one hand, then, the moral feelings must be regulated; on the other, the will. Moral education is the training to perform right actions from right feelings, for the approval of our conscience and of God. In this chapter we shall speak of the Feelings, and in the following of the Will.

**Importance of attending to it.** 56. Those who have to do with the education of the young should know that the moral training of their charge is the principal part of their duty. It is so enjoined on them by the Supreme Authority. "Train up a child in the way he should go." It is society's first demand on the teacher. Deficiency in cleverness or in attainment may be pardoned; but a just sense of right and rectitude of conduct, society requires for the discharge of all its obligations, and it expects to find these inculcated, if anywhere, in the school. And this training is the first need of the child's own nature. With it, happiness is within his reach, in whatever sphere he be; without it, not only is his own happiness impossible, but he will interfere with that of others. A duty which comes to the teacher with so many and so strong sanctions must claim his first, his constant, regard.

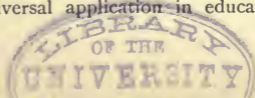
**Infancy the critical period.** 57. Moral training may be commenced very early. We see from observation that emotion is active in the most tender infancy; as soon, indeed, as the infant is capable of feeling a want, and of being conscious of its supply or its neglect. And as soon as emotion is felt, it may be biassed by education. If in its first year, then, the child experiences emotion, we may see that ere its fourth—the period\*at which it comes to school—its experience must be very wide. The first six years, it has been truly said, is the critical period in moral training. The impressions that adhere longest to us and are the deepest are, we know, those of which we remember not the origin—those which we imbibed unconsciously under parental influence in infancy. The child's disposition may issue from this period of his education, not certainly formed, indeed, but with a very strong bent to good. There are then no obstacles to overcome, nothing to undo; the affections are soft and pliable; whereas, if this period



pass without moral training, the difficulties of the work are increased fourfold, the affections take a bent of their own, and our influence is no longer the same either in kind or in effect.

58. The great means of training the feelings is to draw them out into action; we may say, the only means. A feeling apart from its corresponding activity is a mere sentiment; a thing which our neighbors are not conscious of, which does nothing, and which practically is nothing. Activity is natural to the child in its moral character, just as we have seen it to be in its physical and mental. A child in the presence of kindness and affection exhibits a sympathy with it, or a return of it by something which it does; in the presence of pain it tries its little to relieve it. We must therefore provide it with the means of acting out its right feelings; and we must weaken by non-activity those of an opposite character. If we would, *e.g.*, cultivate kindness, let us show it kindness in our deeds, and it will return kind deeds; if reverence, let us habitually show it the example of reverence, and it will conform; if justice, honesty, truthfulness, we must arrange the little society so that in its daily intercourse it will have opportunities of seeing and of exemplifying them. If kindness, reverence, justice, honesty, truthfulness be never *acted* before it, then, however much they may be spoken about, the child will have no sense of their obligation. It is only as acts that it can know them; in themselves they are abstract terms of which it can form no conception. So, if we wish to root out improper feelings, or to prevent their growth, such as vanity or the love of praise, rivalry or the love of superiority, or the like, we withhold the praise or the ocular proof of superiority which ministers to these feelings. The *law of exercise* is of universal application in education; and it

Action the  
only effectual  
means of  
training the  
Feelings.



needs to be specially insisted on in moral training, in proportion to the degree in which it has been overlooked in this department.\*

**Wide field presented by the infant school for moral education.** 59. In view of this law, the infant school offers a very wide field for moral training, There is great room for activity of all sorts. The children are in constant contact with their superiors in the person of the teacher and his assistants, with their equals in the persons of their comrades; and that, both under direct superintendence in the schoolroom and in the freedom of the playground. In the different occupations and the separate interests of the little society, all the feelings have room to show themselves which relate to their neighbors; whilst the feelings that relate to things—honesty, order, cleanliness, and diligence—are also exercised. To which we may perhaps add the opportunities of intercourse which they have when they meet in groups for recreation at home: from such meetings the school influence is not absent.

**The basis of morality at this period not the reason but the affections.** 60. The child is all the while receiving such instruction on moral topics as suits its years; but we are to observe that its moral training does not at this period rest on an intellectual basis. The sanction of its conduct is not conviction but authority. Its duty is assumed by the teacher, as a thing not the less binding on it that it cannot yet comprehend the nature of the obligation. It is prejudicial to be constantly showing the child why it should act in such and such a way. This goes to make its own inadequate comprehension the measure of its duty; to peril the duty on the success of the demonstration. Not so acts the parent; he wills the child to act in a certain way, and sends the obligation home to its heart with indisputable force, as

being the will of one whom it loves and depends on. It is to obey, in the first instance, not because it is right in the abstract for it to do so, but because this is the will of its parent. So with the teacher; he personally is the child's rule; his sympathy the child's sanction; his pleasure the child's reward. The reasons of morality will be given hereafter; meanwhile we cannot suspend the child's training till he is advanced enough to feel the force of these. If the heart be not bent in infancy by sympathy and authority to good, reason, when it comes to act, will not make up the defect. It is because of the absence of any working of this anterior influence that the demonstrations of moral duty so seldom affect the conduct of those who have reached the period of youth.\* For we must not forget that, where the authority of teacher or parent is wanting, there is not on that account an entire absence of authority; it is a delusive hope that the moral nature can be preserved in infancy free and unbiassed, so as to listen with impartiality to the teaching of reason at a future period. Some authority, internal if not external, is always influencing the child for evil or for good.

Moral use  
of the imagi-  
nation.

61. Provided the law of exercise be observed, *i.e.*, provided the children be accustomed to associate immediate action with the feelings called up by the scenes which occur daily amongst themselves, the teacher may avail himself of the power which imagination gives him of multiplying indefinitely, both in number and in character, scenes of feeling. The moral use of the faculty of imagination is to enable us to enter into the feelings of others by drawing a mental picture of their circumstances. At a scene of virtue or heroism a child will feel pleasure and manifest approval; at a scene of suffering or wickedness he will feel pain, and manifest disapproval. His moral

instruction goes on in great part through the medium of this exercise of imagination; for it leaves with him images of good which recur to him, and with which he may compare himself. At the same time we must beware of making this pass for the whole of his moral training. The need of moral action, so far from being superseded by this, is only increased. The most abundant contemplation of these scenes is compatible with perfect moral inactivity, or with a course of action opposed to that which secures his sympathy and approval when seen in others. The feelings which arise from such working of the imagination must be brought into contact and compared with the feelings and actions called into operation by the daily school-life, in order that they may check and stimulate each other.\*

Certain states of existence are obstacles to moral education.

62. There are certain states of being incompatible with moral training—disturbing forces, so to speak, which must be put out of the way. They may be of a physical kind: thus, the circumstances of the school may be so uncomfortable as to deaden the child's natural cheerfulness, and so make it restless and irritable. Or they may be of an intellectual kind: if the child be forced on with its tasks, if cleverness be what is most valued and praised, and goodness overlooked, the excitement arising from the efforts to show cleverness will take possession of the mind and subordinate all other motives. Or, lastly, they may be of a moral complexion: if any of the stronger passions be stimulated, such as fear or ambition, the gentler feelings have no room to grow up. It is the presence of the first and third of these states that so largely banishes moral training from the homes of the lowest class of the people. The second is characteristic of school; but the third, and even the first, though they now operate there perhaps less strongly than they did, are yet

by no means absent from it. There can be no moral training without repose, serenity, cheerfulness.

**63.** Moral training must be viewed as a positive, not as a negative, process. A system of prohibitions will not inspire one good impulse.

Moral education a positive, not a negative process.  
 This manner of educating, though very common, and most of all in the nursery, because very easy, is in every way deficient. In the first place, we have not the means of repressing faults in the child so easily as of encouraging good dispositions. Then, they are an insufficient barrier in the hour of trial; too often they are swept away at the approach of evil. Lastly, they can never meet the full exigencies of the case. We may have prohibitions for many wrong actions, but we cannot for all. But a positive principle is far-reaching in its influence. One good disposition imbibed will strangle ten forms of vice. There are many ways, *e.g.*, in which a child may annoy his companions: he may openly strike him, or call him names, or keep others from associating with him, or tell tales of him, or ridicule him. The one feeling of kindness implies the absence of all these. This positive character is the peculiar feature of the teaching of Christian morality in the New Testament. Our blessed Lord does not say, "Thou shalt not kill," "Thou shalt not steal," "Thou shalt not bear false witness against thy neighbor;" but, "Thou shalt love thy neighbor as thyself." And to the same effect St. Paul, when he says, "Overcome evil with good."\* It would seem to follow from this principle that we should rather exhibit what is right for their imitation than what is wrong for their warning. Vice must no doubt be checked; but this is best done on its actual occurrence. The frequent portraying of it has a bad effect on the tone of the feelings, often suggesting the consciousness of vices to which the mind has hitherto been a stranger.

64. Whilst all the good dispositions must in due time be carried out into action, we should be careful not to bring them prematurely to the test. Before we ask a child to show generosity, for example, we must have previously associated pleasure in its mind with this manner of acting, in which case its own desire will correspond to your wish. Just as in mental operations we should ask it to undertake nothing in which there is not a fair prospect of success; so in moral it must be saved from all trials which it is not able to bear; for, if it fails, the training it has already got in the particular direction, if any, goes for nothing. The work must be begun again, and now not under favorable auspices; for the selfish feeling has taken the alarm. Penetration in estimating the child's power of moral resistance is no small part of the power of the trainer. It need hardly be added that it is imprudent to leave temptations in the child's way which we might remove, and much more to throw them in his way, which is sometimes undesignedly done in the course of instruction; as when he is put, by a particular question, in such a position before his class that he must either admit himself guilty of a fault or utter an untruth. Few can withstand this kind of temptation.

65. It cannot be too strongly impressed upon the teacher to exercise the strictest self-control over his own actions, so that his conduct shall seem to be consistent, not only with his words, but with itself. Success in this is the teacher's rarest merit, at the same time that it is his surest source of influence. We are apt to think that children do not notice the slight liberties, as we call them, which teachers occasionally take in their dealings with them. But this is a mistake. They are keenly observant; and the injury done is the greater from the fact of their dispositions not being yet fixed. Les-

sons of benevolence, for example, conveyed in harsh, loud accents, are worse than useless. Or what are they to think if they see us giving way to passion, whilst we urge gentleness on them? if they hear us using unkind words, whilst we profess to recommend kindness to them? if, in a moment of our ill-humor, they meet a rude repulse when they are making an affectionate approach to us; or, worse still, if they hear us exaggerating or breaking a promise, whilst yet we dare to impress on them the habit of truthfulness? This is a sad reflection for teachers; but there can be no doubt, that the bewildering contrasts which children notice between precept and practice in them is the reason why so much labor in training runs to waste. If our conduct do not point uniformly, under all circumstances, in the same direction as our precepts, we cannot be surprised that the children's dispositions acquire no fixed bent.

**66.** Whilst right action is the natural issue of right feeling, the habit of action has, no doubt, a reflex influence on the feelings. It is on this account prudent to encourage, in the intercourse of the children, some acts which are, in the doing, mere bits of ceremony. To take an example from the family circle: many children are accustomed to bid their parents good-night by the shaking of hands, or in a still more affectionate manner. Acts like these are by no means essential to the feeling of love, as between parent and child; but no sensible person will undervalue such symbols of feeling; for the reality is more closely connected with them in early life than we are apt to imagine. The same principle may be carried out in school to a certain extent. If we make a child close his eyes and his hands in prayer, we shall in the end increase his feeling of solemnity; if we insist on some respectful word or gesture when he addresses us, we strengthen the foundation of a feeling of respectfulness to superiors; and so with other

Reflex influence of action upon feeling.

acts that might be named,\* and which will readily occur to the teacher.

67. The teacher will often find that, after all his most laborious and prayerful efforts, he makes less progress in the moral training of his charge than he might reasonably hope to make.

Some of the difficulties Moral Education has to contend with. He may do well to remember, in such a case, that their moral training does not depend solely on him. It is but a small part of the day that he has the children with him; and the training of their homes may contradict, or at least not support, that of the school. Besides, for this reason he may have had much to undo. These things are mentioned, not to cool his zeal, or diminish his labor, but to suggest reasons why he should not be discouraged by obstacles which, if they are to be removed at all, must be removed by others than himself. It may be that he has no access to the family circle of his charge; but should he have—and he should by all means try to have—he should use all diligence, mingled with prudence, to bring its moral influence on the child into harmony with his own. Alas! that he should so often have to labor to purify it, instead of having simply to support it in his own sphere; which is certainly the natural relation between the influence of the school and that of the family. He should also bear in mind that no man can estimate his own influence, and that in all cases, but especially when in contact with the young, this is much greater than is supposed, although not always immediately perceptible.

It remains to advert to some of the principal feelings which it must be the object of education to cherish.

68. \*The first place is due to those which we should entertain towards God, both on their own account and because they are the guarantee of all the rest. Love is the earliest emotion of

Feelings which should be cultivated—our relation to God—love.



which the child is conscious ; love to its parents, who supply its wants, and who approach it with love written on their countenances. The love directed towards herself the pious mother seeks to elevate to God, as our heavenly Father, the common source of all good to both parent and child. She speaks of Him in this character, and she acts accordingly ; and by directing her own affections to God, and bearing up those of the child along with them, she will succeed in fixing them on Him. This is the example for the teacher to follow ; this is the process he must continue, or which he must begin if it is not already begun. He, too, must present the benignant aspect of the Divine character to the child ; God, the Father of men who loves all and wishes all to love Him, and who is constantly doing good to all His creatures, before he presents God to him as the Governor and Judge of men, at whose tribunal all must give account of their actions. And he will speak of God as the loving Father, not only in the formal lesson or the formal devotion, but at all times as occasion requires, so that the children may feel their dependence on Him for all things, and for all things give thanks.

69. With love there must be inculcated rever-

**Reverence.** ence ; for God, whilst he is the source of all good, is the perfection of greatness and power. This feeling may early be inspired in children, or rather drawn out of them ; for it is natural to infancy. "Thou, God, seest me," finds a ready access to the child's heart. Reverence and love should grow up together. When the parent speaks of God as the heavenly Father, the whole tone and manner in which she speaks impress the child with a sense of solemnity. But she also inculcates reverence directly, more particularly by dwelling on the Divine attributes of omnipresence and omniscience. So also should the teacher. If he be himself reverent in manner, in word,

and in deed, and exact reverent action from the children, he will prevent that habit of irreverence which is commonly urged as the besetting sin of youth.\* It is of unspeakable moment to have reverence impressed on the heart in infancy; its fruits will be manifest over a lifetime.

**Submission to His will.** 70. Reverence for God implies reverence for His will, of which the test is submission to it. The will of God, as expressed in His Word, must be kept before the young as their rule of action, recognized as that by which both teacher and pupils must guide themselves, formally and reverently turned to for its decision. Prayer must be made for strength to keep it, and it must be shown how, "in the keeping of it, there is great reward."

**Our social relation—Truthfulness.** 71. Of the duties that flow from our social relations, truthfulness claims to be first mentioned; that sincerity by which men know what we profess to think, say, or do, is what we really think, say, or do. Truthfulness, as a steady principle, does not seem to be of spontaneous growth in the child. He does not of himself see the necessity of giving exact representations of the past and the future for their own sakes; living in the present, he sees nothing in the facts which come before him which should prevent him from coloring them after his fancy. He practises both simulation and dissimulation, whether for some private interest of his own, or to gain our applause for the moment. Truthfulness is the virtue of widest application; fortunately it is also that for the cultivation of which there is the most constant opportunity. The child comes into contact with the teacher and his own comrades. For ourselves, let us deal truthfully with him; say nothing that is not literally true; make no exaggerations; leave no promises unfulfilled; have a good memory for all the expectations we may have led him to entertain;

make no excuses for deviating from our word, since, even if these are valid, he will not see that they are so; be as scrupulous with him as we are with our friend; presume not that our love for him, much less our authority, will warrant us in deceiving him or trifling with him, since the greater these are the more will he be confounded by our conduct. Let us remember that even a single instance of untruth may unsettle his perception of the obligation of truthfulness. It is only then that we can in turn exact the same from him. Let us listen to no exaggerated stories; enforce the performance of every promise; reward his confessions, as far as we may, with forgiveness; without appearing to be suspicious, scrutinize when we have ground to suspect; think nothing that concerns the habit of truth of slight consequence; make the truthfulness of one a matter in which all are interested. Further let us rejoice if in an accidental mis-statement our children volunteer to correct us; treat all with confidence till we have detected any one deceiving us, and then not restore our confidence till in the eyes of all he has deserved it; show the pain and surprise we feel at a breach of trust; be of one mind, humor, and temper, as far as possible, not doing at one time what we repudiate at another; treat all the little ones habitually with kindness and frankness banishing fear, which is the parent of lies; endeavor, by careful observation, to gain experience in discerning and tracing the motives of falsehood, as this penetration will give us great power. And, finally, while putting the disposition of our children to the proof, let us not lead them into temptation; *e.g.*, in speaking of honesty, we should not ask a child before the class whether he ever abstracted anything from what his mother sent him for; in speaking of kindness, whether he has always been kind to his little brother; in speaking of prayer, whether he always says his prayers night and morning. Such questions are a snare for the

conscience, by offering a temptation that can hardly be resisted: the blushes that accompany the answers are often but too plain and painful a proof that the child has fallen, and knows that he has. (§ 64.)\*

**Kindness.** 72. Next to truthfulness may be mentioned benevolence or kindness; that feeling, the opposite of selfishness, which leads us to think of, and sympathize with, the feelings of others. A great deal of unkindness amongst children arises not so much from deliberate intention, as from thoughtlessness. The crowning test of kindness of feeling is the display of self-denial to oblige our neighbor.—“A little boy came to school one day without his lunch; and when the rest were eating theirs at play-time he had none. The teacher divided his own, and called one of the pupils to deliver a part of it to the fasting one; which he did gladly, as it called for no sacrifice. He felt satisfaction at seeing the want of his comrade relieved: which was heightened by the pleasure felt and expressed by the teacher. Not long after, the same pupil was observed quietly to perform a similar act of generosity to another companion; on this occasion at his own expense. The teacher, who saw the deed, highly approved of it.”—Had the teacher prematurely taken a part from the pupil himself in the first instance, he would not have perceived the justice of such a proceeding, he would even have felt oppressed; and, so far from a strong impulse to generous action having been lodged in his breast, the selfish principle would have been stimulated by being thrown on the defensive.—“Some children were playing together, when one accidentally fell and hurt himself, at the same time soiling his clothes. His companions, instead of sympathizing with him, and doing what they could to console him, turned the accident into matter for their own amusement; except one little girl, who went forward, helped him

up, tried to clean his clothes, and, by her sympathy, lessened the pain and vexation he felt. She had asked assistance from his playmates, but none would give it. The teacher, happening to come to the window, saw what was going on, and immediately came out and gave what aid was necessary. By her kind words, she banished from the sufferer all sense of annoyance. Of course, she did not fail to commend the well-doer; to the others she said nothing, trusting that the practical rebuke they had received would work a sense of shame in them. In a day or two after, when giving a lesson on kindness, the picture which she drew so struck them, by its resemblance to what had happened (and that without any direct references on her part), that many by their silence and others by the tones of their voice testified their consciousness of the unkindness they had been guilty of; and they themselves commended the well-doer. Ere many days elapsed, the teacher had the pleasure of seeing that her gentle and prudent training was not ineffectual."—The feeling of kindness has infinite room for showing itself, from the great number of interests affected in the intercourse of children; in this respect it is second only to truthfulness. Where kindness is, it banishes a number of common school-faults; such as rudeness of manner, calling names, and the like.

**Honesty.** 73. Honesty, or a due regard to what belongs to another, is one of the virtues that must be implanted in the child from without, as there is no natural instinct which leads him to observe it. His desire of possessing is at first indiscriminate and unreasoning, so that it needs to be regulated with much prudence. It is not uncommon to prevail on a child to restore what is not his own, under promise of receiving something else; this is to thrust out one vice (if, indeed, it does so) by means of another. Neither will simple command or force, though per-

haps legitimate means of influence in the circumstances, inspire the right feeling, though it may put the property into the hands of its owner. Some children have a stronger tendency to dishonesty than others, and especially the lower and poorer classes, who are subject to bad influences at home, it often seems like an instinct amongst them. Perhaps the best way is to seize the moment of inculcating honesty in a child, not when he has been the aggressor, but when he has been the sufferer. He then feels the justice of your proceedings, and is in a mood fully to assent to them. He cannot say a word in self-palliation, should he ever in turn become the aggressor. The teacher should show a punctilious regard to the right of property himself. All things that are found must be scrupulously returned to their owners, for whom search must be made; so that importance shall be seen to be attached even to the smallest thing. Those who deliver up property which they find must be commended; those who are detected concealing it disgraced. The teacher may occasionally send them on little errands for such things as it tries the child's virtue to refrain from. If the play-ground be fully furnished, there is room for the display of honesty in it as well as in the school. An incident like the following might occur in any school where honesty is well inculcated: "Two children found a sixpence. None saw them; yet they brought it to the master. He made search for the owner, both in school and in the village, but without success. No one appearing to claim it, master and scholars had to determine what was to be done with it. It now really belonged to the two children who found it, as the master was at pains to explain; but they proposed, in the feeling that what had come into their possession in that accidental way could hardly be called theirs, to give it to a poor man. This was done, amidst the satisfaction of all, and with the approval of the master." This incident showed a high sense of hon-

esty, mingled with generosity, and could not fail to be felt by the teacher as an adequate reward for all his labor in training these children. What would have been the effect on their sense of honesty, had he kept the money to himself when it was first brought to him or even after they had failed to find the owner? What a shock would have been given to their virtuous inclinations!

74. As to the personal virtues, it may be sufficient here to name those deserving of chief attention. First, modesty of bearing, as opposed to forwardness and vanity on the one hand, and to timidity and shyness on the other: the one of these extremes is to be repressed by withholding the stimulants of word or manner which minister to it, the other by a gentle encouragement of the child in his right conduct. Secondly, order, including cleanliness and punctuality; for enforcing which the adequate means are personal example and a daily personal inspection of the pupils at once strict and steady in its requirements.\*

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## CHAPTER X.

### THE WILL.

75. THE Will is the immediate spring of all our actions. The understanding may perceive what our duty is; the feelings may present us with motives to do it; but it is this third power which determines whether it is to be done or not. We cannot wonder, then, that in the business of life it is commonly viewed as the most important of our faculties, as that, indeed, which gives its complexion to the whole character.

Feelings primarily affecting the individual—  
Modesty,  
Punctuality,  
Cleanliness,  
etc.

Importance of training the Will.

“Character,” it has been said, “is a completely fashioned will.” Strength of will is the measure of a man’s moral existence; by which quality we mean the aptitude for making a deliberate choice and of holding steadily to the choice we have seen reason to make, and not “obstinacy, a stubbornness of temper which assigns no reason but mere will for a constancy which acts in the nature of dead weight rather than of strength, resembling less the reaction of a powerful spring than the gravitation of a big stone.” Strength of will is that without which power of intellect may make a man an object of wonder or of admiration, but gives him no influence over those inferior to himself; that without which accomplishments are nothing more in life than so much ornamental fringe-work; that without which strength of feeling, even of right feeling, is of doubtful benefit to society around, whilst it certainly often makes its possessor a dupe; that without which incessant activity effects but little, making little progress amidst all its motion, and frequently returning after all its labor to where it set out. Strength of will is that by which most of what is really great in the world, or in one’s own personal history, is achieved; the compensation given to many for the want of brilliant parts; the guarantee of usefulness, credit, peace to him who has it. In a word, it is that by which a man is to be loved or feared, obeyed or resisted, respected or despised. Man’s great struggle with himself, as a being made for activity, is to obtain the power over this balance of his nature; so that he may direct his capacities with steady purpose to fixed ends. His education should aid him in this; any which does not is deficient in its very essence. But the training of the will is the great difficulty in education; it needs strenuousness, watchfulness, self-denial in the educator; its advantages are remote, whilst it causes present trouble; it is an exercise of faith, not of sight. Of this, as of the whole of moral training, the foundation must be



laid in infancy; and therefore the attention of the infant teacher is here strongly directed to this part of his work.

The two defects commonly observable in the will.

76. The defects which are commonly observable in the will, and which all recognize as detracting from dignity of character and from usefulness, are twofold. The one is weakness, which shows itself either in the form of irresolution when one is called on to choose a line of conduct in any particular case; or in the form of inconstancy, that is, inability to hold to our choice pertinaciously over a time and through variety of circumstances presenting, it may be, obstacles to his design. The other is what is called wilfulness—that state of temper in which the will acts in obedience to the nearest motive at the time, without a fair consideration of all the motives which should influence action in the case. Wilfulness is a vice arising from the misdirection of a virtue; for it implies a strength of will, which, rightly directed, is what we wish to encourage.—It is within the observation of all that both of these faults exhibit themselves strongly in infancy.

Causes that lead to these defects.

77. The causes of them lie on the very surface of things; we see them acting in the plainest manner every day on children. Let a child be brought up so that by the overwatchful anxiety of its guardians all its wants are anticipated, its gestures, and even its looks, scrutinized with the view of divining its desires, all situations in which it would feel the need of doing something for itself carefully excluded: the nerves of exertion are cut; indecision and helplessness are exhaled from the stagnant waters; it is miserable when alone; only when being attended to does it show a sort of insipid meaningless satisfaction. Such a child is destined to be trodden down or pushed aside in the race of life.—Let a child be placed in circumstances where its nature is not understood or sym-

pathized with, having none to appreciate its motives, to encourage it to exertion, to caution it when the tempter leads it astray, or to approve it when it has triumphed ; let a harsh, unfeeling discipline drag it over the wilderness of fear, anxious only for submission ; the will is crushed, the power and desire of activity wither, while sullenness, gloom, dark suspicion, cunning, supplant the nobler qualities of openness and decision.—Let a child be brought up under no fixed discipline, its guardian not being aware of the importance of this, or not capable of carrying it out, or perhaps not being much with the child, thus ruling it only at intervals, while at other times it is left to itself : the unsteadiness and violent contrast to which it is subjected must unsettle its dispositions ; its own whim or the suggestions of chance will appear as binding on it as the commands it receives. Such a child grows up unsubdued and unreasoning.—Again, let the activity of a child be confined within the narrow groove of formality and routine ; let it be surrounded by laws which prescribe for its conduct down to minutest trifles ; let directions be given wherever there is danger of it erring ; let the smallest deviation from the accustomed path and pace call forth a senseless expression of affected wonder and dislike : its will is swamped : when it does right it is never of its own choice ; it becomes timid and fearful of responsibility.—Once more, let us put the case in which the affections of its guardians, exercised without prudence, systematically allow the child perfect freedom from restraint, letting it choose for itself before it has light to guide its choice, viewing its desires as law, or perhaps weakly purchasing ease by the gratification of them ; this makes emphatically the “spoilt,” or wilful child. The will is deliberately thrown, bound hand and foot, amongst its rebellious subjects the passions, who strip it of its dignity and reign in its place—a miserable anarchy. This child’s path is being set with thorns.—We see such pictures in the family circle ; and it is certain that we often see them still more deeply

colored in the school. How may the parent and the teacher be preserved from so misapprehending this part of their work?

To train the will we must inspire right motives of action.

78. The will, while it is the supreme arbiter of our conduct, acts in obedience to motives. The uneducated will obey those which are nearest at the time, though they may be the lowest of all motives, the animal propensities. The object of moral education is to inspire the higher motives as an indwelling power, and to accustom the will to that *suspense* which is the first step towards obeying them. These higher motives are the moral feelings spoken of in last chapter, which bear upon our conduct in all our relations. These feelings are, as has been seen, inculcated expressly in the character of motives; and their obligation is strengthened by those sanctions of religion which have naturally so much power over the young mind. It is hoped in this way to keep them constantly stationed, as it were, in presence of the child, and to invest them with a dignity which shall throw the lower feelings into the shade. Thus, in cultivating the moral feelings, we are at the same time educating the will, inasmuch as we are providing motives for it. In matters, again, whose obligation lies in positive precept (in connection with which the training of the will is in the first instance largely carried on), the feeling of pleasure and satisfaction which the child may be made to feel in doing what is right, that is, what we wish him to do, is the motive we should study to present.

In infancy these must be supplemented by the direct authority of the teacher.

79. In infancy, however, we cannot depend on the action of these motives: they are just being formed; they have not effected a full lodgment in the mind; the character is still fluid and easily disturbed. These motives must be supplemented and strengthened by motives of a stronger and more reliable

sort, acting from without. Adults need this also; and accordingly the necessities of their own position, and the opinion of society, come to support their conviction of right. In childhood, in proportion to its want of development, there is needed a support more palpable, direct, irresistible; an authority which has the power of immediately attaining what it imposes, and which leaves no way of evading its demands. The direct authority of the teacher, then, is the foundation of all education of the will; everything depends on the manner in which this is exercised.

Character-  
istics of a  
sound au-  
thority.

80. It should not be difficult to establish authority over children. In forming the habit of obedience, the teacher should begin by removing as many occasions of disobedience as he can, disobedience being frequently exhibited in school, simply because obedience is difficult in the circumstances. With this view he must look to proper organization and arrangement for aid. This course will enable him to concentrate his authority.—Children will be occasionally rebellious, from their volatility; but obstinacy need not be feared unless there be great mismanagement, for they cannot ultimately resist us, and when they are made to do a thing over and over, they come to think it natural; moreover, it is an instinct in them to look up to their parents and guardians. If an obstinate child is introduced into school, it is not by any single stroke of energy that he is to be subdued; kindness and patience are the only means that will be successful.—The authority of the teacher should not be founded on his personal superiority. The selfish tendency is strong in childhood, and will surely be incited to resistance; and, if we taunt a child afterwards with his submission, we only harden him to disobey us at the next opportunity. The manifestation of strong passion, or bitterness of humor, goes to place authority on this insecure personal basis; whereas calmness, with

firmness, goes to elevate it above all personal considerations. "A teacher was one day collecting the caps of his infant class to put them in the drawer, where they were usually kept during lesson. One little fellow kept his back, and threw it at the teacher as he was going with the others to the drawer. He was quietly ordered to lift it up, go to his place again, and then deliver it in the right way. He took it up and again threw it, but in a gentle way. It fell on the floor once more. Once more he was calmly ordered to re-deliver it. He felt the words of firmness; and the third time he conformed. Without losing temper, the teacher made a remark or two to the child, and to the class. Upon the next opportunity for showing his disposition, he was among the first to follow the rule. And not only so, but he said to his teacher, 'I have done it right this time.'" Willing obedience was rendered by him; had anger or bitterness been exhibited in the teacher's dealing with the case, obedience might indeed have been extracted, but not an obedience like this.—Authority must be thoroughly established, so that there need be no fear of its being available to the extent to which it may be thought advisable to use it. Its limit should not be known to the pupil; but should be to him indefinitely far off, so that he may be full of the conviction that, however far he may go, it will still compass him. Only an authority founded on kindness and justice, from which he finds it impossible to withhold respect because they assure him that the teacher seeks his happiness, can attain this character.—If authority is real, it will show a consciousness of its own power and dignity. Feeling that it is supreme, it will not be solicitous to prove that it is so. Its propriety needs not to be made matter of demonstration; its reality will be made matter of feeling. Its own utterances will be its sanction. An authority which leans on any thing else than its own expression, has no substance. The big threatenings, the indefinite hints, and the shadowy im-

ages of impending terror, by which some seek to uphold their authority with children, are really the signals of distress, by which those who are conscious they do not possess the authority they ought proclaim the fact. The person who has it most shows it least by external signs.

The maintenance of the just proportion between obedience and freedom constitutes the perfection of discipline.

**81.** Direct authority is not a power to be exercised indiscriminately, but only where it is needed. It must supplement and strengthen motives, not supersede them. The perfection of discipline lies in maintaining the just proportion of freedom to obedience.\* This varies. In infancy it is small; so that the whole period, morally defined, might be defined as the period of obedience. Freedom, before the child can choose what is good for him, is hurtful; obedience, absolute obedience, as has been said, is "no less necessary to the preservation of his existence than to the formation of his moral character." It is the first step in his education to freedom. Still, even in infancy, there is a narrow sphere within which the child may have freedom; the sphere not so much of moral as of animal or natural activity. But the sphere is a constantly widening one; and it is in not recognizing this feature of it, it is in attempting to maintain the same degree of subjection in children throughout different periods, that the most common and the gravest error in disciplining the will lies. There is a strong temptation to disregard their altered circumstances; it is easier, and to many more agreeable, to supersede the will than to train it. In so far as this proceeds from misapprehension, however, as it generally does, it should be recollected that the training which accustoms the pupil to do everything at the word of command, whilst it may make an agreeable pupil, may not be the training which goes to confer on him the inestimable

benefit of a strong character. It is the obedience that is free, self-prompted, which we must aim at inculcating; and this cannot be inculcated if we give the child no room for the exercise of freedom. When he begins to reason, we must give him reasons for what we require to be done; taking care, moreover, that we give him truthful and valid reasons.† When he comes to be conscious of responsibility, we must let him take responsibility—which he is quite willing to do—provided only it is a fair responsibility to lay upon him, that is, provided the consequences of a mistake will not be detrimental either to his own moral character or to the higher interests of his neighbors. Where motives already in his possession are strong enough to stimulate him to action, we should keep our authority in the background; it has a bad effect to be always expressly commanding what would be freely offered.

82. Whilst such are the conditions favorable to the growth of the child's freedom, we can scarcely pretend in this the first period of education to give him that steadiness of character which is implied in *constancy* of will. Such a character is really the last blessing which education has to bestow; it is one not to be reached till trials of all kinds have been endured, till the mind finds rest in a firm and well-founded faith, till it has power to reflect attentively on purposes deliberately formed, of which the realization lies yet in the remote future. It is but a short distance that the child, with his extreme volatility, can advance to this goal, yet he may imbibe from the whole of his school-training, if it is judiciously conducted, an *impression* of constancy of purpose; he may feel himself enveloped by a power of which *constant steady aim* is the mark; and thus he may receive a bent in this direction himself, before he is at all conscious

What the School can do to develop Constancy of Will.

of the nature of the influence at work upon him. To illustrate the process: A daily round of work is exacted, which must be discharged in a uniform way; it returns regularly at its appointed time, sometimes more difficult, sometimes less so, but it *must* be done, the end *must* be obtained without fail. A certain line of conduct is prescribed to him; on the one hand, there are positive precepts regarding the manner in which his daily work is to be performed, to which, though resting on grounds of expediency, he must conform; on the other hand, there are duties of a moral nature of a higher obligation, which he sees daily practised by others and undeviatingly enforced on himself, so that he may calculate distinctly on consequences, according to the manner in which he discharges them. He feels that there is a sphere within which he has freedom, and another within which immediate obedience is required; and he is distinctly conscious of the boundary line between them. We shall suppose, too, that he feels the temper and conduct of the teacher to be even, the motives he encourages to be uniform, and the sanctions of conduct to be held up again and again with the same earnestness; in a word, that the teacher is constantly striving after the *same end* as concerns his character. He has an example of constancy before him, of which his tendency to imitation cannot escape the influence; and he feels around him an invisible power drawing him steadily forward in one direction. What more can school-life do to give him constancy of character? The means at work are sufficient with this view, were he sufficiently developed; if he does not acquire fixity of character, it is because, at this period, he is not capable of it. But the foundation is laid. At the least, a habit of perseverance, or a tendency to it, is formed, which is an auspicious starting-point for the will when it comes to self-consciousness.



Power of  
habit in  
forming the  
Character.

83. This suggests, in conclusion, some consideration of habit, in relation to the will. Habits to a considerable extent constitute the character. They do not always have the sanction of the will; but, in effect, it is much the same as if they had. Many examples may be given of this. It is often impossible, we know, to distinguish acts performed by a soldier under the habit of military discipline from those performed by him with conscious will. Again, there are many who are scrupulously punctual and orderly from a habit deeply stamped on them by some accident in the circumstances of their early life. The formation of habits, then, is so far the formation of the character. Habit, it is said, is a second nature, that is to say, its powers may become as strong as that of the instincts with which we are born. There is but this difference between them, that we ourselves *commence* habits; and this is the ground of our hope in the influence of education to elevate the character. The teacher, amongst others, should bear in mind the use of this power of habit; he should view all the acts of the child in the light of it. Things often seem trifling in themselves which are of great moment when viewed in this relation; for what we do once we are apt to do again, and we find easier to do again. The child imitates itself even more readily than it imitates others. Thus a child may throw away a morsel of bread which it does not need, or it may allow a spot to remain on its clothes; these acts, viewed as single acts may seem of small consequence, but from their tendency to be repeated, they are important. We can never estimate the effect of single acts; and this should teach us to permit nothing in children of the propriety of which we have the smallest doubt.\* "Whatsoever is not of faith is sin." And not only in moulding the child to a certain line of conduct, but in withdrawing him from a wrong one, habit is the only

power available. One bad habit can be overthrown only by a good one growing up as a counter-agent ; which, like its predecessor, must be formed gradually. We must not expect to accomplish all things by a single effort.

**84.** There is doubtless one danger attending habit. It may degenerate into routine, thus subverting freedom. But with respect to this danger it is to be observed, in the first place, that we cannot help working by habit. We must encounter bad ones if we do not form good : so that it is not left to ourselves whether we shall recognize its power or not. Secondly, habit, though as powerful in infancy as it is afterwards, is at this early stage felt by the child as much less mechanical in its nature than at a later period ; it has less association in his mind, perhaps we might say none, with routine. His natural activity is so abundant, that acting, even though it be a repetition of the same thing again and again, is always fresh to him. So that, in truth, during this first period, there is nothing in habit which has any tendency to supersede will. It is at a later period that the danger of this, whatever it be, must be guarded against. We may see the transition from habit to will commencing at the end of infancy ; a child of seven has some sense of responsibility—shows the germ of that grand motive, the sense of duty—and can offer to us, so far, a deliberate instead of a mechanical obedience. It is for the teacher carefully to foster and guide this transition by a rational discipline.\*

Danger of dependence on habit not liable to be incurred in infancy.

## PART II.

### SUBJECTS OF INSTRUCTION IN THE INFANT SCHOOL.

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#### CHAPTER I.

