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# Practical Child Study

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# PRACTICAL CHILD STUDY

WITH OUTLINES, DEFINITIONS AND PRACTICAL SUGGESTIONS

FOR

TEACHERS AND PARENTS

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✓  
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## PREFACE.

For some time I have felt that there was a gap between teachers and scientists in the subject of Child Study. While the study of children below school age is a grand, good work, and must be the foundation of scientific Child Study, yet the teachers cannot wait for its results though they will be of the highest value. Teachers must have something that will help now. They must have their attention directed to see their pupils as they now are.

I am conscious of the difficulties in undertaking to furnish such a work, and realize that any work of mine will fall far short of what we might wish it to be, but I have been persuaded that even in its present shape it may be of use to some. I hope at least it will help to raise the tide of interest in Child Study that characterizes the educational movements of to-day.

No claim of originality is made. It takes a Newton to discover gravitation and other laws of nature, but we that have not genius may arrange and apply those principles.

I am indebted to the authors from whom I quote, to Supt. Kratz of Sioux City for an example of where such a record is kept with the best of results, and to my friend and co-worker Professor J. F. Monk of this College for his help and his suggestions, also to Dr. Scripture of Yale for his kindness.

A. D. CROMWELL.

Tobin College, Fort Dodge, Iowa.

Sept. 1895.





## QUOTATIONS ARE FROM:

|                                                                                                                                                                       |        |
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## AN EXPERIMENT.

To those who ask, "Is it not dangerous to allow teachers to experiment on children?" I will answer in the words of Colonel Parker: "Not a tithe of the danger there is in allowing supervisors to prescribe methods, and rigidly enforce the literal following of a course of study. The most awful experiment is to put a girl fresh from the high school on a cram examination, without a scintilla of the art of teaching, or a faint suspicion of it, in charge of fifty immortal souls; and next to that, even more often, if possible, to put a college graduate, chock full of conceit and of nothing else, at the head of a school. Thousands of schools are now in charge of principals who have not the faintest idea how to direct and teach teachers. There must needs be experiments, but let us have those experiments which are promoted by an all-controlling desire to do good rather than the experiments of ignorance. The strongest influence of a teacher consists not in his teaching of itself, but in his attitude towards knowledge and its relation to education. If the teacher is everlastingly in love with knowledge, if this love speaks in his eyes and charms in his manner, little else is needed to make his pupils lovers of knowledge. If the teacher is thoughtfully studying the needs of each of his pupils, and striving to apply the best conditions for the highest self-effort, he is not an experimenter in the common acceptance of the term; the difference is world-wide between an investigation in the sense of studying a profession and an experiment which implies the destruction of material used."<sup>12</sup>

## INTRODUCTION.

CHILD STUDY is the systematic observation of children. If, as Stanley Hall says, but one teacher in a hundred is interested in child study, it is because they do not know how to go at it; how to look, or what to look for. To them the subject is a vague, abstract, theoretical conglomeration. The aim of this book is to bring the subject before teachers in a clear, practical form; to furnish a definite basis and practical aim for systematic observation of school children. All theoretical or unpractical matter is omitted, and only that is included which is of paramount importance to the teacher. Forty blanks are furnished, as that is enough for the average school, but extra blanks may be obtained from the publishers.

To the teacher, tact and skill to read the minds and motives of pupils is a possession of no small importance. Successful teaching consists in carefully and skillfully applying the proper means of discipline and culture to each individual under instruction. If the teacher fails to find the proper means or the proper place of application, the end sought will not be attained.

“The living, playing, learning child, whose soul heredity has freighted so richly from a past, we know not how remote, on whose right development all good causes in the world depend, embodies a truly elementary psychology. All the fundamental activities are found, and the play of each psychic process is so open, simple, and interesting that it is strange that

psychology should be the last of the sciences to fall into line in the great Baconian change of base to which we owe nearly all the reforms from Comenius down, which distinguish schools of to-day from those of the sixteenth century. It is a striking fact that nearly every great teacher in the history of education who has spoken words that have been heeded, has lived for years in the closest personal relations to children, and has had the sympathy and tact that gropes out, if it can not see clearly, the laws of juvenile development."—Stanley Hall.

How many teachers would have failure turned to success, if they could only see and correct the little defects or faults? How many weary, anxious hours would be saved, if teachers could see pupils as they are? Such little things as: "Why is that child inattentive to day? She gave good attention yesterday." Perhaps she is deaf in the ear toward the class and teacher. If, as yesterday, she were at the other side of the class, the good ear would be toward the speaker, the child would hear all, become interested and attentive. That boy on the back seat may be unable to get his lessons because the light pours into his weak eyes causing them to pain him. If the teacher knew that, she would give him a better lighted seat. Children can hardly be interested enough to study when ill or in pain. Their minds turn in, as it were, upon themselves and not out upon the subject. If the teacher knew that that boy was of a sanguine temperament, she would ask a favor of him instead of scolding him, then he would be the maker and not the breaker of the school. That girl missed half her words in the reading lesson because she is a careless, inaccurate observer. Mary does not understand the reading lesson, or is poor in geography and history, because she has a poor imagination. Such little

things make the difference between success and failure; between school keeping and school teaching.