##### INTRODUCTION.—GENERAL CHARACTER OF THE INSTRUCTION.

Nature of the engagements of the Infant School. 85. FROM the principles laid down in the foregoing pages, it will appear that physical exercise for the healthy growth and relaxation of the body; exercises of observation, conception, and imagination, for the mind; and moral and religious lessons for the cultivation of the heart, are the principal engagements of infancy, and, therefore, of the infant school. Under physical exercise we include the right regulation of the physical circumstances in which the child receives his instruction, which, though he is outwardly passive under them, very greatly influence the tone of his mind and feelings; physical exercises, strictly so called, requiring positive bodily exertion, such as he is subjected to in the school; the recreation of the playground, where, in full apparent freedom, he is yet under superintendence; and, lastly, singing, which in one aspect of it is one of the keenest of all the physical incitements to the general work of the school. Exercises of observation and conception are given

by means of things or objects such as the eye can see, the hand handle, and the ear hear ; their appearance to the eye in color, form, and size ; to the touch in weight, hardness, and other qualities ; to the ear in sound. As a distinct exercise of observation by this last sense, is to be mentioned the combination of musical sounds by singing. Exercises of imagination are found in the elementary geographical lesson, in which the pupil is required to group natural things, such as he has already observed, variously as to place ; and in reading or relating stories of real or imaginary life. Moral and religious instruction comprises doctrines or points for belief in morality and religion ; feelings to be cherished, and actions to be practised. This kind of instruction may for the most part be best given in the form of incidental reflections throughout the daily work, and exercises of devotion.

**General method of the instruction—conversational.** 86. The instruction of the infant school is carried on through the medium of familiar conversation between the teacher and his pupils. They cannot read when they begin their course ; yet they have powers which are eager for activity. The most advanced of them, though they may be able to read very easy narrative, have not that facility that enables them to extract information from what they read ; and, even if by the teacher's help they can turn this to account, they ought to know, and they are able to know much more than this source can supply them with. It is most unnatural to make their reading-power the measure of their intellectual activity. It is by conversation upon actual objects and feelings that the parent first calls forth the glimmering intelligence of the child ; so it is by conversation, or, to call it by its technical name, oral instruction, that the teacher is to continue the process which the parent has begun. By this method alone is it possible to give the child a stimulus

to attention: for it interposes nothing between the child and the living voice of his instructor to prevent the full play of that mutual sympathy which is the very breath of the school life. By this method alone is it possible to give an impulse to his observation, imagination, curiosity; for it submits interesting things to his inspection, while it humors his volatility by turning aside to notice anything that attracts his own notice by the way. And by this method alone is it possible to engage the child in full activity without restraining his freedom: the teacher presents to him things of which he already knows something, and, speaking to him as a friend and companion rather than as a preceptor, easily draws from him the knowledge he is so willing to show.

**87.** There is another aspect of this oral instruction not less important; it is our great means for giving the child the use of his mother-tongue. When the time comes for the parent to initiate the child in this, she does not make "set" lessons on language; she speaks to him of things and feelings in which he will be interested, knowing that in learning of these he is learning to speak.\* The teacher must proceed in the same way. Language is nothing apart from ideas; words must be taught to the infant in connection with things. This aspect of oral instruction is frequently forgotten in the infant school: otherwise, it would not be thrust into the subordinate place it is often found to occupy. In oral instruction, whatever subjects it deals with, the teacher should remember that he is training the child to language. He must engage each one, therefore, in conversation; he must vary the subjects of conversation, as each subject has a vocabulary particular to itself; he must watch attentively to secure a gradual increase of power over words, content at first, perhaps, with their utterance of single words, but

Linguistic  
aspect of such  
instruction.

looking, by and by, for phrases, and then easy sentences. Nor must he be wearied with repetitions, as the children are just beginning their exercises in language, and require long and varied practice to learn its endless variety of forms. Whilst oral instruction is the rule in the infant school, it is pre-eminently the want of the youngest infants. The teacher may observe in the elder pupils some diminution of interest in the oral lessons; this is one of the symptoms that the time has come for advancing them from the infant school. They have now got a practical command over speech which serves them for all ordinary purposes; and they not only require, but feel a desire for, the new field of exercise which book-instruction gives. But the younger children have no such command of language; and what they want most is such a knowledge of the names of common things and actions as shall enable them to characterize these when they see them, and to hold intercourse with their fellows regarding them. Hence their acquisition of language goes on with great rapidity. The younger the children, therefore, the more should they be occupied by oral instruction.

88. What are we to say of book-learning, which in point of fact occupies a place in all infant schools? The power to read with intelligence is the greatest benefit which school-education bestows upon us; for this enables us to educate ourselves in after-life. Not unnaturally, therefore, the reading-lesson occupies the principal place in the common school. It does not follow from this, however, that it should hold, as it is commonly made to hold, the principal place in the infant school; for the proper study of it requires certain powers which the child in the first period of his education does not possess. It is self-evident that reading is an effort for the child, whilst conversation is not.

Danger of  
the excessive  
use of the  
reading-book.

Even to read mechanically is so. It is impossible for him to fix his eye upon a page, and to thread his way from word to word, and from line to line, in their close succession, without feeling a strain upon the nerves of sight, and through them upon the brain, which has only to be prolonged to do him serious injury. To read with intelligence is a double or complex effort. It includes all the effort necessary for mechanical reading, and in addition the effort which is necessary to keep the mind moving at the same rate as the eye. The mechanical motion tends from the first to outstrip the mental: and the effort to keep them together is the most painful to which the infant can be subjected. The brain is under a twofold strain; that from without through the nerves of sight, and that from within proceeding from the reflex action of the mind upon it. Well has it been said that "it is not so much the actual process of learning to read as the consequences of being able to read during early years that are to be guarded against." From physical considerations, then,—which dictate the fundamental law in infant education,—we conclude that it is imprudent to have the child's attention fixed for any considerable portion of a day on a book.\*

89. Systematic reading from books should be

Limitations  
under which  
reading may  
be allowed.

delayed till the child becomes physically capable of a little conscious effort, which it does about four and a half or five years of age; that is to say, it may be carried on during the last year and a half or two years of his infant-school attendance. There would be no harm in delaying it even till the very end of this period: his progress would be all the more rapid when he did begin. But on this point the teacher may defer to the desires of parents, provided he do not urge forward the child too much with the reading-task, by keeping him at his book over an immoderate proportion of

his daily time. During the first half of his infant-school attendance, the child should be prepared for learning to read rather than engaged in reading. His oral instruction will put him in possession of a large number of words with their applications; without which it is altogether a solecism to engage him with written language. It can also make him acquainted with the forms and sounds of all the most familiar words of the language, and with the elements of words, in connection with the *things* which it speaks to him about, not only without tasking him, but by way of amusement.

With these limitations we may consent to reckon the reading-lesson as one of the occupations of the infant school.

Tabular  
view of In-  
fant-School  
work.

90. The following table presents at one view the different parts of the school-work : \*—

PHYSICAL . . .	{	1. Healthy Condition of the Schoolroom. 2. Physical Exercises in School. 3. Recreation in Play-ground. 4. Singing.
INTELLECTUAL .	{	1. Objects. 2. Number. 3. Color and Form. 4. Sound. 5. Geography. 6. Reading and Reciting to Pupils. 7. Reading and Spelling.
MORAL AND } RELIGIOUS }	{	1. Doctrines and Points for Belief. 2. Duties. 3. Incidental Instruction. 4. Devotions.



## CHAPTER II.

### PHYSICAL CIRCUMSTANCES OF INSTRUCTION.

91. IT is the first and constant duty of the infant-school teacher to attend to the regulation of physical influences. He has to deal with a large number of children, of tender age, of different temperaments and degrees of health, keenly susceptible of external influence on their bodily frames, and liable to suffer from even slight irregularities. A disregard of the plainest laws of health in the school-room must, in the end, affect the health of the children; in the meantime it prevents them deriving any benefit from the work in which they are engaged. For his own sake, too, the teacher must be mindful of these laws. If he is depressed in spirits, not to say enfeebled in health, the whole school suffers. One day's work in a close room may not affect him much; but no constitution can resist the effect of a continuance of this over several years. It is in the fact that such influences operate almost imperceptibly that his danger lies. Let the sanitary state of his school-room, then, be his first thought when he enters it in the morning; and let his thoughts recur to this at the end of every lesson.

92. First in order of importance is ventilation. The school must have a steady supply of fresh air throughout the day. The symptoms which indicate neglect of this are very plain. Perhaps the teacher may often be conscious of a dimness of eyesight, a giddiness of head, a general languor and drowsiness which nothing can shake off and for which he cannot well account; it is probable they are largely owing to his working in impure air. Many continue even to bear headaches, sickness,

or sore throat, without ever suspecting that these are owing to the same cause. If such be the effect on the teacher, is it to be supposed that the children will escape? Their countenances and the tones of their voice are some index to the state of the school. And if the teacher will scrutinize these, as he should accustom himself to do, he will be kept from error in this matter. It is not enough that the air be fresh in the morning; or that the windows be opened and closed fitfully throughout the day, just as accident may direct his attention to the subject, or that there be one stereotyped degree of ventilation throughout the year: this is a matter that requires attention from hour to hour, and from day to day, according to wind and weather. An atmosphere which is fresh in the morning very soon becomes vitiated unless it is changed, and the teacher may not be conscious of its condition; he cannot do better than go outside occasionally for the sake of comparison.

**Tempera-  
ture.** 93. Another important feature is the keeping up of a proper degree of temperature in the school-room. Every school should have a fire; and the teacher should regulate it throughout the day. Where there is neither fire nor stove, we need hardly wonder that the windows should be kept close to obtain warmth. Both extremes of temperature must be avoided. If the temperature be kept habitually too high, the children will become nervously sensitive of cold. At the same time the air may be fresh and yet injuriously cold. Particularly are drafts to be avoided. As many schools are constructed, it is hardly possible to avoid these. A class should not stand immediately under an open window or behind a door.

**Light.** 94. The management of light is not so much attended to as it ought to be in schools. A dull, dingy room, in which the eye has to strain itself to discern objects, must depress the elasticity of children. On the

other hand, a body of bright light, streaming into the faces of a class, cannot but produce restlessness and inattention. If the windows are not well placed for the distribution of light, the teacher may, perhaps, modify their effects by regulating the state of the blinds. An infant school should be a light, cheerful place.\* A stone-color is most suitable for the walls.

95. Children in the infant school are not capable of much tension, either mental or bodily. A great deal of inattention is often attributed to wilful trifling, which would be more justly traced to the teacher's disregard of the physical capacity of the children.

The hours of school attendance should not be long; never exceeding four daily; distributed thus, two hours in the forenoon, and two in the afternoon, with an hour's interval; or better, into three sittings of an hour and twenty minutes each, with two intervals of three-quarters each, if the circumstances of the school admit of it. Whatever children can do in school, they will accomplish within these hours; to prolong their attendance to five or six hours, instead of aiding their progress, will only injure their health. Parents are often found to desire this longer attendance; but the teacher must be guided neither by their ignorance nor their selfishness, but by his own consciousness of what is right in this matter; for it is he alone that would have to bear the responsibility in the event of any child being injured.

96. Every morning and afternoon should be occupied by various lessons. A lesson should not average in duration more than a quarter of an hour, and on no account exceed twenty minutes. It is hard enough to sustain the attention even for

Length and  
distribution  
of daily at-  
tendance.

Shortness  
and variety of  
Lessons.

this period, and no child will be able to retain more than we can tell him within it. The teacher should sub-divide his lesson rather than trespass beyond this limit. Lessons of different kinds, *i.e.*, occupying different senses, should follow each other; this is a great relief. It is absurd to speak of these frequent changes as causing loss of time.

97. Not more than three-fourths of each morning and afternoon period should be devoted to instruction which involves mental occupation. It is necessary to have short intervals between the lessons for physical relaxation; which is given either by a general change of position in the classes throughout the school, accompanied with marching, or by special bodily movements. Further, it may sometimes be necessary during the lesson to recall the wandering thoughts of one or of all by such movements for a few seconds; the teacher may easily read in the countenances of the children when such a stimulus will be beneficial. Too much either of sitting or of standing is objectionable; they must alternate. Variety in every species of activity is the rule of the infant school.

98. There is an endless choice in the selection of physical exercises; body, legs, arms, and fingers may all be called into requisition. Bending of the body, a sudden passing from a sitting to a standing posture and *vice versa*, easy gymnastic movements of the arms, beating time with the feet, action amongst the different fingers, and imitation of the trades, are the most common. The secret of success in these is alertness in calling for them and in varying them rapidly and decidedly. They should be performed by the children, partly at word of command, but chiefly in silence, by imitation, with eyes fixed on the example of the teacher.\* Free and confident

motion is indispensable in the teacher whilst giving them ; they will fail unless the children see and feel the influence of this. Smartness in giving these exercises is not the least of the accomplishments of the infant-school teacher ; it turns into an aid to discipline that disinclination to remain still which would otherwise disturb him. The only limitation to them is that they should not be ungraceful in themselves, or unduly noisy, or tend to produce any kind of discomfort in the class-room. Those are particularly suitable which from the rhythm of their motion admit of being accompanied by singing ; of which marching is the most prominent.

99. We shall do no more than simply notice here the exercises of the play-ground, as the provisions for these will require us to speak of them more minutely afterwards. The proportion of play to work must in the case of infants be very large. The usual daily hour of interval is not enough for the purposes of training ; but circumstances often make it impracticable to give more. As already indicated, the work should be twice broken by recreation ; a third opportunity may be had before the children enter school in the morning. They should return home immediately, however, after the last school hour. As the play-hour serves both to give recreation to the children and to afford room for the exhibition of their dispositions in actions towards each other, it should be given under superintendence.\* Such a watchfulness would serve no good purpose with advanced pupils, but the reverse ; young children, however, do not feel it to be any restraint on them.

100. Finally, singing is a physical exercise of wonderful power in relieving the more serious work of the school. All must observe its calming influence

Recreation  
in Play-  
ground.

Singing.

after exertion, and its cheering preparative influence on exertion yet to be undergone. It is like the ventilation of the mind; giving an outlet for the oppressed and pent-up feelings of the child, the hearty utterance of which is at all times refreshing. The younger children are, the more and the more frequent the necessity for the relaxation thus afforded; there can be no successful management of the infant school without it. We shall afterwards have to notice its value as a branch of instruction: what we insist on at present is its value as an instrument in a skilful hand for keeping alive the tone and activity of the school.

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## CHAPTER III.

### INTELLECTUAL INSTRUCTION.

#### 1. The Object-Lesson.

**101.** THE principles need not be again stated which demonstrate the object-lesson to be so important a part of the infant-school work; but the student should refer to §§ 26, 29, 37, 86, in connection with the present chapter. All that it seems necessary to premise here is that we are not to confound, as is very often done, the object-lesson of the infant school with the lesson on "common things," as that phrase is now understood (see note on § 29). The latter, strictly speaking, is not designed for the infant school at all; the purpose of it is to give a certain amount of practical information about the things and processes of every-day life to children sufficiently advanced to turn it to account. The object-lesson of the infant school has quite a different purpose. Its predominant aspect is the mental exercise it gives; it is meant to awaken the intelligence, and

Difference between the Infant School and the lesson on "common things" so called.

to cultivate its different phases of observation, conception, and taste, without which little satisfactory progress can be made in their future education. It is a disciplining, not a utilitarian, process; the information it gives is a means, not an end.

**102.** The range of this department of instruction is exceedingly comprehensive. It draws its materials from all the branches of knowledge dealing with things which can interest the child or exercise his mind. Thus, it is Natural History for children; for it directs their attention to animals of all classes, domestic and others, their qualities, habits, and uses—to trees, and plants, and flowers—to the metals, and other minerals, which, from their properties, are in constant use. It is Physical Science for children; for it leads them to observe the phenomena of the heavens, sun, moon, and stars, the seasons, with the light and heat which mark the changes of the weather, and the properties of the bodies which form the mass of matter around us. It is Domestic Economy for children; for it exhibits to them the things and processes daily used in their homes, and the way to use them rightly. It is Industrial and Social Economy for children; for it describes the various trades, processes in different walks of art, and the arrangements as to the division of labor which society has sanctioned for carrying these on in harmony and mutual dependence. It is Physiology for children; for it tells them of their own bodies, and the uses of the various members for physical and mental ends, with the way to use them best and to avoid their abuse. It is the "science of common things" for children; for it disregards nothing which can come under their notice in their intercourse with their fellows or their superiors. And, finally, as we shall afterwards see more distinctly, it is Geography for children; since it has

Range of  
the Object-  
lesson.

favorite subjects of illustration in mountain and river, forest, plain, and desert, the different climates of the earth, with their productions and the habits of their peoples, the populous city, and the scattered wigwams of the savage.

103. All the things fit to be treated of in the object-lesson may be said to be "familiar things;" at the same time, the phrase must not be too narrowly interpreted. We cannot consent to confine our instruction to things which the child has the opportunity of actually seeing. By familiar things we are to understand all those things on which he can exercise his mind in the way which is familiar to it. For example, amongst animals, the lion, the camel, the elephant, and the rein-deer afford scope for reasoning of as familiar a kind as the horse, the sheep, or the dog. In the vegetable world, similar remarks may be made on the tea-plant, the sugar-cane, and the cotton-plant relatively to the potato, the turnip, and flax—upon rice and maize relatively to barley and wheat—on the palm-tree and the cedar relatively to the fir and the oak. All the child's observation of things at home, of the materials for food, clothing, building, or industry, prepares him for observing the corresponding things in other lands, and is in turn greatly enlightened by this extended observation. Of course, things around him claim his first regard; that is not, however, because the reasoning about them is easier, but because the observation of them is more palpable and definite, and it is observation that is to be first exercised. As soon as he can reason at all, his imagination must be sent abroad. There is no force in the argument sometimes employed that his attention should be confined solely or chiefly to things about him on the ground that he may not be long at school, or that his future occupation may throw him into the midst of these. The mental exercise of the infant school must be

Meaning of  
the phrase  
"familiar or  
common  
things."



held to be independent of such considerations of time, place, or professional prospects.

**104.** The features common to all infant-school teaching will be noticed further on; so that, with regard to the method of the object-lesson, it need be only here stated that, as it has in view the cultivation of the conception and the higher faculty of relation, so both of these faculties must be exercised in their proper time and degree. The former cannot be furnished and stimulated, unless the object be actually subjected to the observation of the class, and that not to one sense only, but to all that are available. It is not enough, for instance, that in a lesson on "glass," the teacher should simply hold it up before the class, and on the strength of his own observation proceed to state its properties. It is *their* sight, and touch, and hearing that are to be exercised; so that he should first show it, then put it into the hands of the children to feel it, and then ring it on the table. This is often neglected, just because it seems needless; thus it may seem enough if the teacher squeeze a sponge to show that it is soft and elastic, or if he handle lead to show that it is heavy. But this is only an exercise of sight to the class; tactual as well as ocular inspection by some, if not by all, must be allowed. How far the reasoning of a child may be carried, and in what way it is to be exercised, has been indicated already (see §§ 39-49).

**105.** One great use of the object-lesson is to cultivate the conceptive faculty in connection with language; for which purpose it should, from first to last, present much of the descriptive part of our vocabulary (§ 87), dealing first with those terms that denote qualities broadly recognizable, before descending to the finer shades. The describing and

Actual observation and inspection of objects necessary.

The describing and naming of the qualities of things.

the naming the qualities of things is thus quite a legitimate resource in these lessons; still, as bodies possess the same qualities frequently in common, there is great danger of the object-lesson falling into a barren monotony of plan. To remedy this, the teacher will observe, (1.) that the universal qualities of bodies, or those which are nearly so, such as *useful, opaque, inanimate*, need be very seldom mentioned; (2.) that when qualities are given, there should be a *real* exercise of observation given with the name (§ 104); and, (3.) that the mentioning of these qualities should not, in the general case, constitute the whole of the lesson, but that other facts should be communicated, which are interesting to be known, and which exercise the imagination, the sense of beauty, and the moral feelings. This will prevent the verbal aspect of the lesson from obtaining too great predominance over the real.

**106.** A very common, though little noticed, Different stages in the Object-lesson. practical error in the giving of object-lessons, is the neglect to distinguish the different stages in the advancement of the children to whom they are given. An infant of four years is a very different being, intellectually, from one of six or seven; and can only to a very small extent follow a lesson addressed to him. Even in dealing with things we shall not secure the child's attention, unless we select things which interest him, and unless we address him in a suitable way. Perhaps we may distinguish three stages of the object-lesson. In the first, the pupil is required to distinguish objects by their names, to notice their parts, their color, and, a little later, their simpler properties, such as form and size; in the second, the lesson should deal chiefly with qualities and uses of things; and in the third, with a more formal statement of the various relations in which things stand to each other, resemblance, causality, etc. These three stages may corre-

spend approximately to the first year of attendance at the school, the second year, and the third year or part of year.

Subjects  
suitable for  
the first  
stages.

107. The following list exhibits a variety of subjects suitable for the first stage :—

I.—NATURAL HISTORY.

Sheep.	Bear.	Bee.	A Tree.
Cat.	Wolf.	Ant.	Rose.
Dog.	Fox.	Spider.	Lily.
Horse.	Hen.	Butterfly.	Daisy.
Cow.	Goose.	Herring.	Dandelion.
Donkey.	Duck.	Haddock.	Potato.
Goat.	Swan.	Crab.	Turnip.
Rabbit.	Crow.	Whale.	Carrot.
Hare.	Sparrow.	Worm.	Cabbage.
Pig.	Swallow.	Adder.	Grass.
Deer.	Robin.	Snake.	Leaves.
Mouse.	Pigeon.	Mussel.	Apple.
Lion.	Parrot.	Whelk.	Pear.
Elephant.	Pheasant.	Oyster.	Cherry.
Camel.	Common Fly.	Snail.	Berries.

II.—DOMESTIC ECONOMY.

Different kinds of Houses.	Articles for Breakfast and Tea.
“ parts of a House.	“ Dinner.
“ kinds of Roofs.	Things for washing with.
Things used in Kitchen.	Parts of our Clothes.
“ “ Parlor.	Vessels for holding things.
“ “ Bedroom.	A Fire.
Things for sitting on.	Utensils for Fire.
“ lying on.	Making of Tea.
“ eating with.	“ Coffee.
“ drinking with.	Porridge.
Breakfast-Table.	Bread.
Dinner-Table.	Candle.
Tea-Table.	A Bed.

## III.—PHYSIOLOGY.

The Body.	The Eyes.	Hearing.	Swimming.
Arms.	Mouth.	Seeing.	Standing.
Hands.	Nose.	Feeling.	Breathing.
Fingers.	Ears.	Smelling.	Sleeping.
Legs.	Throat.	Tasting.	Dreaming.
Feet.	Skin.	Running.	Singing.
Toes.	Bones.	Leaping.	Dancing.
Head.	Blood.	Walking.	Drinking.
Face.	Voice.	Hopping.	Eating.

## IV.—INDUSTRIAL AND SOCIAL ECONOMY.

Things for writing with.	The Railway.
“ sewing with.	What their parents do in a day.
The Cabinetmaker’s Shop.	“ brothers “
Baker’s “	“ sisters “
Grocer’s “	What they themselves “
Butcher’s “	Materials for Clothing.
Shoemaker’s “	Leather.
Tailor’s “	Materials for Building.
Painter’s “	“ Furniture.
Fruiterer’s “	Making Stockings.
Smith’s “	The School.
The Farm.	Work of the School.
Garden.	The Family Circle.
Ship.	One’s Relations.
Sailor.	Things of Stone.
Letter-Carrier.	“ Iron.
Soldier.	“ Tin.

## V.—COMMON THINGS.

Cart.	Clock.	Gas-light.	Nails.
Table.	Watch.	Drawers.	Thread.
Chair.	Picture.	Slate.	Rope.
Stool.	Window.	Ink.	Pen.
Coach.	Book.	Pins.	Quill.
Railway Carriage.	Scales.	Needles.	Shilling.
A Letter.	Bottle.	Scissors.	Egg.
Money.	Black-board.	Thimble.	Pen-knife.

## VI.—PHYSICAL APPEARANCES.

Aspects of Sky.	Aspects of Water.	Aspects of Winter.
“ Sun.	“ Vapor.	“ Thunder and
“ Moon.	“ Ice.	“ Lightning.
“ Stars.	“ Heat.	“ Rainbow.
“ Rain.	“ Cold.	“ Day.
“ Snow.	“ Spring.	“ Night.
“ Clouds.	“ Summer.	“ a Storm.
“ Wind.	“ Autumn.	“ a Calm.

Supposing an object-lesson to be given daily, the list of subjects now presented, making allowance for the geography object-lessons which are not here included, is large enough for a year's work; and it may readily be increased.

**108.** For the second stage or year, many of the foregoing subjects might be repeated, and information given on a larger scale; whilst a further selection of common objects should be made to exemplify the qualities of bodies and put the pupils in possession of descriptive terms. The following list is sufficient to exemplify all the more familiar qualities; it may be enlarged or varied at the teacher's discretion:—

Cork.	Salt.	Paste.	Silk.
Leather.	Whalebone.	Slate.	Barley.
India-Rubber.	Sand.	Coal.	Rice.
Sponge.	Bread.	Soap.	Pepper.
Glass.	Lead.	Horse-hair.	Ginger.
Iron.	Copper.	Feathers.	Rose.
Wood.	Gold.	Clay.	Hawthorn.
Water.	Tin.	Oil.	Tea.
Paper.	Mercury.	Vinegar.	Coffee.
Common Sugar.	Honey.	Chalk.	Milk.
Loaf-Sugar.	Gum Arabic.	Earthenware.	Balloon.
Wool.	Starch.	Putty.	Air-bubble.
Sealing-Wax.	Glue.	Wire.	Bladder.

After some practice in the observation of qualities inherent in particular objects, the idea of the quality in the abstract will gradually form itself, and the ground may be gone over again in reverse order. Thus a quality may be selected, *e.g.*, heavy, hard, smooth, brittle, elastic, tough, liquid, viscid, fibrous, pliable, fusible, porous, inflammable, or the like, and various objects which have the quality brought together, and the uses to which they are put in virtue of the quality slightly noticed. (§§ 29, 30.)

**Subjects suitable for the third.** 109. In the third stage, the pupil is required to trace relations more, particularly of resemblance and of connection by way of cause and effect. Such relations have not been altogether unnoticed in the middle series of lessons, but the teacher has greater latitude now. Most of the subjects of the second year are quite serviceable still; for there are many points connected with the form and utility of these which the pupil has not yet been able to comprehend. Bearing in mind that it is more in the tracing of incidental connections that the sense of relation is cultivated at this period than by the antithetic statements of the explicit comparison (§ 43), the following list presents subjects in the latter exercise for which the pupils may be deemed quite competent :—

Dog and Cat.	Hoof of Horse and of Camel.
Dog and Wolf.	Whale and Fish.
Dog and Fox.	Thumb and Forefinger.
Newfoundland Dog and Shepherd's Dog.	Bird and Quadruped.
Cat and Tiger.	Animal and Plant.
Rabbit and Hare.	Plant and Mineral.
Bee and Wasp.	Tree and Shrub.
Snail and Whelk.	Common Shrubs.
Duck and Goose.	“ Flowers.
Swallow and Sparrow.	“ Wild Flowers.
	“ Trees.

Coverings of Birds.	Common Shells.
Wool and Hair.	“ Esculents.
Nails and Claws.	Different states of Weather.
Needle and Pin.	“ kinds of Clouds.
Pen and Pencil.	“ “ Fuel.
Steel-pen and Quill.	“ “ Bread.
Knife and Penknife.	“ “ Soap.
Cart and Wheelbarrow.	“ “ Sugar.
Shilling and Penny.	“ “ Coal.
Cotton and Wool.	“ “ Glass.
Clock and Watch.	“ “ Nails.
Grate and Stove.	“ “ Stockings.
Snow, Hail, and Ice.	“ “ Lamps and Lights.
Hand and Foot.	“ “ Gloves.
The Teeth.	“ “ Locks and Keys.

110. The following are examples in outline of the different kinds of lessons suitable for the younger infants,—the successive points for illustration being indicated in italics:—

Example of  
Lessons for  
the First  
Stage.

#### I.—THE SHEEP.

Subject of lesson familiarly introduced—animal you often see passing you on streets, a great many going together, what can it be? The *sheep*. Where going to? the *market*, to be *killed*—*poor* sheep—*flock* explained—the *shepherd* in charge—the *dogs*.

Where did they come from? the *fields*—in the *country*—where the *grass* grows—the *green* grass—which the sheep *eat*. Did you ever see them in a field? What doing? *walking about*—*lying down*, sometimes at the *wall*, sometimes *under bush*—*eating*.

Were you ever near one? how *afraid* it is—how *big* is it? bigger than the *cat*? its color *white*, sometimes *black*. How it feels when you *touch* or *handle* it—*soft* all over, from the *wool* on its *back*. How many legs? What they are like,

and its little feet? *marks* left by a flock on the street or road. Its *face, ears, etc.*, sometimes *horns*; and with the horns they sometimes *box*—(if the season be spring the lambs should be noticed).

The sheep is very *gentle* and *timid*, and *hurts* no one—little children sometimes *throw stones* at it, which is very *wrong*—they should be *kind* to it.

## II.—A BED.

Willie—was sleeping a short time ago; what made him do so? he was *tired*. Should we let him *sleep long*?

The *use* of sleep—how *every one*, their fathers and mothers, brothers, sisters, etc., need it. *What* makes us sleep?—the *time* for it?

What we sleep in? a *bed*—put off our clothes, for we are to sleep *till morning*—what is in the bed? *blankets* for warmth, *sheets* to be *nice and clean*—*coverlet*, perhaps white or blue—the *mattress* thick and soft below.

We should be *thankful* to have comfortable beds to go to at night—some *have not*—*God gives* us this and all good things—what should we *do when we go to bed*? *Ask God* to take care of us through the night—and when we rise?

## III.—THE MOUTH.

Refer to previous lessons (perhaps) on face, eyes, nose, etc. What more to be seen on the face—look at your neighbors' faces—*mouth*.

Open your mouth, shut them, point to them—different things the mouth is for—*eating* when we are *hungry*, *drinking* when *thirsty*, *singing* when *merry*, *yawning* when *sleepy*, *speaking* when we have *anything to say*, etc.

Many things in mouth—*tongue*, which is soft—move them—little children sometimes *put out their* tongues, which is *naughty*—the *teeth* for *chewing*, e.g., bread, flesh, etc.,—many



of them *small* and *white*, and sometimes they *come out*—and for *shutting* the mouth we have *lips*.

We should take care what we *put into* our mouths—little children sometimes *hurt themselves* by putting strange things into their mouths—they should *ask* their mothers or their teacher first.

#### IV.—THE BAKER'S SHOP.

What do children bring to school with them? their books, playthings, but also their "*piece*" (lunch)—what they bring it for? to eat—*when* do we eat? different things we eat, bread, flesh, etc.

I have a piece of (wheaten) bread in my hand—its *color*? *hard* or soft? Where it comes from? the *baker's shop*—What does the *baker do*? does he give it *for nothing*? *what does he give it for*—you often buy for yourselves and your parents.

What have *you seen* in a baker's shop? *different* things named, with their color, and form, and degree of hardness.

How should we do without the baker, who makes so many nice things?

Yesterday I saw some *crumbs* on the floor, and a small piece of bread—notice how *easily broken* it is, and how *very careful* we should be with it not to waste it.

Conclude with the anecdote of the dog that went to the baker's shop every day, with the half-penny, and brought back the roll; or with the verses on "The Crust of Bread" (Appendix B).

#### V.—THE CART.

Tell me all the things you met in coming to school this morning—things named till they come to *cart*—the *man* that drove it, and the *horse* or *donkey* that pulled it.

Its parts—*wheels* and *spokes*—then the *shafts* for the horse to go in—the cart itself, its *bottom* and *sides*, and *back*. Draw or show model of cart or its parts.

What did you see *in* the cart? *coals*—get a *number of different* things named that they may have seen in carts—have you *ever* been carried in a cart? And when the cart is heavily laden it has *two horses*, and the other pulls by a chain.

What could we do without the cart? Little children sometimes get into their way in the street or road; which is wrong, for they may be hurt. So when we see a cart coming, we must quickly get out of its way.

#### VI.—RAIN.

What kind of day is this, children? day described, *sunny, clear, warm*, perhaps. Is it *always* so? What *other* kind of days have we? they are named till *rain* is mentioned. What was the *last* rainy day?

Where does the rain *come from*? what does it do? *wets* everything, streets, houses, etc.

You cannot *play* on rainy days—perhaps you wish there were none—but they *are needed* to make things grow, *trees*, and *grass* and *flowers*, etc.—did you ever notice how fresh and green all things look *after a shower*?

If you go out on rainy day what happens to you? your clothes are wet and spoiled, perhaps—children sometimes go *out in* rain, which they should not do.

*Who* sends us both rain and sunshine?—Verses on the Rain.

111. The following are outlines of more advanced lessons, such as might be given at the second stage; the first on a very familiar animal, in which the information is given on a larger scale than it would be to the youngest classes, the second on an object, with a special view to illustrate the qualities of it, and the third on a quality.

Examples  
for the Second  
Stage.

## I.—THE ELEPHANT.

The *general* size of the animal should be first noticed ; its *height* and *bulk* make it the largest of quadrupeds ; compare it in height *with a man*, and in bulk with the *largest animal* known among us, the horse.

What kind of *legs* it must have, *thick* and *strong*, like *pillars* ; what it has got for *toes*. Infer whether it has *joints* in its legs or not ; *necessary* to enable it to kneel for service of man. Its *head* big and heavy, with *hanging* ears ; infer the character of its *neck*. With a short neck, could it drink *off the ground* ? The substitute in the shape of a *trunk* ; describe this ; illustrate its power by an anecdote—*mouth* and *teeth* and *tusks*—*skin* compared with that of the horse in color and covering. Show the picture of the animal.

How *it lives*—perhaps some one may infer from its structure that it is not *flesh-eating*—eats *leaves* and *twigs of trees* in his tame state ; *rice* also is given.

*Countries* it lives in, and is intended for.

How *it is used* after being tamed—being strong, it can *do much work*—*carries* loads, *pulls* or *pushes* carriages, etc.—used for *riding* on—easy to *tame*, *gentle*, and *knows well* what is required of it.

NOTE.—The *inferential* or *comparative* aspect may be extended or diminished to suit the class addressed. The order here followed is—(1) structure ; (2) habits ; (3) uses. This is not always the best order to follow. Thus, in a lesson on the “camel” the habits or mode of life had better precede the structure. The rule is to begin with whatever the children know best about the subject. In the lesson before us, all that they know about it may be its general size and appearance, with the presence of the trunk or tusks.

## II.—THE SPONGE.

Notice the various uses of the sponge for *domestic purposes*

Then its qualities *by inspection*.—Its *color*, light yellow; *soft* to the touch; *light* in weight; easily squeezed by the hand, *i.e.* *compressible*; springs back again after being squeezed, *i.e.*, *elastic*; full of little canals, *i.e.*, *porous*; sucks in water, *i.e.*, *absorbent*; when torn, seems to consist of a *fibrous* substance.

[The different qualities here indicated must be clearly wrought out by the teacher, and verified by the class, before the terms are given. According to the advancement of the class, *other articles* may be named exhibiting any of the same qualities.]

How it is useful *for washing*—because of its *sucking in* the water, and throwing it out again *under pressure*, the fibres resuming their place again from their *elasticity*, and ready to suck in as before.

Tell the interesting story of “where and how it grows,” and “how it is got.”

### III.—THE TERM “POROUS.”

The term is supposed to have been illustrated before in connection with some familiar substance—sponge, for instance, as above.

Mention *anything porous*? *Sponge*. *How do we know it is porous*? what like is it? Full of holes or apertures. Can we always *see* the holes? No; they may be *very small*. How do we know it is porous, then? *Any other thing* that is porous? *Bread*; illustrate how it is so. *Wood* is porous; illustrate this by wood that has been lying in water. *Loaf-sugar* is porous; illustrate this by the appearance it presents when dropped into tea. On the strength of these illustrations, an easy definition of “porous” may be given: porous means “full of pores, or little pipes.” Then they may be told of the porousness *of the skin*. [The microscope would be of great use in such a lesson.]

112. There is considerable danger that the

Examples  
for the Third  
Stage.

teacher may confound the character of the "early" and "middle" object-lesson in his practice, and therefore a number of examples have been given of these, particularly of the "early," for analysis. There is less danger of erring in this way with the "higher" object-lesson, so that one outline may suffice :—

THE COMMON HEN		THE COMMON DUCK
	lives	
on the ground about our houses.		about ponds, in which it swims,
short and nearly round,	has a body,	long and flat, for resting on water,
thick and upright,	a neck,	longer and curving, to stretch under water,
short and sharp, to peck in ground,	a bill,	broad and flat, to grope in the mud,
with separate claws, fitted for walking and for scraping in the ground,	feet,	with a web, and placed far behind for swimming, so that it does not walk well,
short, and not fitted for water, either for a pond or for rain.	feathers,	longer, and constructed so as to be light, and to throw off the water.

113. As soon as the children can read print

Use of  
Blackboard  
in connection  
with the Ob-  
ject-lesson.

or script hand, this ability should be turned to account in the object-lesson. The heads of topics, or the names of qualities, should be written down to make them acquainted with the

forms of the words as well as to aid the impressing of the lesson; and the blackboard should present at the conclusion of each lesson the outline of what has been said. The previous paragraph exhibits what might be the appearance of the notes on the board at the end of the lesson there

sketched. The necessity of *sketching* on the blackboard for illustration, as it is felt in other lessons as well as in the object-lesson, will be adverted to hereafter (§ 220).

**114.** The moral aspect of the object-lesson is not to be overlooked. There is abundant room, Moral aspects of the Object-lesson. incidentally, for profitable reflection. This may take different forms. Thus, in lessons on objects drawn from the region of nature, as from animal life from the phenomena of the world, the beauty in form or in adaptation which we constantly meet with cannot but impress us with the wisdom, power, and goodness of the Creator, and with a sense of the homage which is therefore due to Him. From various animals we learn useful, practical lessons regarding personal or social habits; as order and diligence from the ant, perseverance from the spider, etc.; also, we have suggested to us our duty towards them. And from certain kinds of lessons such duties may be easily inferred as that of using temperately and thankfully our gifts, of kindness to others less favored than ourselves, of economy, etc. Some of these are exemplified in the outlines given in § 110. No general rules can be laid down either for the mode or the extent of such reflections; beyond these, that where occasion presents itself we are bound to avail ourselves of it, and that the reflections should be short and naturally suggested by the lesson.\*

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## 2. Number.