A record has been kept so long of attendance and pages passed over, that the importance of them has been magnified till we have lost sight of growth or developing the child morally, intellectually, and physically. We ought to remember that it is the individual and not the class that is of importance. Develop the individual and the class will take care of itself. But how are we to bring out the individual? In the public schools there must be class work, pupils must be treated collectively. While this is true, yet, if an outline of each pupil's capacities and tendencies is kept, attention is directed to him as an individual, he is brought out, as it were, from behind the class, and many opportunities that would otherwise pass unimproved, will be used for the upbuilding of that individual.

The plan is especially adapted to institute work, as the topics are treated so briefly that the instructor may enlarge upon them as he chooses. It is recommended that children be brought before teachers and the outline filled in as far as possible, allowance being made for the embarrassment of the child under such circumstances.

It may seem hard to understand how to keep the record, or it may appear to be an extra burden on the teacher, but teachers should remember that we are the sum of our endeavors and that the fruit will be in direct proportion to the labor or the effort put forth. And so the child, when we try to lead him to correct his faults, or make up his deficiencies, is helped in proportion to the effort we can induce him to put forth.

## BENEFITS.

1. It gives teachers a better understanding of general tendencies and apparent inconsistencies of human nature.

2. It aids in developing that which should be the highest aim in education,—character.

3. It gives tact, and understanding of the best stimulus for each child, through which to gain physical, intellectual, and moral growth; and through which to govern.

4. It leads the teacher to a careful and systematic observation of each child, and thus makes possible a more symmetrical development of each individual.

5. It tends to bring teacher and pupil into closer relations of co-operation and sympathy. The rod is used for all offences, not because any teacher supposes it a cure-all, but because it is easier to pound the flesh than to think, and study the best means of controlling each child.

6. It makes something besides attendance and pages passed over, the aim of school work. By keeping a record of attendance and pages passed over, we have come to look upon these as the aim of our school work; whereas, growth, physical, intellectual, and moral, is the true end of education. If no record is kept, the little peculiarities of the child will pass unnoticed; but, by keeping an individual record, attention is called, and the teacher by her assignment of lessons, her questions, her conversation, and her seating, etc., may be able to suppress the bad and to stimulate the good. Remember, a dormant impulse dies; but we are the sum of our endeavors.



7. Child Study will enable the teacher to know what constitutes an average normal child. If she find a child below this, she can use means to bring him up to the required perfection, but if she find a child above this, and symmetrical, she may do more, if she knows child nature, to stimulate a healthy, vigorous growth. And, if the child has the capacity, she may lead him on to develop genius. Because no two children are alike is no reason why the teacher should not know the ideal, and work toward it.

8. Child Study will enable the teacher to stimulate and guide self-effort. It will enable teachers to control, to some extent, the child's ideas, and so control his emotions and his acts. For ideas make emotions, emotions make actions, actions make character, character makes destiny. School government is character building. Child Study will enable the teacher to understand herself,—her thoughts, her emotions, her actions—and only when a teacher understands herself, is she able to understand others. One mind is typical of the race. Each one is a type of the race and stands for humanity. The scientist sees the oak tree in the acorn, so the teacher should see the future man or woman in the boy or girl. Above all, the outlines enable a teacher to leave to her successor a statement of the child's physical, intellectual, and moral condition—his characteristics, his tendencies, and his attainments, thereby enabling her successor to become a safe and sure guide up the path of intellectual and moral development.

9. Child Study will do for the teacher what any science will do for her—Develop power to think, and give mental culture because it requires, first, close observation; second, careful reflection; third, fine and critical distinctions; fourth, precision and exactness in the use of terms and in making statements, and as Whittier says:

“Invite the eye to see and heart to feel  
The beauty and joy within their reach,  
Home, and home loves and the beatitudes  
Of nature free to all.”

## HOW TO USE THE RECORD.

1. NATIONALITY: If not an American, allowance should be made for his thinking in a foreign language.

2. TEMPERAMENT: This word means the blending of the mental characteristics with the physical characteristics. We recognize four temperaments; first, the Nervous or Mental; second, the Sanguine; third, the Biliou; and fourth, the Lymphatic.

*Nervous:* Physical characteristics: Form slender, neck long, nose narrow, motions quick, skin thin and clear, eyes bright and usually gray, hair light and flaxen but turns dark as the child grows older.

Mental characteristics: Impulsive, quickly and easily reconciled, irresolute, lover of study, especially of poetry and nature.

*Sanguine:* Physical characteristics: form plump, neck short, nose outspread, motions medium, skin florid or reddish, eyes blue, hair reddish.

Mental characteristics: Impulsive, resolute, muscular pursuits preferred, lover of music and fine arts, especially eloquence. Equally happy in the pursuit of little as of much.

*Biliou:* Physical characteristics: Form thick set, motions slow, neck short, nose outspread, skin dry and dark or pale olive, eyes black or brown, hair black and abundant.

Mental characteristics: Passionate, not impulsive, business and gainful pursuits preferred, aims high, happy in the attainment of wealth, power, and family advancement.

*Lymphatic:* Physical characteristics: Form thick set, neck short, nose outspread, motions slow, skin dense and colorless, eyes hazel or brownish-gray, hair brown.

Mental characteristics: Slow, heavy, often stupid, never excitable, forgives but never forgets, plodding in business but persistent in work, happy from personal or sensational comforts or pleasure.

3. LEADING FEELINGS THROUGH WHICH TO GOVERN: The temperament will be suggestive, and the government at home will also be suggestive. Is it love, fear, public opinion, future reward, sense of duty?

4. SUBJECT OF DEEPEST INTEREST: Temperament will again be suggestive. Is it learning, business, war, history, literature, music, poetry, art? Endeavor to find out whether he has ideal heroes, heroines, or associates whom he is trying to imitate. If so, what is the character of this ideal? This is important. It may be his ideal is a boy who "bothered his teacher," "broke up the school," became a "cowboy," or, her ideal heroine became a "Trilby." If so, and you can't change this ideal, your teaching, so far as that boy is concerned, is time worse than wasted, for the longer he continues the more he becomes like the character.

5. HEALTH: Good or bad? If ill, what is the cause? Suppose you find that a pupil has poor health, what can you do? You can, at least, not blame the child for his inability, as you may be doing now. You will not require long-continued stillness, long-continued stress of attention, long-continued or precise use of the hand, eye, or vocal organs, especially if the child is nervous.

6. SIGHT: Tested by letters, heavy half inch letters, such as are on the chalk box, should be seen twenty feet.\* If sight is poor, give the child a well lighted seat. If the teacher wishes to test for color blindness, she may send the child to a box

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\*A card especially for this purpose may be had of the Publishers for 25 cents.

containing different colored sticks, shoe-pegs, pieces of yarn or paper ; and tell the child to select the blue, the red, the violet, etc. Professor Krohn says : "Defective vision will eventually cause nervous disorders in any child."

7. HEARING : Tested by the watch tick. An ordinary watch should be heard six feet or more. If the child is partially deaf, especially as most often occurs in one ear, seat the child where he can best hear, i. e. with good ear toward the class and the teacher.

8. OBSERVATION : By this word we mean the ability to see all that there is about us. The child's observation may be tested by questions like the following: How many wings has a fly? How many legs has it? How many feet has a snake? When a cow eats grass does she walk forward or backward? How does a robin build her nest? What color is your house painted? What did you see on the road to school? How does a hen swim? A cat cross a river? A dog walk? Any questions that will enable you to tell whether he has seen or is guessing.

9. ATTENTION, or the power to give undivided thought and action to the subject in hand. Attention is the power that the mind has to bring all its force to bear on one thing. Newness of surroundings; a cold in the head, or ill health of any kind will weaken attention for a time, so we should watch the child for a few days before we conclude that his power of attention is poor. Then, if he gazes around while trying to study, or takes first one thing and then another, his attention may be called poor.

10. MEMORY, or the power to receive, retain, and again recall past ideas or objects as they are or were; (a) *Thought Memory* is the faculty that enables us to receive, retain, and

recall the thought or idea of that which we learn. It is tested by ability to learn easily and quickly the idea of rules, quotations, or recitations. (b) *Mechanical Memory* or the faculty that enables us to reproduce the exact words of quotations, recitations, poems, etc.

12. IMAGINATION or the faculty by which we see ideal objects. It is seeing with the mind's eye. It is our power to intentionally represent our acquisitions in new forms. Imagination may be tested by story pictures, by ability to see in the mind the people, places, and such objects about which the child reads.

12. REASON, judgment, or power to think. This is the faculty by which we see cause and effect, right and wrong, or what will be of benefit from what will be of injury. It may be tested with questions like these: Do boot-blacks like to have it rain? What is the use of doors? Why do men sow seeds? Why doesn't the cat walk on two legs? Where do the fish go when it rains? Are snow and rain alike?

13. SELF CONTROL: Are the child's movements accurate? Does he sit and stand still? Can he place his pencil just where he wants to—between two dots? Does he get nervous when he writes? Can he thread a needle?

14. SENSE OF RIGHT: Does he obey the golden rule? Give others their right? What would he do with a thousand dollars? Does he share his toys, food, pleasures, etc., with others?

15. GREATEST MENTAL DEFICIENCY: Is it attention, imagination, memory, or some other deficiency?

16. GREATEST PHYSICAL DEFICIENCY: Is it hollow chest, stoop shoulders, lack of blood, or some other defect?

17, 18, 19. In the words of the Bible, "It is the letter that killeth, but the spirit that maketh alive." Teachers want knowledge, but they want inspiration also. 17, 18, 19 are left blank below for the teacher to fill with Perception, Language, Reaction-time, Association-time, Weight, Height, or any topic the teacher may choose. Reaction-time and Association-time are explained in the last chapter of this book.

Keep a record of each pupil, leave a record for your successor, and if you think it for the child's good, send a copy of your record to the child's parents.

Extra outlines may be bought of the publishers of this book.

Cards prepared especially for testing sight of school children may be had of the publishers of this work for 25 cts.

Read : The Benefits, How to Use the Record, the Importance, and Practical Directions.