**115.** NUMBER is a property of things which the child observes very early, so that he may be exercised upon it as soon as he enters the infant school. He may be subjected to a mental training of very considerable extent in connection with number; regarding which the following remarks may be made:—

Nature of the Infant-School Instruction in Number.

(1.) As the child comes by his first notions of number through the medium of objects, so his whole training must be based on the observation of these. He does not use numbers for their own sake, but for the sake of the things to be numbered; he counts by sight, and is not able to abstract number from the things. He knows what five balls or five horses are, but he cannot reason about the number five. If it be understood that it is with number as a property of bodies that the infant has to deal, and not with the science of number, it will be very clear that he must not be occupied with rules or technical operations. This preliminary course of training is termed "on number," to distinguish it from the formal study of arithmetic. The teacher will find no aid for it in the ordinary text-books on arithmetic; he must give it orally himself.\*

**116.**—(2.) The child's observation of number  
*Extent of it.* will carry him over a wider range of numerical operation than might be thought possible at first view. It will enable him to work practically in all the fundamental operations. The outline of the course may be conveniently indicated by the following heads: (*a.*) Practical Numeration; (*b.*) The Adding of Numbers; (*c.*) The Subtracting of Numbers; (*d.*) Multiplying of Numbers; (*e.*) Dividing of Numbers; (*f.*) Combined Operations; (*g.*) Parts or Fractions of Numbers; (*h.*) Tables of Applied Number or Standard Measures. The details to be given under each of these heads should be studied with a view, not only to the nature of the operations, but to their order.

All we ask is that the teacher shall bear in mind that it is with infants he is dealing; that, therefore, he shall not expect them to comprehend or perform anything that is

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\* Since published, "First Steps in Arithmetic," by Rev. James Currie, A.M.

complex; and that he shall speak to them in familiar, untechnical language.

117.—(3.) This training in number, well conducted, is very valuable in the way of preparing for future study. The great obstacle to a useful study of arithmetic in school is the abstract way in which it is often taught, owing to which the pupil never thinks of finding illustrations of what he is taught in the things that meet him in daily life. From the habit of close association between number and things which it gives him, this preliminary training will give him a great advantage in his lessons in the upper school, even if its spirit be not there carried out as it ought to be.

Practical  
Numeration,  
with Exam-  
ples.

118. PRACTICAL NUMERATION.—(1.) *Significance of the numbers up to ten.* Each number must be taken separately, and a lesson be given on its power. Thus, for the lesson on “one,” write down on the board one line | one dot . one + one round O etc., and have them simultaneously repeated, *one* line, *one* dot, etc.; lay off on the lines of the ball-frame *one* ball; point to various things in the school, and have them similarly named, with stress on the number. Make the class mark down *one* line, *one* dot, etc., on their slates. In the lesson on “two,” show how it is formed by putting another *one* to the *one* already had; proceed quite as in the former lesson; extend and vary the questioning thus: a boy has two *eyes*, two *hands*, etc.; a cart has two *wheels*, etc., the class supplying the words in *italics*; and conversely, how many legs has a bird? how many scales has a balance? etc. Proceed similarly with the remaining numbers in separate lessons, always keeping in view to show how each number arises out of its predecessor by the addition of another of the same kind; and for this purpose introducing each lesson by a reference to the former.



(2.) *Reckoning with the numbers up to ten*—not only from one, but from other starting-points—not only forwards but backwards—not only by odds but by evens—not only in regular order but following the number of balls the teacher may lay off—the children sometimes raising a number of fingers, or marking on the slate a number of dots or lines, corresponding to the number of balls laid off.

(3.) *The symbols up to ten, in the first instance, must be learned gradually.* To verify the child's knowledge of these he may be required to lay off balls, or mark down dots, corresponding to the symbol which the teacher writes on the board in silence, and conversely to write down the symbol for the number of balls laid off by the teacher.

(4.) *In passing beyond ten*, the eleventh ball should be laid off on the line below that which has the ten, the twenty-first on the third line, and so on; so that it may be seen how eleven is ten and one; twelve, ten and two; twenty, two tens; fifty-five, five tens and five, etc. Each number will not require a distinct lesson.

**119. THE ADDING OF NUMBERS.** (1.) *Adding the numbers under ten to each of them in succession; the receiving number being, in the first instance, kept constant throughout the ten additions.*

Thus the first lesson would be on "adding to one;" 1 and 1 are 2, 2 and 1 are 3, 3 and 1 are 4, etc., the children counting in each case and then repeating the formulæ just set down. Then take the lesson backwards, and after that in any order, only keeping the receiving number the same; then apply the lesson by means of practical questions, thus: John had 1 penny, and his mother gave him 2 pennies more; how much had he? There was 1 tree standing at the water-side, and 4 more near it; how many trees in all? Do not be content with a mere number as the answers to these questions, e.g., 3 to the first, and 5 to the second. Insist

The Adding  
of Numbers,  
with Exam-  
ples.

on the full answer, 3d., 5 trees, or, "he would have 3d.," there were 5 trees;" and the class should often simultaneously add, "for 1 penny and 2 pennies are 3 pennies, 1 tree and 4 trees are 5 trees." Devote a similar lesson to 2 as a constant receiving number; 1 and 2 are 3, 2 and 2 are 4, 3 and 2 are 5, etc., and so on up to 10, taking care, when the sum goes beyond 10, not to put more than 10 balls or 10 marks on the slate in one line, but carrying the excess to the line below. Encourage the pupils to put questions to one another, particularly of the practical sort.

(2.) *Adding the numbers under ten, in their order, to each of them in succession; the added number being now kept constant throughout the ten additions.* Thus, the first lesson would be the "adding of one;" 1 and 1 are 2, 1 and 2 are 3, 1 and 3 are 4, etc. For second lesson, 2 and 1 are 3, 2 and 2 are 4, 2 and 3 are 5, etc.; and so on up to 10. The exercises should be conducted precisely as the former ones. It may be well to observe at this point that already a series of not less than twenty lessons in addition alone is provided, excluding revisal. The teacher who thinks that this minute subdivision is unnecessary and that the children can get over more ground in one lesson, and who accordingly does not keep to one number for one lesson, understands neither the infant mind, nor the object with which the course is given. He destroys the gradation in it, fuses its whole materials into one mass, and in this way deprives it of any training power. This remark applies to the whole of infant-school instruction.

(3.) *Exercises of a converse kind to the two foregoing:—* Whereas in those the two constituent numbers were given and the sum required, let any number now be given and its two constituents be sought thus: what two numbers make up 4? 6? 8? All the pairs that make up any one should be obtained; thus, for 4, 1 and 3, 2 and 2, 3 and 1,

(4.) *Adding may be extended, so as to include three small numbers, and by degrees more.*

(5.) *The adding of tens, first with themselves alone,—10 and 10 are 2 tens or 20; 10 and 10 and 10 are 3 tens or 30, etc., which is just the adding of lines of balls instead of single balls; and then with other numbers,—as 10 and 7 are 17, 20 and 5 are 25, 31 and 3 are 34. Each new number will not now need a separate lesson, for the process between 30 and 40 is just the same as between 20 and 30, and may be learned at one and the same time. Thus, let the teacher set off 20 on the two highest lines of the ball frame, and 30 on three lines lower down, say on the sixth and seventh lines; let him add to the 20 one ball on the third line, and to the 30 one ball on the eighth, then 2, then 3, etc.; it will easily be seen how 30 and 4 are 34, or how 32 and 4 are 36, just as 20 and 4 are 24, or 22 and 4 are 26, the 2 tens in the one case and the 3 in the other remaining quite unaffected by the process.*

The Sub-  
tracting of  
Numbers,  
with Exam-  
ples.

## 120. THE SUBTRACTING OF NUMBERS.—If it

be understood that all the operations in number are to be conducted in the same spirit as those of addition, it will be sufficient to give the outlines only of the following ones:—

(1.) *Exercises in subtracting the numbers under ten from each other in succession, the minuend being in the first instance constant. Thus, 9 from 10, 8 from 10, 7 from 10, etc.; 8 from 9, 7 from 9, etc. Subtracting should be based on addition: 9 from 10 is 1, for 9 and 1 are 10; 8 from 10 is 2, for 8 and 2 are 10, etc.; verified at each step by use of the balls, etc,*

(2.) *Exercises in which the subtrahend is constant,—as 1 from 2 is one, 1 from 3 is 2, etc., 2 from 3 is 1, 2 from 4 is 2, etc.*

(3.) *Exercises in which minuend and remainder are given,*

—as, what must be taken from 8 to leave three? etc.; also in which subtrahend and remainder are given, as, from what must 6 be taken to leave 4? etc.

(4.) *Exercises in double subtraction*,—as, take 2 from 8 and other 2, 3 from 10 and then 4, etc.

(5.) *Exercises combining addition and subtraction*,—as, add 4 to 6 and then take away 2, etc.

(6.) *Exercises with the tens*,—as, 10 from 17, 10 from 30, 90 from 100, 30 from 35, 5 from 35, 6 from 8, and, with it, 6 from 48, etc.

(7.) *Applied exercises to be constantly given throughout the whole series.*

(8.) *Addition and subtraction may now be conjoined with numeration*; as, count up to 100 by twos, by threes, by fours, by fives, etc.; count back from 100 by tens, by fives, by fours, by threes, and by twos; or count back from 90 by threes (90 being a multiple of three), from 80 by fours (80 being a multiple of four), etc.\* But the symbols for these larger numbers must be taught very slowly.

The Multi-  
plying of  
numbers. **121. THE MULTIPLYING OF NUMBERS.**—The “multiplying” of arithmetic is an artificial process derived from addition. Children have some difficulty in understanding its use, and always tend in their reckoning to fall back on the *natural* process of addition. To obviate the difficulty, the artificial process must be taught through the natural.

(1.) *Exercises in multiplying the numbers under ten by each other in succession, the multiplicand in the first instance remaining the same.* Thus:—

2 times 1 are 2	2 times 2 are 4
3     1     3	3     2     6
etc.   etc.	etc.   etc.

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\* We have used the technical terms in the exposition for convenience' sake, such as minuend, subtrahend, multiple, etc.; these, and any hereafter to be used, are addressed to the teacher, however, and should not be used before the class.

The proper way to put these exercises is this:—

1 and 1 are 2, then 2 times 1 are 2			
1	and 1	3,	3
1	and 1	and 1	4
1	and 1	and 1	and 1
2 and 2 are 4, then 2 times 2 are 4			
2	and 2	6,	3
2	and 2	and 2	4
2	and 2	and 2	and 2
etc.		etc.	

(2) *Exercises in which the multiplier is constant.* Thus:—

2 times 1 are 2			3 times 1 are 3		
2	2	4	3	2	6
2	3	6	3	3	9
etc.			etc.		

This step is more difficult than the former; any operation is not seen to rise out of the preceding one so evidently. In each of the two steps now given one number only should be taken as the subject of lesson, either as multiplicand or multiplier, and the table of results connected with it thoroughly learned.

(3) *Exercises in multiplying tens and in multiplying by tens.*

(4) *Exercises in decomposing numbers into their factors.*—

First give one factor; as, what must 4 be multiplied by to give 12? Then require both factors, as, what two numbers multiplied by each other give 6, 8, 9? This exercise corresponds to the decomposition of numbers under the head of addition, with which it may be compared. The teacher must carry the eye of the child along with him in this process. Let him make rectangles and squares with the balls. Thus, if he wishes the factors of 12, he should present 12 to the class, (1) in a line, (2) in two lines, (3) in three or four lines; thus:—

.....	(1 × 12)
.....	(1 × 6)
.....	
.....	
.....	(3 × 4)
.....	

It is an interesting exercise for him to make rectangles on the ball-frame, or to get the children to make them, then cause the class to count the balls in them by counting the two sides, and notice how the removal of a row or two rows affects the result; and conversely to make them construct rectangles of which he gives the number in the sides.

(5) *Exercises in double multiplication by small numbers, and in the adding of two multiplications.*

(6) *Exercises of application, e.g.*—Five boys get 2d. each, how much money was given to all? John passed 3 flocks of sheep in coming to school, having 6 in each; how many sheep did he see? Two loaves at 2d., and 3 at 3d., cost how much in all? Three of you hold up all the fingers in the right hand, how many fingers are up? Six of you hold up all fingers except the thumbs, how many fingers are up? In each of these 6 seats there are 9 boys, how many are there in the gallery?

The field for putting these applied questions is widening; the teacher's ingenuity must task itself accordingly

**122. THE DIVIDING OF NUMBERS.**—As multiplication is an artificial form of addition, so division is of subtraction; the same link of connection must therefore be kept up between division and subtraction.

(1) *Exercises where the divisor is constant.*—To give the class an idea of the nature of this operation, the teacher may count 10 or 12 balls in their presence, saying that he wishes to give 2 to each child and to know how many children he can give them to; or to arrange the children into rows of 2 each and know how many rows there will be. The result will be attained, in the first instance, by taking 2 and 2 successively till the number is exhausted, *i.e.*, by subtraction. The first lesson in division should be "dividing by 2;" for which purpose the balls on the frame may be

The Dividing of Numbers.

arranged in successive lines below each other, 2, 4, 6, 8, 10, and 12. Then in first line (2) there is one 2, in second line (4) 2 twos, etc.; and the table of results is learned, 2 in 2 once, and 2 in 4 twice, etc. For 3 the same arrangement of the balls may be adopted; but for numbers above that they must be placed in mass to get dividends large enough. There are no better illustrations of division than those which are got by arranging the children themselves in rows.

(2) *Easy exercises with remainders.*

(3.) *Exercises in which multiplication and division are used correlatively*,—as 10 in 30, 3 times; then 3 times 10 or 10 times 3 are 30.

(4) *Exercises of application.*—If 9d. be divided among 3 girls, what will each get? How many sixpences in 18d? weeks in 21 days? etc. In one seat, where all the children held up all their fingers, there were 100 fingers up; how many children in the seat? etc.

**123. COMBINED OPERATIONS.** — Cross-questioning is of great use to the teacher; it enters largely into his art of impressing. It connects one point of the pupil's knowledge with another, and makes them all available for mutual illustration. It may be profitably resorted to in lessons on number. For this purpose combined operations may be performed almost from the beginning of the course. Thus, when the children have got a little of addition and a little of subtraction, they may be practised on both adding and subtracting, as parts of the same question; so with multiplication and division.

The following example shows how cross-questioning may be used in connection with any number:—

*On the number 8.*—What is the last below it? Count up to it? Next above it? Count four above it? Two numbers that make it up by adding? other two? Three num-

bers that make it up by adding? What must be added to five to make it? Take one from it? two? three? How much greater is it than four? than two? how much less than ten? than twelve? What taken from eleven will give it? How many twos in it? fours? What number divided by two will give it? by three? What does forty give divided by it?

Then the questioning may pass on to concrete numbers:—

Eight boys having apples put them into two rows, how many in each? then into four, how many in each? Each boy got an additional apple, how many had they all now? One boy ate his, how many remained? two, how many remained? Only one boy of the eight kept his, how many were eaten? Other three boys came in each with apples, how many apples were there now? with two each, how many now? Four boys gave theirs to their neighbors, how many had each of these four? and how many apples were there in all? These eight apples were taken from a stall in which there were twenty, how many remained in the stall? And so on indefinitely.—Such exercises may be made very amusing, and are valuable from the readiness they encourage.

#### 124. PARTS OR FRACTIONS OF NUMBERS.—

**Parts or Fractions of Numbers.** Elementary notions and operations in fractions are just as available in the infant school as those in whole numbers. The half of a thing is as easy of comprehension as the double of it, the third part as three times it; that two halves make a whole or three halves one and a half as that two twos make four, or three threes nine; provided the illustration given in the two cases be equally simple.

(1) *Exercises to illustrate what a fraction is.*—An apple is to be divided between Willie and his sister, what must be done with it? It must be *cut*. Will it do to cut into a big



piece and a small piece? No, they must get pieces of the same size. Look at me, now, while I cut it (teacher holding up the two pieces). Are they about the same size? Yes. Then each of them is called *a half*. How many halves in the whole? Two. Could I divide an orange into two parts of same size? Yes. What would each part be? A half. Here is a bit of string, of paper, of wood, etc., which I shall divide into two bits of same size; what do you call each? A half. Then if I put two halves together, what do they make up? The whole.—Take another apple, and illustrate a third in the same way. The subdivision of the halves will show how fourths or quarters arise, of the thirds how sixths and ninths arise, and of the fourths how eighths. The fifths and sevenths must be explained by cuttings for themselves. Beyond these fractions it is not necessary to go. For further illustration it would be desirable to have a rod, say a yard long, divided into halves, fourths, and eighths, and another into halves, thirds, and sixths. The solid cube divided into eight parts, and another into six parts, would also be very useful. But the balls on the frame, and counters of any sort, may also be turned to account; for six balls may be divided into two groups or three groups, to illustrate halves and thirds, and so on.

(2.) *Nature of the exercises in fractions. In equivalence:* How many halves in one? in two? etc.—How many thirds in one? in two? etc.—How many fourths in one? in two. etc.—How many fourths in a half? in a half and a fourth?—How many sixths in a half? in a half and a sixth?—How many sixths in a third? etc. *In addition:* A half and a half make? a half and a half and a half make? a half and a fourth make? one third and one third make? one third and two thirds make? one fourth and one fourth make? one fourth and two fourths make? one fourth and one half

make? etc. *In subtraction*: One half from one gives? from one and a half gives? one fourth from three fourths gives? from one half gives? from one gives? from one and a fourth gives? etc. *In multiplication*: What is the double of a fourth? four times fourth? three times a third? three times a sixth? etc. *In division*: How many halves in one? in two? in one and a half?—How many fourths in one? in one and a half? in a half? etc. *In comparison*: Whether is a half or a third the greater? a third or a fourth? a half or three fourths a fifth or a sixth? etc. *Applied questions* may be given under all these heads, especially with the pence table. What is a farthing? how many in twopence? Difference between a penny and a farthing? a halfpenny and a farthing? What must you add to a halfpenny to make twopence? etc. It may be repeated here that for verification of the results the children should manipulate with the illustrative apparatus as well as the teacher,

**125.** The ball-frame is the principal means of illustration used in infant schools; it is proper, therefore, to give the following cautions as to the manner of using it: (1) It is not to be used beyond the pupil's ability to follow it with the eye. Rapid operation with 40, 60, or 80 balls does nothing to aid the observation; it can neither lead to, nor verify, any result. When the frame is used at all, it must give *bonâ fide* illustration. (3) It must be used as a means, not as an end. The child is not learning the ball frame, but operations in number through its help. Particular manipulations, therefore, need not always be repeated after they have served their purpose. It has already been indicated that the different operations, after being performed with the aid of the frame, are to be performed without it.

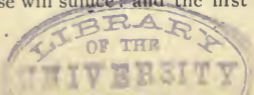
**Cautions  
for the use of  
the ball-  
frame.**

Manner of  
conducting  
the Collective  
Lesson on  
Number.

126. These lessons in number may be assumed to be given by way of collective-lesson. Interest, and rapid distribution of questioning, are the elements of success in such teaching. To be interesting, the questions must deal with familiar things, must be varied, and must be simply expressed; in a word, must come into contact with the child's daily experience. To be rapidly distributed, the teacher must have at command all the possible forms in which questions may be put; with which view he should, at the beginning of his career, write down all these forms, and learn them as so many formulæ. He has then only to vary the *things* mentioned in the questions, which a little practice will enable him freely to do. It is not to be expected that a lesson of this nature can succeed unless the children feel that the teacher speaks from a full mind, and is quite at ease.

Number as  
applied to  
Standard  
Measures.

127. STANDARD MEASURES.—Lessons on number must make the child familiar with the various units of measurement used in the affairs of life. These are excellent illustrations of the different operations; and, besides, he needs to know them. He must become familiar—(1) With the units themselves; (2) with the relation of different units of the same kind; and (3) with the application of them to practical purposes. For the first of these ends, the units must be constantly before him; for the second, he must see them compared, and with his own hands compare them; for the third, he must see them applied, and with his own hands apply them, to the measurement of things about him. In this way, what appears so formidable a task when presented in the shape of reduction-tables to be learned, will become an easy, natural, and most interesting exercise of his senses and his activity. It is needless to carry him through all the tables; those in most common use will suffice; and the first place is due to—



Number as  
applied to  
Value.

128. *Number as applied to Value, or the Money-table.*—The child necessarily becomes familiar with this to a certain extent without any special training, and the preceding exercises have assumed such an acquaintance; but it is well that distinct practice in the use of money be given. He must complete his acquaintance with all the coins therefore, with farthing, halfpenny, penny, threepenny-piece, fourpenny-piece, sixpenny-piece, shilling, florin, half-crown, crown, half-sovereign, sovereign, and one-pound note. Their forms should be examined, their sizes, colors, weights, sounds, and the stamps upon them; their points of resemblance and of difference noted, so that he may be able to tell them at once on seeing them, to describe them, or recognize them on description. He must be exercised in adding, subtracting, etc., different sums, in every variety of language. And he should go through little processes of buying and selling in imagination, in which he shall be accustomed to give back and get back the proper amount of change. Actual counting and handling of the money is indispensable.

Number as  
applied to  
Size or Linear  
Measure.

129. *Number as applied to Size (linear).*—In going through a parallel process with this table, the teacher should have beside him an inch measure and a three-foot rule, to show the foot and the yard. For verifying operations, he should have twelve inches, some three-inch measures, six six-inch measures, and three foot-measures; slips of wood cut to the size will do. The child should be able to tell them all at sight. The field of questions on their relative size is very wide, thus: (holding up foot-measure) How many of the smallest measures (inches) in it? what part is the inch, then, of foot? How many of the next smallest (3-inch measure) in it? of the next? How may it be made up by three slips (half-foot, and two of the three-inches)?

of four slips? of five (6-inch, 3-inch, and 3 inches)? of seven? In each case the process of comparing should be gone through. When the children are familiar with the measures, things should actually be measured. What is the breadth of this book? its length? its thickness? the height of this picture above the floor? the length of the picture? of the pointer? of some of the children selected? the depth of this cup? this jug: the length, breadth, and thickness of this cube? the dimensions of the school-room floor by ad-measurement? etc. Draw a line on your slates an inch long, up and down? the same even along? the same slanting? two of them? six in order? the same half an inch long? alternating an inch and a half inch? two inches long? alternating two inches and one inch? three inches? etc.

**130. Number as applied to Weight.**—If the spirit of the previous exercises be understood, it cannot be necessary to exhibit the details of those upon weight. Suffice it to say, that the children must acquire their notions of weight by weighing. For this purpose, the teacher should have beside him a pair of scales, with the different current weights, 1 lb. 2 lb.,  $\frac{1}{2}$  lb.,  $\frac{1}{4}$  lb., 1 oz., 2 oz.,  $\frac{1}{2}$  oz.,  $\frac{1}{4}$  oz.; and duplicates enough to show equality, 16 oz. for the lb., two  $\frac{1}{2}$  lb., four  $\frac{1}{4}$  lb., two 1 oz., two  $\frac{1}{2}$  oz., four  $\frac{1}{4}$  oz. For weighing, he should have sand, small shot, or some equally convenient thing; and he should also often weigh common articles. Let the questioning be varied as before.

**131. Number as applied to Square Measure.**—The most convenient apparatus is a diagram of the square inch, square foot, and square yard on the school wall, white lines on a black ground; the yard divided into its nine feet, and the foot into its 144 inches. Handkerchiefs or towels may easily ex-

emplify the yard and the foot. Any rectangular object in the school, such as the slate, the board, the map, the picture, etc., are convenient for this measurement.

**132. *Number as applied to Capacity.***—In liquid measure, the gill, the pint, the quart, the gallon are the measures to be shown. In dry measure, the peck, the  $\frac{1}{2}$  peck, and the  $\frac{1}{4}$  peck will suffice.

Lastly, *Number as applied to Time* gives an important series of lessons. though there cannot be ocular illustration with them. Experience, however, makes them quite intelligible; the second, the minute, the hour, the day, the week, the month, the year, should all come under review.

**133.** The steps in this series of lessons on applied number must be taken gradually, just as the child can bear; each one being thoroughly mastered before another is taken up. They afford scope for all the fundamental operations, and particularly for fractions. The *reduction-tables* should be learned after the practical exercises in each kind of measurement; but the children, so far from finding this difficult, will be able to construct the tables along with the teacher on the board.\*

### 3.—On Color and Form.

**134.** Color and Form should have a distinct and no unimportant place assigned to them amongst the instruments of infant-school training. They are two properties of bodies the most general, and, for the child, the most distinctive; they both appeal to the sight, and are therefore very early recognizable; they occur in endless varieties, and therefore afford ample scope for the training of the observation. Lessons

on Color and Form are necessary to enable the child to form correct impressions of the things about him. But they have another aspect, the latter of them particularly. Color and Form are the elements of *representation*, pictorial and linear. An acquaintance with them is needed, therefore, before we can interpret such representations; a power of much consequence, considering the wide circle of things of which we can learn only through representation. Besides, the child is at a later period to be instructed in certain departments of the art of representation, to wit, drawing and writing: for both of these the lesson on Form is a valuable preparation.

135. Color and Form have been mentioned

Peculiarities of each Department.

together because they are the proper complements of each other. Their instrumentary character in training differs, however, in these two

particulars: (1) Color, as a property of bodies, is recognized before Form. From experience we see that it fixes the attention of children earlier than Form. The reason is that the recognizing of it is an exercise of simple sensation only; whereas the recognition of Form is an exercise of complex or double sensation. Color is recognized by simple sight; Form by sight combined with motion, the motion of the muscles of the eyeball. Practically, then, we speak to infants of Color, before we speak to them of Form. (2) Though earlier available, Color is less useful as an instrument of training than Form. The tints and shades of Color are, no doubt, exceedingly numerous, and the effects producible by their combinations are of inexhaustible variety; but the child cannot and need not notice all these. It is enough if he can discriminate the leading species (hues) of Color with a very few of their most commonly occurring modifications as to tint or shade. But the variety of forms which he needs to discriminate are indeed endless; of the

common things about him no two have precisely the same form. And from the nature of the sense to which it appeals, variety of form is easily distinguishable to a much greater extent than variety of tint and shade in Color.

### Color.

**136.** The design of the lessons on color may be stated as twofold. It is (1) to enable the child to discriminate the commonly-occurring colors; and (2) to cultivate his taste, so far as to habituate his eye to those combinations of color that are known as harmonious. Any experimenting on the physical relations of colors beyond this, such as explaining the effects of their admixture, or the numerical ratios involved in their harmony, is quite beside the mark. We have not to deal with color as a science or as an art, though it is both, but simply as a property of bodies. The elements of instruction are few, but there is constant room for their application.

**137.** As a natural order for the lessons on color, the following might be adopted:—

Order in which they may be given. *First Series:* On *white* and *black*, with their mixture in *gray*. White and black are not, properly speaking, colors; white is the neutralization of color, black is the absence of color. They are the extremes, however, within which the colors lie, and by which they are measured; so that a knowledge of them is necessary. And they first present themselves to notice; *light* is represented by white, *darkness* by black, and by reference to light of the sun and the darkness of night the notion of white and black is given.

*Second Series:* *Red*, *blue*, and *yellow*. These are the three primary colors, so called, which produce all other colors by



composition in various proportions, but cannot themselves be produced by any composition.

*Third Series: Purple, orange, green.* These are the secondary colors, so called, produced from the admixture of the primary.

*Fourth Series: Russet, olive, and citrine.* These are the tertiary colors, so called, produced by admixture of the secondary, thus—purple and orange give russet, purple and green give olive, orange and green give citrine.

*Fifth Series.*—Those now named are all the hues of color; but each of these hues has different tints and shades, according as it is mixed with white or black, more or less. Thus red may be varied into crimson, scarlet, pink, etc.; yellow may be varied into lemon, straw, primrose, etc.; and blue may be varied into stone, sky, slate, etc.

**Apparatus.** 138. For giving these lessons on color, the teacher may have them exhibited on a board either together or singly; but the best possible color-board is one made by himself and the children with the help of a box of paints and white card. If he cannot get a board for the purpose, he may procure other apparatus in its stead. He may get small squares sewed with the different colors of worsted, in the manner of a sampler; or he may find the colors exemplified in the skeins themselves, in bits of merino, silk, or ribbon, in paper, wafers, glass, etc. After the children have *observed* any color, red, for instance, they should single it out of many others; than be required to name things which show it, as blood, a rose, and other flowers; the robin, and other birds; sealing-wax, a soldier's coat, binding of a book, shawl, hair, etc.; also to think at home of as many things as they can, and mention them in the next lesson. A color need not at this time be distinguished into its different shades.

How the sense of Harmony in Color may be Educated.

**139.** In seeking to give to the child some perception of harmony in color, whilst he may be told that certain colors agree beside each other, and certain others do not, it is to be remembered that it is the eye that is to be trained in the first instance, and then the mind. A sense of concord in music, whether in melody or harmony, grows up in one after hearing it exemplified frequently; without this no explanation can have any meaning. So in color: the eye must have the opportunity of dwelling frequently on harmonious combinations. When it is accustomed to these, it will instantaneously be offended by a combination which is not harmonious. The presence of all the three primary colors, either pure or in combination, being required to produce harmony, it will be understood that red and green harmonize, as also yellow and purple, blue and orange, green and russet, orange and olive, etc. This principle should guide teacher and children in the combinations they make of their slips of color in designing patterns. An eye familiar with such juxtapositions will not tolerate such as yellow and orange, blue and purple, red and orange, blue and green, orange and russet, and the like.\*

### Form.

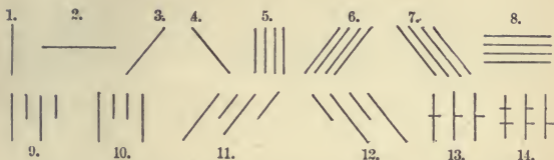
General Scope of the Lessons in Form.

**140.** The lesson on Form deals with forms of all the kinds of dimension; with those of one dimension or lines, those of two or plane figures, and those of three or solids. In each case the forms must be traced, as exemplified in the common things of life.

Straight Lines.

**141.** To commence with lines: the following diagram represents what may be the first series of lessons, or some of them:—

I.

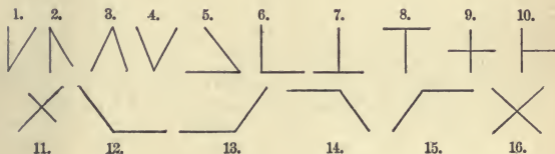


The simple straight line gives materials for a large series of lessons, as there are various ideas to be developed in connection with it, viz., straight, up-and-down (perpendicular), even-along (horizontal), sloping, equality of length, equality of thickness, equality of width between, bisection, and trisection.

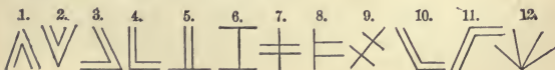
Combinations of Straight Lines.

142. Combinations of the straight line suggest another series of which these are examples:—

II.



Extended by duplication thus:—



**Plane Figures.** 143. Plane figures may be grouped according to the number of sides that constitute them; triangles of various shapes, four-sided figures comprehending the square, the rectangle, the rhomb, the rhomboid, the trapezium, the polygon, including the pentagon, hexagon, and decagon:—

## III.



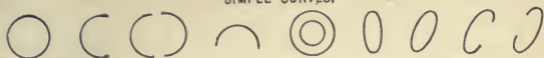
**Inventive Exercises.** 144. There is no invention exercised in the construction of these forms; but, when the children have had some practice in imitating, they should be encouraged to invent, *i.e.*, to put together the elements already learned into new patterns, combining line with line, or figure with figure, or figure with line, thus:—

## IV.

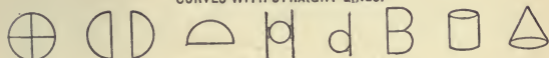


**Curved Lines.** 145. The curved lines are more difficult to deal with; but some practice must be given in making them also, since they occur in the letters, and in many familiar things. Thus:—

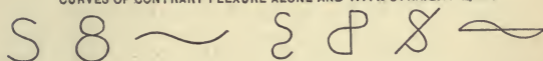
## SIMPLE CURVES.



## CURVES WITH STRAIGHT LINES.



## CURVES OF CONTRARY FLEXURE ALONE AND WITH STRAIGHT LINES.



**Application of these elements to commonly-occurring Forms.**

146. The mere imitation of these various forms on their slates interests the children ; but the interest is greatly increased when the different forms are applied to practical purposes. This application is twofold : (1) to commonly-occurring *forms*, (2) to commonly-occurring *things*. Under the first fall the letters of the alphabet—both small and capital, both in print and in script. The alphabet-board is useful here and also the letters separately on slips of mill-board ; but the teacher should draw them on the black-board, classifying them according as they are straight-line letters or curved letters, and noticing the parts they are composed of with reference to the elements already learned. A similar course should be followed with the numerals, first the common or Arabic characters, then the Roman.

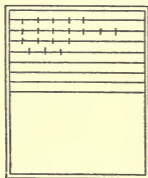
**Application of these elements to commonly-occurring Things.**

147. But the application to things is more interesting still, from the appeal it makes to their curiosity and their imagination. All forms from the very simplest may be found in things : straight lines and figures, as in a pointer, pen, pencil, comb, book, picture, win-

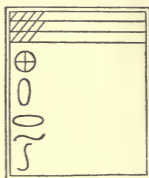
dow-frame, arrow, sword, stool, table, house, castle, box, star, cross, door, etc.; curves, as in penny, sixpence, targ cup, saucer, bottle, jug, whip, walking-stick, candlestick extinguisher, spire, cart-wheel, spinning-wheel, knife and fork, spoon, basket, ship, pillar, chimney, flag-and-staff, clock-face, a leaf, an apple, cherry, plate, tub, bell, gun, key, drum, trumpet, a cheese, a loaf, an egg, the moon, etc., etc. The thing should be associated with the form, and some conversation held upon it, or some little story given in connection with it, whilst the outline is before the eye.

**Apparatus.** 148. The apparatus for the lesson on form, so far as it has been described, is very simple; all that is indispensable is the black-board for the teacher, and slate and pencil for the class. It will be found convenient to have the slates ruled, not over their whole surface, but partially; so as to give the children a little help without restraining their freedom of imitation. Perhaps the most convenient form of ruling is this:—

FOR STRAIGHT LINES AND FIGURES.



FOR CURVES.



On the one side the upper half is ruled, and a few points put on some of the lines; and, on the reverse, a few lines ruled for writing, and the simplest curves are represented.

It will contribute very much to the regularity and uniformity of the lesson, that the slates should be the property of the school, each class having its own set attached to it

in its own box. Though not indispensable, it is serviceable to have diagrams of form: a board, *i.e.*, on which the geometrical forms are represented, both planes and solids, with their proper shade. Very serviceable, also, is a number of slips of wood, or laths, by means of which the children can construct any of the forms, either straight lines or rectilinear figures, which the teacher draws on the board. Thus, all the examples in §§ 141-144 may be exhibited, the requisite number of children holding the laths, in vertical lines, in slanting lines, in even-along lines, in triangles, rectangles, etc., as the case may be.

**149.** There are two senses in which solids may be made materials for lessons on Form. According to the one, the geometrical solids are exhibited and their outlines made familiar; this is of much service, and the teacher should have a box of solids for this purpose, and a series of representations of them, shaded if possible. According to the other, by the use of solids themselves, such as cubes, parallelopipeds, cylinders, cones, pyramids, etc., the invention is taxed to construct different forms. These, in fact, are so many bricks, stones, pillars, towers, arches, etc., with which the child becomes a builder. Such engagement seems well suited for an individual child or for a family, as it must foster the taste, the imagination, and the habit of perseverance; and it may be provided in the play-ground of the infant school (§ 26).

**150.** The lesson on Form may be given either to the whole school collectively, or to separate groups, the latter being the better way. One caution, however, should be given: it must be viewed as a lesson, and not as a mere device for occupying the children while the teacher is otherwise engaged. Doubt-

Form-lesson  
not a mere  
amusement.

Solids and  
their Repre-  
sentations.

less, it may be made very interesting and amusing; nevertheless it is instruction proceeding upon a principle, in systematic order, and with a view to the attainment of certain results. The teacher must bestow some forethought, therefore, on its arrangement, and exercise adequate superintendence over the class engaged in it.\*

Example of  
Form-lesson  
on the even-  
up-and-down  
(perpendicu-  
lar) line.

15L. Subjoined are examples of the lesson on Form in different stages:—

### I. *On the Perpendicular Line.*

1. Teacher holds in his hand (suppose) a bit of string, stretched by some object attached to its other end; children notice its appearance; teacher then holds in his hand a bit of string which is curled and twisted, from having been rolled round something; children notice the difference; the one even or straight, the other not.

The teacher similarly contrasts the pointer with a walking-stick or cane; also, a straight lath with a slightly-bent one.

2. Again, the teacher holds in his hand the straightened cord, (1) perpendicularly, (2) slantingly, and the children notice the difference; the pointer, stick, lath, etc., held (1) perpendicularly, (2) slantingly. This will give the further notion of *even-up-and-down*; which word may be used for a while instead of perpendicular.

3. Teacher asks them to watch him as he draws an even-up-and-down line on the board; they follow with the eye; he asks how it was done; examines whether it is *straight*—whether it is *even-up-and-down*; places the pointer or lath along it, and they see it is. Would this

do? / Why not? This? / Why not? This? |



Why? Who can draw one on his own slate? All draw one; teacher looks and criticises a little.


4. Teacher asks for any common things in shape of an even-up-and-down line. A pointer held up; that is designed for ——? A ruler; that is ——. A flag-staff; that is for ——? A mast of a ship; that is for ——? Some trees, which grow in the ——?