Record of \_\_\_\_\_ Date \_\_\_\_\_

1. Nationality \_\_\_\_\_ 2. Temperament \_\_\_\_\_

3. Leading feelings through which to govern \_\_\_\_\_

Age \_\_\_\_\_ 1st. month 3rd. month 5th. month 7th. month 9th. month

| Age _____ |                                 | 1st. month | 3rd. month | 5th. month | 7th. month | 9th. month |
|-----------|---------------------------------|------------|------------|------------|------------|------------|
| 4.        | Subject of deepest interest     | .....      | .....      | .....      | .....      | .....      |
| 5.        | Health.....                     | .....      | .....      | .....      | .....      | .....      |
| 6.        | Sight.....                      | .....      | .....      | .....      | .....      | .....      |
| 7.        | Hearing.....                    | .....      | .....      | .....      | .....      | .....      |
| 8.        | Observation.....                | .....      | .....      | .....      | .....      | .....      |
| 9.        | Attention.....                  | .....      | .....      | .....      | .....      | .....      |
| 10. (a)   | Logical or thought memory       | Acquires   | .....      | .....      | .....      | .....      |
|           |                                 | Retains.   | .....      | .....      | .....      | .....      |
|           |                                 | Recalls .  | .....      | .....      | .....      | .....      |
| 10. (b)   | Mechanical or word memory       | Acquires   | .....      | .....      | .....      | .....      |
|           |                                 | Retains.   | .....      | .....      | .....      | .....      |
|           |                                 | Recalls .  | .....      | .....      | .....      | .....      |
| 11.       | Imagination.....                | .....      | .....      | .....      | .....      | .....      |
| 12.       | Reasoning or judgment (thought) | .....      | .....      | .....      | .....      | .....      |
| 13.       | Self control.....               | .....      | .....      | .....      | .....      | .....      |
| 14.       | Sense of right.....             | .....      | .....      | .....      | .....      | .....      |
| 15.       | Greatest mental deficiency      | .....      | .....      | .....      | .....      | .....      |
| 16.       | Greatest physical deficiency    | .....      | .....      | .....      | .....      | .....      |
| 17.       | .....                           | .....      | .....      | .....      | .....      | .....      |
| 18.       | .....                           | .....      | .....      | .....      | .....      | .....      |
| 19.       | .....                           | .....      | .....      | .....      | .....      | .....      |

E-excellent, M-medium, P-poor, W-weak. Use the letters. 1, 2, 5, 6 and 7 should be filled in the first week. The others as soon as the facts can be ascertained.

Read : The Benefits, How to Use the Record, the Importance, and Practical Directions.

Record of \_\_\_\_\_ Date \_\_\_\_\_

1. Nationality \_\_\_\_\_ 2. Temperament \_\_\_\_\_

3. Leading feelings through which to govern \_\_\_\_\_

Age \_\_\_\_\_ 1st. month 3rd. month 5th. month 7th. month 9th. month

| Age _____                                 | 1st. month     | 3rd. month | 5th. month | 7th. month | 9th. month |
|-------------------------------------------|----------------|------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |                |            |            |            |            |
| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory         | Acquires ..... |            |            |            |            |
|                                           | Retains .....  |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
| 10. (b) Mechanical or word memory         | Acquires ..... |            |            |            |            |
|                                           | Retains .....  |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
| 11. Imagination.....                      |                |            |            |            |            |
| 12. Reasoning or judgment (thought) ..... |                |            |            |            |            |
| 13. Self control.....                     |                |            |            |            |            |
| 14. Sense of right.....                   |                |            |            |            |            |
| 15. Greatest mental deficiency .....      |                |            |            |            |            |
| 16. Greatest physical deficiency .....    |                |            |            |            |            |
| 17. ....                                  |                |            |            |            |            |
| 18. ....                                  |                |            |            |            |            |
| 19. ....                                  |                |            |            |            |            |

E-excellent, M-medium, P-poor, W-weak. Use the letters. - 1, 2, 5, 6 and 7 should be filled in the first week. The others as soon as the facts can be ascertained.



Read: The Benefits, How to Use the Record, the Importance, and Practical Directions.

Record of \_\_\_\_\_ Date \_\_\_\_\_

1. Nationality \_\_\_\_\_ 2. Temperament \_\_\_\_\_

3. Leading feelings through which to govern \_\_\_\_\_

Age \_\_\_\_\_ 1st. month 3rd. month 5th. month 7th. month 9th. month

| Age _____                            | 1st. month                         | 3rd. month | 5th. month | 7th. month | 9th. month |
|--------------------------------------|------------------------------------|------------|------------|------------|------------|
| 4. Subject of deepest interest ..... |                                    |            |            |            |            |
| 5. Health.....                       |                                    |            |            |            |            |
| 6. Sight.....                        |                                    |            |            |            |            |
| 7. Hearing.....                      |                                    |            |            |            |            |
| 8. Observation.....                  |                                    |            |            |            |            |
| 9. Attention.....                    |                                    |            |            |            |            |
| 10. (a) Logical or thought memory    | { Acquires<br>Retains.<br>Recalls. |            |            |            |            |
|                                      |                                    |            |            |            |            |
|                                      |                                    |            |            |            |            |
| 10. (b) Mechanical or word memory    | { Acquires<br>Retains.<br>Recalls. |            |            |            |            |
|                                      |                                    |            |            |            |            |
|                                      |                                    |            |            |            |            |
| 11. Imagination.....                 |                                    |            |            |            |            |
| 12. Reasoning or judgment (thought)  |                                    |            |            |            |            |
| 13. Self control.....                |                                    |            |            |            |            |
| 14. Sense of right.....              |                                    |            |            |            |            |
| 15. Greatest mental deficiency       |                                    |            |            |            |            |
| 16. Greatest physical deficiency     |                                    |            |            |            |            |
| 17. ....                             |                                    |            |            |            |            |
| 18. ....                             |                                    |            |            |            |            |
| 19. ....                             |                                    |            |            |            |            |

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Record of \_\_\_\_\_ Date \_\_\_\_\_

1. Nationality \_\_\_\_\_ 2. Temperament \_\_\_\_\_

3. Leading feelings through which to govern \_\_\_\_\_

Age \_\_\_\_\_ 1st. month 3rd. month 5th. month 7th. month 9th. month

| Age _____                                 | 1st. month     | 3rd. month | 5th. month | 7th. month | 9th. month |
|-------------------------------------------|----------------|------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |                |            |            |            |            |
| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory         | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls . .... |            |            |            |            |
| 10. (b) Mechanical or word memory         | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls . .... |            |            |            |            |
| 11. Imagination.....                      |                |            |            |            |            |
| 12. Reasoning or judgment (thought) ..... |                |            |            |            |            |
| 13. Self control.....                     |                |            |            |            |            |
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| 17. ....                                  |                |            |            |            |            |
| 18. ....                                  |                |            |            |            |            |
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| Age _____                                 | 1st. month | 3rd. month | 5th. month  | 7th. month | 9th. month |
|-------------------------------------------|------------|------------|-------------|------------|------------|
| 4. Subject of deepest interest .....      |            |            |             |            |            |
| 5. Health.....                            |            |            |             |            |            |
| 6. Sight.....                             |            |            |             |            |            |
| 7. Hearing.....                           |            |            |             |            |            |
| 8. Observation.....                       |            |            |             |            |            |
| 9. Attention.....                         |            |            |             |            |            |
| 10. (a) Logical or thought memory         | } Acquires |            |             |            |            |
|                                           |            | } Retains. |             |            |            |
|                                           |            |            | } Recalls . |            |            |
| 10. (b) Mechanical or word memory         | } Acquires |            |             |            |            |
|                                           |            | } Retains. |             |            |            |
|                                           |            |            | } Recalls . |            |            |
| 11. Imagination.....                      |            |            |             |            |            |
| 12. Reasoning or judgment (thought) ..... |            |            |             |            |            |
| 13. Self control.....                     |            |            |             |            |            |
| 14. Sense of right.....                   |            |            |             |            |            |
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| 16. Greatest physical deficiency .....    |            |            |             |            |            |
| 17. ....                                  |            |            |             |            |            |
| 18. ....                                  |            |            |             |            |            |
| 19. ....                                  |            |            |             |            |            |

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| Age _____                                 | 1st. month     | 3rd. month | 5th. month | 7th. month | 9th. month |
|-------------------------------------------|----------------|------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |                |            |            |            |            |
| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory         | Acquires ..... |            |            |            |            |
|                                           | Retains .....  |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
| 10. (b) Mechanical or word memory         | Acquires ..... |            |            |            |            |
|                                           | Retains .....  |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
| 11. Imagination.....                      |                |            |            |            |            |
| 12. Reasoning or judgment (thought) ..... |                |            |            |            |            |
| 13. Self control.....                     |                |            |            |            |            |
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| 15. Greatest mental deficiency .....      |                |            |            |            |            |
| 16. Greatest physical deficiency .....    |                |            |            |            |            |
| 17. ....                                  |                |            |            |            |            |
| 18. ....                                  |                |            |            |            |            |
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Age \_\_\_\_\_

|  | 1st.<br>month | 3rd.<br>month | 5th.<br>month | 7th.<br>month | 9th.<br>month |
|--|---------------|---------------|---------------|---------------|---------------|
|--|---------------|---------------|---------------|---------------|---------------|

|                                     |          |  |  |  |  |
|-------------------------------------|----------|--|--|--|--|
| 4. Subject of deepest interest      |          |  |  |  |  |
| 5. Health.....                      |          |  |  |  |  |
| 6. Sight.....                       |          |  |  |  |  |
| 7. Hearing.....                     |          |  |  |  |  |
| 8. Observation.....                 |          |  |  |  |  |
| 9. Attention.....                   |          |  |  |  |  |
| 10. (a) Logical or thought memory   | Acquires |  |  |  |  |
|                                     | Retains. |  |  |  |  |
|                                     | Recalls. |  |  |  |  |
| 10. (b) Mechanical or word memory   | Acquires |  |  |  |  |
|                                     | Retains. |  |  |  |  |
|                                     | Recalls. |  |  |  |  |
| 11. Imagination.....                |          |  |  |  |  |
| 12. Reasoning or judgment (thought) |          |  |  |  |  |
| 13. Self control.....               |          |  |  |  |  |
| 14. Sense of right.....             |          |  |  |  |  |
| 15. Greatest mental deficiency      |          |  |  |  |  |
| 16. Greatest physical deficiency    |          |  |  |  |  |
| 17. ....                            |          |  |  |  |  |
| 18. ....                            |          |  |  |  |  |
| 19. ....                            |          |  |  |  |  |