5. They then draw on their slates a number of these even-up-and-down lines.

NOTE.—One idea is enough in one lesson. Here it is the idea of even-up-and-down. The children need not at present attend to the *distances* of the lines from each other, when they make a number.—Another lesson similarly illustrated would be given to the slanting line to the right, another to the slanting line to the left, another to the even-along (or horizontal) line. So a distinct lesson would be given to equality in length, equality in thickness, equality in slope, and equality in width, thus:—


## II. *Equal Width or Distances.*

Example of Lesson on even-up-and-down lines at equal distances.

152. Teacher draws 

1. Count how many lines are there; what kind of lines? Would this be the same?  Why not. What is between every two lines? A space. How many spaces are there? If I draw another line, how many lines? spaces?

2. Teacher tells them to notice that spaces are of same width—measures them before the class. If I want all

spaces to be the same, then, would this do? 

Why not? How do you know? You don't need to measure

that, you see it. Now, make three even-up-and-down lines yourselves on your slates. They draw three, and the teacher criticises a little.

3. Think of any things we could get to show even-up-and-down lines with same width between them. We could do it with fingers—three children hold one finger each together—with arms in same way—with pointers or laths—some are called on to put these in position. Another thing yet in the school which shows them? The ball-frame. Count the wires and the spaces.

Anything not in school which shows even-up-and-down lines at equal distances? A railing, which is made of ———? and is used for ———? A bird's cage, which is made of ———? and is used for ———? Grating in some windows, which is made for ———?

4. Now make some rows of even-up-and-down lines on your slates.

### III. *On the Oblong or Rectangle.*



Example of  
Lesson on a  
plane-straight  
line Figure—  
the Rect-  
angle.


153. Teacher draws it by degrees, thus: |

What is this? An even-up-and-down line.—

┌ What is added here?—and here? ┐

and here? ┐ Another way of making it—What are

these? ┌ ┌ Two even-up-and-down lines of same length.

Join them.  How many lines in all? how many *kinds*?

how many of each kind? Are they separate? how many corners? What is within the lines? a space? Are the lines of same length? any two of them—teacher measures them—pupils draw one for themselves, and teacher criticises a little.

2. Name anything you know which is drawn by four lines in this way—a slate, which is for —? a black-board, which is for —? a map, which is for —? the ball-frame, which is for —? a book, which is for —? Count all the sides in these. Also a window, which is for —? the door, which is for —? a sheet of paper, which is for —? etc.

3. The pupils proceed to draw figures for themselves, the teacher giving them directions how to use the lines ruled on their slates, and the points indicated on them.

#### IV. *On the Circle.*



154. Teacher holds up a penny, sixpence, etc.—gets the shapes named successively—  
Example of Lesson on the plane curve-line Figure—The Circle. holds up a circle cut in paper—another shape more or less nearly circular—children observe difference.

2. Teacher draws on board a figure nearly circular—then a circle, the children following the chalk—teacher takes a line and measures across the centre-point, and shows the children how this is always the same—draws a few such lines (or diameters) through the circle—then through the other nearly circular figure, and children observe the difference. They draw one on their slates.

3. Things named which are round: various coins; cart-

wheel, used for — ? and which well illustrates the circle ; a cheese, for — ? a chimney, for — ? a hoop, for — ? the sun, which — ? etc.

4. Children then proceed to construct several on their slates.

NOTE.—Lessons on the forms of solids are the most advanced of which they are capable, and differ from the preceding lessons in this particular, that they are not fully or not at all within the child's power of drawing. But he should be taught to recognize the forms of all the solids when he sees them drawn ; which he cannot do till his eye is educated. With this view lessons should be given on each of the solids ; as the cube, prism, pyramid, cone, etc. Subjoined is the example of a lesson.

### V. On the Cylinder.

155. *To give a general notion of its form,*  
 Example of Lesson on Solids—The Cylinder. teacher holds it in his hand before the class—turns it on its axis vertically—the same horizontally—rolls it. It is *round*—holds its end towards the class—they recognize the circle—two ends and surface—teacher sets it on end—children name anything corresponding in form, as a pillar—lays it down—children name something corresponding to it in outline, as a roller. Length varies ; to show which it should be cut parallel to its end in one or two places.

2. *To explain its form in the drawing before the class, it being drawn on end.* Teacher places it on end—children trace its outline—its round front, how much of it seen?—the two vertical lines that bound its front—part of its base line—its top, not quite circular in appearance—all these lines actually traced—teacher draws it, or points to drawing—children trace the corresponding lines.



3. Children name a number of things cylindrical in shape, so see that it is a common form—pillar, roller or baton, tin

box, a tree so far, a map or sheet of paper rolled up, a pitcher, a hat so far, etc.

4. Children imitate cylinder on their slates.

NOTE.—If the drawing before the class be shaded, this must be explained by reference to their experience. They observe things casting shadows, men, pillars, trees, etc.; thus they will understand on what side the shade should be. The drawing of a cylinder in other positions should be deferred to other lessons.

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#### 4. On Singing.

**Necessity of Singing in the Infant School.** 156. Singing is absolutely indispensable in the infant school. The child is naturally sensitive to sweet sounds. The mother sings to her child to soothe its sorrows and enliven its joys. The child sings to itself; almost unconsciously indeed. If it be not in possession of any melody, it will yet put sounds together; if it have learnt a melody, it will often be heard rehearsing it. Singing is a vehicle by which it expresses its feelings; producing an effect on the child which is keenly pleasurable at the moment, and which leaves him in a calm, pleased state. Every one who has seen the cordiality and unanimity with which children break out into a simple melody after some stretch of attention will understand the prominence we assign to singing. It is in infancy that the taste for singing must be founded; the period invites us to do so; if we neglect to cultivate it then, the inspiring of it will be a work of more difficulty at any future time.

**Extent to which it should be carried.** 157. In the infant school singing should be taught by ear and not from note. Skill in music certainly implies the power of reading from note, and an acquaintance with grammatical structure. But the study necessary to acquire this

skill must be deferred till a later date. It will equally perplex and repel the child at this stage. If we give him a taste for music by accustoming him early to its beautiful effects, he will be allured to the study in due time. At present, therefore, he learns his melodies by listening to and following his teacher's voice.

**158.** With regard to style of music, there are several kinds of errors made. A very common one is the exclusive, or almost exclusive, use of sacred music, perhaps even of psalmody. One of the ends—we may say the highest end—of learning to sing, is certainly to sing for devotional purposes; and the child, too, must use his gift of song in solemn worship. But while he must know some sacred songs, it does not suit the character of his own mind or of the music itself that he should be always engaged with this style. He must have the means of expressing the ordinary joyousness of his years; which is found in secular melody alone. Since the child sings from lightness of heart, he should be taught lively songs. The graver rhythms are unsuitable for him; and the use of the minor mode is a gross incongruity in the infant school.

**Character-  
istics of In-  
fant School  
Music.**

**159.** To describe suitable melodies more minutely:—They should preserve a medium in respect of pitch, ranging between the notes D (below the first line) and E (fourth space) on the treble staff, since the voices of the children are tender, and liable to suffer from straining; the intervals between the notes should be of the simplest kind, viz., diatonic and common-chord, modulation from one key into another being, as a rule, avoided; the rhythm should be simple and well marked, such as  $\frac{2}{4}$ ,  $\frac{3}{8}$ , and  $\frac{6}{8}$ , and then  $\frac{4}{4}$  and  $\frac{3}{4}$ .

**160.** Singing in two parts or more should not be pressed on too hastily. The more advanced children may be taught to sing a second part, but it is not necessary; simple melody is attractive enough to attain all the ends of the exercise. The teacher may sing a second part at pleasure as accompaniment.

**161.** The difficulty in finding suitable songs lies as much in the words to be sung as in the tune itself. Verses of a purely didactic character, or which are filled with abstract sayings, are not suitable. Still worse are rhymes of a professedly utilitarian kind, arithmetical or geographical tables, and the like. Speaking generally, whatever carries the child's thoughts to the objects that he naturally finds pleasure in is suitable, so far as matter is concerned. Pieces on beautiful natural appearances, on natural objects, on animals, or stories in the ballad style, may safely be used, provided their language be simple and their sentiment correct.

**162.** The singing, if it is to cultivate the taste, must be done tastefully. The children may not sing artistically, but they may be expected to sing in tune without shouting, and with becoming light and shade in expression. If there be a child who seems unable to keep in tune with the rest, *i.e.*, whose ear requires more exercise in tune than the average, he should keep silence during the singing till he has attained sufficient cultivation to join in it, and not be allowed to mar the singing of the others.

For singing, in its bearing on discipline, see § 100.

A selection of suitable songs and melodies is given in Appendix D.

## 5. On Geography.

**163.** Geography is one of the natural sciences, having for its subject-matter not ideas, or symbols, or formulæ, but *things*. On this account it was introduced not very long since into the course of school-studies. It was designed as a counterpoise to the too exclusively verbal and abstract character of that course. It has not, for the most part, been taught in such a way as to serve the ends of its introduction, having been greatly confined to what is really an abstract study, the study of the position of places on the map. It should be well understood that geography, viewed educationally, is a *study of things*. If this its true character be preserved, it will readily be seen that there is an aspect of it in which it is fit to be handled in the infant school. It were to be wished that there were a more familiar name to give to the study in this stage. The name "Geography" is too scientific. The lessons contemplated in it really fall under the object-lesson. They are a series of object-lessons on the earth, with its more striking external aspects, its products and occupiers; and we treat of them separately from the object-lesson in general, only because they are the germ of what in the subsequent stages of the child's progress is recognized as a distinct and important branch of study.

**164.** Map-geography, in the ordinary sense of the word, is no part of the work of the infant school. It is very common to begin geography by setting before the class—after telling them what the shape of the earth is, and what a map is meant to be—a map of Europe; and to give them the names of the

Explanation of the study of Geography in the Infant School.

Error most frequently made.



countries, mountains, rivers, bays, islands, straits, towns, etc. But this is altogether an anticipation of the work of the upper school. In the infant school it gives a certain knowledge of the piece of paper before them called a map; but as the children can comprehend neither what a map is, nor what it is for, it gives them no *real* instruction whatever. It is to no purpose that it be made simple or even amusing by the teacher's ingenuity, and that the children become actually expert in naming the places pointed out. The work itself is not that which should be engaging their attention. They cannot at this stage realize the "geography of locality or relative position."

Nature of  
the Infant  
School Geog-  
raphy.

165. The geography of the infant school should be pictorial and descriptive. Commencing with the elements of natural scenery that fall under the child's observation, and carefully noting their distance and relative direction from the school and from each other—the hill, the mountain, the brook, the river, the plain, the forest, the moor, the rich mould, the island, the sea, the cliff, the cape, the castle, the village, the city, that may be seen in prospect from the school; the productions of his own land—its animals, its trees, and flowers, and herbs, its metals; the men of his own land—their occupations, their customs, their habits, their food, their clothing; it should seek to make the child realize the corresponding features of other lands and climes by comparison with what it has observed in its own. We should ever set before his eye, when possible, specimens and pictures of foreign products and scenes, and for the rest appeal to his imagination to take off the impressions from our vivid descriptions. Such is an outline in brief of the course the instruction should follow,

166. *Examples of subjects of lessons in Home-Geography.*—Let the subject be “*rivers.*” What a variety of instructive matter is suggested by it!—their source in the little springs welling forth amongst the hills from the bosom of the earth—the descent of the many small rills from the mountain side to the valley—the length, depth, and gradual increase of the main stream—the influence of the season of the year upon them—the smooth, clear, low water in summer, and the dark, swollen, angry torrent in winter—the character of the land through which they flow for fertility—the uses to which man puts rivulets and rivers—the one a source of power for industrial purposes, the other the highways of commerce and of travelling, both adding to the riches and civilization of a people. All these considerations are involved in the idea of “*river* ;” and there are few of them that could not be illustrated by reference to the brook that may pass the school or the river that may flow through the city.

Let the subject be “*mountains.*” There may be some hill near the school which the children may have beguiled a summer’s day in climbing. They are to observe its shape—whether it be broad and flat, or steep, and in part precipitous—whether it be a single hill, or one of a range—the matter of which its surface is composed, whether earth or rock in any of its forms—the covering of its surface, whether grass, or heather, or shrubs—the animals that may be browsing on its slopes—the streams which may leap down its sides—the climate varying with the height till they reach the cool of the summit—the corn-fields at its base, extending more or less up the slope—then the woods, and, lastly, the grass—the toilsomeness of the ascent, and the time required for it—and, perhaps, the metals or minerals dug out from it.

*Let the subject be one of the phenomena of “climate,”—*

On a "*winter's day*" let them observe the thick flakes of the falling snow, whitening the face of nature, or the hardening influence of the clear frost covering our lakes, ponds, and roads with ice—the rapid motion and the thick covering necessary for comfort—the fires we need in our houses—the care we need to take of our animals—the unproductiveness and barrenness of nature at the time—the short day and the long night. On a "*summer's day*," again, the mild air—the clear, blue sky—the moderate motion and the lighter clothing—the face of nature beaming with animal life, and clothed with the rich vegetable green—the treasures in the fields—the long day and the short night.

In these lessons on geography, scientific order is of little consequence. The true point of commencement is with what the children see and know. Thus, if we give a lesson on "rivers," we just take them in imagination to the river-side, and exercise their senses on what is before them. The river is (suppose) broad, deep in the middle, shelving, clear or brown, smooth or broken in surface; its banks are pebbly, or rocky, or grassy, and so on. For the next lesson, we take them to a spot further up where different phenomena are seen, and then further up still to its source; next take them down the river till they come to the point at which it falls into the sea, or into some other river. Proceed in the same spirit, and by similar subdivisions, with mountains, matters of climate, etc., constructing the lessons entirely after the manner of the object-lesson, as exemplified in §§ 110-112.

**167.** It is when these and a series of such minute pictures of "home" are conceived, that the child's imagination can take wings to other lands. He can expand the idea of the river at home till it reaches the Rhine, or the Nile, or the Mississippi, or the Amazon, and the circumstances of the

Its Imaginative and Comparative Aspect.

one till they pass into those of the others; the mountain at home till he shall see the Alps, with their fertile valleys and lower slopes, and their woods above, reaching upwards to the everlasting snow; or till he shall conceive Etna with its teeming sides and magnificent prospects and the smoke rising from its volcano top. From the "winter's day" at home he may realize the dreary desolation of the Arctic zone, with its freezing temperature, its wilderness of ice, its stunted vegetation, its dearth of animal life, its short, cheerless days, and its humble fur- or skin-clad dwellers; and the "summer's day" at home may lead him to fancy himself beneath the scorching blue sky of the tropics, with the want of rain, the rapid and abundant growth of plants and animals, the overpowering heat of day and the dews of night, the jungle or the desert.

**168.** In this series of lessons the names of countries are sparingly dealt with, a few typical ones alone being given: typical, *i.e.*, of the different climates, but without map in the meantime. And it will be observed that the lessons are not expressly given on particular countries, as Egypt, or Arabia, or Lapland. A country is too vague, an idea for a child at this time; he must have some definite object on which to rest his conceptions. Hence, the series is given on natural features, of which he can see certain examples around him, and these are stated as being in particular climates or countries. He associates the country with the object, not the object with the country. And the same holds in the series as now to be continued.

**169.** To have the means of describing the different regions of the earth more particularly, the teacher should proceed with a series of object-lessons on their productions. Thus, the lion, elephant, camel, tiger, wolf, bear, hyena,

How far  
Proper Names  
should be  
given.

How the  
child at this  
period identi-  
fies foreign  
countries.

kangaroo, buffalo, reindeer, dog, sloth, serpent, whale, shark, eagle, vulture, ostrich, etc., are for geographical purposes so many types. So in the vegetable world are the palm, the olive, the bread-fruit, the vine, the cotton-plant, the tea-plant, the coffee-plant, the sugar-cane, rice, maize, cinnamon, cedar, mahogany, and the like. So with respect to man and his habits would be a series on the articles of food, clothing, and building. In the course of these lessons some of the principal countries—*not every country*—would have been noticed so frequently, that the children must have accumulated a number of ideas regarding each.

**Apparatus for the Geography-lesson.** 170. During this course of instruction, the only maps used are pictures—pictures of objects such as have been alluded to under the object-lesson, and pictures of scenes typical of countries. It is much to be wished that this latter kind of pictures were greatly more numerous and accessible for schools than they are. Thus the map of Arabia for the infant school should be a desert scene, exhibiting the general features of the desert and the sky, the caravan in whole, the camel as an animal, and the Arab himself in his usual costume. On the same principle should we have Egypt represented by its river and its pyramids; India by its rice-fields, its jungles with their fierce inhabitants, its mountain-passes with their elephant trains; China by its tea-plantations; Australia by its bush with the native and the kangaroo; the South Sea Islands by an assembly of natives on land or in their canoes; South America by its forests and its pampas; North America by its cotton-fields and its sugar-fields; the Indian territory by its prairies and buffaloes; the Esquimau by his sledge and dogs; Turkey by its mosque and worshippers; Spain by its wild mountain-pass and picturesque traveller; Switzerland by its

jagged peaks and enamois-hunter; Italy and Greece by their ruins; Lapland by its reindeer and sledge; and, to come to our own country, Britain by its several scenes of the river crowded with shipping, of the busy factory, of pastoral and agricultural life, and of the hills of the north and west, with the sheep and the deer and the birds that occupy them.

171. The geography of the infant-school is thus a series of object-lessons connected by a geographical link. It but prepares materials for the formal study of geography. It may be thought that the use of the map would facilitate the instruction; but it is quite immaterial whether the map be in the school at all or not. It is the business of the next stage of progress to "*localize*" all that has been learned; which it does by going regularly over the map, and fixing down in position the countries which as yet are only names to the children. The utmost use of the map that should be made in the infant school is to go over with the elder infants, if time permit at the end of their course, on a physical map of the world distinctly outlined so as to show the features of districts, the general outline of what they have already learned—showing the position of the different countries with whose names they are familiar, collecting all their knowledge regarding each, and explaining how the directions of north, south, east, and west, which they have already learned from observation of the sun's course, and which they have been taught to apply to the whole district about them over which their eye can reach, are exhibited on the map.\*

Connection  
of the Infant-  
School Geog-  
raphy with  
that of the  
Juvenile  
School.

## 6. On Reading to the Children.

172. Reading to the children is an important resource of the infant-school teacher. Considering the universality of this practice in infant family training, it is singular that it should have been so much neglected in school. The benefit of it seems clear and indisputable, in the one case as in the other. It is not for the sake of any instruction conveyed by it that we recommend this practice; the child receives his instruction otherwise. But two advantages flow from it, which are very apparent. The first is the stimulus which it gives the children to learn to read for themselves: and this is peculiar to reading *to* them as distinct from addressing them in words of our own. Let the teacher avowedly read before them; let him manage it so as to interest them in what he reads; let him cluster pleasant associations around the book; let him show them how *he* knows the stories only by reading, and how they must learn to read for themselves to know the stories recorded in books; let him, in a word, be thus constantly showing them, directly and indirectly, what a pleasant thing it is to be able to read, and there is certainly present to their minds a stimulus to exertion, a motive of a noble sort or the germ of one, the love of knowledge for its own sake. The second advantage is the culture it imparts to them—culture of the imagination and of the heart, for it is to these the reading should appeal. Direct address, or the relating of stories, may attain the same end; but, even if all teachers had the power of vivid description and picturesque narrative, which they have not, their resources are greatly extended by the use of the book. It presents them with an indefinite range of beautiful ideas, clothed in a fair and ample drapery of

Utility of  
the practice  
of Reading to  
Children.

words. These have a permanent existence withal, and may be read again and again, affording to the child renewed pleasure at every repetition. Reading to the children, moreover, supposing it conducted in a way to interest them, accustoms them to close and self-sustaining attention.

**Characteristics of Children's Books.** 173. The greatest obstacle to the practice of reading is one of a practical kind; the difficulty of procuring suitable books to read from.

To set forth all the characteristics of a child's book would be to recapitulate much of what has been said in the former part of this treatise; but the teacher may be aided in his judgment by bearing the following cautions in mind: (1) The subject of it must be a story, of which the interest centres distinctly on a person, or on some object actually or virtually personified. Science and history, therefore, however much simplified and garnished, are from their very nature unsuitable; the one being too abstract, the other too complex. (2) The book must appeal to the imagination, and not merely to the reason or understanding. A cold, didactic style, however clear, has no attractions for children. (3) In speaking to the feelings the book must not assume too great a degree of self-consciousness in the children. Some otherwise suitable books are spoilt by a perpetual moralizing in set terms, and calling for reflections of a nature quite beyond the children to make; forgetting that the morality should be inwoven into the entire web of the narrative, and that they imbibe the impression of it in silently identifying themselves with a personage whose sentiments and actions are moral. (4) In teaching morality the book must be careful to base it on a sure foundation. A false morality is a dangerous, yet very common, fault in a child's book. Virtue is very frequently associated with personal and temporal advantage, as when "getting on in the world" is made the basis for incul-



cating truthfulness and honesty; and vice is frequently condemned on the ground of personal and temporal disadvantage alone. If virtue and vice be grounded on no deeper basis, the child's morality must in course of time be rudely shocked, and perhaps overthrown. Sometimes virtue and vice are founded on extreme cases of reward and punishment. Thus the boy who robs nests has often assigned to him the fate of falling from a tree into a river and being drowned; or the lying child goes on in a wicked course, till perhaps he comes to the gallows, or, like Ananias, is struck dead. Such consequences either rarely or never occur; and if no other penalties of vice are mentioned, the child will conclude from its never seeing these particular ones occur that there are none at all. (5) The book should portray virtue for imitation rather than vice for avoidance. It is not prudent to anatomize vicious characters before the young, to trace their steps through their various schemes, to show up their designs; even for the purpose of denouncing them. As has been well remarked, 'the infectious nature of vices is not destroyed by the reproach which may be attached to them.' There is no use of giving children an experience of evil they had better be without. Let their innocence be preserved as long as it may; the knowledge of good and evil will come soon enough. Not the dark side of human nature, then, but the bright, should be held up as the picture on which they should dwell. (6) The subject of the book may either be level to their experience, or it may be remote from it; but the story should not be improbable. *Robinson Crusoe* and the *Fairy Tales* are equally admissible.' "Once upon a time there was a troop of boys, notorious for all kinds of juvenile wickedness, engaged in a bird's-nesting expedition. One, better than the rest, and associated with them then only by accident, was shocked at their profanity and cruelty. They lost their way in a wood and were benighted, and had to sleep under a tree. Pres-

ently noises were heard from the howling of the wild beasts. The good boy withdrew from his comrades; who were attacked and destroyed by the beasts. He escaped." This outline, taken from a book professing to be a child's book, shows, with other faults, the absurd improbabilities often set before children. (7) The sentiment and style of the book should be unaffected. The flattering prettinesses sometimes addressed to the young with the view of getting them to listen, regarding either their personal appearance or their actions and dispositions, can only breed conceit and affectation in return. And, in point of style, there is an *excess* of expression, a studied affectation and overdoing of childish words, which by no means add to the beauty or simplicity of the narrative.

174. Books for children fall under two classes; Two classes of Children's Books. those whose subject-matter is real, and those in which it is fictitious. For the former kind many incidents in biography, and many biographical incidents in history, ought to be available. But much less is available than would at first sight appear; which is fully explained if we recollect that a large proportion of these incidents are connected with crime and punishment, and that it is not so much the quiet and unobtrusive virtues they record, as the more noisy and popular. Besides, biography and history are seldom or never written for children. On the whole, the teacher may make more use of these by studying the incidents himself and relating them to the class, simplified in style and somewhat idealized. There remain to be noticed those books which embody fictitious narrative. The utilitarian spirit has almost entirely banished from the present generation the old nursery tales; Cinderella, Aladdin, Sindbad, and the fairies are in disgrace. These and similar tales must and will be brought back again, being fitted for children in all time.

They are much superior in respect of healthy influence to the generality of the books which for the present have superseded them. They are not professedly moral tales; they are tales of imagination and amusement; but neither are they immoral; of none of them can worse be said than that they leave morality where they found it. Whilst many of them, especially the fairy tales, have certainly a distinct moral influence, separating good from evil by a wide and impassable gulf, instead of mingling them up together as is now so commonly done. From these tales the teacher may make a selection suitable for his purpose. Stories about animals, and dialogues on familiar processes and things, are very attractive to children, and easily accessible. The fables of Æsop and such like have at all times been favorites with children, and have the advantage of having somewhat escaped the general ostracism of our day. Perhaps the fable is improved for the purposes of reading when neatly done into verse. Next might be named extracts from the works of writers like Miss Edgeworth, Mrs. Barbauld, Mrs. Lee, Maria Hack, Peter Parley, and others; till we come to tales like Sandford and Merton, and Robinson Crusoe. Extracts might also be made from some other established fictions—of course to be somewhat prepared by the teacher. And there is a large variety of children's papers in current publication, where he may find something to serve his purpose. But he should carefully peruse beforehand whatever he reads, to see that its sentiment be correct; even 'religious tales,' so called, should not be exempted from careful scrutiny with this view, as it is seldom they handle religious truth without distorting it or dislocating its parts.

Caution to  
be observed  
in Reading  
to Children.

175. Reading to children, with the view of stimulating the imagination, must be carefully regulated in amount. It is not prudent to let this faculty be dormant; but it is worse to over-excite it.

Two or three weekly readings of about twenty minutes each are amply sufficient. But the teacher should watch the effect of his reading on the individual temperaments of the children. Some are more liable to be excited than others: who should accordingly be less frequently present at the reading.\*

### 7. On Reading and Spelling.

**General cautions to be observed in Teaching Reading.** 176. Learning to read is unquestionably a *task* for the child. It should, therefore, not be seriously undertaken until he is fit to encounter a task; it must be carried on with a very careful regard to his strength; and it should be the object of his instructor to make him feel it to be a task as little as possible.

**The Theory of Teaching Reading in the Infant School.** 177. The proper view to take of the child learning to read is that he is learning to recognize in written forms the words with which he is already familiar *in speech*. We only surround him with difficulties if we regard his reading-book at this period as the means of extending his vocabulary. He acquires words in the conversational lessons, the natural vehicle for his acquiring them; his reading, let it be repeated, should be nothing more than the recognition of what is already familiar to him. If this be allowed, four things will follow. *First*, he should not begin to read from books till he has considerable acquaintance with spoken language; an acquaintance not only with all the fundamental words denoting relation, some of which occur in every sentence we utter, but with the names of all the familiar things about him, and with the most common qualities of things. *Secondly*, the reading lesson should consist of words which have a sense for him, and not only so, but of sentences which express complete thoughts: otherwise there is

nothing for him to recognize. Lessons consisting of columns of single words, and much more of columns of syllables or parts of words, are not suitable. He should have in all his lessons the stimulus and pleasure which arise from the recognition by the eye of what is already known to his mind. *Thirdly*, the subjects of his reading-lessons should be things with which he is familiar from his observations. He will recognize most readily what he best understands and sympathizes with. *Fourthly*, his reading must be systematically interwoven with his speech. He should be engaged in a conversational lesson on the subject he has been reading about, which shall embody the words he has read. This will give a practical aspect to all he reads, and secure from the beginning the habit of reading with the understanding.\*

**Two Stages of Infant-School Reading.** 178. For the purposes of the reading-lesson we may reckon two periods in infant-school attendance. The one is the preparatory period, that in which the child is being prepared for reading, rather than actually reading; the other is that in which reading from books is a systematic lesson. We may consider the middle of the fifth year as the boundary between the two; so that the first shall extend over a year at least. During this period the child is unfit to be subjected to tasks. He may be engaged with the first formal steps of reading, as we shall see; but the real preparation for his subsequent reading is the frequent conversational lesson, which develops his general intelligence and gives him some power over spoken language.

**Different ways of beginning Reading.** 179. His preparatory lessons in reading should leave him in possession of all the fundamental words in written language, and of a number of the names of familiar things and qualities. The method of giving these lessons is still matter of opinion.

The old way, and perhaps still, after all, the common way, is to teach the sounds of words apparently by associating these with the series of letter-names in the words; but this is to teach spelling rather than reading. It is evident that there is no natural association between the names of the letters composing a word, and the sound of a word. More recently it has been sought to gain the end by decomposing words according to the powers or sounds (and not the names) of the letters. This method is certainly capable of doing good service when properly used; but it has suffered somewhat from injudicious application. The attempt to apply it universally to English words leads to an elaborateness and intricacy of system quite unsuitable for a class of infants: who do not learn reading, or anything else, by rules. Finally, it has been proposed to teach the child to read without the aid of either the common or the phonic spelling; the words being simply viewed as pictures, with which the eye is to make itself familiar, *in whole*, as it does with other pictures.

**180.** Our first aim in teaching the child reading must be to make his path interesting; our second, to make it clear. To attain the first, we must awaken his curiosity, intelligence, and activity about the things of which he reads; to attain the second, we must give him whatever aid is to be derived from a rational classification of letters or of principles of sound. There is certainly a danger of trusting too exclusively to the second, from the very fact that it requires us more or less to construct a *system* of procedure for ourselves; it should be remembered, however, that whilst the aid derived from this source may seem to make the child's path clear, it does not necessarily make it interesting. That is secured only when we attain our first aim; which must therefore be viewed as the higher of the two. But good

The Stimulus that has greatest power with the child.

teaching will keep both in view, and will strive to make them act harmoniously in support of each other. With these preliminary remarks, the order and method of the early lessons may now be suggested.

**The Alpha-  
bet.** 181. (1) *The Alphabet.*—The names of the letters must be learned, not so much for any direct use they are of in learning to read, but just because they are the names of things that require frequently to be spoken about. And they may be acquired at the very beginning of the course, in a short time, and not only without causing the child any trouble, but with positive interest to him. By far the best way is by the use of letter-cards and slates. Whatever order the letters are taken in, let the card first be shown to the class, the form of the letter carefully traced and described, a drawing of it made on the black-board, and from that by the children themselves on their own slates, and the name frequently repeated in course of the process: when they have all been gone over in this way, with the necessary revisals, let the teacher question them on the cards at random, adding an easy or perhaps amusing description of the forms, and let the children question each other with them in various ways as their ingenuity may suggest. Both the capitals and the small letters may be learned in this way.\* Thus the lessons on the Alphabet are rather form-lessons, than reading-lessons.

**Words of  
two Letters.** 182. (2) *Words of Two Letters.*—These words should be learned at once, having the sounds attached to their forms without any analysis into their separate letters. They are almost all irregular in sound, and do not admit of phonic analysis, even if it were desirable. The most convenient way of teaching them is to have them printed on separate cards like the letters, and a similar process gone through with them. The ingenuity of the children may be agreeably and profitably exercised in

arranging them into sentences. For this purpose there should be a board or frame conveniently constructed, so as to admit of a row of sentences being placed on it. To these words of two letters many words should be added which consist of only two sounds, though of three letters, *e.g.*, *are, you, the*, etc.; and some of the most common of three sounds, *and, but, with, not*, and such like. If this apparatus cannot be had, lesson-sheets are the best substitute; but an interest attaches to the use of such an apparatus which even lesson-sheets cannot attain.

**Phonic Analogies.** 183. (3) When they come to read from the lesson-sheets, the class should be taught to perceive analogies of sound in words: that is to say, they should be exercised in phonic analysis. Thus the words *at, an, ox, all, in, it*, etc., are the roots of so many classes of words:

at	{	b-at c-at f-at h-at m-at r-at s-at	an	{	c-an f-an m-an p-an r-an v-an	all	{	b-all c-all f-all h-all t-all w-all	ox	{	b-ox f-ox	in	{	f-in p-in s-in	it	{	b-it f-it h-it p-it s-it
----	---	--	----	---	--	-----	---	--	----	---	--------------	----	---	----------------------	----	---	--------------------------------------

Whenever, therefore, a number of words from any such class occurs in a reading exercise,—*e.g.*, *bat, cat, fat*,—they should be compared, so that the *common* element *at* may be recognized, and also the *different* elements, to wit, the sounds attached to the letters *b, c*, and *f*. The number of classes of words thus formed may be largely increased by taking as roots certain syllables which are not words, but from each of which a number of words arise by the prefixing of a consonant; *e.g.*—

-ot	{	c-ot h-ot l-ot n-ot p-ot r-ot sh-ot	-ug	{	h-ug m-ug d-ug r-ug j-ug	-og	{	b-og d-og h-og f-og l-og fr-og	ill	{	b-ill h-ill m-ill t-ill k-ill	-ad	{	b-ad l-ad h-ad s-ad m-ad
-----	---	---	-----	---	--------------------------------------	-----	---	---	-----	---	---	-----	---	--------------------------------------



and some others. These words, it must be understood, do not occur to the class, as they are here given, tabularly. The reading-lessons are constructed so as to present them in course, and they are selected from these for the purpose of analysis. Classes of which *can, cat, car, cap* are types, having the common element first and the differing one at the end of the word, should also be examined. No great number of reading-lessons is required to put the children in possession of all the sounds of the letters, both consonants and vowels. When this is done, they have the key to reading in their hands; and they should be required systematically to use it henceforward.

Apparatus  
to be used  
prior to the  
Reading-  
book.

184. No reading-book should be put into the hands of the class during these early lessons. This is a point of some importance; a class who are obliged to look individually at their books are thereby precluded from that mutual sympathy and common activity which is necessary to their success in any exercise. Lesson-sheets are an intermediate resource between the letter and word cards just described and the use of the reading-book. The cards and lesson-sheets, and the black-board and their own slates, should be the sole materials for the instruction in reading of a class under four and a half years of age.

General di-  
rections for  
conducting  
the more ad-  
vanced Read-  
ing.

185. The teaching should be continued in the same spirit when the child takes the reading-book in hand. (1) The phonic analysis should accompany each lesson, so that he may have every facility which the ear can afford to reading. And the teacher may observe that, whilst it would certainly be better to have the lessons arranged in the reading-book for this analysis, he is not altogether dependent on whether they are so or not. By using his black-board

he may give analogies of sound from every lesson. Irregular words cannot be thus analyzed; their sounds should be at once told. (2) The subject of every reading-lesson must be carried home to the child's understanding, so that it may be thoroughly lodged amongst the things which have an interest for him. And not only *at the time* should teacher and pupils talk over the subject; it will be found very conducive to the end in view to recommend it to their attention over the evening, so that they may collect any points of information at home about it which they can, and to recur to the subject on the morrow or soon after. (3) If the moral aids to the reading-lesson be wanting, it will avail little to have those of an intellectual or mechanical sort. It is they alone that can supply motives to the child for exertion. Patience, kindness of temper, good humor keep the child pleased with itself, and with its teacher; which is essential to success. It is not indispensable that the child should be pushed on rapidly; but it is indispensable that he should like the work he is engaged in. Success in teaching the elements of reading seems often a very arbitrary thing; it is the moral qualities of the teacher which will be found to explain the results.

**186.** Reading includes not only the power of recognizing words, but of uttering their sounds correctly; and to this aspect of it great attention should be paid in the infant school. Children pick up the sounds of words by imitation, so that they are liable to error from two causes: either from having wrong models for imitation, or from their own imperfect imitation of their models. Under the first head are to be reckoned provincialisms of all sorts, but also deliberate mispronunciations encouraged in them by their parents under the notion of accommodating their speech to the wants of the children in point of simplicity. Under the second

Faults in  
Reading—Im-  
purity of Ut-  
terance.

head we may set the confounding of similar or allied sounds by the vocal organ, or the imperfect formation of difficult sounds; the confounding of the liquids *l* and *r*, *s* and *th*, *t* and *k*, *ghr* and *r*, etc. Such impurities of articulation occur in every infant school; the pupil who exhibits them should be taken aside, and be made to observe the true sounds with the ear and the manner of their formation by the vocal organs with the eye, till he can utter them.

**Indistinctness.** 187. Another fault to be guarded against is indistinctness, arising either from a general feebleness of articulation, or from the suppression or slurring of some part of the sound of a word. This occurs most readily with the liquids, especially when two of these, or a liquid and a dental, follow each other in successive syllables. To correct this fault, if it have been already incurred, the pupil should be accustomed to full and strong utterance of all the parts of the word, even overdoing it for a time; reading sentences with a slight pause after each word, and words with a slight pause after each syllable. The most certain preventive of this fault in an infant school is the habit of distinct and forcible articulation in the teacher, in speaking as well as reading. The value of this habit as a qualification in an infant-school teacher is for the most part not sufficiently estimated.

**Other faults indicated.** 188. These are the faults to which infants are most liable in their reading. But the teacher must cultivate, so far as there is opportunity, all the recognized qualities of good reading; *e.g.*, proper time, which consists not only in stopping at the pauses, but in giving proper length to the vowel-sounds, as *fēel*, *swēēt*, *gōōd*, *dream*, *broad*; proper tone and pitch, which varies with each voice, but which is equally free from monotonous drawl or sing-song on the one hand, and from an irregular scream on the other.

Use of Simultaneous Reading.

189. The practice of simultaneous reading, moderately indulged in, may be attended with some good effects. *First*, in respect of time, it tends to correct both the extremes of quick and of slow reading by requiring conformity to one standard. *Secondly*, it tends to heighten distinctness of utterance from the very effort needed to observe a measured time. One is always struck by the degree to which distinctness characterizes simultaneous utterance. *Thirdly*, it tends to modify any peculiarities of tone in individual readers: after a little practice, a harmony of intonation is almost always established. Too much, however, must not be expected from simultaneous reading; it tends to correct faults rather than to impart any positive excellence.

#### Spelling.

How the child learns Spelling at first.

190. According to the common way reading is acquired through spelling. This relation should be reversed; spelling should be learned through reading. There should be no formal lesson on spelling given during the preparatory lessons on reading; and yet it would be a mistake to suppose that the child is not learning to spell during these, for spelling is a habit of the eye. The forms of words must be familiar to the eye before there can be any spelling. This then is the contribution which the early lessons in reading make to the child's progress in spelling,—and it is a great one,—that they stamp the images of the words on his mind, so that his eye recognizes them when it sees them, and, consequently, any deviation from their form.

Formal practice in Spelling.

191. The elder infants may be practised in spelling; but not alone upon any prepared amount, nor in any one lesson in particular. It may be introduced as effectively in the object-or form-lesson as in the reading-lesson. The exercise is

designed to test their intimacy with the forms of the words that have come before them during their preparatory lessons in reading. It holds with spelling, as with reading, that the subject should be words forming a sense. Besides the names of things, sentences should be spelled through, by single words or by a number of words together. Much is attained if the children can spell monosyllabic words with some facility when they leave the infant school.