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| Age _____                                 | 1st. month     | 3rd. month | 5th. month | 7th. month | 9th. month |
|-------------------------------------------|----------------|------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |                |            |            |            |            |
| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory         | Acquires ..... |            |            |            |            |
|                                           | Retains .....  |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
| 10. (b) Mechanical or word memory         | Acquires ..... |            |            |            |            |
|                                           | Retains .....  |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
| 11. Imagination.....                      |                |            |            |            |            |
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| 13. Self control.....                     |                |            |            |            |            |
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| 15. Greatest mental deficiency .....      |                |            |            |            |            |
| 16. Greatest physical deficiency .....    |                |            |            |            |            |
| 17. ....                                  |                |            |            |            |            |
| 18. ....                                  |                |            |            |            |            |
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|-------------------------------------------|----------------|------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |                |            |            |            |            |
| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory         | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls. ....  |            |            |            |            |
| 10. (b) Mechanical or word memory         | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls. ....  |            |            |            |            |
| 11. Imagination.....                      |                |            |            |            |            |
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| 17. ....                                  |                |            |            |            |            |
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|--------------------------------------|-------------------------------------|------------|------------|------------|------------|
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| 5. Health.....                       |                                     |            |            |            |            |
| 6. Sight.....                        |                                     |            |            |            |            |
| 7. Hearing.....                      |                                     |            |            |            |            |
| 8. Observation.....                  |                                     |            |            |            |            |
| 9. Attention.....                    |                                     |            |            |            |            |
| 10. (a) Logical or thought memory    | { Acquires<br>Retains.<br>Recalls . |            |            |            |            |
|                                      |                                     |            |            |            |            |
|                                      |                                     |            |            |            |            |
| 10. (b) Mechanical or word memory    | { Acquires<br>Retains.<br>Recalls . |            |            |            |            |
|                                      |                                     |            |            |            |            |
|                                      |                                     |            |            |            |            |
| 11. Imagination.....                 |                                     |            |            |            |            |
| 12. Reasoning or judgment (thought)  |                                     |            |            |            |            |
| 13. Self control.....                |                                     |            |            |            |            |
| 14. Sense of right.....              |                                     |            |            |            |            |
| 15. Greatest mental deficiency       |                                     |            |            |            |            |
| 16. Greatest physical deficiency     |                                     |            |            |            |            |
| 17. ....                             |                                     |            |            |            |            |
| 18. ....                             |                                     |            |            |            |            |
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| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory {       | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls. ....  |            |            |            |            |
| 10. (b) Mechanical or word memory {       | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls. ....  |            |            |            |            |
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| 17. ....                                  |                |            |            |            |            |
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|                                         |                |  |  |  |  |
|-----------------------------------------|----------------|--|--|--|--|
| 4. Subject of deepest interest .....    |                |  |  |  |  |
| 5. Health.....                          |                |  |  |  |  |
| 6. Sight.....                           |                |  |  |  |  |
| 7. Hearing.....                         |                |  |  |  |  |
| 8. Observation.....                     |                |  |  |  |  |
| 9. Attention.....                       |                |  |  |  |  |
| 10. (a) Logical or thought<br>memory    | Acquires ..... |  |  |  |  |
|                                         | Retains. ....  |  |  |  |  |
|                                         | Recalls. ....  |  |  |  |  |
| 10. (b) Mechanical<br>or word<br>memory | Acquires ..... |  |  |  |  |
|                                         | Retains. ....  |  |  |  |  |
|                                         | Recalls. ....  |  |  |  |  |
| 11. Imagination.....                    |                |  |  |  |  |
| 12. Reasoning or judgment<br>(thought)  |                |  |  |  |  |
| 13. Self control.....                   |                |  |  |  |  |
| 14. Sense of right.....                 |                |  |  |  |  |
| 15. Greatest mental deficiency          |                |  |  |  |  |
| 16. Greatest physical deficiency        |                |  |  |  |  |
| 17. ....                                |                |  |  |  |  |
| 18. ....                                |                |  |  |  |  |
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| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory         | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls. ....  |            |            |            |            |
| 10. (b) Mechanical or word memory         | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls. ....  |            |            |            |            |
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| 15. Greatest mental deficiency .....      |                |            |            |            |            |
| 16. Greatest physical deficiency .....    |                |            |            |            |            |
| 17. ....                                  |                |            |            |            |            |
| 18. ....                                  |                |            |            |            |            |
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|--|---------------|---------------|---------------|---------------|---------------|

|                                         |           |       |       |       |       |
|-----------------------------------------|-----------|-------|-------|-------|-------|
| 4. Subject of deepest interest          | .....     | ..... | ..... | ..... | ..... |
| 5. Health.....                          | .....     | ..... | ..... | ..... | ..... |
| 6. Sight.....                           | .....     | ..... | ..... | ..... | ..... |
| 7. Hearing.....                         | .....     | ..... | ..... | ..... | ..... |
| 8. Observation.....                     | .....     | ..... | ..... | ..... | ..... |
| 9. Attention.....                       | .....     | ..... | ..... | ..... | ..... |
| 10. (a) Logical or<br>thought<br>memory | Acquires  | ..... | ..... | ..... | ..... |
|                                         | Retains.  | ..... | ..... | ..... | ..... |
|                                         | Recalls . | ..... | ..... | ..... | ..... |
| 10. (b) Mechanical<br>or word<br>memory | Acquires  | ..... | ..... | ..... | ..... |
|                                         | Retains.  | ..... | ..... | ..... | ..... |
|                                         | Recalls . | ..... | ..... | ..... | ..... |
| 11. Imagination.....                    | .....     | ..... | ..... | ..... | ..... |
| 12. Reasoning or judgment<br>(thought)  | .....     | ..... | ..... | ..... | ..... |
| 13. Self control.....                   | .....     | ..... | ..... | ..... | ..... |
| 14. Sense of right.....                 | .....     | ..... | ..... | ..... | ..... |
| 15. Greatest mental deficiency          | .....     | ..... | ..... | ..... | ..... |
| 16. Greatest physical defici-<br>ency   | .....     | ..... | ..... | ..... | ..... |
| 17. ....                                | .....     | ..... | ..... | ..... | ..... |
| 18. ....                                | .....     | ..... | ..... | ..... | ..... |
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|--|---------------|---------------|---------------|---------------|---------------|
|--|---------------|---------------|---------------|---------------|---------------|

|                                         |            |       |       |       |       |
|-----------------------------------------|------------|-------|-------|-------|-------|
| 4. Subject of deepest interest          | .....      | ..... | ..... | ..... | ..... |
| 5. Health.....                          | .....      | ..... | ..... | ..... | ..... |
| 6. Sight.....                           | .....      | ..... | ..... | ..... | ..... |
| 7. Hearing.....                         | .....      | ..... | ..... | ..... | ..... |
| 8. Observation.....                     | .....      | ..... | ..... | ..... | ..... |
| 9. Attention.....                       | .....      | ..... | ..... | ..... | ..... |
| 10. (a) Logical or<br>thought<br>memory | { Acquires | ..... | ..... | ..... | ..... |
|                                         | { Retains. | ..... | ..... | ..... | ..... |
|                                         | { Recalls. | ..... | ..... | ..... | ..... |
| 10. (b) Mechanical<br>or word<br>memory | { Acquires | ..... | ..... | ..... | ..... |
|                                         | { Retains. | ..... | ..... | ..... | ..... |
|                                         | { Recalls. | ..... | ..... | ..... | ..... |
| 11. Imagination.....                    | .....      | ..... | ..... | ..... | ..... |
| 12. Reasoning or judgment<br>(thought)  | .....      | ..... | ..... | ..... | ..... |
| 13. Self control.....                   | .....      | ..... | ..... | ..... | ..... |
| 14. Sense of right.....                 | .....      | ..... | ..... | ..... | ..... |
| 15. Greatest mental deficiency          | .....      | ..... | ..... | ..... | ..... |
| 16. Greatest physical deficiency        | .....      | ..... | ..... | ..... | ..... |
| 17. ....                                | .....      | ..... | ..... | ..... | ..... |
| 18. ....                                | .....      | ..... | ..... | ..... | ..... |
| 19. ....                                | .....      | ..... | ..... | ..... | ..... |

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1. Nationality \_\_\_\_\_ 2. Temperament \_\_\_\_\_

3. Leading feelings through which to govern \_\_\_\_\_

Age \_\_\_\_\_ 1st. month 3rd. month 5th. month 7th. month 9th. month

| Age _____                                 | 1st. month     | 3rd. month | 5th. month | 7th. month | 9th. month |
|-------------------------------------------|----------------|------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |                |            |            |            |            |
| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory         | Acquires ..... |            |            |            |            |
|                                           | Retains.....   |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
| 10. (b) Mechanical or word memory         | Acquires ..... |            |            |            |            |
|                                           | Retains.....   |            |            |            |            |
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| 11. Imagination.....                      |                |            |            |            |            |
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| 17. ....                                  |                |            |            |            |            |
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|         |                                 | 1st. month | 3rd. month | 5th. month | 7th. month | 9th. month |
|---------|---------------------------------|------------|------------|------------|------------|------------|
| 4.      | Subject of deepest interest     | .....      | .....      | .....      | .....      | .....      |
| 5.      | Health.....                     | .....      | .....      | .....      | .....      | .....      |
| 6.      | Sight.....                      | .....      | .....      | .....      | .....      | .....      |
| 7.      | Hearing.....                    | .....      | .....      | .....      | .....      | .....      |
| 8.      | Observation.....                | .....      | .....      | .....      | .....      | .....      |
| 9.      | Attention.....                  | .....      | .....      | .....      | .....      | .....      |
| 10. (a) | Logical or thought memory       | Acquires   | .....      | .....      | .....      | .....      |
|         |                                 | Retains.   | .....      | .....      | .....      | .....      |
|         |                                 | Recalls.   | .....      | .....      | .....      | .....      |
| 10. (b) | Mechanical or word memory       | Acquires   | .....      | .....      | .....      | .....      |
|         |                                 | Retains.   | .....      | .....      | .....      | .....      |
|         |                                 | Recalls.   | .....      | .....      | .....      | .....      |
| 11.     | Imagination.....                | .....      | .....      | .....      | .....      | .....      |
| 12.     | Reasoning or judgment (thought) | .....      | .....      | .....      | .....      | .....      |
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| 15.     | Greatest mental deficiency      | .....      | .....      | .....      | .....      | .....      |
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| 17.     | .....                           | .....      | .....      | .....      | .....      | .....      |
| 18.     | .....                           | .....      | .....      | .....      | .....      | .....      |
| 19.     | .....                           | .....      | .....      | .....      | .....      | .....      |