**192.** As spelling is learned, not for the purposes of spoken language, but for those of written, so spelling and writing must be conjoined as soon as practicable. The elder infants, who have previously had practice in writing on their slates the letters of the alphabet, and also the simplest kinds of words, may profitably be engaged in this rudimentary dictation-exercise, which serves the double end of teaching them both writing and spelling.

#### Grammar.

**193.** Grammar is sometimes taught in the infant school, but with little propriety. The teacher is often tempted to introduce the elements of this subject by seeing that the children seem to understand his familiar oral illustrations of noun, verb, and other parts of speech. But this understanding is not real; it can be turned to no practical account. Nothing whatever is gained by such an anticipation of future studies. The work has all to be done over again; and it occupies time which may be more profitably occupied with subjects of whose propriety there can be no dispute. Therefore it should be altogether deferred.

**Impropropriety  
of Grammar  
in the Infant  
School.**

**Rudiment-  
ary Dictation.**

## CHAPTER IV.

## RELIGIOUS INSTRUCTION.

General  
character of  
the Infant-  
School Re-  
ligious In-  
struction.

194. "OUR Father who art in heaven" should be the key-note of all the religious instruction conveyed in the infant school. In these words "is comprised all religious truth, as the plant is in the seed." God is our father; for He is the creator of ourselves and of all we see around us.

He is our father; and, as a father, He provides lovingly and carefully for all His children. He is our father; and, when He sees His children in danger, He rescues us from it, having even sent into our world His Son, who is our elder brother, to save us from our greatest danger—the death of sin. He is our father; and so we have "the bright hope of eternal life, for why should a father give life to his children in order afterwards to slay them?"\* He is *our* father, loving not one only, but all the members of His great family; who ought, therefore, to love one another. He is our father; and so should we give to Him all the love and reverence and obedience which are due to a father. He is our father *in heaven*, all-wise therefore, holy, and good; and so should we try to be like Him, and humbly seek to know and do His will. He is our father in heaven; and if we be dutiful children, He will take us to dwell with Himself in light for ever and ever. "Our Father in heaven!" words worthy, from their inexhaustible depth of meaning and fulness of obligation, to preface the model prayer which our Divine Teacher, the Son of our Father in heaven, hath given us!

195. This idea of "God our Father in heaven"

Extent of  
Instruction in  
Doctrine.

must be made the centre of the whole circle of doctrines we teach to children. The circle is wide; but in traversing it we must ever keep the centre in our eye, as the sun which gives light and life to the whole. There is no difficulty in reaching the infant mind with doctrines like the following; which, so far from being received by it as strange, seem to it quite natural, from that "sense of God" which pervades its being: God the creator of the world and of man—God the preserver of all—His attributes of power, wisdom, eternity, unchangeableness, omniscience, omnipresence, holiness, truth, goodness—His Son, our Redeemer, Teacher, Example—the love, reverence, and obedience we owe Him—our sinfulness, and our duty to follow holiness—the Scriptures, His Word which we should read—prayer—the reward of the good—the shortness of life—death—life in heaven with Himself. This outline comprehends the substance of our religion; and is an amply sufficient basis on which to rear instruction in its practical duties.

196. Everything depends on the *manner* in

Manner of  
conveying  
this Instruc-  
tion.

which we convey this instruction. In this we must have respect to the laws which regulate the whole instruction of the infant school. An abstract style of teaching is unsuitable, however clear our proofs or simple our phraseology. The "Catechism" is the exponent of this style of teaching, and can never, therefore, be the vehicle of effectual instruction by itself. Its forms of expression are mere words to the child.\* We must use the conversational form of instruction, which allows us to present to the child whatever subjects and phases of subjects are fit for him. And these oral lessons must convey their teaching by means of "examples" or "illustrations." The doctrines of Scripture must be learned

from the narrative of Scripture; and thus the two will be interwoven as they should be, each throwing light on the other. The complexion presented by the religious instruction of the infant school to a person viewing it as a whole is that of a series of stories, which in the first instance engage the imagination and feelings of the child from their own interest; but each of which suggests a doctrinal lesson, and the whole series of which is arranged as to leave the child in possession of a connected scheme of the doctrines of the Bible. If this manner of teaching by story be followed, there is little danger of the instruction falling into the great error which most besets it, that of becoming too theological; which it does either when it tries to explain abstruser doctrines, which are as difficult for men to comprehend as for children, or when it uses technical theological terms instead of the language of every-day life. In stating the doctrines as they successively flow from the daily lesson, by far the best way is to express them in selected texts from Scripture, clear, short, and emphatic; which the children should commit to memory and often be made to repeat. It is well to have a series of these on the school-walls; but they are for the most part not sufficiently, often they are never, used.

**197.** The following scheme will exemplify the nature of the lessons; and the teacher may expand it indefinitely. It will be seen that the channels of instruction are various; being most commonly incidents from Old or New Testament history, sometimes the parables of our Lord, and sometimes mere descriptions addressed to the imagination. The same truth may be enforced by many lessons, for the sake of impressiveness, either in the same aspect or in different aspects:—

Outline of  
a Scheme of  
Lessons.



TRUTH TO BE LEARNED.	CHANNEL OF INSTRUCTION.	TEXTS.
God our Father . . .	{ Comparison with earthly parent. Parable of Prodigal Son.	{ "Our Father who art in heaven." Ps. ciii. 13.
God the Creator . . .	{ of the world. " heavens. " man and beast.	{ Descriptive Lessons. Gen. i. 1. Ps. xxxiii. 6.
God the Preserver . . .	{ Incidents in life of Noah, Abraham, David, Daniel, Elijah, Peter, Christ.	{ Ps. xxxvi. 6. Ps. cxlv. 20.
God's Power . . . . .	{ Creation. Flood. Red Sea. Miracles in life of Daniel, Peter, Christ.	{ Ps. cxlvii. 5. Luke i. 37. Matt. viii. 27.
Omniscience . . . . .	{ Incidents in life of Abraham, Moses, Elijah, Peter, Pharaoh, Herod.	{ Acts i. 24. 1 John iii. 3-20.
Omnipresence . . . . .	{ Jacob. Daniel. Christ.	{ Prov. xv. 13. Gen. xxviii. 16.
Holiness . . . . .	{ Our first parents. Flood. Sodom. Abraham, Moses, etc.	{ Ps. cxlv. 1 John i. v.
God our Redeemer in Christ. Christ our example, teacher, elder brother, intercessor, Saviour . . . . .	{ Under this head may be introduced the chief incidents in the life of Christ, both parables and miracles.	{ Corresponding texts.
Our own sinfulness Holiness alone from the Lord . . . . .	{ Moses. Israelites. David. Peter.	{ Do.

TRUTH TO BE LEARNED.	CHANNEL OF INSTRUCTION.	TEXTS.
Death . . . . .	{ Any of the prominent characters in Scripture. Christ's ; Lazarus'. Parable of Lazarus. Transfiguration. Our Lord's parable of sheep and goats. }	} Corresponding texts.
Resurrection . . . .		
Future State of Life or Death. . . . .		

By filling up this outline a little, a series of lessons for a year might easily be constructed, And this would suffice for the purposes of doctrinal instruction in the infant school ; it would be better to revise in the second year than to extend the course. In this case a higher style of treatment would be necessary ; which might be varied by sometimes basing the instruction on Scripture emblems. These are not less excellent a field of instruction for the younger infants than for the elder, who can bring the knowledge of Scripture incidents already acquired to bear on their illustration.

**198.** The same method must be followed substantially in teaching moral and religious duty. The only difference is that in addition to the incidents of Scripture the teacher will find a large store of anecdotes in secular narrative serviceable as the groundwork of his instruction. He should be acquainted with many of these ; indeed, he should be a reader of biography for the purpose. With each lesson a text of Scripture should be committed to memory. In this way should be enforced the whole range of virtues appropriate to children : obedience to parents, to teachers, respect to old age, truthfulness, honesty, justice, a forgiving spirit, kindness, kindness to animals, avoiding story-telling and nicknames, charity to the poor, patience, meekness, diligence, faithfulness to trust, redeeming the time, order, punctuality, economy, cleanliness, etc., etc. Many stories may be found for each of these, in addition to those which the teacher's imagination may construct from observing the

Instruction  
in Practical  
Religion.

children's conduct towards each other ; so that this practical religious instruction is always going on, and yet is ever fresh.

**199.** Apart from the formal religious lesson, much instruction may be given incidentally, suggested either by what is observed in the course of the secular lessons, or by circumstances which occur in the daily intercourse of the school. Such instruction is very valuable ; it is the test of the sincerity of the formal instruction—that which shows to the children that the teacher's mind habitually turns to the solemn truths he teaches in the religious lesson, and which exhibits the proper use to make of these truths—that which alone gives a religious character to the whole work. It is that which inclines the child to try everything by the light of God's law, and to take a Christian view of all His works. At the same time little can be said of it except that it should be given ; the time and manner of giving it can be reduced to no rule. But the teacher who keeps in view the high moral ends of his teaching will never lack opportunities at which, without any abruptness or forcing, to drop the word in season into the willing ear of the child.

**200.** Whilst it will hold as a rule that in seeking to reach the mind with religious instruction the same principles of teaching must be followed which are approved of in the secular lesson, it will always contribute to effectiveness of impression that the whole treatment should give indications of greater seriousness of manner than the ordinary school-work demands. A powerful influence will be exercised on the young mind if it is wont to see sacred subjects handled in a way which betokens the reverent recognition by teacher and pupils of a Power before whom both must bow. Any expedients in a class-management, therefore, which in-

Incidental  
Religious In-  
struction.

Externals  
of the Reli-  
gious Lesson.

terfere or seem to interfere with this may well be dispensed with, even though experience recommends them for adoption in the secular lesson. The object of this is to set bounds about the religious lesson, that it may be indeed felt by all to be, what it is, a religious thing.

201. Specimens of the different kinds of lessons are subjoined by way of appendix. With reference to these, it may be observed that the subject-matter of the religious instruction is the same for the younger as for the elder infants. Their less advanced condition must be provided for in the manner of giving the instruction. The story, the object that forms the emblem, the features of the scene, in a word, whatever appeals to the observation must be dwelt upon, and the abstract instruction diminished in relative amount; the lesson itself should also be shorter, and the language more familiar.

Examples of the different kinds of Religious Lesson—'The Scripture Narrative.'

## I.

## Christ's Power—Scripture Narrative—Matt. viii. 23-27.

Introduction.

Jesus' habit of going about preaching—travelled like other men—how travellers go?—he would go mostly on foot, for he was poor—he lived much about the Sea of Galilee—often crossed it—how would he do so?—where would he get the boat?

Scene described.

Describe the scene here—he and his disciples (name some) embarking—a little ship with a sail—the hills round the lake—how the gusts of wind sometimes come down—the storm raised—the large waves breaking over the vessel—what would they feel?—why?—and what would become of them?

Observation and

Imagination.

**Jesus.** What did they do at last?—How they found Jesus—strange—was he in any danger?—why not?—what they thought he would do to them—they had seen him do strange things before—Ought they to have been afraid then?—They should have trusted him—What he told them.

**The Miracle.** What he did—his *word*—the wind ceased and the big waves fell, and there was a calm—danger removed.—They had often seen a change, but none like this—what was strange here—what would they think?—And other sailors who might be there who did not know him? Suppose the same case now.

**Lessons.** What they said—what Jesus showed—could any man show such power?—Jesus was God—and how good he was to his disciples, even though they were wrong—they would like to have such a friend.

**Personal Application.** Where is Jesus now?—Powerful still, and good still, though we cannot see him.—Let us be his friends, and love him, and ask him to do us good; he sees us and hears us, and he will do it.

2.

**The Scripture Emblem.** 202. God's goodness—Scripture Emblem—"The Lord is my Shepherd" (§ 44).

What the shepherd does:—

**The Emblem illustrated variously in its natural use.** Watches his sheep on the hill-sides and in the fields—keeps away danger, either from men or wild animals.

Feeds them—seeks out the best pastures—the green pastures—beside the quiet streams—not amongst the rocks—or brings them food into the fields, where there is not grass for them.

**What the shepherd does.** Leads them carefully from one place to another—how he gathers them from the hills or the field—watches them along the road, that none stray—and carries the young ones when they are tired.

Imagination and Reason.  
Reason and Conscience.  
Observation and Imagination.

Sometimes he is himself in danger—among the hills when he loses his way, or when snow comes—but he faces this danger for his sheep—for he is kind, and patient, and watchful.

Reason.

Who is the Shepherd spoken of here?—Who can be the sheep?—Christ says, “I am the good shepherd, and know my sheep, and am known of mine—the good shepherd giveth his life for the sheep.”—The kind of people that are his sheep?—Those who love and obey him?—how safe they must be with such a shepherd!

Reason.

We need guidance in the world—for, like sheep, we are weak—let us love and follow Christ, that we may be his sheep, and that he may care for us.

Personal Application.

Conscience.

*Note*—Lessons on emblems very often fail from too great refinement in tracing the analogy; the truth is then apt to be lost sight of in verbal distinctions. We may illustrate the emblem in its natural use variously, as has been done above under three heads; but we are not to seek for as many corresponding heads in enforcing the fact symbolized in the emblem.\*

## 3.

**203.** Christ's love for children—Scripture precept—“Suffer little children,” etc.

Describe the scene of Jesus preaching to the people—he often did so—one time he was preaching, and there was a crowd round him—men and women, and *children* too. And the people were pleased with his mild and loving words—they brought their children to him—why?—What they must have thought of Christ—He had always blessed people and done good to them.

Disciples were there, as they always were—stopped the people—thought their Master had no time. He *had* very much to do, but he did not turn away the little children—He saw what they were doing, and prevented them.

The children received.

Imagination chiefly.

Jesus' words.

His words—"Suffer"—suppose you ask me to let you go out, then I allow you, or *suffer* you—suppose you are writing on your book, and I tell you not to do it, then I "*forbid*" you. What Christ said, then, was that his disciples were to let the mothers bring their children to him, and not to stop them.

Conception.

Lessons. Christ cares for children as well as for men—He was once a little child himself—If he loves them, what should they do to him?—What he wishes them to be? Kind and obedient, etc., as he was—and if they are so he will bless them—He has many children in heaven with himself.

Conscience.

## 4.

One of a series of Lessons on the Lord's Prayer.

204. One of a series of lessons on the Lord's Prayer—"Thy kingdom come."

Introduction.

The terms *King*, *Kingdom*, and *Subjects* illustrated correlatively.

Conception.

God's Kingdom.

*Kingdom* amongst men is a particular part of the earth, as England, France, etc.—*Kingdom* of God not like this—ranges over the whole earth, and has men of every nation and clime—the Briton, the Frenchman, the African from the sandy deserts, the Laplander from his icy plains and hills, etc. (Draw out this picture somewhat.)

Imagination.

Its Laws.

*Kingdom* amongst men governed by certain laws—sometimes good and sometimes bad—Christ's *Kingdom* has laws too—tell me some of them. Here is one, "Thou shalt love the Lord thy God," etc.—here is another, "Live at peace with all men"—and another, "Do justly, love mercy," etc.—and another, "If thy brother offend thee, forgive him," etc. These are good laws—we must try to keep them—how happy men would be if all kept them!

Conception and Memory.

Its prospects.

*Kingdom* of God not yet spread over whole world—name (descriptively) some people who are yet without it—once it only included one people (the Jews), in a little country

Conception.

—now it has spread over much of the world—it will spread everywhere—Christ's promise.

How it is to be spread. How the *Kingdom* of God is to be spread—by men preaching to the nations who are not in it—missionaries—what we can do—support them with our money when we have any—many missionaries in different lands, and needing to be supported—something else we can all do—pray God to help the missionaries, and to make the heathen willing to listen to them—nothing can be done without this.

Lessons. Repeat prayer for spread of the Gospel, § 207.—When Christ was on earth, he taught us to pray—and one of the things he told us was, to pray thus: “Thy kingdom come”—what we should pray for frequently.\*

## 5.

The Moral Lesson. 205. Moral lesson—on Truth.

Introduction. Children, you have all seen the cherry-tree growing—on the house-wall, with its long branches like arms, tacked to the wall to keep them up—sometimes on the school-wall.

The Cherry-tree. A story of a cherry-tree. One was growing on the wall of the school, and it had much fruit on it—perhaps a basketful of cherries. It belonged to the teacher, and though not in the play-ground, the children could reach some of the branches, and the cherries on them—would it be right in the children to touch them? why not? We should take nothing that is not our own. Well, they did not touch them.

The Crime. Two little boys came to school—once they passed the tree and stood to look at it—and, as they looked, they wished for a cherry—one asked the other to pull one, but he would not—then he told him to touch it, and see how nice and big it was, which he did—when he had it in his hand, the other



pushed his arm, and the cherry came off—the little boy was much afraid, and cried—the bigger one picked it up and divided it, and told him to say nothing about it.

**The Discovery.** By-and-bye the teacher missed the cherry, and asked some of the children, but they could not tell him of it—he asked the bigger of the two boys, who hesitated, and at length blamed his companion—the little boy was going to be punished, but when the teacher asked him, he told the whole truth.

**The indirect Lie.** Which of the two do you think should have been punished? why? The little boy actually broke it off, but he could not help it—he did not know what was coming—dishonesty of big boy, and then, when the master asked, he told a lie. It was a lie, even though he himself did not pull it. This shows us that we may tell a lie, when our words may state truly what took place. Children sometimes tell lies in this way.

**Practical Lessons.** What would the rest of the children think of the boy who told the lie? Would they love him? trust him? Would God be pleased? what does he wish us to do? He will bless the child who speaks truth. Let us always tell the truth, then, even though it may lead us into punishment. Our hearts will tell us we have done right, and all that know us will think well of us.

Point to, and have repeated, the Scripture maxim on truth. Repeat the prayer against lying (§ 207).\*

**School Devotions.** 206. Exercises of devotion are the practical recognition of all we learn regarding religion. Of course no infant school is opened or closed for the day without them; but perhaps more fruit might be reaped from them than is often attempted. They include two parts, sacred song and prayer. For the former; the children should learn a few hymns, or verses of hymns, suited to their capacity, after due explanation of their con-

Reason.

Conscience.

tents. To all, particular tunes should be attached ; and, after they have been learned, they should never be sung simply as singing exercises ; a feeling of solemnity must attach to them. For the latter, it is common to use the Lord's Prayer, both in the morning and the afternoon, having it repeated simultaneously by the children in a becoming posture and manner. This is very proper ; but it is desirable that other forms of prayer should be lodged in the children's minds ; short, simple, and expressing each a single want. They should be called on to repeat these during the day's work, as occasion may suit, that they may both acquire the spirit of prayer, and become familiar with its proper elements. The following are offered as specimens for the elder infants ; and the teacher may construct others for himself :

#### MORNING PRAYER.

Examples of Prayers suitable for the Infant School. 207. O God, Thou hast been very good to me through the night. I have laid me down and slept, for Thou hast kept me. Keep me through this day. May I ever think "Thou, God, seest me." May I do what is right. May I obey my parents and teachers. May I be kind to my companions and to all. O God, help me to be good, as Jesus was. Amen,

#### EVENING PRAYER.

O God, Thou hast kept me safely through this day : and I thank Thee. O God, who lovest little children, Thou hast given me what I need : food to nourish me, a house to shelter me, and friends to love me. Help me to think of Thee more, and to do what Thou desirest me. Watch over me in my sleep, O God, for Jesus' sake. Amen,

## A PRAYER FOR FRIENDS.

O my God, all good things come from Thee. Thou hast made me, and Thou keepest me by day and by night. Thou hast given me father and mother, and sister and brother, and friends, to love me and watch over me. O God, do Thou bless them. Give me a good heart that I may love them and be kind to them. And do Thou help us all to do Thy will, as Jesus did. Amen.

## FOR A SICK CHILD.

O our Heavenly Father, be kind to our sick companion. Thou hast done this: Thou knowest what is good for us all. Thy will be done. Be Thou, O God, near him, and give him rest. May he feel Thee beside him, and be at peace. Comfort his friends who are watching him. Restore him to us, if it please Thee, O God, for Jesus' sake. Amen.

## FOR THE SPREAD OF THE GOSPEL.

O God, Thou hast given us Thy Holy Word to tell us what is right, and we thank Thee. Thou hast sent Jesus, Thy Son, to bless us. Thou hast told us of heaven where we shall dwell with Thee, if we are good. Thou hast told us to put away sin: O God, help us! May all the children in the world soon hear of Thee, and of Thy Son, and of Heaven; so that they may put away sin. And then we shall all serve Thee together, for Thou art our Father in Heaven, who lovest us all. O God, hear us! O God, save us! O God, let all the world soon know Thee and Thy Son! for Jesus' sake. Amen.

## AGAINST LYING.

O God, Thou hatest lying lips. I have sometimes said that which was not true; make me sorry for it, and do Thou forgive me. Help me to tell the truth at all times, to my parents, my teachers, and my companions: for this is pleasing to Thee, O God. When I am tempted to tell a lie, may I remember that Thou art near me, and hearest what I say. Grant this, O God, for Jesus' sake. Amen.

It is well that the children should learn some prayers like these to say by themselves. In addition to this, they may often repeat after the teacher short ejaculatory prayers, in keeping with the subject of the lesson, consisting of a single sentence; without formally learning them. This will give them the habit of prayer and the benefits which result from a prayerful frame of mind.

## PART III.

### ELEMENTS OF CRITICISM AS APPLIED TO TEACHING AND SCHOOL MANAGEMENT.

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#### CHAPTER I.

##### CHARACTERISTICS OF LESSON-GIVING.

**208.** IN giving a brief view of the elements of criticism as applicable to the practice of teaching, it is desirable to assign to them no higher importance than what properly belongs to them. It is for the most part points of form with which they deal ; and the greatest attention to these, whilst it is highly necessary and becoming, will not of itself make a good teacher. Let it be said, then, at the outset of this chapter, that the first requirement of an infant-school lesson is that it be interesting. Interest is the life of teaching. It is an antecedent consideration to all rules of form. If the teacher show that sympathy with the children and that tact in addressing them which enable him to engage their attention, his lessons will be very gently criticised in other respects. But nothing can compensate for the absence of interest ; not the most elaborate design, the most symmetrical structure, the most faultless language and posture. If this be understood, the teacher may go on to study the following precepts.

Interest is  
the first re-  
quisite in a  
Lesson.

**The "Plan" in a Lesson.** 209. Every lesson must have a design, both general and special. Suppose the lesson is on a "pin," it must be viewed (1) as one of a series of lessons designed to exercise the perceptive power of the child, and (2) as an individual lesson, designed to leave on his mind the impression of the particular thing (a pin). Unless there be a distinct aim, and a distinct conception of the steps by which this aim is to be attained, no training is imparted.

**Procedure from the known to the unknown.** 210. Lessons should be so constructed that the minds of the children shall immediately come into contact with something they have observed and can sympathize with. By exciting their activity this at once excites their interest. It serves a double purpose: (1) it engages their attention for the new matter that is to follow, and (2) it becomes the means for explaining it. There is no stereotyped plan, therefore, even for lessons of the same kind. On an animal, for instance, we may begin with its "structure" and "parts," and then consider its "habits," as in the case of the sheep, cow, or other domestic animal; but we may, in some cases, find it best to begin with the "habits" before we examine the "structure," as with the wolf, camel, and most of the non-domestic animals. The same difference holds in lessons upon things: with "salt," or "coal," or "glass," we may begin with "uses;" whilst with "sealing-wax," "gold," or "pepper," we may begin with "qualities." The teacher should uniformly ask himself this question before arranging his materials—What is it that the children are likely to know of the particular thing?—and he should connect with that all he intends to say.

**Beginning, middle, and end.** 211. Apart from the arrangement of the lesson with respect to the succession of ideas, there is a conventional view of it which it serves some purpose to take. We may recognize in a lesson

three distinct parts, with different functions—the beginning, the middle, and the end. The *beginning*, or introduction, is especially designed to arouse the attention of the pupils. It gives them the key-note of the lesson; and the teacher should be accordingly very careful in striking it. It should be bold or picturesque; either imaginative in its complexion, or calling the children to some exercise of activity. The *middle* is the lesson strictly so called. The *end*, or conclusion, is designed to apply what has been taught in the lesson; shortness, clearness, and force in personal appeal should be its features.

**Faults in the Plan of a Lesson.** 212. Elaborate and pretentious plans are to be avoided. A lesson is not a treatise; and effect is not to be sacrificed to logic. The aim of the teacher should be, not to say all that can be said on the subject, but only what the children can profitably receive. Each act of instruction should leave them with the desire for a continuance of it, for which purpose it should just be a narrow outline, clearly put and happily illustrated.

**Notes of Lessons.** 213. It is a good practice for the young teacher to prepare a sketch, or what is called “notes,” of his lesson beforehand. He may hope by so doing to communicate his instruction with greater confidence and clearness. This sketch should contain merely the heads of the lesson, and any illustration which he intends to use under each. The notes should be lodged in his mind, however; the freedom necessary to a successful infant-school lesson is quite incompatible with frequent reference to a written plan.

**Undue display of plan.** 214. The “plan” of a lesson, it must be understood, is for the teacher, and not for the children. There is a great difference between having a plan and making a show of it. Whilst, therefore, lessons must

be logically constructed, there must be no parade of construction. A lesson may be compared to the scene upon a stage, which has two sides; on the one, some pictorial effect designed for the audience; on the other, the several parts of the mechanism by which it is held together, to be handled by the machinist.

The "Work-  
ing-out" of a  
Lesson—  
Regularity. **215.** In working out a lesson—which is the real difficulty—it is taken for granted that there is regularity of procedure from part to part. If the teacher have presence of mind and a firm grasp of his subject, this will follow as a matter of course. Somewhat more difficult is it to preserve the proportion of treatment amongst the parts. For this purpose the teacher must have the whole plan of his lesson at every moment in his mind's eye, so that he may see how far he has come, and how far he has still to go.

Intelli-  
gence. **216.** The lesson must be wrought out with intelligence. It is easier to say when this is absent, and how the absence shows itself, than to give any directions for exhibiting it. If the teacher is not of a practical turn of mind, he will probably present his subject to the children in a strange, unpractical way, not giving it any connection with what they daily observe and think about. If he has no perception of the characteristics of childhood, he will try to put his own ideas of the subject into their minds, instead of getting them to form their own from his materials. If he be the slave of rules, his instruction will be dry and pedantic—a skeleton instead of a living frame, destitute of any human interest. In all these cases the teacher gives his lesson without intelligence or common-sense—does not address the children in a natural manner—is not really in conversation with them,



Two opposite Errors in the Manner of Address.

217. The child's mind must be active throughout the lesson; whatever prevents this is a fault in teaching. A lesson should, therefore, not be given by direct address, or in the form of lecture; for whilst this communicates ample materials for thought, it gives the class no opportunity of exercising their minds on what is communicated. Accordingly, attention is never sustained in this way. A fault of an opposite kind, and not less common, is too exclusive questioning. This gives the class ample opportunity for thinking, but communicates no materials for thought. The children are addressed as if they had prepared the subject and were undergoing examination, which is in no respect the ideal of an infant-school lesson. A very few questions given in this spirit exhaust their attention. We must preserve a medium between these two extremes. We shall not greatly err if we make our lesson literally a conversation. To this there are two parties, standing for the time on the same level, mutually supporting and sympathizing with each other, the obligation to listen as well as to speak being the same on both. Exclusive lecturing or exclusive questioning places a gap between the teacher and the children which bars this mutual support and sympathy. A successful lesson exhibits direct communication of facts and questioning intermingled. What the child can discover for himself he should by no means be told; but he cannot discover everything. It is a waste of time, and the misapprehension of a sound rule, to act as if he could.\* In almost all lessons beyond the very earliest series, the groundwork of instruction will have to be communicated. This must be done by graphic description. The art of the teacher is shown in communicating no more than what is indispensable, and in communicating it as materials out of which the children are to form their own thoughts under his guidance. This communication should never be long, and it is never necessary that it should be long on any one topic. There

are always at hand familiar analogies, by means of which the aid of the children may be called in either to initiate or to complete the description. The teacher should be careful to encourage spontaneous action on the part of the children by listening to what they have to say; and, even when their answers are only partially right, by accepting with approval the amount of truth which may be in them, and expanding that with the help of the class, or the pupil himself, till it reach the full truth of the case.

**On Illustration.** 218. The intellectual feature in a lesson which beyond all others makes it attractive is happy illustration. To be successful this must be apposite, *i.e.*, bearing directly on the point to be illustrated, clearly put so that it may be really an illustration, and interesting, *i.e.*, drawn from some case falling within the sympathies of the children. Illustration is of two kinds, verbal and pictorial.

**Verbal Illustration.** 219. Verbal illustration must be distinguished from explanation. "Suffer little children to come unto me and forbid them not:" this is explained when it is said that "suffer" means to "let" or to "allow;" and that "forbid" means to "hinder" or "prevent." It is illustrated when a familiar example of "suffering" or "forbidding" is set before the children, as in lesson, § 203.—"Whatsoever a man soweth, that shall he also reap:" this is explained when it is said to mean that a man will reap the consequences of his actions, and that these consequences will correspond to the actions. It is illustrated by tracing the operations of the husbandman, who sows his seed of wheat or corn, expecting that in spring his crop will be of wheat or corn.—A teacher, in giving a lesson on the sugar-cane, had occasion to use the word *impurities* to denote chips of cane, dust, etc., which have to be skimmed off in boiling down the sugar-cane. She just told the children

that a great deal of straw and dust mingled with the juice, and that these *impurities* had to be taken off. Another approached this word in a different way; she referred them to what they had seen at home in the making of jelly. Another referred them to the straining of milk; another spoke of turbid water, which becomes clear when allowed to be still. The first process is one of explanation; the other three are illustrations. Explanation appeals to the understanding alone, and is therefore not suitable to the infant school (§47); it is by illustration alone, which appeals to the observation, that ideas are conveyed to the child's mind.

**Pictorial and Black-board Illustration.** 220. Pictures are very useful for illustrating all kinds of lessons, particularly lessons on Scripture incidents and object lessons on natural history. They do not relieve the teacher, however, from the necessity of using ample verbal illustration. The picture should, as a rule, not be introduced at the beginning of the lesson. When interest has been roused by appeal to the children's imagination, they will scrutinize it more minutely when they are asked to compare the idea they have themselves formed of the object with its representation in the picture. It is better not to have the pictures suspended on the school-walls till they have been used for lessons in this way. After they have been made *symbols* by having instruction attached to them, the children may be allowed to see them *for a time*, to become familiar with them; but as far as possible they should be new to the children when first used in illustration of lessons. Pictures do not supersede the use of sketching on the black-board, as is sometimes thought. The teacher who can draw the outlines, say of an animal or a tree, or any familiar object, has, in the mere act of constructing the figure under the eyes of the children, a resource for engaging their interest quite distinct from that which a picture affords.

**The use of Definitions.** 221. Illustration serves the purpose of definition in the infant school. If a child is asked, What is a good boy? he answers that it is one who does not lie, or who obeys his parents, or who loves God. His mind naturally turns to the concrete, for he has experience of that. Definitions are from their nature abstract; standing alone, they have no meaning to the child. They cannot be dispensed with in teaching, but the teacher must observe for himself when his class is capable of any particular definition; and he will give it not at the beginning of his lesson, but towards the end, after illustration.

**The Means of impressing Instruction.** 222. The degree of impression made by a lesson, in so far as that is influenced by the manner of giving it, depends on two circumstances. On the one hand the successive topics must be clearly and forcibly stated, and dwelt upon for a sufficient length of time to enable the child's mind to grasp them. It is a frequent fault in lessons to introduce topics apparently only for the sake of leaving them, or to pass from topic to topic, in a way which leaves the children unaware that a new one has been introduced. It is impossible that lessons so destitute of character can make any lasting impression. The teacher should advert to nothing which he cannot press home by illustration.

**On Repetition.** 223. The other means for making a lesson impressive is repetition. The concluding part of the lesson is generally devoted to a recapitulation of the leading points; but opportunities for incidental repetition continually occur in course of the lesson itself. Repetition is essential to the whole of elementary teaching; particularly so in the infant school, where everything is new to the children, and where their minds have so little power of tension. Every fact communicated should be repeated more

than once in one form or other; and nothing should be told which is not worthy of this frequent repetition. There are two ways of repeating; the direct and the indirect. Both are necessary. In the former the thing is repeated in the precise form in which it was before communicated; the design being simply to impress the memory. In the latter the thing is repeated in another form; the class are got to express from one point of view what was communicated from another. Besides appealing to the memory, this process exercises the minds of the class; it is, in great part, the educating process in every lesson. The tact of the teacher has great room to show itself in this indirect repetition.

**The Ultimate Test of a Lesson.** 224. "What are the children likely to carry away of this lesson?" is a question the teacher should always be putting to himself. It is the ultimate test of a lesson; for they will carry away what they have been told only in so far as they have been interested and their minds exercised.

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## CHAPTER II.

### ON THE LANGUAGE OF TEACHING.

**Simplicity of Language.** 225. As language is the medium through which lessons are conveyed, the nature of the language employed is an important element in successful lessons. The recommendations of style are the same in teaching as for any purpose. First of all, the teacher's language should be simple; simple both in respect of individual words and of the structure of sentences. The Saxon part of English is, characteristically, our mother

tongue ; it is that part which should be used in the infant school, so far as it goes. Style is not made simple by the use of monosyllables ; nor is anything gained, but the contrary, by always affecting to talk to children in monosyllables. Words of two and of three syllables are quite intelligible, provided the thing has been illustrated before its symbol is given. Sentences of intricate structure should not be used, even though their several parts are quite clear ; the children cannot follow the chain of their connection. Simplicity of style is not to be attained in teaching without study and practice ; if it were, it would not be a virtue in style, instead of being, as it is, one of the highest.

**Precision.**      **226.** The teacher's language should be precise ; in other words, should express neither more nor less than the ideas he intends to convey. Failing this, he is obliged to repeat himself. An excess of words has an injurious effect on a lesson ; it almost always obscures and confuses instead of illustrating. It is only when his style is precise that the teacher can afford to dispense with this unsatisfactory verbal repetition.\*

**Fluency.**      **227.** A ready command over language is indispensable to the teacher. Breaks in the progress of a lesson disturb the attention by shaking the confidence of a class. Further, the same point has often to be presented in different lights to suit different capacities ; which cannot be done without ready power of speech.

**Correctness of Enunciation, Grammar, and Expression.**      **228.** In striving to be familiar, the teacher must preserve correctness of style. Slang or cant phrases must be scrupulously avoided. He should raise up the children to his level in purity of speech rather than descend to theirs. Nor must strict grammatical correctness be sacrificed under the notion of attaining greater familiarity. It is by imita-

tion that the children learn to speak: so far as the school is concerned, therefore, they should have correct models before them. And the teacher should make a point of uniformly correcting any incorrect expressions used by the children, whether in pronunciation, grammar, or idiom.

**229.** Distinctness and force of articulation having been previously insisted on (§ 187), it remains only to notice the tone and modulation proper to the teacher's language. The tones of the voice are very expressive of the state of the mind and affections. A lesson should resemble a conversation in this respect. If there is mutual confidence and interest in the subject, the voice will naturally modulate itself, so as to produce the effect of light and shade. Children feel that in the tones of the teacher's voice which encourages them to respond to what he says. Monotony is quite incompatible with interest and freedom; and, therefore, is always a cause of failure in a lesson. Children read accurately the moral aspect of the tones of the voice; these are a reflection of the temper of the speaker. It is difficult or impossible to give a successful lesson with a feigned good-temper. The living voice has great power with the child; it is the emblem of life itself, ebbing and flowing with the tide of thought and feeling within. Now it is high, now low; now regular and measured, now bold and impulsive; now light, cheerful, and rapid, again slow and solemn.

**230.** The habitual tone of the voice in teaching should not be higher than is absolutely necessary. Noise is a very common fault in infant schools, which is encouraged by loud speaking on the part of the teacher. This is frequently confounded with animation; but it is a very different thing from animation, and by no means necessary to it. The work goes

on far more effectively, and with better moral effect on the children, not to say with less exhaustion to the teacher, when it is conducted quietly and gently ; and the discipline of the school will also be higher.

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## CHAPTER III.

### ON QUESTIONING.

**231.** THE recognized form of school-teaching is by question and answer. In the common school, the teacher engages one pupil at a time directly ; but, if he is skilful, the minds of all are at work during his intercourse with this one. Externally viewed, the questioning is individual, and therefore addressed to consecutive pupils. This is not felt to be irksome in an advanced class ; for their power of attention is more or less developed. It is different in the infant school. Here the children must constantly have something to do ; they cannot attend when they are not engaged directly ; the effect of the teacher's intercourse with them is not felt over the mass unless all are addressed together. Further, the individual pupil is not mentally strong enough to stand apart from his neighbors ; he requires the encouragement that flows from mutual support ; he is but part of a whole, whether intellectually or morally considered ; timid and feeble alone, he is bold only when all act together. Sympathy is the condition of the whole infant-school action ; and the teacher must work by it in his questioning.

Individual  
Questioning  
only partially  
applicable in  
the Infant  
School.



The influ-  
ence of Sym-  
pathy.

232. There is a sympathy which binds the children together amongst themselves; and there is a sympathy which binds them to the teacher. Both of these sympathies influence the manner of the teacher's address to them; the one suggests the propriety of simultaneous questioning, the other of elliptical questioning.

Simultane-  
ous Question-  
ing.

233. By simultaneous questioning is meant questioning addressed to the whole class; questioning to which the answering is simultaneous, within certain limits. It is not implied or expected—indeed, it is not possible, that all the pupils shall always answer. They have different temperaments, and different degrees of mental power. Some will answer one kind of questions, some another; sometimes only two or three may answer; but all have the opportunity. Questions must be given to suit all capacities. The danger is that they be one-sided, and only engage a certain part of the class; who will thus do all the work, the rest being content to be silent. The teacher's observation of his class will tell where to expect the initiative of the answers to particular questions, and where it will be necessary to impress the answers by indirect repetition. Frequently all who can answer should be allowed to do so; but not always. The class should be accustomed to hold their hands out when they can reply to a question, and the teacher will select who is to answer. The occasions for doing this depend on the nature of the probable answer. Uniform promiscuous answering is not contemplated when we speak of this simultaneous questioning; it will lead to confusion. All, who can, provide themselves with an answer; one or two, or any section of the class, will give it, at the teacher's discretion. Thus individual answering is mingled with the simultaneous. The only case in which a whole class or gallery gives one answer is when the teacher wishes a certain answer to be re-

peated, for the purpose of having it impressed on the minds of all.

**234.** Elliptical questioning requires the children to complete a sense of which the teacher has given the greater part. Some use this kind of questioning more than others; it is a matter of temperament. The ardent and sympathetic use it most and succeed best with it. The teacher carries his pupils along with him, identifies his mental action with theirs, and withdraws his assistance just before the end, trusting that the impetus he has given them will carry them to the completion. From the greater sympathy with them of which it is the vehicle, it contributes remarkably to keep up the continuity of thought in a lesson, aiding the children in paying the exactions made upon them. Altogether, the use of it makes a lesson smoother and more flowing in its progress.

**235.** (1) This kind of questioning should be given without previous notice. The children should supply what is wanting by force of their sympathy with what is going on at the time the ellipsis presents itself. The voice of the teacher should not be raised, or any other sign given, when it is coming. This habit will break the continuity of attention, as they will be called upon to think only when the sign is given them. (2) Elliptical questions must be constructed like other good questioning. They must not be merely verbal; for this gives no mental exercise. They must not be indefinite, so as to admit of more than one answer. They must be adapted to the capacity of the class, short and easy at first, and gradually increasing in difficulty. As far as possible the teacher should manage to avoid failure on the part of the children in filling them up. Whatever degree of difficulty

Elliptical  
Questioning  
—its Theory.

Rules for  
using Ellip-  
ses.

they are intended to be of, they should be fairly put. The common but injurious practice of giving half of the word to be supplied must be avoided. When the teacher is driven to such an expedient, he should gather from this that he is not conducting his elliptical questioning with tact. (3) Elliptical questioning is not to be used alone; its design is only to relieve direct interrogations. (4) It is not to be contrasted with simultaneous questioning; they harmonize perfectly, and are best given in conjunction.

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## CHAPTER IV.

### TEMPER AND MANNER IN TEACHING.

236. IN the infant school, children take part in

Personal influence of the Teacher as bearing on the success of his Lessons.

their lessons more for the sake of the person who gives these than for the lessons themselves.

A more important element in their success, then, even than their intellectual character, is the disposition the teacher bears to the children, as shown by his temper and manner. They must have confidence in him and love him, in order to profit by his instruction; and they are never deceived in the estimate they form of his disposition towards them.

Cheerfulness.

237. Cheerfulness in school has the effect of sunshine on a landscape. It keeps the children

pleased with themselves; disposes them to do their best; gives them a liking for their work. A dry, morose, sharp manner shuts up their minds, so that they will not answer even what they know. That cheerfulness which exhibits itself to the children whilst at play, but not whilst at their lessons, is spurious, and does not attain the end. A genuine cheerfulness is uniform. The teacher must watch him-

self when he is tempted to depart from it: this is perhaps the greatest test of his self-control. It is certain that without cheerfulness of disposition no one can attain any of the ends of infant training.

**Patience.** 238. Cheerfulness implies patience. The children are weak, and not capable of great things. The teacher must bear with their weakness, repeat his illustrations again and again, and not give way to anger because they cannot keep pace with him. Anger dissipates their self-confidence, and quite incapacitates them for exertion; they cannot attend or think when fear takes possession of them. The way in which impatience most commonly manifests itself is in passing over the duller children. The teacher has only to meditate a little on the nature of those with whom he is dealing to see how unreasonable this impatience is.

**Self-possession.** 239. The learner may require to be told that to give a successful lesson perfect self-possession is requisite in the teacher. Without this he is too much occupied in thinking of himself to think of the qualities of his lesson. Different degrees of self-possession are to be distinguished. One may be able to adhere to the plan of lesson he has prepared, yet with evident effort; he is disturbed by any unusual external influence, and cannot diverge from the straight path he has laid down for himself. A higher degree of self-possession than this is necessary. He must have such command of the lesson as not to be under the necessity of keeping his reflection constantly on the stretch upon it; must be able to avail himself of any casual illustrations which occur to him as he proceeds; must not be disturbed by the presence of any one. Careful preparation is an aid to this quality; but practice in teaching alone can secure it.

**Enthusiasm.** 240. Without perfect self-possession there can be none of that enthusiasm or self-abandonment which characterizes the best lessons. That power which some have of entering into their subject and identifying themselves with it, of teaching with their whole heart, from the conviction that they have something important and interesting to communicate, is a step beyond mere self-possession; but, in so far as it can be *acquired* at all, is to be so only through this quality.

**Animation.** 241. Animation or energy is an obvious commendation of manner in teaching. The manifestation of this quality is frequently mistaken. A noisy, bustling manner and loud tone do not of themselves constitute animation. This is essentially a mental quality. When the teacher by activity of mind succeeds in engaging the attention of the children, his manner may be calm, but he cannot be said to be wanting in animation. On the other hand, it is very unpleasant to see the external affectation of energy without the presence of the reality.

**Decorum.** 242. The most animated manner is quite compatible with propriety or decorum. Attitudes and gestures must be becoming; the teacher must not tolerate in himself, any more than in his pupils, anything approaching to slovenly action.

## CHAPTER V.

## PRACTICAL DISCIPLINE.

**243.** THE word "discipline" properly denotes the whole influence, physical, intellectual, and moral, to which a pupil is subjected in the course of education. But it is sometimes taken in a narrower sense to denote the influences which the teacher employs to regulate the pupil's conduct, in other words, the motives he presents to the pupil for the discharge of his duty. In this sense "discipline" is not only a large part of moral education, but has a very important bearing on intellectual progress. The motives it encourages are being constantly encouraged; they are appealed to in every lesson. We must determine, then, what are the motives proper to be encouraged, and how they are to be practically appealed to.

**244.** The highest motive which a man can follow is the sense of duty; and in the case of a Christian man the standard of duty is the will of God. But this motive is a very abstract one; its power is not felt except as the result of long education. For this reason it is not a motive by which alone the work of the infant school can be conducted. Till it comes to be felt as a motive, there are three others by which we must work, all pure and powerful; the love of activity, love for the teacher who directs that activity, and the sympathy of the school. Regarding the first we have seen already that the infant is keenly desirous of activity,

Meaning of  
the term  
"Discipline."

Motives to  
be cultivated  
in the Infant  
School.

so much so as to be unhappy when anything interferes with it. Provided, then, the work in which he is engaged is suited to his capacity and made interesting, the child requires no external stimulus; he will give himself to it for its own sake. Regarding the second we have seen that love is the first and strongest feeling in the child's bosom; love for his parent, love for the teacher who acts towards him in a parental spirit\* (§ 68). [This love is essential to his happiness, and it will flow forth from the child unless it be positively repressed by the imprudent or unkind conduct of his superior.\* And this love will lead the child to self-denial; it will make pleasant to him a path which may have no attractions in itself. There is but one way to draw forth this love from the child; the teacher must himself feel it and show it towards the child.\* Regarding the third motive we have already seen (§ 17) that a good social relation is necessary to the child's happiness. He cannot stand alone, isolated and independent; he is swayed by the opinions and influenced by the example of the assemblage of which he forms one. When he is singled out and exhibited as contravening the spirit which the whole school recognizes, and in conformity with which all act, he is pained, and in a manner overwhelmed; no child is so strong as to be able to resist this; a few, indeed, so bold as to be disposed to try resistance. To the teacher, then, who wishes to have complete command over the children, and to rule them by an influence which shall be indisputably salutary in its effects on their moral character, we say that these three things are to be attained: (1) he must make the work interesting, not a task but a pleasure; (2) he must love the children over whom he is placed; (3) he must establish a community of sentiment over the entire school. Regarding the highest motive of all, the sense of duty, it is to be observed that, whilst from its nature it does not immediately serve him, it is his business to develop it. The

idea involved in the word "ought" should grow up in the child's mind from the whole complexion of his training. The teacher must frequently introduce it, adding it to the other motives, speaking of his own will as a thing that *ought* to be obeyed by the children, and of God's will as a thing that *ought* to be obeyed by all, and which all who are good do obey. In this way the children will become familiar with the full strength of the obligation that lies in the word, and, as they grow older, will desire and feel the need of no other obligation.

**Rewards and Punishments.** 245. Rewards and punishments are the natural sanctions of law ; they are involved in the very idea of moral training. Necessary in all the departments of human activity, they are also necessary in the infant school. If the motives specified in the previous section be the proper ones to cherish, then the nature of the rewards and punishments to which we should have recourse clearly follows. † If the work of the school is made a pleasure to the children, then it is a mark of the teacher's satisfaction when he allows any one to continue to take part in it ; and a larger share, or a peculiar share, in the work of any lesson may be easily made in the eyes of the child an eminent reward : on the other hand, exclusion from the work is a means of punishment.\* If mutual love exists between the teacher and his pupils, then the *expression* of his satisfaction with a child is reward, and the *expression* of his dissatisfaction is punishment. † If a feeling of sympathy be established in the school, then the manifestation of this feeling in favor of a child is reward ; and the manifestation of it in condemning him is punishment. These are rewards and punishments of indefinite power. Speaking generally, they are sufficient for the purposes of the infant school. The children will be not less emulous to obtain the one than to avoid the other.



“Places”  
and Prizes  
not expedi-  
ent.

246. Various other rewards and punishments are commonly employed; but they appeal to motives of an inferior nature. The giving of “places” and of prizes is one of these rewards. This practice develops a particular phase of emulation. It is liable to two objections: first, it is narrow and indiscriminating in its application, rewarding only efforts of intellect, and that without making allowance for the relative circumstances of the children, or even recognizing all the different faculties by which such efforts may be made; secondly, it tends to obscure the higher motives by which children should be influenced, by giving undue development—so far as it has any meaning at all—to the *personal* feeling. For these reasons, “places” should not be allowed in the infant school nor prizes given, it being understood, of course, that the giving of little books or tickets to all the children at the end of the year does not in any way partake of the nature of prize-giving.

The “Sugar-  
plum” sys-  
tem.

247. Another form of reward may be characterized as *bribery*. A child is stubborn, we may suppose; the teacher persuades it to do its work by the prospect of a sugar-plum, or a halfpenny, or something else. This practice is certainly more common in the domestic sphere; but it is not unknown in schools. Now, we do not say that there is no occasion on which the teacher may not with advantage give a child a reward of this nature; it might not be unfitting that he should in such a way mark his approbation of a child who in his private capacity has conquered some bad habit or resisted some individual temptation. But, as a theory of government, this “sugar-plum” system is most debasing in its effects on character, throwing entirely into the shade all the higher motives, making the feeling of present sensuous pleasure all-powerful, and spreading jealousy and discord through the school.\*

Tasks and  
Corporal  
Punishment.

248. Two forms of punishment in common use are these: (1) the giving of tasks to be learned; and (2) corporal punishment. The first is objectionable in respect that it directly associates the idea of pain with the ordinary work of the school, whereas the great aim of the teacher should be, as we have seen, to make that work a pleasure. How can we call that a pleasure which by a certain little increase we assume to be a pain?—With respect to corporal punishment, we do not say that it is never to be had recourse to, and are far from taking the high ground of denying the teacher's right to have recourse to it. When the parent delegates his child's education to the teacher, by the same act he seems to delegate all his powers of government, so that the teacher is entitled to use all the measures which are lawful to the parent. But with both corporal punishment is quite an exceptional resource. Special cases may occur in which it would be the best form of punishment; but it must be condemned when it is a thing of daily occurrence. The chief practical recommendation of it is the ease with which it is administered: perhaps this should rather be looked on as the great objection to it and the great danger attending it. The teacher who views it as an ordinary resource is, to say the least, under very strong temptation to let the higher motives remain dormant. Whilst the power of using it, then, must remain with the teacher, those are the fittest to be intrusted with it who use it the least. This much is certain; many infant schools are conducted entirely without it, and it will always be found that the discipline of these is far better than that of schools where it is a thing of daily occurrence.

Expulsion.

249. Expulsion is a punishment which deserves a special notice. There can be no absolute rule in moral discipline; and cases may arise where expulsion is necessary for the character of the school. But

the teacher who views it lightly, and reckons it among his ordinary resources, has a very imperfect conception of the functions of his position. It is very easy to expel a bad child ; but if we are only to educate the good, what is to become of the bad ? Is it not they who most need a teacher's labor ? When we say that a child is incorrigible, that only means that *our* discipline has not yet met his case. But it is certain that there is some way of subduing him, if we have only the ingenuity to discover it. Wilderspin says that, though some children of peculiar temperament gave him much trouble, he finally got the better of every case, so that there never was any child expelled from an infant school under his care ; and his testimony is specially valuable on such a point.\* On the whole, then, some teachers may, from their limited powers of insight into the young heart, find it necessary to expel a child to preserve the others from his bad influence ; but it is a very extreme resource,—not to be used, perhaps, more than once in one's whole experience.

250. To exercise a salutary discipline, two cautions are very necessary to be borne in mind.

Marks of a  
generous dis-  
cipline.

The one is that the teacher should have that generosity which gives the children credit for what good things they do, and puts the best construction on acts which are ambiguous in their aspect. To reward the right is certainly as important as to punish the wrong, and it should be more welcome to the teacher : in the eyes of the children, the one gives credit and power to the other. To construe their motives and acts favorably is required not less by kindness than by policy ; it will give him greater power when he has to deal with indisputable faults. This is particularly the case with respect to attention to their lessons. The teacher should remember that the children are weak, and only *acquiring* the habit of attention ; he will often be mis-

taken if he attribute every act of inattention to deliberate purpose, and make no allowance for their nature or their circumstances. In the majority of instances of this fault, he will probably find that he has more ground to blame himself than them. The teacher should not always be on the outlook for faults; if he shows that he expects them, he will certainly find them. And mere fault-finding has no power to prevent faults. It may be added that there are often a great many small faults current in a school which must be remedied, not by being directly noticed, but by an elevation of its whole tone.

**251.** After removing from his discipline in this way the predominating aspect of fault-finding, the teacher must be careful to maintain the dignity of his rewards and punishments by the manner in which he administers them. (1) When he has made up his mind as to those which he intends to use, he must strive to preserve them in their purity. This needs great watchfulness and self-denial: at first, especially, the lower forms of them will be continually obtruding themselves upon him. Examples of error are these: he forgets to discriminate between moral good and intellectual, and so bestows the same expression of commendation on the pupil who answers cleverly and on him who does some good action; or he habitually threatens the children without either the ability or the intention to fulfil, forgetting that such a mode of discipline carries on its very front the aspect of perpetual falsehood, besides making frivolously familiar to them those expressions of *will* which ought to carry with them, and which, if judiciously used, would carry with them, a great restraining power; or he uses ridicule freely and without reflection, forgetting that this has absolutely no application to natural defects, whether of mind or heart, but only to

How to  
maintain the  
Dignity and  
Effectiveness  
of the Re-  
wards and  
Punishments  
adopted.

conventional faults, which are at worst bad habits in things that of themselves have no moral significance. (2) Rewards and punishments are degraded when they become of too great frequency. The virtual effect of this is to confound the character of actions. If they are to maintain their power, they must not be made too common. (3) They must be administered in a spirit of seriousness. It is for a very serious purpose they are used, namely, to form the character; anything like levity in dealing with them must give the children the impression that there is no real meaning in them, and that the idea of duty is after all only a joke. (4) They must be administered on strictly uniform principles known to the whole school. The children must not be in doubt as to whether certain actions are allowed or forbidden, innocent or punishable. The boundary-line between the right and the wrong must be clear and unmistakable; and, when once fixed, the teacher must not let his own caprice interfere with it. Constancy is of the very essence of moral discipline (§ 82): uniformity of consequence is the sanction, in all actions, either of doing or of not doing; the child must be able to calculate on the consequence of what he does, and this consequence should be made as certain as our knowledge and power can make it. The idea of duty is developed in its full force only by a long course of steady rule.\*



## PART IV.

### SCHOOL STRUCTURES AND ORGANIZATION.

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#### CHAPTER I.

##### SCHOOL STRUCTURES.

Site of an  
Infant  
School.

**252.** THE site of the school is generally determined by circumstances over which the parties interested have little control. But where there is a choice, the site of an infant school should conform to the following conditions. It should include not only space for building on, but also a distinct space for play-ground. It should be retired; if in town, from the noise and danger of the street; if in country, from the dust and danger of the highway: in either case, the little school-community should be by itself during school-hours, and subject only to its own influences. The soil on which it is built should be thoroughly dry, and free from rank vegetation. It should not be in proximity to public works of any kind, or to any open drainage. It should be sheltered, either naturally or artificially, from inclement winds. It should be of good exposure, not overtopped by surrounding buildings which exclude the air; and it should have some view of the surrounding country or locality. It will be understood, however, that these considerations, many or all of them, must give way to the more imperative considerations of social or economical necessity.

Parts of an  
Infant  
School.

253. A school is something more than a mere room. The structure of an infant school, as of other schools, includes certain distinct parts, which have their peculiar functions, and which must be individually provided for, if the school is to be complete. We may reckon these six :

The School-room itself—Section-room—Lobby or Entrance-room—Wash-room—Teacher's room and Museum—Playground and its appliances.

And these parts of the structure should be compactly and conveniently arranged relatively to each other. It may be added that they should be all on the ground-flat ; stories in a school are in every way objectionable, and particularly in an infant school.

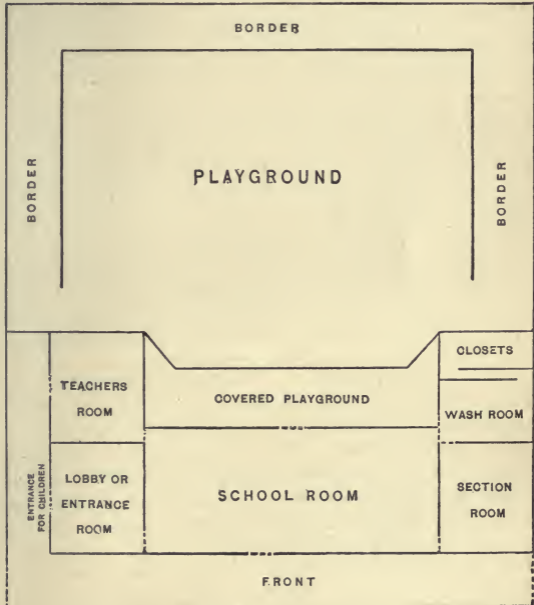
The diagram on the opposite page is not given as the plan of a school, but to present to the eye the different parts, and the closeness of connection that should exist between them.

Dimensions  
of School-  
room.

254. The best shape for the school-room is an oblong, about twice as long as it is broad. A square, or other shape, is not so convenient ; nor does it allow of such economy of space. The gallery, constructed to hold the entire number of pupils, and no more, without crowding, should, alone or with passage to section-room, just fill one end of the school, and extend forward about one third or two fifths of the total length. The size of the room relatively to the attendance must be greater in the infant school than in the common school. The children are more sensitive to the influences which arise from closeness and overcrowding ; and there must be space to accommodate all the children in classes independently of the gallery. The area allotted to each child is never below ten square feet in a good infant school ; in some, especially in smaller ones, it is eleven, and even twelve. The ceiling



should in all cases be high, ranging from fourteen (twelve is the minimum allowance in the Minutes of Council) to eighteen or twenty feet: some are not ceiled, but it is bet-



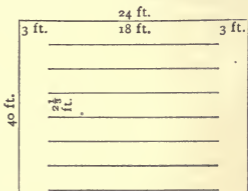
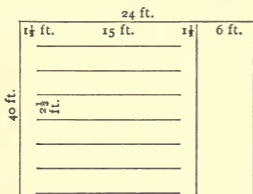
ter that they should be, to insure an equal temperature. If the ceiling is not high, no amount of area will secure a well-ventilated and comfortable school-room.

Distribution of space exemplified in a School of moderate size.

255. The two following examples will illustrate the distribution of space in the infant school. Suppose an actual attendance of eighty children—which is probably the best average number to work with in one school—and that 12 square feet are allowed to each child; we require 960 square feet, *i.e.*, a room 40 feet by 24. The height we shall assume to be 16 feet. In estimating the dimensions of the gallery, not less than eighteen inches should be allowed as length of seat for each pupil; it is not good to have the children sitting close to each other. The breadth of one seat and its accompanying platform may be 28 inches.

Then, supposing the door of the school-room is in that end of it against which the gallery is, we should require eight seats, each holding ten pupils. Each seat would be 15 feet long, which, with 18 inches for each passage, would give 18 feet length to the whole gallery.

Its breadth, from front to back, would be that of seven platforms, together with the breadth of one seat; *i.e.*, seven times 28 inches + 8 inches, or, in all, 17 feet. The open space in front would have 23 feet of length, or 552 square feet of area; giving as nearly as possible 7 square feet to each child. If the gallery extended quite across the end wall, each seat would then be 18 feet long, holding twelve pupils; and seven seats, with the two passages of 3 feet width each, would accommodate the whole. The open space would be somewhat greater in this case; which it would need to be in order to



allow for the door. The arrangement would now appear as indicated in the lower diagram. These are liberal, but not over-liberal, dimensions. The gallery space may be considerably contracted, either in length or breadth, if the children are made to sit close together: in this case 13 inches is sufficient allowance for the length of each seat. With a school-room such as has been described, no separate section-room would be necessary.

**The same in a large School.**      **256.** Suppose an infant school of the largest sort, in a densely-peopled district, having an average attendance of 180. Allowing 10 square feet to each pupil, we require 1800 square feet, or a room 60 feet by 30 feet. In this case there would almost certainly be a door in the same end of the school-room as the gallery. Giving 6 feet of breadth for this, the gallery would be 24 feet across, *i.e.*, the seats 20 feet, and each passage 2 feet. Each seat would thus hold 18 pupils sitting closely—which they must do in so large a gallery—so that 10 seats would accommodate the whole; breadth of seat and its platform same as before. The open space would thus be  $38\frac{1}{2}$  feet long, giving nearly  $6\frac{1}{2}$  square feet area to each pupil. It may be observed that so large a gallery should never be taught with all the children in it, and that one moderately large section-room, or two small ones, would be indispensable to a school-room constructed on these conditions. A large school-room of this kind should have a smaller gallery at the other end of it; or, at least, the class-seats should be so arranged as to admit of being easily thrown together for collective lesson.\*

**Section-room, Teacher's Room, Wash-room, Entrance-room or Lobby.**      **257.** The other parts of the school may be very briefly noticed. The section-room attached to a large infant school should be of sufficient size to accommodate a collective group of the children for an object or religious lesson.

It should contain a small gallery, and, whilst in close connection with the principal room, should be effectively separated from it in respect of sound.—The teacher's room is attached to the school on the supposition that his house is not. It should command a view of the playground. It might conveniently serve as museum, as it is not a good arrangement to have the collection of objects in the school itself.—Every school should have a wash-room adjoining it, fitted with basins, etc., to give effect to what the children are taught regarding cleanliness. The children should be allowed to enter it, however, only under superintendence.—A very important part of the school is the lobby or entrance-room. Where such a room is not provided—which is too often the case—there must be more or less confusion in assembling and in dispersing. It should be furnished with pegs, etc., for caps, bonnets, and other articles of dress. Each class should have its own division of pegs, and each child its own number. One or more of the assistants should always be stationed in this room at the hours of assembling and dismissing. A few simple regulations, strictly enforced, will secure perfect order in this department. A mere closet or passage will not serve the purpose.

**258.** For ventilation, various expedients have been proposed, but experience shows that the teacher must still depend chiefly on the proper use of the school-windows. If there are windows on opposite sides of the room, a draft is easily had which will keep the air fresh. There is but one condition on which windows should be so placed, and that is, that they should be at a considerable height above the heads of the children. But it is generally easy to create a through-draft, even when there are windows only on one side, by the use of a perforated plate in the opposite wall. Without some such

Ventilation,  
Lighting, and  
Heating.

contrivance, the ventilation will always be defective where the windows are only on one side.—The infant school should be well lighted. The best sides for the admission of sunlight are of course the south and the west. The windows must have blinds. When the school is ventilated by means of the windows, the difficulty of using the blinds to exclude the sun's rays on a windy day may be obviated by having a fixed Venetian blind outside the window of a foot or a foot and a half in depth, and lowering the window-blind to a level with the bottom of it. It may be observed that a window-light in the ceiling is very convenient both for lighting and ventilating. Where this plan is adopted, great care must be taken to make it and to keep it watertight.—For the heating of a school, the open fire, with all its disadvantages of expense and unequal temperature, is still recommended in preference to stoves, which are generally neither wholesome nor cleanly.—(§ 92-94.)\*

The Play-  
ground—its  
Uses.

259. A playground is an essential feature in the infant school. Its uses have already been stated by implication. (1) It is necessary for the physical recreation of the children; for which purpose it should be occupied not less than a third part of the total school-time. (2) It is most valuable for the opportunities of moral training which it affords. In the school-room the children are under immediate superintendence, and are so far restrained in their manifestation of character; in the playground they feel themselves free, and there, therefore, they show themselves as they are. In the play ground, accordingly, the teacher may obtain an insight into their characters and tendencies which he will seek for in vain elsewhere; and numerous incidents will pass under his notice, which he may turn to excellent account in the school-room, from their reality and freshness.—(§ 59, 72.)\*



**Superintendence of Playground.** 260. The children should not be left to themselves in the playground. In the case of elder pupils, direct superintendence would not be desirable ; but with infants it is indispensable, both for physical and moral ends. From their want of reflection they cannot safely be left to themselves ; and for the same reason the presence of a superior is not felt by them as any restraint. At the same time this superintendence must be judicious ; it must be more that of a friend than of a master, sympathizing and advising rather than dictating. In this way it will encourage instead of diminishing the general hilarity. The teacher cannot afford to dispense with taking a personal share of this superintendence, even when his assistants are worthy of all confidence. His room should always command a view of the ground. In point of fact, the hour for the recreation of the children is scarcely one for his recreation, unless he can find his in theirs.

**Features in arrangement of Playground.** 261. The features which may be observed in a good playground are the following : (1) As to size, it must be large, affording ample space for the children to run up and down in. (2) As to position, it must be adjoining the school, with entrance immediately from the teaching-rooms, inclosed from public view, bounded off so as to be school property, and on the sunny side of the school. (3) As to soil, it must be thoroughly drained, laid with fine gravel rather than with flags or deal ; grass is unsuitable in damp weather, so that only a small part, if any, of the surface should be covered with it. (4) As to arrangement, there should be a flower-border of greater or less extent. This is valuable in different ways ; it affords materials for object-lessons which can scarcely be had otherwise ; it tends to cultivate the taste, and it is an instrument of moral training from the habit of self-restraint imposed upon the children

with regard to it. A part of the ground should be covered to provide against wet weather ; it is not desirable to be under the necessity of retaining the children in school during play-hours. (5) As to furniture, the means of physical exercise which seem to be most generally approved of are the circular swing, bars for easy gymnastic exercises, and a rope for the children pulling against each other on the grass. Agreeable recreation of a more sedentary kind is furnished by a collection of wooden bricks of different shapes for building, and the sand-pit for digging in and building on. In addition to these the children are supposed to have their own games and playthings.\*

**School-cleaning.** 262. It only remains to be added here, that all the parts of the school must be kept scrupulously clean. The class-rooms and other rooms must be swept and dusted daily ; it may often be advisable also to have the principal floor swept in the hour of interval between forenoon and afternoon work. The rooms must be washed as often as necessary. Attention should also be paid to the playground ; it must be kept clean and neat, and free from puddles. The whole appearance of the school should be such as to impress the children with the idea and love of order and cleanliness (note on § 74). It is hardly necessary to add that no visitor can form a favorable opinion of a school where this is neglected, whatever its character be in other respects.\*

## CHAPTER II.

## ORGANIZATION.

**263.** THE general complexion of the arrangements of the infant-school differs widely from that of the common-school ; partly because the subjects of instruction do not correspond ; but chiefly because the methods that must be used in conveying instruction have no resemblance. On the one hand, collective action is largely required in the infant-school ; and, on the other, in exercises of attainment the classes are necessarily much smaller than in the common-school (§ 21). There are three distinct groupings for which provision must be made in the infant-school : (1) in some exercises all the children must participate simultaneously, as in the opening and closing devotions, in singing, and in physical exercises. For this purpose the gallery must hold them all ; and, as some of the physical exercises are performed on the floor, *e.g.*, marching, the area in front of the gallery must be large enough to admit of this. (2) In some exercises several classes are combined for collective lessons. Children of four years cannot follow the instruction of children of six or seven. If there is to be regular progress, therefore, and adaptation of work, the children must be formed into separate classes ; and yet, as we have seen, the division must not be so minute as to destroy the character of simultaneous action. A twofold grouping will suffice for this purpose ; the one group comprising the children under five, and the other those above five. These groups will be found sufficiently homogeneous to work well together, and, as a rule, will divide the



school with sufficient equality. Their collective lessons may be given with perfect convenience in the gallery; when the school is very large, the separate class-room will also be required. The subjects of instruction which need this union of collectiveness with division are those which appeal to the general intelligence of the pupils, such as the religious lesson, the object-lesson, the lessons on color and form, the lessons on number, and the geography lesson. (3) Exercises of attainment require separate sectional and, as far as possible, individual action. Under this head fall reading and spelling. Classes for these may be arranged standing round the area in front of the gallery.\* From the minute subdivision that is needed, it is in this exercise that the teacher requires most assistance. But the difficulty is more easily overcome than would appear at first sight; for the whole of a large school is never thus subdivided at one time, but generally only one group, the other being engaged with some collective lesson. As these small classes are only made for reading, attainment in reading is the only test to be used in constructing them. There is but one way in which the consideration of age may affect the classification: a child of six (suppose), whose education has been neglected, may require in respect of attainment to be ranked with a class of three-and-a-half or four who are just beginning to learn reading; yet it would be injurious to the interests of such a class that he should be a member of it.

**Time-Tables**  
**—their Uses.** 264. On succeeding to the charge of a school, the teacher will naturally be anxious to draw up a suitable time-table of its engagements. He should not immediately overturn the arrangements of his predecessor, but rather allow them to continue, subject only to necessary modifications, till he has become well acquainted with the circumstances and wants of the school. His own time-table is almost certain to be better by the short delay, and to be

of such a character as to supersede the necessity of subsequent material change. It should be suspended in a prominent place on the school-room wall, for reference by the teacher and his assistants, and for the information of visitors.

**Principles of their Construction.** 265. The time-table should be constructed on such considerations as the following: (1) The hours of daily instruction in the infant-school should be fewer than in the common-school; for the senior infants four hours are sufficient; for the juniors three, or three and a half. (2) This period may be variously divided, according to the exigencies of the school; where the children do not go home at any interval, the best division is into three parts, with a short interval of recreation between each two; where they do—and this is the more common practice—a division into two parts is enough. (3) The times of meeting and times of dismissing may likewise vary; probably the most generally convenient hours are from 10 to 12 A.M. and from 1 or half-past 1 to 3 P.M. (4) There should be no teaching on Saturdays. Both teacher and children require relaxation on one day in the week. It is not uncommon to make Saturday a half-day; in this case the attendance is almost always so irregular as to make it not worth while to assemble the school. (5) The teacher should have the different kinds of lessons before him, and fix the proportion they should bear to each other in respect of time. Thus it is enough to have one formal religious lesson daily; reading and number may be taken up twice daily; the geography lesson as distinct from the object-lesson is sufficiently treated in two lessons weekly; the teacher may read to the children twice weekly; there is no use for more than one exercise on color in the week; whilst singing and manual exercises may be given three or four times in the day. (6) The lessons should not, on the average, be longer

than twenty minutes; for the junior infants a quarter of an hour is sufficient. (7) The succession of lessons given to any one class should be agreeable from its variety; lessons of the same nature, such as the religious lesson and the object-lesson, should not follow each other. (8) To make the noise and mutual disturbance as little as possible, exercises which may be performed in silence should generally be given to one group or class whilst the others are engaged in their oral lessons. (9) A class should not be left without direct superintendence, or set to learn something by themselves in school, if it be possible to arrange otherwise. (10) The arrangements should be such that the teacher may have opportunity of coming into daily personal contact with all the classes, and that the pupil-teachers or assistants may have opportunity of seeing and taking part in all the work of the school. (11) The necessary changes during the day should be expeditiously conducted, so that no time be lost between the lessons. (12) When the timetable has been made, the strictest punctuality should be observed in keeping the lessons within the times allotted to them.

266. The following is an average specimen of

Specimen of  
Time-Tables.

the time-table of an infant-school: (1) On the supposition that the children do not go home

in the interval; (2) On the supposition that they do.

TIME-TABLE, No. I.

	10-11.40.		12.20-1.30.		2.15-3.15.	
Assemble in Play-ground, 9.45.	Opening, . . . . .	10 m.	Singing, . . . . .	5 m.	Singing, . . . . .	5 m.
	Roll, . . . . .	5 "	Form, Senior {	20 "	Ob. Less., Sen. {	20 "
	Religious Lesson, . . . . .	20 "	Number, Jun. }		Form, Junior }	
	Reading, . . . . .	25 "	Reading, . . . . .	20 "	Drawing, Sen. }	15 "
	Sing. and March, . . . . .	10 "	Mutual Ques-		Ob. Less., Jun. }	
	Number, Senior {		tioning, . . . . .	10 "	Reading to Chil-	
	Form, Junior }	20 "	Exercises, . . . . .	5 "	dren or Moral	
	Phys. Exercises, . . . . .	10 "			Lesson, . . . . .	15 "
					Close, . . . . .	5 "

## TIME-TABLE, No. II.

	10-11.	11-12.	1-2.	2-3.
Assemble in Playground, 9.45.	Opening, . 10 m.	Singing and	Sing., etc., . 10 m.	Ob. Less., } 15 m.
	Roll, . . . 5 "	Exerc., . 10 m.	Object Les-	Junior
	Religious	Num., Sr. } 20 "	son, Sen.,	Form, Sr. }
	Lesson, . 20 "	Form, Jr. }	Reading	Singing, . 5 "
	Read in Sec-	Form, Sr. }	(all), . . . 30 "	Num., Jr. }
	tions, . . . 25 "	Num., Jr. }	Playground. Juniors meet at 1.30.	Mor.Less. or Read- ing, Sen. }
		March and		Mutual Ques-
		Dismiss, . 10 "		tions, . . . 15 "
				Close, Dis-
				miss, . . . 10 "

*Notes on Time-Tables.*—(1) The children should always assemble a quarter of an hour before school-opening on the playground, and have their caps, etc., deposited in the entrance-room, under the superintendence of the pupil-teachers, so as to be ready to enter school whenever the bell rings. (2) The religious lesson should be given as the first lesson of all, either to the school collectively or to groups. The order of the following lessons may vary. (3) Reading, which is a class-lesson and is given standing, will well follow the religious lesson. (4) The children will then require some relaxation by singing and manual exercises. (5) The lessons on number and form (including color) are supposed to be given to the senior and junior groups separately, to suit the advancement of each. Physical exercises conclude the morning meeting. (6) When the children do not go home, three quarters of an hour in playground at a time is enough; otherwise an hour or hour and a half is required. (7) A little singing is given at commencement of each meeting to calm the excitement of the playground. (8) The object-lesson, like the lessons on number and form, is supposed to be given to separate groups. (9) Reading to the children and the moral lesson (as distinct from the religious) may alternate with each other, as neither requires to be given daily. (10) Mutual questioning on miscellaneous subjects is a very interesting exercise to the children, and has ten minutes daily assigned: this may be varied by the

children in turns leading the manual exercises. (11) There should be no admission to playground after the afternoon dismissal. (12) No place is assigned in these time-tables to sewing. The elder girls may be engaged in it if it is deemed necessary or expedient. It is not much they can learn in the infant school, beyond how to hold the needle and to make stitches in sewing and knitting. It is, however, an interesting occupation to the girls. Not less than three quarters of an hour should be given to it at a time, when it is a part of the course; the teacher will have so much to do setting the seams for them, that it would not be worth while to engage in it for a shorter time. The boys may be engaged in drawing or writing during the sewing time unless it be at an extra hour. (13) This time-table is made out for one day; but with the necessary change of lessons and hymns it will serve for every day.

**School Registers—their Uses.** 267. Registers of attendance should be kept for the information of the teacher himself and of all who are interested in the school; the condition of the school, both past and present, can be gathered from them at any moment. And the very fact that strict account is taken of the attendance has an important influence, both with parents and children, in promoting regularity.

**Register of Admission and Withdrawal explained and exemplified.** 268. The Register of Admission and Withdrawal, or general roll of the school, is designed to record the names of the children who have been pupils at any time, with the exact period of their attendance. It should be of considerable size, therefore, so as to serve over a number of years. It consists of two parts: the Register itself, strictly so called, and its Alphabetical Index prefixed. The Register may be simpler in its construction than would be necessary in the common school. The following is sufficient:

## REGISTER OF ADMISSION AND WITHDRAWAL.

Index No.	Date of Admission.	Child's Name.	Age	Name and Residence [and Occupation] of Parent.	Date of Leaving.	Reason.	Character.
1		Dixon, John					
2		Ord, Mary					
3		Wilson, Henry					
etc.		etc.					

The alphabetical index prefixed may be of this form :

## ALPHABETICAL INDEX.

Child's Name.	Index No.	Child's Name.	Index No.	Child's Name.	Index No.	A
Addison, John	283	Arden, John	191			
Allan, Peter	54	Avery, Anne	302			
Alton, Mary	789	etc.	etc.			
Anderson, Jane	681					

The name and index-number need alone to be recorded here ; the index-number borrowed, of course, from the register. This page only represents names beginning with A : from two to four pages may be given to a letter. The way to use the general roll is the following : " When a child is to be received into school, write his name in its proper column in the register, and fill up the other columns so far as they can be filled at that time ; then make the necessary transference of name and index-number immediately to the alphabetical index.

Daily Register of Attendance exemplified. **269.** The other register which should be kept is the daily class-roll, designed to register the state of attendance from day to day. For this purpose the whole infant school should be treated as one class, and the roll called when the children meet in the gallery in the morning. This register might be of the following form:

MARCH, 1854.

No.	Name.	Index No.	M.	Tu.	W.	Th.	F.	M.	Tu.	W.	Th.	F.	etc.
			1	2	3	4	5	8	9	10	11	12	etc.
1	Charles Craig	243											
2	Andrew Dawson	61											
3	William Tibbetts	29											
4	Mary Cook	456											
5	Anne Park	185											
etc.	etc.	etc.											
Number present daily.			87	88	86	90	94	94	93	93	88	87	etc.
Number absent daily.			7	6	8	4	0	0	1	1	6	7	etc.
Average Number present daily for week ending . . . . .			5th, . . . . . 89				12th, . . . . . 91				etc.		
Weather.			Fair, but dull.				Fine.				etc.		

Its Construction and the Manner of using it. **270.** This register, as it is ruled for a month, must be renewed every month. It should distinguish the senior and junior groups in the school. The number in the left-hand column indicates

mere numerical succession. The index-number is copied from the general register of admission and withdrawal. It will be observed that the name and the index-number always go together; the index-number is the link which connects the registers. If it is necessary to mark the roll twice daily, the number present daily is found by adding the number present in the forenoon to the number present in the afternoon, and dividing by two. The average number present daily for the week, or "the weekly average of present" is found by adding together the numbers present on each day of the week, and dividing by five, the number of school-days, as is done in the example given. The weather-column serves an evident purpose. Nothing else needs to be recorded in the daily class-roll in the infant-school. The marks for present and absent may be conveniently arranged thus: present by a dot, thus . or by a blank, absent I, late +, absent and excused -H, sick indicated by underlining. As the teacher is required to be able to tell the average attendance for the year, he may arrive at that in two ways; either by simply adding together the average weekly attendances and dividing this by the number of weeks in his school year, or by keeping the monthly or quarterly averages as he goes along and then dividing their sum by the number of months or quarters. It may be added, that the teacher should regularly balance his register at the close of the day, and of the week; this will prevent mistakes, and enable him to make a return of the state of attendance with little trouble whenever he is called upon.

**Explanation of Annual Returns required from Infant Schools under inspection.** 271. Infant-schools, as well as other schools, under the inspection of the Committee of Privy Council on Education, are required to make an annual return of the state of the school. The following is a copy of the schedule the teacher is required to fill up:—



INFANTS' SCHOOL.

N.B.—It will be observed that separate Returns are to be made for Boys' and Girls' Schools, where such are included in the Establishment.

Teacher's Name in full.....	Where trained?			Certificate.	Class.	Division	Date.
Date of birth...	How long?			Augmentation.			
Date at which he or she took charge of sch'l.	In what year?			Is she in possession of her parchment certificate?			
Number of Children on the Books, aged—	Boys.	Girls.	Total.	<i>This table should be filled up with Totals collected from the Time-table and Attendance Register of each class. In cases of doubt, it is requested that application be made to the Secretary of the Committee of Council on Education.</i>			
Under 4 .....				Number of Children learning—			List of Books (No. of perfect Copies only) and Apparatus (No. of perfect articles only).
Betw'n 4 and 5.				B'ys	G'ls.	Tot.	
Betw'n 5 and 6.				Holy Scriptures			
Betw'n 6 and 7.				Catechism.			
Over 7.....				Letters and Monosyllables			
Total .....				Lessons on Form and Color.			
Admitted in last 12 months.....				Numbers.			
Left in last 12 months.....				Objects.			
Highest weekly average in past year ... ..				To sew and knit.			
Lowest weekly average in past year .....				Other subjects (if any).			
Average attendance for past year .....							
Present ordin'y attendance....							
Dimensions of School-room .	L'th	B'th	H'th				
Are the Managers satisfied with the Mistress' character, conduct, and attention to duty during the past year !				Are the Managers satisfied that the requisite instruction of one and a half hours daily required by their Lordships' Minutes has been given to the Pupil Teacher !			

The questions as to the number of the children on the books of different ages are answered from the register of admission and withdrawal; so also are the two relative to the number of admissions and withdrawals within the last twelve months. Those relating to the averages are answered from the register of attendance. Those in the right-hand column relating to the subjects of instruction are answered partly from the time-table and partly from the register of attendance. Well-kept registers and complete returns are always marked with special approbation in the official reports on schools.

**Register of Fees.** 272. The teacher will of course keep a register of fees or cash-book; not less for economical than for professional purposes. His annual return of the state of the school includes as one of its items the rates of the fees and the number of the children who pay at each rate. The form of this register will vary according to the way of charging the fees; in some places these are quarterly, in others weekly. It is better to have them quarterly; but this is a matter greatly influenced by the circumstances of the parents. If the teacher cannot find a form ready to his hand, he can easily construct one for himself; ruling each page for a quarter so as to indicate date, names, and amount of payment.

**Register of Work or Lesson-Roll.** 273. There is one other register which the teacher is strongly recommended to keep, a register of the work done in the school, or a lesson-roll. Every judicious teacher keeps a private account of this; but such a record should lie on every school-table for the satisfaction of all who are interested in it. In most of the subjects of the infant-school the course may be laid down beforehand with perfect certainty, for a month, or even for a quarter. And it will not only save the teacher's time to

do so, but will prevent the instruction from being fragmentary and rambling. Here is a specimen of what is meant ; from which it will be seen that all the subjects may be marked daily except the reading, which it is sufficient to mark weekly.

REGISTER OF WORK.

Sept. 1856.	Religious Lessons.	Moral Lesson.	Object-Lesson and Geog.	Lesson on Number.	Form and Color.	Reading to the Children.	Hymns, Songs, and Tunes learnt.	Reading.
1	Providence of God— story of Daniel.	.....	Salt.	Adding of nine.	Acute angle.	Instinct of the Dog.	How doth the little busy bee, vv. 1, 2.	Seniors.—Part II. pp. 49-54. Middle Class.—Part I. pp. 26-30. Juniors.—Finished Alphabet.
2	Do. Christ's escape from Herod.	Be kind to animals.	The Rabbit.	Applied questions in adding.	Obtuse angle.	.....	Do. 3d verse	
3	etc.	etc.	etc.	etc.	etc.	etc.	etc.	
4								
5								

This register may be conveniently made out for a month. By reading it from left to right, we see each day's work ; by reading it from the top downwards, we see the sequence of the various subjects for each month. The teacher will find himself amply repaid for the very slight trouble implied in the keeping of such a record,

## CHAPTER III.

## SCHOOL APPARATUS.

**Necessity of School-Apparatus.** 274. THE various articles needed in the infant-school for efficient instruction have already been noticed incidentally in connection with the different lessons ; but it may be useful to bring them together in a tabular form. Their number is pretty large, but they are not expensive ; and it were much to be wished that they were provided in greater profusion than they generally are by those who are interested in schools. No infant-school can bear a high character without a good supply of apparatus ; the teaching is almost certain to be too scholastic in its complexion. The following list comprises the principal things that are necessary, exclusive of books, which, from their being generally the property of the parents, can hardly be called school apparatus :

**What Apparatus should comprise—Black-boards.** 275.—I. There must be an adequate supply of black-boards. For the collective lesson one large one is required ; but there should be smaller ones as numerous as the classes themselves. These last may be conveniently suspended on the wall, or even fixed upon it. The former must be movable, and it requires much care in its construction. Different materials are in use. Slate is less troublesome than wood is in selection, but it is not so pleasant to write or draw on ; whilst it is too heavy to be convenient, and too expensive when properly mounted. Wood is, therefore, more generally used. Not to mention more expensive woods, birch is perhaps the best ; but common deal will serve the purpose

when care is taken in the selection. It should be well seasoned and carefully painted. If it be so, and if good chalk be used, it will cause no trouble to the writer; but it must be occasionally re-painted. The black-board is mounted in various ways,—sliding in a frame, or turning in the manner of a looking-glass, but sometimes, and perhaps with most convenience, merely resting on an easel.

**Letter-cards and Lesson-sheets for Reading.**

**276.** For the reading-lesson, a set of letter and word cards are required. The most convenient instrument for arranging them on is a wooden board with a few projecting ledges across its front. The box for containing the cards should admit of their classification. Lesson-sheets should be mounted on pasteboard and provided with stands, consisting of a wooden rod resting on a firm base, and with two clasps, the lower one fixed about two and a half or three feet from the ground, the other sliding. There should be one stand for each class.

**Ball-frame and Standard Measures.**

**277.** For lessons on number, the following articles may be reckoned: The ball-frame, a hollow square frame of strong wood, from 15 to 18 inches in the side, crossed with twelve horizontal wires, each strung with ten balls, colored alternately with different colors for helps to the eye, the left-hand half of the frame being covered in front with a slip of wood to keep a portion of the balls out of view—the whole fixed on a frame about three and a half feet high; scales for weighing, with sand or shot to be weighed; the various standard measures, with duplicates of some, as specified in §§ 127–132.

**Apparatus for Color and Form.**

**278.** For color and form, the apparatus should include a box of paints with cards for painting on; the different colors in worsted, merino, paper, sealing-wax, or wafers; boards of harmonious colors;

flexible laths, cane and cord, for exhibiting lines and figures ; representations of rectilinear and solid figures, some shaded ; a box of the geometrical solids, if possible admitting of section ; a box of slates, small, strong, and unframed, with string, sponge, and pencil attached, all as specified in §§ 134-155.

**Pictures.** 279. Pictures are necessary for object and other lessons. They must be on a good scale, so as to be seen at a distance, and distinct and bold in outline. Crowding of figures is to be avoided. There is no need of letterpress to accompany them ; picture-boards are designed for conversational lessons. Different sets of pictures are required : (1) A set illustrative of the leading incidents in Scripture history ; (2) A set illustrative of natural history,—men, animals, trees, and plants ; (3) A set to illustrate geographical lessons, serving as picture-maps ; (4) A set to illustrate the different trades. A press or box should be provided to hold the picture-boards. It has been stated already, that suspending them all round the walls of the school has the effect of making them too common in the eyes of the children, and so detracts greatly from their effect when used in a lesson. It is not uncommon to have a number of prints of a better sort suspended on the walls of the school, representing subjects interesting to children, and distinct from those comprised in the apparatus for teaching. This has a good effect, from the appearance of cheerfulness and neatness it gives to the room, and therefore from its influence on their taste.

**Collection of Objects.** 280. No infant-school is properly equipped without a small collection of objects to illustrate the object and form lessons. Things themselves are better than their representations, when they can be had ; things alone give full training to the senses

(§ 26). There can be no difficulty in furnishing such a museum, for it should consist of the commonest and therefore most inexpensive things. The teacher would find it advantageous to invite the aid of the pupils and their parents in collecting materials. They will generally be glad to give it. It is hardly possible, or perhaps necessary, to give a full list of articles; it will suffice to indicate the kinds of articles that should be represented. (1) The first place is due to articles used in domestic economy, which are at once the most essential, the cheapest, and the most accessible,—cup, saucer, plate, spoon, knife, fork, wine-glass, egg-cup, tin jug, hand-iron, and the like; (2) Textile fabrics, such as cotton, linen, silk, woollen, etc., in all their different stages of thread and cloth, from the state in which nature gives us them up to the forms in which they are used for clothing; (3) Articles used in the different trades, as a hammer, nails of different sorts, needles and pins, types for printing with, a little saw and chisel, a shuttle, a little cart, a painter's brush, etc.; (4) Vegetable products, such as pieces of the different kinds of wood, the different grains, leaves, and berries of trees; vegetable products used as food, as rice, barley, coffee-beans, etc., slips of plants like the cotton-plant, tea and coffee plants, sugar-cane, etc.; (5) Animal products, specimens of preserved animals, of feathers, of skins, of shells, etc.; (6) Minerals, as iron in different states, lead, tin, copper, stone, lime, coal, etc.; (7) Curiosities of any sort which illustrate the customs of different people.

**How to use these.** 281. The museum should not be arranged in glass cases round the school-room, but in a separate room, or in common presses, for the same reason that the pictures should not be publicly exhibited; and it would require to be used very judiciously. There is a temptation to over use it, which will end only in giving the

children a rooted distaste for all its stores. Things should not be used till they are wanted, and then only when the way has been prepared by a previous excitement of the interest of the children in what is to be displayed.

**Teacher's Library.** 282. The last item of school-apparatus which an infant-school should have is a small but select library of professional books for the use of the teacher and pupil-teachers. The teacher may be supposed, no doubt, to furnish himself with a number of the most essential books on his profession, but he cannot obtain all he would be the better of having, and the pupil-teachers may not be able to obtain any. A small sum thus invested by school-managers would amply repay itself in the general improvement of the school-work. One or two books in each department of instruction would serve the purpose. The teacher would of course require to know what the most suitable books are in recommending a selection; for which purpose a few have been mentioned in the notes to the chapters that treat of the different subjects of instruction.

**Care in the Use of Apparatus.** 283. Finally, whatever apparatus is attached to a school, let the teacher be very careful of it, and require his assistants to be the same. There is a great difference amongst teachers in this respect. Let it be borne in mind that this habit of carefulness is not only valuable as a part of moral training, but, from the saving which it effects, is the surest way of obtaining an enlargement of the apparatus already attached to the school.



## CHAPTER IV.

## PUPIL-TEACHERS.

Necessity  
of care in  
selecting  
Pupil-Teach-  
ers.

284. WHEN an infant-school is carried on with the aid of pupil-teachers, the selection and superintendence of these is an important and responsible part of the teacher's duty. They are, on the whole, the best kind of assistants at present within reach. In such a school the old "monitors" who used to be employed are of little value as aids in training; whilst in a large infant-school one adult assistant is not sufficient to find constant engagement for all the classes. The commonly accepted proportion of one pupil-teacher to forty children meets the difficulties of the case. Considering how much the efficiency of the school and the personal comfort of the teacher depend on the manner in which they perform their duties, he would require to exercise great discrimination in selecting candidates for the office.

Tests of  
Fitness.

285. In pointing out the tests of fitness by which he should be guided, it is sufficient here to refer back to the statement already given of the qualities which should mark the infant-school teacher (§§ 65, 236, 238). His own perception of character must show him which of his pupils seem to manifest a liking for the work, a natural turn for communicating knowledge, an earnest and humble, yet cheerful, disposition, the habits of order and tidiness, together with sound health; these are recommendations that should weigh more than mere cleverness and extent of attainments.\*

Statutory  
engagements  
of the Teach-  
er towards  
them.

286. The duties which the teacher has to perform towards his pupil-teachers are so far prescribed in the terms of their mutual engagement. Regarding the daily instruction in general subjects which he is bound to give them, nothing need here be said; their annual examination is a pretty sure test of its efficiency. The nature of the special professional instruction they ought to receive is variously interpreted, in practice at least. They should have opportunity in the course of their service of engaging in all the parts of the work; they should frequently see and hear how the teacher conducts it, and be engaged in conversation thereon; he should frequently superintend their work and watch their progress; explanations should be given privately of what they are called on to practise; and, in addition to their teaching and preparing sketches of lessons, they should get an insight into the whole organization of the school.\* Intelligent directions and frequent incidental conversations will be of more service for this purpose than formal exposition, for which, perhaps, their previous education has not fitted them.

Extent of  
his Moral  
Obligation to-  
wards them.

287. He has duties towards them, however, which, from their nature, cannot be prescribed by any enactment. He is bound morally to do all he can to promote their personal and professional well-being; and, therefore, to give them all the directions, warnings, and encouragements which their peculiar circumstances require. For example, their usefulness requires that they be invested with a certain amount of dignity and authority in the eyes of the school. It depends on the conduct of the teacher whether they shall attain this or not; by taking them into his confidence and treating them in a respectful way, he will make them respect themselves, and secure for them the respect

of the pupils. At the same time, as persons young in authority and therefore little skilled in using it, he will not compromise both himself and them by putting on them a responsibility they are unable to bear. Again, they are at a period of life when their tastes are just being formed. Let him charge himself with some superintendence of their private reading and pursuits. He knows what will best prepare them for the training of an infant-school. He knows, *e.g.*, that they should have a taste for both in-door and out-of-door things,—a curiosity about, and an acquaintance with, the animals, plants, flowers, stones, etc., that lie about them; he will, therefore, guard them against mere closet, and especially against mere verbal, studies, which have too little general human interest for their purposes, and will send their mind and fancy abroad amongst the richness, freshness, and variety of nature. At the same time he must foster in them a taste for reading of the kind that will benefit them most in a professional way: biography, natural history, moral tales and poetry, out of which they may illustrate and beautify their teaching. If the teacher would show occasionally that he interests himself in their private studies, he will do almost as much for their intellectual training as by his formal lessons, whilst he will supply a want which these formal lessons never can. Lastly, whilst firmly maintaining his natural authority over his pupil-teachers, under the conviction that the best preparation for learning to command is to learn to obey, let him greatly mingle the character of friend with that of superior; the character of the Christian man with that of the Christian master. For professional excellence does not of itself furnish a claim to love and regard; to do so it must be based on excellence of private and social character. Let him cultivate such relations with them, then, that they may confide in him as a friend, and feel at liberty to ask his advice in everything that concerns their welfare.

## NOTES AND ILLUSTRATIONS.

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8. TILL recently the opinion prevailed that the organization of the brain is complete about the seventh year. Later experiments would go to show, however, that this is not quite the case. Still, comparing the average weight of the brain in men (48 oz. av.) with its average weight in the child between one and four ( $39\frac{1}{2}$  oz.), the average weight between five and seven ( $43\frac{3}{8}$  oz.), and the average weight between seven and ten ( $46\frac{1}{8}$  oz.), we are warranted in asserting, as in the text, that at the end of infancy it is comparatively complete. The brain attains its average maximum weight long before the other bodily organs attain their full development; for between ten and thirteen its average weight is given as  $48\frac{1}{2}$  oz. Perhaps still more extensive observation is needed on this subject.—See Todd's *Cyclopædia of Anatomy and Physiology*, Art. "Nerves," or Solly on the Brain, Part IV.

9. A detailed account of the structure and action of the nervous system must be sought for in works which treat of physiology; e.g., in Todd's *Cyclopædia*, article above referred to, or in Carpenter's *Physiology*. The following short extract from Morell's *Elements of Psychology*, chap. iii. sec. 2, may give the reader a general view sufficient for his purpose: "If we can imagine the bone, muscles, skin, and all the other portions of the human frame to disappear, and the nervous system alone to remain, that remainder would present to our view the entire human form, figured out towards its circumference in the most delicate fibrous trace-work. The fibres, however, of which it consists, approach more and more towards a solid mass, in proportion as you get nearer the central line or axis of the body, first uniting together in the spinal cord, and then developing themselves at the summit of

the spine into the whole complex structure of the encephalon. Every portion of the body is thus more or less *penetrated* by these nerve-fibres; and the impression which is made upon any one point of the circumference can be transmitted with unerring precision towards the central line, and, under proper conditions, still upwards to its final expansion, the brain." The whole section may be referred to for a view of the inter-action between the brain and the nervous system on the one hand, and the brain and the mind on the other.

11. The relation between exercise and growth, both physical and mental, is fully set forth in an article by Dr. Barlow, in the *Cyclopædia of Practical Medicine*, on 'Physical Education,' to which the reader is referred.

12. On the topics alluded to in this section, Dr. Andrew Combe's treatise on *Physiology applied to Health and Education* will furnish the reader with all the information he can desire.

13. See Marcel on Language, a work which, owing perhaps to its imperfect title, is less known than it ought to be. It is, in truth, a comprehensive treatise on education, which will not often disappoint the reader who refers to it. The idea in this section is illustrated at length in Book I. chap. i. sec. 4, from which the following extract is made in extension of what is said in the text: "The accidental and variable states of the soul are not alone expressed by the external appearances of the body; its propensities and inclinations are also indicated by an habitual deportment and a fixed expression of countenance. Moral and mental habits produce in the whole person, and especially in the external muscles of the face, corresponding modifications which become permanent, and which faithfully represent them. The habit of low thought and degrading inclination vilifies the features, and that of thoughtlessness and ignorance stupifies them; but the ugliness which proceeds from vice is the most shocking of all; while virtue diffuses an unspeakable charm over the features, and intellect (intelligence?) beams in the eye of its possessor. What object is more lovely than the serene and bright countenance which bespeaks brightness and benevolence, intellect and wisdom? This is the physical beauty to which every human being may

aspire, and which a proper moral and intellectual education can bestow."

A short statement of the diseases of children, with their symptoms and the manner of their treatment, will be found in Appendix B; and the infant-school teacher cannot too carefully study it.

14. This characteristic of the child's nature results necessarily from its reflective power being not yet developed, so that it does not feel the sequence and connection of events as to time. Where this power is, the shadows of the past and the anticipations of the future float steadily across the present. The *man* lives in the past and future, which are full of cares; the *child* lives in the present, thinking not of the yesterday and the morrow, and the more entirely the younger he is. Hence his freedom from care.

16. The words quoted are those of the author of *Home Education*; whose second chapter on 'Happiness, the Necessary Condition of Home Education,' will well repay perusal in this connection. The infant-school teacher should carefully study the whole work. Though written with an immediate view to the circumstances of the child who is being educated at home, it will give him a view into the interior of the child's mind, and a succession of hints for its cultivation; which I do not know he will easily find elsewhere. With ordinary discrimination, he cannot be misled in applying its teaching to his own circumstances.

(2) The necessity of consulting the child's happiness in his education, and the way of doing so, seems to be now fully appreciated by writers on this subject. One of the latest of these, in a little work entitled *Early Influences*, written in an earnest, pleasant spirit, though somewhat fragmentary, has the following paragraph: "Childhood is especially the period in life, indeed the only one, when joy springs out of everything, when mere existence is a boundless cause of happiness, and when frolic and laughter seem absolutely necessary to unburden the heart of its superfluous and overflowing merriment. There is an irresistible charm in this; and since it has no necessary tendency to make the character unfeeling or regardless of others, it is too cruel to damp it for the few short years we may dare hope it will last. Do not impose the gravity and the composure that become the years

of manhood upon the bright and thoughtless head of childhood. So far as amusement is innocent, let them blow those glittering bubbles while they can; and so far as fun and frolic do not infringe on duty, and do not make sport with the feelings or infirmities of another, there can be no doubt that to give them fair play is more likely to allow room for a healthy mind and good feelings to grow up, than if you, as it were, cramp the free, supple limbs of childhood into the dignified or solemn gait of its elders. The effect of too much restraint in early years will always show itself somewhere. Either in childhood it will produce morbidness and unnatural gloom, or conceit and affectation; or in youth, when the restraints of home and education are necessarily diminished, the mind, long wearied of its shackles and its prison, will burst forth into excess and error; and, having been in the habit of connecting principle with dulness and stupidity, will throw it all away, and give itself up to a delirious and headlong course of folly and pleasure. Be content with making children good as children, and do not cramp them into dwarfish representations of men and women."—Chap. iv.

19. This principle, the "sympathy of numbers," is largely insisted on in Mr. Stow's work entitled *The Training System*, chap. iii., and elsewhere throughout the book. And practically it occupies a very prominent place in the mode of education with which his name is so intimately connected. The reader may further refer to vol. i. of *Papers for the Schoolmaster*, which contains a few papers on this topic written in the spirit of Mr. Stow's work.

(2) The extent to which the infant school can avail itself of the principle of sympathy has struck nearly all writers on early education. Madame Necker thus speaks of it: "Generally speaking, children seldom take as models those who differ much from them either in age or situation. They soon understand how to make allowance for professional prejudice or the personal interest of those who address them. On the other hand, the dominion which children exercise over each other is almost unbounded. What ever may be the difference in their future destination, it vanishes before their present community of feeling and equality of situation. Their influence over each other must, therefore, be

either very dangerous or highly useful; and by obtaining the direction of it we secure to ourselves the advantage of a most powerful instrument in education. This circumstance accounts for the continually increasing success of infant schools. In these institutions a sort of reciprocal moral instruction takes place. Order, exactness, obedience, truth, justice, civility, are communicated from one child to another by the force of example; and from the external imitation of these qualities a real feeling of them is produced. And in the same manner, as regards their lessons, it is often possible to fix the attention of a number of children upon objects in which it would have been very difficult to interest a single child. Every subject of examination which is proposed to them becomes a sort of earnest amusement, and engages their whole attention; and the interest which one child begins to take in it is communicated to all."—*Progressive Education* (Eng. trans.), vol. ii. book ii. chap. 4.

23. This fact of the prominence of sight as a knowledge-giving sense is embodied in our very language. Thus, when we speak of *observing* or *perceiving* a thing, we are understood to refer to sight, though the words themselves are just as applicable to the other senses as to it. So we symbolize knowledge by light and enlightenment; whilst we speak of mental vision, mental blindness, the mind's eye, etc.

(†) The two quotations are from Morell's *Elements of Psychology*, chap. iii. sect. 3, which treats of the "Varieties of Sensation."

(‡) The following extract sets forth the difference in character between the higher and the lower senses: "Conscious states differ remarkably in this particular [the more or less facility of reviving the state or feeling in the absence of the physical cause, the case of stirring up the experience as a recollection or idea]; some that are most intense while they last are very difficult to realize as matter of recollection; their intellectual or ideal existence is of a low order. Others again are remarkable for their conceivability by an intellectual effort, and are therefore more prone to enter into the ideal life of the individual; such are the emotions of spectacle, the feelings of the beautiful and the sublime. We recognize a superior dignity in the emotions that have an ideal



or intellectual persistence, as compared with such as can exist only in the actual, or while their physical stimulus is present." Then speaking of pains as organic sensations, the writer says that "they do not persist in the intellect as ideal emotions, and are not easily revived in any effort of recollection. Of all intense feelings they may be reckoned to stand lowest in these peculiarities; whereby their influence and malignancy become confined to the evil hour of their real presence."—Bain on the Senses and Intellect, p. 90. The idea in the last sentence may be much more broadly set forth. We have seen that all the physical senses are of a low intellectual order; and it is well for us that they are so. What sort of beings should we otherwise be? A pain once felt would be, so far, a pain felt at every recollection of it; unpleasant sensations of any sort that we had ever experienced would be our constant tormentors. Equally unfortunate would it be if our sensations or physical pleasure could be recalled with power. Then we should be constantly recalling them, and they would swamp our mental activity. From both these fates we are preserved by the low intellectual character of the physical senses.

25. The reader will find much pleasing illustration of this topic in a little work by Dr. George Wilson, *The Five Gateways of Knowledge*: the object of which is generally to urge the cultivation of the senses.

26. Even when objects are introduced to a class, they are, for the most part, very partially used. The teacher often seems to think it enough for the class to see it in a very general way. They should be made to inspect it, however, individually, as far as circumstances will permit, to hear its sound, if the object admit of it, and to handle it. It is by this, and not by merely speaking of things even when they are in presence, that the child's observation is sharpened. If the privilege of ocular or tactual inspection be accorded to the attentive pupils, a great stimulus is given to the attention of the whole class.

(2) *Complex sensations*: "Those resulting from the combination of optical effect with the feelings of movement arising out of the muscles of the eye-ball. As in the case of touch, this combination is necessary as a basis of those perceptions of the external

world that are associated with sight. It is admitted that mere light and color will not suffice to found these perceptions upon." —Bain on the Senses and Intellect, p. 239. The reader is referred to this work for a full and clear statement of the phenomena and character of the senses.

(3) The influence of the laws of sensation on practical instruction is recognized, and, with more or less success, traced in an article in the *North British Review*, February 1854, entitled "The Art of Education." See also a paper in the first publication of the Central Society of Education, "On the Education of the Senses."

29. On the subject of this paragraph, the reader should refer to Taylor's *Home Education*, chap. x., "On the Culture of the Conceptive Faculty in Connection with Language." The exercise exhibited in the text is sometimes condemned as a mere heaping together of words which the child cannot understand. It may degenerate into this; but where the observation is *bona fide* exercised, the idea enters the mind before the term, and the exercise is altogether suitable for young children. There is another point of view from which such lessons may appear useless, as the reader may see by referring to Mr. Moseley's Report in the Minutes of Council for 1853-54. It is where a lesson of this sort is palmed off on a class of advanced pupils under the name of a lesson "on common things." To such a class a lesson of this sort is just one on words, not by any means giving to them the discipline which it does to a young class. Mr. Moseley is speaking expressly of instruction in common things; and from that point of view his criticism is just. But his words are not to be construed into a condemnation of the kind of lesson before us, at all times and in all places, though they have been often thoughtlessly quoted as if this were their meaning.

30. See Locke's *Essay on the Human Understanding*, book iii., "On Words," chaps. 1, 2, 3.

31. Stow's *Training System*, chap. iv.

32. It is often, and not incorrectly, said that to cultivate attention is the first object of intellectual education. To understand this, however, a little explanation is necessary. Attention is sometimes spoken of as if it were a distinct faculty: it is rather

a state or quality of the faculties. Continuousness of operation by any one of them, whether it be the perception, the reason, or the imagination, is attention. In infancy, it is evidently a state of the observation or conception; so that we may express the design of intellectual education at this time in either of these ways: It is to cultivate attention through the medium of the observation and conception; or it is to cultivate the observation and the conception, to which end attention is essential.

34. Miss Edgeworth, in her story of "The Good French Governess," exhibits the change that takes place on listless and *apparently* naughty pupils, when proper motives are presented to them for attention.

(†) With regard to *curiosity*, Locke observes that children should be trained to silence with respect to their whims and fanciful desires, but to speak to their instructors when it is information that they desire. "For, whenever reason would speak, it should be hearkened to; but as they should never be heard when they speak for any particular thing they would *have*, unless it first be proposed to them, so they should always be heard, and fairly and kindly answered, when they ask about anything they would *know* and desire to be informed about. Curiosity should be as carefully cherished in children, as other appetites suppressed." *Thoughts concerning Education*, § 108. See also § 167.

And with regard to *sympathy*, Madame Necker says: "There is nothing so likely to excite these tastes as possessing them ourselves, and associating our child with us in the pleasure we receive from them. The idea that we are constantly occupied about him may excite his gratitude, but will not determine the direction of his inclinations; but if children see that our interest is awakened, and our curiosity excited, by the idea of making some new observation or ascertaining some new fact, they will soon try to anticipate our discoveries. If they observe us interested in the cultivation of flowers, in watching the labors of the bee or the metamorphoses of insects, they will soon be delighted themselves with these occupations. Example, emulation, curiosity—the most natural stimulants at an age when pleasure is so vividly enjoyed,

and the idea of utility so indistinct—will all act in unison.” *Progressive Education*, vol. ii. pp. 73, 74.

35. This is well exemplified in Miss Edgeworth’s *Essay on Tasks* in “*Essays on Practical Education*.”

(†) On the influence of difference of temperament on attention, Edgeworth’s *Essay on Attention* may be consulted. On the listless temperament, in particular, Locke has some very pertinent observations. *Thoughts concerning Education*, sects. 123–126.

37. This point is put with great force by the author of *Home Education*. “The furniture of the conceptive faculty, as derived from the objects of sight, constitutes the principal wealth of the mind, and upon the ready command of these treasures, with some specific end in view, depends in great measure its power. The quality and extent of these ideal stores, and the degree in which they are available as materials for the other faculties to work upon, are a chief reason of the vast difference between one mind and another, and generally of the difference between cultured and uncultured minds. Whatever may be the path of exertion pursued by any one, and even if it may lead over ground the most remote from the regions of the imagination, it will still be true that, if the conceptive faculty in the particular department which the mind occupies be full, fraught with its proper objects, and be prompt in producing its stores, such a mind will take the lead among others.” *Home Education*, chap. ix.

44. For further illustration of the sense of resemblance and analogy, the reader may see chapter xi. of the work named in the previous note.

47. The difference between the two uses of terms is illustrated perhaps by the nomenclature of chemistry. The term sulphuric acid, for instance, conveys a certain image and certain associations to the person who has seen it and used it; but in chemistry, sulphur, with reference to its equivalence, is written  $\begin{matrix} \text{S} & \text{O}^3 \\ \text{H} & \text{O} \end{matrix}$  or  $\text{S O}_3$ . The popular name is given to the image which observation forms of the thing. The symbol addresses itself to the (scientific) understanding as a formal term.

The following passage is quoted as illustrative of the sphere of the understanding: “A sentence or proposition in language

answers to a *complete thought* in psychology. By a complete thought, in the sphere of the understanding, we mean a *distinct act of comparison between two terms, in which we apprehend the relationship that exists between them*. All logical or formal thought answers exactly to this explanation; and the mental activity by which we compare terms, find out their exact agreement or disagreement, give expression to this in propositions, and deduce other propositions from them, is that which, *par excellence*, bears the title of the UNDERSTANDING."

The abstract notions and generalized ideas which have been formed in the manner before explained, and which are now held distinct from each other by means of words, universally retain, amongst those who have experienced the intuitions out of which they are formed, some impress of their origin. When, however, the mind begins to deal with them for purposes of formal reasoning, and regards them merely as *terms* to be compared and estimated, it soon loses all sight of those intuitions, and seeks to fix the meaning of each term it employs by pointing, not to the phenomena in nature which they are intended to denote, but to the *other terms*, which they either exclude or comprehend in their logical signification.

Having become in this way apt in the use of language, and accustomed to employ words according to their defined logical signification, it is a very easy step for us to make use of terms, without having ever experienced the real phenomena that led to their formation. We may obtain the most precise knowledge of the logical meaning of such terms, understand exactly what *other terms* agree or disagree with them, use them correctly in conversation and argument, employ them with the utmost accuracy as signs of a given formal comprehension, while, at the same time, we have never possessed one of the intuitions, or of the mental images, out of which the abstraction originally proceeded.—Morell's *Elements of Psychology*, chap. vi., sect. 1.

(†) This was the rock on which much of the earlier infant-school teaching split. The "intellectual system"—first exemplified in Wood's well-known *Account of the Edinburgh Sessional School*—is, doubtless, fully adapted to answer its design of cultivating the

understanding of advanced pupils. But it was by a singular mistake that it was in many cases transferred pure and simple to the infant school. That system required for its own fruition an anterior process of an entirely different sort, the cultivation of the observation and the conception: it is not fully effective without this preparatory course as a basis to rest on. The character of many of the early school-books published for use in infant schools quite justifies the severe remarks of Dr. Andrew Combe in chap. xvi. of his work on the *Management of Infancy*.

48. The questioning in this lesson, which is such a one as may be heard any day in infant schools, is not open to any objection on the score of logical arrangement or of simplicity; on the contrary, it shows both of these features. It is such questioning as would be given by a teacher who has given some thought to the nature of elementary teaching, and perceives clearly the necessity of clearness and simplicity of language, yet who is only in the second stage of his progress as to skill in teaching. The lesson is good of its style, but its style is not the proper one. The final step in progress in infant-school teaching is to pass from the teaching which exercises the understanding to that which appeals to the conceptive faculty, and to handle this style well.

49. "When the child first passes on to regular instruction in language, his thoughts range through a very narrow circle, and, as it were, only over the surface of the things in his immediate vicinity. And what shall we say of his intelligence and penetration? It is with difficulty that he connects two proximate ideas. Then it is useless to prepare for him a train of reasoning, however simple; still more useless to submit to him the most conclusive chain, for you will never bring him any nearer to the conclusion, because from weakness he will have lost sight of the antecedents, and, therefore, will have no materials for comparison, no means of conclusion. There are no leaps either in the operations of the intellectual or in the physical world. Language, which is the expression of thought, is also its image. Now, the pupil at seven or eight years old only speaks in propositions composed of few ideas, or in phrases which express at most two thoughts, with little combination and of easy instruction. He

attempts nothing further because he is not strong enough. If you wish to lead him on you must gradually expand his powers of conception by well-graduated exercises." *La Langue Maternelle*, by the Abbé Girard (Lord Ebrington's Translation), chap. iii. sect. 4.

50. Compare sections 14 and 16, with the notes upon them, for illustration of the child's imaginativeness.

54. "Imagination," says Madame Necker, "by connecting itself with the future, becomes the source of hope. What would be our moral condition if the imagination were suppressed? Incapable of foreseeing either the pleasure of executing our plans, or the good likely to result from their success, we should remain idly stationary; having no motive to exertion, our energies would be completely deadened." Again, speaking of its influence on the intellect: "The task of instruction [in the case of children devoid of it] becomes almost insurmountable. Even when minds, though incapable of nobler interests, are open to physical pleasures, so little power have they of looking forward, that these cannot be held out to them as rewards; and if by chance they do conceive any desire, the whole force of their will is concentrated on that one point—they cannot be made to comprehend any suggested substitute. From these indisputable facts we may learn that the imagination, far from being only, as sometimes designated, *the fool of the family*, performs a most important part in our intellectual development."

"It is a great mistake," says Mrs. Montgomery, "to suppose it advisable to exclude children from works of imagination, or to seek in every way to crush and destroy that noble power—that link to things unseen—that faculty by which we embrace truths we cannot understand, and by which we live in a spiritual and higher world. Faith is the exalted, the sanctified, the religious form of imagination, and it is surely unnecessary to treat with disregard and persecution the power by which we grasp the invisible realities of a spiritual existence."

54. There is one sphere in which the object of cultivating the imagination must be to restrain it—the sphere of the affections and motives to every-day conduct. If it be allowed to wander at will

through this, the disposition becomes dreamy and melancholy, the conduct unpractical.

On this important subject, see Necker's *Progressive Education*, vol. ii. chap. viii.; *Early Influences*, chap. vi.; Taylor's *Home Education*, chap. ix.; and Edgeworth's *Practical Education*.

55. Matt. xxii. 37, 38; xxii. 39; Matt. vii. 12; 1 John iii. 20, 21. See also Rom. xii. 15. The same truth was declared (in the later days at least) of the dispensation of religion that preceded Christianity. "He hath showed thee, O man, what is good; and what doth the Lord require of thee, but to do justly, and to love mercy, and to walk humbly with thy God?"—Micah, vi. 8.

58. "And will you tell me, whilst I am working [said Amy Herbert to her mamma], what you had not time to speak about yesterday? I mean, why it never does people any good to go and see others suffer merely from curiosity."

"It not only does them no good, but it does them harm," replied Mrs. Herbert, "and for this reason: God gives to almost every one, and especially to young people, many kind, amiable feelings, as a sort of treasure which they are carefully to keep. Now, these kind feelings, as people grow older, gradually die away as they get accustomed to the sight of suffering, and so at last they are likely to become cold and hard-hearted; and there is only one sure way of preventing this—by doing kind actions whenever we are blessed with kind feelings. Perhaps you would rather I would explain myself more clearly," added Mrs. Herbert, as Amy laid down her work and looked thoughtfully in her mother's face. When you saw Susan Reynolds yesterday, you had compassion for her, and a great wish to help her—this was the good feeling given you by God; but supposing you had thought that, after all, it was too much trouble to work for her, you would soon have forgotten her; and the next time you saw her you would probably have pitied her less, and the next less still; and if you had gone on so, you might have ended in becoming perfectly cold and selfish; but by determining to do something you have kept up your interest, and you will find that your kind feeling will continue and increase, not only for her, but for other persons you may see in distress."



“But then I have heard you say, mamma, that we ought not to follow our feelings entirely.”

“No,” replied Mrs. Herbert; “because very often our feelings are wrong, and therefore we must have some other rule to go by, or we shall continually mistake our duties; but when they are right, they are given us by God to make those duties easy and pleasant; and if we do not encourage them we shall find, when we grow old, that it will be very difficult, if not almost impossible, to do right, however we may wish it.”

“Then, mamma, if we had always good feelings, there would be no occasion to do anything but just what we felt inclined; how very nice that would be!”

“There is but one way of getting these good feelings,” said Mrs. Herbert, “and that is, by doing what we know we ought, whether we like it or not; and only one way of keeping them when we have got them, by taking care always to act upon them; and if we begin when we are young, it is astonishing how easy it will soon become.”—*Amy Herbert*, chap. v.

This pretty tale is written to exemplify moral training in the family, and will give the reader a good insight into the management of the feelings and the will in children. No teacher, and especially no infant-school teacher, can read it without profiting by its good sense, as well as by its pious and gentle spirit.

The point insisted on in this section is one of vital importance; it constitutes the difference, indeed, between education or training and instruction. The greatest merit, as it seems to me, of Mr. Stow's excellent volume on the Training System, is the prominence it gives to *action* in moral training as distinct from *rule*.—“The only way to do a thing is just to do it.” Locke long ago enforced the same truth on an age not prepared to understand him. “And here give me leave to take notice of one thing I think a fault in the ordinary method of education; and that is, the charging the children's memories, upon all occasions, with rules and precepts which they often do not understand, and which are constantly as soon forgot as given. If it be some action you would have done, or done otherwise; whenever they forget or do it awkwardly, make them do it over and over again till they are

perfect, whereby you will get these two advantages: First, to see whether it be an action they can do, or is fit to be expected of them; secondly, that by repeating the same action till it be grown habitual in them, the performance will not depend on memory or reflection, the concomitant of prudence and age, and not of childhood, but will be natural in them. Pray, remember that children are not to be taught by rules which will be always slipping out of their memories. What you think necessary for them to do, settle on them by an indispensable practice, as often as the occasion returns, and, if it be possible, make occasions. This method has so many advantages, which way soever we consider it, that I cannot but wonder (if ill customs could be wondered at in anything) how it could possibly be so much neglected."—*Thoughts of Education*, sects. 64, 65, 66. This is the germ of the Training System.

60. See Necker, vol. i. book i. chap. v.

61. On the moral use of the imagination, reference may be made to the work of Girard, already quoted; for the principle, to pp. 88, 89, and for the way of using it, to pp. 144, 145. It may be said of this work—one of the earlier works on modern teaching—that whilst, in a certain sense, it has lost part of its value from the fact that the principles of teaching advocated in it have been long since substantially adopted, it will still amply repay the teacher's perusal—on the one hand, as exhibiting the kind of argument by which the method of teaching he daily practises was vindicated, whilst still a novelty; and, on the other and chiefly (to use the words of the translator's preface), "from the delightful picture it presents of the author's piety, benevolence, and delicacy of feeling."

The moral *abuse* of the imagination (if we may use the expression) is referred to in Abercrombie *On the Philosophy of the Moral Feelings*, part i. sect. ii. Remarks on Habit.—See also the note on sect. 58.

63. Rom. xii. 21.—Neither is it prudent in dealing with children to draw the distinction too widely between the real character of men and their outward conduct. Thus, with respect to kindness to the poor, it is too true that many poor are quite undeserving of charity, and that many solicit it on false pretences. But it is

better that a few acts of such undeserved charity should be performed by the child, than that at this tender period suspicion should take possession of him. There is no surer way to crush all exercise of the benevolent feelings than prematurely to raise these suspicions. This discerning between reality and counterfeit will, and must, come betimes; but for the child, let him "rake not into the bowels of unwelcome truth to save a halfpenny: it is good to believe." These remarks apply to other feelings as well.

66. Another reason may be given for attending to this direction. Madame Necker observes: "By giving children habits of complying with certain physical and conventional regulations, we are exempting their minds from future care on these subjects. The more we make use in this respect of the instinct of imitation, the more we shall spare ourselves hereafter the pain of having to prescribe, as duties, things which are not such in reality, yet which are almost indispensable: and we shall thus, too, render an inestimable service to the child. How much embarrassment, how much awkwardness, how much waste both of time and thought is often occasioned even to grown men by doubts respecting the propriety of the most trifling actions."—Vol. i. book ii. chap. i.

68. It will be seen that we treat "religious education" under the general head of Moral. It may be necessary here to remark, that God, as presented to the child in infancy, is the object of the feelings, and not of the intellect. His character is to be held forth for love by the child, and not his attributes for discussion. Locke's few remarks on this subject, in his 136th section, are strikingly judicious, and an exact anticipation of the best modern practice in school education.

69. Description of the Symbolical School.—*Wilhelm Meister's Travels*, chap. x.

71. All the common works on education treat of this virtue, so that it is, perhaps, hardly necessary to refer to authorities here. Yet, on a matter of such moment, the teacher should read and meditate much. Locke, sects. 131, 132; Edgeworth, *Practical Education*, chap. viii.; Necker, vol. i. book ii. chap. iv., will afford sufficient materials for this purpose. It may be added here, once for

all, that the same writers may be referred to on the other feelings, which it is the business of early education to cherish.

74. I would fain dwell at greater length on these personal virtues, particularly that of cleanliness,—cleanliness in person, and cleanliness in respect of surrounding circumstances. How much the want of this adds to the discomfort of the lower classes of society in this country needs not to be mentioned. If the want is ever to be supplied, it must be by laying the foundation of the habit of cleanliness in infancy. The personal influence of the teacher is enormous; and if, as a body, teachers were as scrupulous in respect to this habit as they might be, the effect on the moral tone of the children would be very palpable. Let me entreat all who have charge of infant schools to set a pattern to the children, to be intolerant of slovenliness and dust, to take a pride, first, in having their own dress tidy, and, secondly, in having their school-room and furniture as clean as circumstances will admit. Nothing disposes one to think favorably of a teacher sooner than the presence of these features in a school.

75. The words quoted may be recognized as those of John Foster, to whose well-known essay on *Decision of Character* the reader is referred for a satisfactory 'anatomy' of the will in its practical bearing. If the teacher do not find much in the way of practical professional hints, he will at least find much very instructive and interesting reading.

77. In Combe's *Management of Infancy*, chap. xiv., there is a lengthened exposition of the faults most commonly committed in the training of the will in childhood.

81. "He that has found a way how to keep up a child's spirit, easy, active, and free, and yet, at the same time, to restrain him from many things he has a mind to, and to draw him to things that are uneasy to him; he, I say, that knows how to reconcile these seeming contradictions, has, in my opinion, got the true secret of education."—Locke. The true method of training the will is clearly indicated in sections 34, 46, and 63 of the "*Thoughts*," etc.

(†) "Whenever we can explain the reasons for any of our requests, we should attempt it; but whenever these cannot be fully

explained, it is better not to give a partial explanation; it will be best to say steadily, 'You cannot understand this now, you will perhaps understand it some time hence.' Whenever we tell children that we forbid them to do such and such things for any particular reason, we must take care that the reason assigned is adequate, and that it will in all cases hold good. For instance, if we forbid a boy to eat unripe fruit because it will make him ill, and if afterwards the boy should eat some unripe gooseberries without feeling ill in consequence of his disobedience, he will doubt the truth of the person who prohibited unripe fruit; he will rather trust his own partial experience than any assertions. The idea of hurting his health is a general idea, which he does not yet comprehend. It is more prudent to keep him out of the way of unripe gooseberries than to hazard at once his disobedience and his integrity."—Edgeworth on *Practical Education*, chap. vii., on Obedience.

83. See Abercrombie on the *Moral Feelings*, part ii. chap. iii.

84. In addition to the references already given in this chapter, the student should not neglect to refer to Madame Necker's excellent remarks on the subject of the will. See *Progressive Education*, preliminary chapter, sections 3 and 4, book ii. chap. ii. and vol. ii.

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## PART II.

87. See Girard, chap. i.

88. The limits to the use of books in infancy are nowhere better defined than in the work on *Home Education*, above referred to, chap. iv., which should be carefully read by the student. "Not a syllable of book-learning," says the author, "need have been acquired, and scarcely a task learned, and yet the mind of a child in its fifth year may be not merely in a state of the happiest moral activity, but may be intellectually alive, and actually possessed too of various information concerning the visible universe; and he may have made acquaintance with whatever presents itself under a pleasurable aspect (and assuredly nothing but what is

agreeable should be presented to the infant mind)." Speaking of the labor of the child in reading with intelligence, he says: "There is a particular jar [between the motion of the eye and that of the mind], a want of synchronous movement, and a sense of distress and a strain which quickly exhaust the power of attention; or, if persisted in, impair the brain. . . . It is certain that the ruddy vigor of high health will almost always be found in inverse proportion to the hours in the day during which a child has a book before his eyes."

90. On the general character of early instruction, Marcel has an excellent chapter in his work on *Language*. See book iv. chap. i.

94. The management of light and ventilation is referred to in some of the inspectors' reports, in the *Minutes of Council*, e.g., Rev. M. Mitchell's 1853-54, and 1855-56, and Rev. Mr. Bellair's, 1855-56.

98. "And pupil teachers, if any, be present." It may be observed that those exercises are better done when *all* the assistants in the room take part in them. The children seem to expect that all present should join with them. This is the effect of sympathy. For the various physical exercises that may be given, either in school or in playground, see *Exercises for the Improvement of the Senses* (L. U. K.), part iii.

99. Hence the name of 'uncovered school-room,' which Mr. Stow has applied to the playground.

114. Mayo's "Object-Lessons" may profitably be consulted by the teacher for materials; also "Information on Common Objects," published by the Home and Colonial School Society; Mann's "Handbook of General Knowledge;" "The Observing Eye;" "Book of Birds, Fishes, Trees," etc., published by Society for Promoting Christian Knowledge; "Exercises for the Improvement of the Senses." See also the list of books given in the note on § 175, some of which are available for giving materials for object-lessons. The chief practical works on infant-school training may be mentioned here once for all; they are Wilderspin's "Infant System," Young's "Infant-School Teacher's Manual" (Dublin); "Chambers' Infant Education;" Stow's "Training Sys-

tem," chap. xiv., and the Home and Colonial School Society's "Infant-School Manual," "Model Lessons," "Religious instruction," and other publications. These last have the advantage of exhibiting minutely the gradation of infant-school work.

133. There are a few little works which may be profitably consulted by the teacher on this subject; of these may be mentioned "Arithmetic for Young Children," published originally by the Society for the Diffusion of Useful Knowledge; "First Ideas of Number for Children," published by Parker, London; and Tate's "Arithmetic."

139. For information on the subject of color, see Redgrave's little "Manual of Color," and corresponding chart; also "Hay on Harmonious Coloring." The reader may meanwhile refer to Appendix A, which has been obligingly furnished for this work by the author of the last-named work.

150. Hints on the nature and order of the lesson or form may be found in works like the following: "Richson's Copies" (National Society); "Drawing for Young Children" (Society for Diffusion of Useful Knowledge); "Krüsi's Manual," or the summary of it in the Home and Colonial Society's "Infant-School Manual." But any of the better kind of elementary manuals of drawing, such as Tate's or Carpenter's, will suggest many things to the teacher.

171. For giving descriptive lessons on geography, the best helps are familiar accounts of places or of travels. See also "First Ideas of Geography" (Parker); and "Near Home" and "Far Off" (Hatchard).

175. On this whole subject, see *North British Review*, August 1854; "Necker," vol. ii. book iv. chap.; viii. and *Home Education*, chap. x. A few books suitable for reading from to children may be mentioned:—

Evenings at Home; Edgeworth's Early Lessons; Winter Evenings, or Tales of Travellers, by Maria Hack; Mrs. Lees' Anecdotes of Animals, and Familiar Natural History; My Own Treasury, by Mark Merriwell; Peter Parley's Tales; Bingley's Tales about Animals; Lessons from the Animal World (Society for Promoting Christian Knowledge); Life of a Bird (S. P. C. K.); The

Nursery Tales; Gammer Grethel's German Fairy Tales; Granny's Wonderful Chair, by Francis Browne; Æsop's Fables; Woodland Rambles, or Conversations on Trees; The Mine, by Rev. I. Taylor; Arabian Nights. This list may be largely increased by any teacher who will spend an hour in a bookseller's shop.

177. The reader will find the argument for carrying the child's understanding along with what he reads, and the manner of doing so, fully stated in Pillans' "First Letter on the Principles of Elementary Teaching," see *Contributions to Cause of Education*, pp. 8, etc.

182. What Locke says of reading is interesting. He recommends that children be amused into a knowledge of letters and words; suggesting the use of an ivory ball with twenty-six sides, and a letter on each, for the child to play with; or four dice, one for vowels, the rest for consonants to throw words with. "I know a person," says he, "who, by pasting on the six vowels on the six sides of a die, and the eighteen consonants on the sides of other three dice, has made this a play for his children, that he shall win who, at one cast, throws most words on these four dice; whereby his eldest son [yet a child], has played himself into spelling, with great eagerness, and without once having been chid for it, or forced to it."—Locke, sects 148-155. Compare these lines in Cowper's *Conversation* :—

"As alphabets in ivory employ,  
Hour after hour, the yet unlettered boy,  
Sorting and puzzling, with a deal of glee,  
Those seeds of science called his A, B, C,  
So language," etc.

The idea of cheating the child into knowledge, however, is not quite sound, as going to confound work with play. In the infant school we must accustom the child to the idea of *work*, but this work may quite well be made agreeable.

194. These quotations are from the work of Girard, already referred to for the manner in which it exhibits the whole course and spirit of religious instruction.

197. The teacher is often obliged, in deference to the wishes of



parents, to use a catechism. There are one or two simple catechisms constructed for children. In teaching the catechism, there are but two alternatives, either to hear the children simply repeat it, or to connect the illustrative method of instruction with it. The mere explaining of its words and sequence conveys no ideas to the child.

202. The teacher may derive assistance in giving lessons on emblems from Stow's little work on "Bible Emblems."

204. For helps in giving religious instruction to infant classes the teacher may with advantage consult the little works, "Peep of Day," "Line upon Line," Draper's "Stories from the Old and New Testaments," "Religious Instruction for Children," by Miss Mayo; and works like Kitto's "Daily Readings," which supply materials for descriptive lessons.

205. Since writing this lesson, I find that the incident related in this story happened in one of Mr. Wilderspin's schools. The reader may see it given at length in his *Infant School System*, chap. x.; where he should turn to see the precise use to which the incident was put when it occurred.

217. The duty of the teacher to "get everything from the children"—as if he were to tell them nothing at all—has been very much overstated by many writers. Girard's remarks on this point are just; see p. 90 of this treatise.

226. Miss Edgeworth shows the impropriety of excess on this point. *Practical Education*, vol. i. p. 129.

245. "If a mother can make it an honor and a privilege to her child to lift her handkerchief, and a punishment not to be permitted to do so; or if it be possible and practical that for disobedience and any other fault a child's exclusion from table for half an hour is felt to be a punishment so severe as almost to tear his heart-strings asunder; then it is clear that by the same process, and by the additional power of the sympathy of numbers which the mother cannot have, may the master of a training-school punish a child most severely without corporal infliction. To order a boy out from the gallery after being properly warned once or twice, is found to be really more severe than half a dozen 'pal-

mies.'” Stow, *Training System*, chap. viii. This passage is quoted here simply as applying to the infant school.

247. See the chapter on “Rewards and Punishments,” in Edgeworth, vol. i.

249. Wilderspin’s *Infant System*, chap. x., on “Rewards and Punishments.”

251. In connection with the considerations on discipline advanced in this chapter, and §§ 19, 63, 80, 259, and 260, the reader should refer to the chapter on “Moral Discipline,” in Abbot’s *Teacher*.

256. The only satisfactory way of giving students and teachers an acquaintance with such details is to make them prepare a plan of the school, making all the measurements themselves.

258. The principles and practice of ventilation, lighting, and heating do not concern infant schools specially. The reader who is disposed to see the various plans that have been recommended may, in addition to reading the “Memorandum on Organization,” issued by the Committee of Privy Council on Education, refer to the American work of Barnard, entitled *School Architecture*, or to a work founded on these two sources, Burn *On the Arrangement, etc., of Schoolhouses*.

259. But the teacher’s references to what passes in the play-ground must not be too personal, otherwise the children will begin to suspect his motives and distrust his disposition towards them. He must, “by indirections find directions out.” He must touch on the incidents of the play-ground in such a way that the children, while feeling the power of what is said, shall hardly know that he is referring to them.

261. Barnard, in the work just referred to, gives a minute description and drawings of the various parts of infant-school play-ground furniture,—circular swing, climbing-stand, horizontal bar, parallel bars, pivot-swing, and double-inclined plane. All the games which young children may play at are mentioned (but not described) in a little work, *Exercises for the Senses*, in the Library of Useful Knowledge.

262. The subject of closets has not been referred to in the text, but it will be understood that they must be provided in sufficient

number and in due retirement ; further, that the most scrupulous attention be paid to insure their cleanliness. This is often a weak point in school-arrangements.

263. These classes may either be separated by small curtains or not. These articles of furniture, however, are not now so much esteemed as they were once. If they have their advantages, they have also their disadvantages.

285. The qualifications of the infant-school teacher are well specified in the Rev. Mr. Mitchell's Reports in the volumes of the Minutes of Council, 1854-55, and 1855-56. These Reports may be referred to also for what is said on the whole method and the apparatus of the infant school.

286. Pupil-teachers in infant schools have the same studies prescribed as other pupil-teachers ; but a somewhat different course of study is enjoined on them if, when they join the training-schools, they profess themselves candidates for the office of infant school teacher. For those who may contemplate this profession, the substance of the Minute of April 24, 1857, on Infant Schools, is subjoined :—

“Queen's scholarships are offered to all who have satisfactorily finished their apprenticeship in an infant school ; and to other candidates, eighteen years of age, whose manners and address are *prima facie* suitable for dealing with very young children, and who can (1) Read with fluency, correctness, and intelligence ; (2) Write simple sentences from dictation correctly ; and (3) Work easy sums in the first four rules, simple and compound.”

*Subjects of Examination at the end of the Year.*

1. Historical part of Holy Scripture, with Doctrines of the Church to which Candidate belongs ; for higher proficiency, an Epistle.
2. Theory and Practice of teaching Infants, and of conducting an Infant School.
3. Lessons on Objects, Trades, Manufactures, and Domestic Economy.
4. Language—Parts of Speech with Inflections ; for higher proficiency, Parsing, Analysis, and Paraphrasing.

5. Penmanship—Large and Small hand.
6. Arithmetic—first from Rules, Simple and Compound, with Explanation of Processes ; for higher proficiency, Practice, Proportion, and Vulgar Fractions.
7. Geography—only required for higher proficiency—Europe and General Outlines, Map-drawing of British Isles and Palestine.
8. Natural History—
  - The Human Body;
  - Common Animals;
  - Common Plants and Minerals;
  - Conditions affecting Health.
9. Sewing and Cutting.
10. Singing and Drawing, so far as to enable the teacher to conduct the Singing Exercises of the School, and illustrate his lessons by Sketching.
11. An Examination in Teaching, with a view to note the degree of power possessed by the Candidate of presenting the first elements of knowledge to the infant mind, and the correctness of the language used.

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## APPENDIX A.\*

### ON COLOR.

THERE are three distinct kinds of color in nature, viz., yellow, red, and blue. The first is most allied to light, and is a color having no characteristic tone; the second is characterized by warmth of tone; and the third by coolness of tone. Yellow, red, and blue are called the primary colors, because out of their various modes of combination all other colors, either in nature or in art, are produced. The three colors which arise from the binary union of these primary colors are orange, purple, and green, orange being composed of yellow and red; purple, of red and

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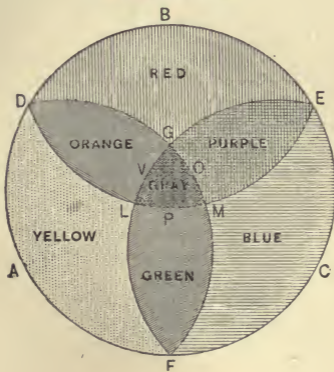
\* Contributed by Mr. D. R. Hay, Edinburgh.

blue; and green, of blue and yellow. They are therefore called secondary colors. All other colors in nature and art arise from the union of the whole three primary colors, under an infinite variety of modifications, in respect to the relative proportions in which they are combined.

White and black represent light and darkness, and are not therefore considered as colors. When yellow, red, and blue, of corresponding intensities, are united together in equal quantities, a neutral gray, similar to the union of white and black, is the result; because it is the nature of these colors, when in triple union, to neutralize each other.

These simple facts would clearly exhibit themselves in a diagram constructed like the accompanying one (but without the dotting and straight lining by which color is there represented), by coloring the space within the two curved lines D A F and D O F with pure yellow, the space within the similar lines D B E and D P E with pure red, and the space within the similar lines E C F and E N E with pure blue.

DIAGRAM OF COLORS.



The primary colors may be represented as follows:—



The colors thus put together must be of equal intensity, and quite transparent. Gamboge yellow, crimson lake, and Prussian blue are quite suitable for ordinary purposes of this kind. Each color should be thoroughly dry before the other is put on, and then applied quickly in order to prevent the washing up of those first laid on. By this means the space *D A F L* remains yellow, *D B E G* red, and *E C F M* blue, while the space *D G L* is orange color, *E G M* purple, *F L M* green, and the centre space *G L M* gray, all arranged in harmonious order, both as to that of succession and union.

The primary and secondary colors follow each other in the order of a primary and secondary alternately, as in the rainbow. The yellow, being neutral as to tone, unites with the warm-toned red on the one side in the production of orange, and on the other side with the cool-toned blue in the production of green, while the red and blue neutralize their respective warmth and coolness in the production of the secondary purple. The manner in which the most powerful harmonies of color occur within this circle is as follows: on the line *A E* we find opposed to the neutral-toned primary color yellow the secondary color purple, in which the warm-toned primary color red and the cool-toned primary color blue have mutually neutralized each other, and thereby constituting purple, the true harmonic accompaniment to yellow. On the line *B F* we find opposed to the warm-toned primary color red the secondary color green, in which the cool-toned primary color blue is united with the neutral-toned primary color yellow, thus constituting green, the true harmonic accompaniment to red. On the line *D C* we find opposed to the cool-toned primary color blue the secondary color orange, in which the warm-toned primary color red is united with the neutral-toned primary color yellow, thus constituting orange color, the true harmonic accompaniment to blue.

The contrast between each of these three pairs of harmonizing colors is relieved by the neutral gray which occurs in the space G L M.

These varieties of tone in the three primary colors thus produce that harmony to which the eye responds with so much delight when dwelling upon the beauties of nature ; and a proper knowledge of this species of harmony would enable us to render truly beautiful many of the most simple products of our labor.

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## APPENDIX B.

### ON THE MORE SIMPLE DISORDERS AND INJURIES TO WHICH CHILDREN ARE LIABLE.\*

THE object of the following observations is merely to afford some guidance in the treatment more immediately required in several of the commoner complaints to which children are liable. Any attempt at describing individually the different diseases incident to childhood would here be out of place ; all that is necessary being such an amount of information as may enable the teacher, or others in charge, to afford remedial assistance in those cases which are either of so simple a nature as not to demand the attendance of a medical man, or which occur where the services of one cannot be easily or directly procured.

In order to be ready for emergencies, some knowledge of the *weights and measures* used in medicine is advantageous ; and a few of the more useful *remedies*, etc., being kept at hand—especially where no druggists are to be found within a convenient distance—will be of service. These remedies may consist of castor-oil, syrup of senna, magnesia, gray powder (mercury and chalk), Dover's powder, antimonial wine, ipecacuanha wine, and ipecacu-

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\* As competent medical sanction is quite indispensable on a subject of this nature, it may be proper to state here, that Dr. John Smith, Lecturer in the Medical School in this city, [Edinburgh,] has kindly written Appendix B expressly for this work.

anha in powder; chalk mixture, lime-water, creosote, some pieces of lint and of oil-skin, or gutta-percha skin, one or two bandages, etc.

The *signs of illness* which ought to attract our attention in children are shivering, loss of appetite, unaccountable thirst, unnatural flushing of the face, listlessness, inclination to sleep or lie down, depression of spirits, unusual heat of skin, cough or sneezing, watery eyes, general pains in the body or limbs, eruptions on the skin, vomiting or purging, tumidity of the belly, emaciation, etc. Most of these symptoms may occur in a transitory and unimportant manner, but, at the same time, they comprehend those ushering in the most serious maladies, and on that account should always be attended to from their first appearance, and watched, lest they become gradually more severe.

It is scarcely necessary here to mention those *diseases* to which children are especially liable, as they are everywhere pretty generally known. Croup, hooping-cough, measles, scarlet fever, small-pox in unvaccinated children, some inflammations of the eyes, and several eruptions or diseases of the skin, are among those which we may always expect to be occurring.

Most of these are *contagious or infectious* diseases; that is, they are capable of being communicated from the sick to the healthy, and of spreading in this way. Cleanliness and ventilation are here of primary importance in preventing the accumulation of contagious emanations from the bodies of the diseased; while proper attention to diet, to maintaining the proper temperature of the body, and avoiding all causes which weaken or exhaust, are the most effectual methods of enabling the healthy to resist such contagious emanations, when unavoidably exposed to them. In diseases of the eyes and of the skin, towels, sponges, etc., ought never to be indiscriminately used; but those of the patient should be kept rigorously apart from all others, as contagion in these cases is very apt to be thus communicated. Indeed in many skin diseases, such as itch, several forms of what is called ringworm, and some other diseases of the scalp, contagion is so liable to occur, that it is best to separate the patient entirely from the healthy children. With reference also to the eruptive



fevers, etc., common to early life, such as measles, small-pox, scarlet fever, etc., even after the disease is *cured*, in the ordinary acceptation of the phrase, the patient ought not to be allowed to return to school, or mix with the other scholars in any way, until recovery is so far advanced that the skin shall have been completely restored to its healthy condition, so that its surface shall not be scaling off, nor affected with any scabs, pustules, nor anything of the kind. The mere red marks remaining after small-pox are of course to be excepted, as these continue long after a perfect cure has been established, and when no danger of contagion any longer exists.

Whenever any severe or unusual symptoms of illness arise, time should not be wasted in attempts at guessing at the disease, or conjecturing what should be done, and endeavoring to treat it without the assistance of a medical man; in all such cases a physician ought at once to be sent for. Even in those cases where disorders apparently of a very trivial nature do not obviously *improve* under simple treatment, it is better not to persevere too long without proper medical attendance.

But although these, and the so-called "specific" diseases, of which some have been already mentioned, are generally of too serious a nature to be treated by non-professional persons, yet many simpler disorders of the stomach and bowels, of the chest, such as common colds, etc., and many slighter forms of injury to which children are subject, may, with a little attention, be easily and effectually treated in this way; and with that view the following directions are subjoined.

#### DISEASES, INJURIES, ACCIDENTS, ETC., AND THEIR TREATMENT.

*Looseness or Purging.*—If the motions are frequent, scanty, and attended with much pain or straining, from one to three teaspoonfuls of castor-oil, with one, two, or three drops of laudanum in it, may be given. If the motions are abundant, a teaspoonful of chalk mixture may be administered three or four times a day; and should the disease continue for some days, one grain of Dover's powder, and one of the gray powder of mercury and chalk, should

be taken three times a day. The diet should be restricted to rice, arrow-root, and such substances; and the drink should consist of small quantities of milk and lime-water in equal proportions, thin arrow-root, etc.

*Constipation.*—When the bowels are not regularly opened every day, the use of brown bread, oatmeal, etc., is sometimes all that is required. In more obstinate cases, however, aperient medicines may be necessary; but unless we *wish* to induce purging, there is no necessity for administering powerful doses for this affection. Caster-oil, in the dose of one to four teaspoonfuls; or syrup of senna, in a dose of one or two teaspoonfuls; or magnesia, in a dose of ten or fifteen or twenty grains, will be found to answer in most instances. Salts and other drastic purgatives are generally productive of bad effects in simple constipation.

*Colds and Coughs.*—A simple cold, if treated at its commencement by keeping the patient somewhat warmer than usual, and bathing the feet and legs in warm water at night, and taking some warm drink—such as thin gruel upon going to bed—may generally be cut short. If not, however, then all we can do is to guard against exposure during its progress, and to treat the various symptoms of it, such as cough, etc., as they occur.

A cough is either what is termed dry—that is, without expectorations—or loose, that is, with the flow of mucus in the lung much increased. In a dry cough, from eight to ten drops of ipecacuanha wine may be given in a little sugar and water every four hours; and if much heat of skin, or pain in the chest, is present, half a teaspoonful of antimonial wine may be combined with this dose. In a loose cough, if severe, half a teaspoonful of the syrup of squills, in two teaspoonfuls of camphor mixture, may be substituted for the other remedies; and where a considerable quantity of mucus seems to be lodging in the air-passages, an emetic of twenty grains of ipecacuanha in powder may be given in a cupful of warm water.

*Ear-ache.*—Poultices and warm fomentations to the ear, with the use of brisk purgatives, and the restriction of the diet, are the general measures to be adopted in the treatment of this affection.

*Inflammation of the Eyes.*—What is commonly known by this name comprehends a number of diseases of far too serious a nature to be treated without the attendance of a medical man. In simple cases, the eyes may be bathed with a tepid solution of two or three grains of sulphate of zinc in a wineglass full of water. And where the eyelids are inclined to adhere together, a little hog's lard may be smeared over their edges at night. The bowels ought to be kept gently open during this disease, but purging is unnecessary. This affection in children is very apt to be communicated by contagion, and great caution is therefore necessary to prevent any matter formed from reaching the eyes of other persons.

*Blows or Bruises.*—In these cases there is generally observed some degree of swelling and redness at the seat of the injury; the red color soon gives place to a violet or livid hue, and that again in course of cure to green and yellow tints, the original color of the skin being next restored. From the time of receiving the injury until the disappearance of discoloration is generally from ten to fourteen days. In slight bruises, bathe the part, if no abrasions are present, with vinegar and water. Never apply leeches unless great inflammation and swelling are present; but in all cases where the injury is so severe as to require such treatment, it ought to be submitted to a medical man. A coagulum formed of alum and the white of an egg is said to hasten the removal of discoloration in the skin.

*Abrasions of the Skin.*—All extraneous matter, such as sand or gravel, sticking about a part from which the skin has been abraded, ought to be removed by bathing it with warm water. A piece of lint or rag soaked in tepid water is then to be laid over the injured surface, and over this again a piece of oil-silk or thin gutta-percha, so as to prevent the rag or lint becoming dry by evaporation. A light bandage, merely sufficient to retain these appliances in position, is all else that is required; ointments, plasters, etc., only tending to irritate and inflame the injured surface, unless specially called for.

*Burns and Scalds.*—Injuries by heat may be divided into two kinds, viz., those where the skin remains whole, although perhaps

blistered, and those again where the skin is destroyed. Burns or scalds on the body or head are much more dangerous than those on the limbs; and during childhood their effects are more serious than in after-life. The principal danger to be apprehended is that of the patient sinking from the shock or severe effects of the injury; and burns which produce this effect, although generally extensive, are sometimes not so painful as less formidable cases. In removing the clothes from a scalded part, care must be taken not to injure or break the skin. Where the skin is not destroyed or broken, but only reddened, or blistered, cold applications are to be employed. If, however, the injury is over a large space, these must be used cautiously, as then they are apt to increase the danger of sinking already alluded to. Cold water, spirits and water, vinegar and water, or cold poultices—all frequently renewed—are the most ready methods of treatment in this way. Blisters ought not to be pricked or cut in any way, as they serve to protect the raw surface underneath, until healing commences there.

When the skin has been destroyed, the burn becomes more of the nature of a wound, and requires treatment not very different from a severe abrasion. Soft cotton-wool may be laid upon the part, or a piece of lint dipped in equal parts of lime-water and olive-oil, or lime-water and milk, may be applied. But as the sores left in these cases are generally difficult to heal, a medical man ought to see the patient as soon as possible.

*Sprains.*—All injuries or affections of the joints in children should be particularly attended to. Any unaccountable swelling about a joint, although unattended with pain, a halt or lameness in walking, and pain or uneasiness in any of the limbs, ought to excite suspicion of serious disease, and be immediately investigated. The most important of all our remedies here is rest to the limb; and the principal danger to be averted is inflammation of the joint. If a joint has been injured, and is much swollen and painful, leeches may be applied to it in the first instance: after this the employment of fomentations and absolute rest are to be most relied upon; and upon the subsidence of the more acute symptoms, moderate exercise of the limb, frictions either with the dry hand or some

simple liniment, such as camphorated oil, and wearing a flannel bandage round the joint, are the chief measures to be adopted.

*Fainting and Convulsion Fits.*—These two very different affections are frequently confounded with one another, although, in general, they may be easily distinguished. In fainting, the face and lips become pale, the skin is generally covered with a clammy perspiration, and the patient falls to the ground motionless; in a few seconds recovery takes place with deep and heavy sighs, and occasionally vomiting then occurs. In convulsions, again, the attack comes on suddenly, and in most instances with a loud cry; the patient falls, and is affected with strong muscular writhings or spasms, the limbs being kept in violent motion, or firmly fixed in one position, while the face is much distorted, and froth issues from the mouth. These symptoms cease in from five to ten minutes, leaving the patient drowsy and motionless.

In both these affections the treatment must be much the same. Cold water dashed on the head and face,—the removal of all pressure on the neck,—such as neck-cloths, etc., and, in convulsions, the insertion of something between the teeth, such as the corner of a towel, folded once or twice, to prevent the biting of the lips and tongue, which is here apt to occur—constitute all that is essentially necessary to be done during the fit.

The most important treatment is that which has for its object the removal of the constitutional condition which leads to these fits, and this, of course, is not to be attempted by non-professional individuals.

*Broken Bones.*—The indications of a bone being fractured are alteration in the shape of the limb, unnatural mobility at some part of its length, and a grating or rubbing of the rough broken ends of the bone against each other at this part when the fractured bone is moved in certain directions.

All that is necessary to describe here, in the way of treatment, are those temporary measures to be adopted previous to the arrival of the surgeon. The limb should be placed in a position as nearly natural, and as easy for the patient, as possible, and maintained there at perfect rest by means of pillows placed alongside of

it, or by pieces of thin wood or stout pasteboard being bandaged round the limb, and padded with tow or pieces of blanket or any other soft material, so as to be more comfortable. The patient ought to be moved as little as possible before being seen by a medical man; as by lifting and carrying individuals so injured, the ends of the bone may tear the flesh surrounding it, or be even driven through the skin.

*Chilblains.*—These are slight inflammations which occur on the toes and fingers, and sometimes the nose and ears—generally in winter, and where a part has been rapidly heated when it was very cold. They consist of red and swollen patches, sometimes accompanied with blisters, and these, upon breaking, are apt to become ulcerated and to occasion much annoyance.

In the simpler forms, some stimulating liniment, such as equal parts of spirit of wine and vinegar, spirit of camphor, or soap and opium liniment, any of these being applied cold, is generally efficacious. Care must be taken not to break the blisters should any exist: if they are broken, then the ulcers should be poulticed, and afterwards dressed with a little resin-ointment spread on lint, until they are healed.

*Bleeding from Wounds, etc.*—In cases of obstinate bleeding, the best thing which can be done until a surgeon is found is to apply pressure to that point from which the blood flows. This may be done either simply by the finger being firmly applied to the wound, or by a piece of lint or rag being folded up into a thick and small pad, and that placed upon the wound, and tied there by means of a flat bandage of some kind. Should the pad become saturated with blood, it may require to be renewed, as in that case it acts like a sponge, and increases instead of diminishes the bleeding.

*Toothache.*—This affection may be temporarily alleviated by scrupulously cleaning out the cavity of the tooth—as decay has generally hollowed it at some part—and dropping into this cavity a piece of cotton-wool soaked in creosote, or a strong solution of alum. It is useless, however, doing so, unless the decayed cavity is first well cleaned out, even although the pain should thus be temporarily increased. After using the creosote, etc., the hollow of the tooth should be filled up with a pellet of cotton-wool satu-

rated with a solution of gum-mastic in ether, or with a piece of gutta percha softened in boiling water. The condition of the stomach and bowels should in all cases of toothache be attended to most carefully.

*Stings of Bees, Wasps, etc.*—Should the sting itself be left in the wound, it ought to be removed, if possible; and the part may have applied to it vinegar, hartshorn-water, laudanum, or spirits of wine, on a piece of lint or thick cotton.







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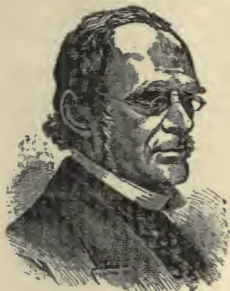
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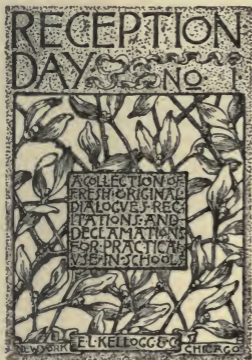
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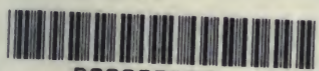
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