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|--|---------------|---------------|---------------|---------------|---------------|
|--|---------------|---------------|---------------|---------------|---------------|

|                                         |          |       |       |       |       |
|-----------------------------------------|----------|-------|-------|-------|-------|
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| 6. Sight.....                           | .....    | ..... | ..... | ..... | ..... |
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|                                         | Retains. | ..... | ..... | ..... | ..... |
|                                         | Recalls. | ..... | ..... | ..... | ..... |
| 10. (b) Mechanical<br>or word<br>memory | Acquires | ..... | ..... | ..... | ..... |
|                                         | Retains. | ..... | ..... | ..... | ..... |
|                                         | Recalls. | ..... | ..... | ..... | ..... |
| 11. Imagination.....                    | .....    | ..... | ..... | ..... | ..... |
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| 17. ....                                | .....    | ..... | ..... | ..... | ..... |
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|                                         |                |       |       |       |       |
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| 17. ....                                | .....          | ..... | ..... | ..... | ..... |
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|                                     | Retains. ....  | ..... | ..... | ..... | ..... |
|                                     | Recalls. ....  | ..... | ..... | ..... | ..... |
| 10. (b) Mechanical or word memory   | Acquires ..... | ..... | ..... | ..... | ..... |
|                                     | Retains. ....  | ..... | ..... | ..... | ..... |
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| 17. ....                            | .....          | ..... | ..... | ..... | ..... |
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|                                         | Retains .....  | ..... | ..... | ..... | ..... |
|                                         | Recalls .....  | ..... | ..... | ..... | ..... |
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| 17. ....                                | .....          | ..... | ..... | ..... | ..... |
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|                                         | Retains. | ..... | ..... | ..... | ..... |
|                                         | Recalls. | ..... | ..... | ..... | ..... |
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| 17. ....                                | .....    | ..... | ..... | ..... | ..... |
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| 6. Sight.....                             |                |            |            |            |            |
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|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls . .... |            |            |            |            |
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| 18. ....                                  | .....          | .....      | .....      | .....      | .....      |
| 19. ....                                  | .....          | .....      | .....      | .....      | .....      |

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1. Nationality \_\_\_\_\_ 2. Temperament \_\_\_\_\_

3. Leading feelings through which to govern \_\_\_\_\_

Age \_\_\_\_\_ 1st. month 3rd. month 5th. month 7th. month 9th. month

| Age _____                                 | 1st. month                              | 3rd. month | 5th. month | 7th. month | 9th. month |
|-------------------------------------------|-----------------------------------------|------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |                                         |            |            |            |            |
| 5. Health.....                            |                                         |            |            |            |            |
| 6. Sight.....                             |                                         |            |            |            |            |
| 7. Hearing.....                           |                                         |            |            |            |            |
| 8. Observation.....                       |                                         |            |            |            |            |
| 9. Attention.....                         |                                         |            |            |            |            |
| 10. (a) Logical or thought memory         | { Acquires<br>{ Retains.<br>{ Recalls . |            |            |            |            |
|                                           |                                         |            |            |            |            |
|                                           |                                         |            |            |            |            |
| 10. (b) Mechanical or word memory         | { Acquires<br>{ Retains.<br>{ Recalls . |            |            |            |            |
|                                           |                                         |            |            |            |            |
|                                           |                                         |            |            |            |            |
| 11. Imagination.....                      |                                         |            |            |            |            |
| 12. Reasoning or judgment (thought) ..... |                                         |            |            |            |            |
| 13. Self control.....                     |                                         |            |            |            |            |
| 14. Sense of right.....                   |                                         |            |            |            |            |
| 15. Greatest mental deficiency .....      |                                         |            |            |            |            |
| 16. Greatest physical deficiency .....    |                                         |            |            |            |            |
| 17. ....                                  |                                         |            |            |            |            |
| 18. ....                                  |                                         |            |            |            |            |
| 19. ....                                  |                                         |            |            |            |            |

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| Age _____                                 | 1st. month | 3rd. month     | 5th. month | 7th. month | 9th. month |
|-------------------------------------------|------------|----------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |            |                |            |            |            |
| 5. Health.....                            |            |                |            |            |            |
| 6. Sight.....                             |            |                |            |            |            |
| 7. Hearing.....                           |            |                |            |            |            |
| 8. Observation.....                       |            |                |            |            |            |
| 9. Attention.....                         |            |                |            |            |            |
| 10. (a) Logical or thought memory         | {          | Acquires ..... |            |            |            |
|                                           |            | Retains. ....  |            |            |            |
|                                           |            | Recalls. ....  |            |            |            |
| 10. (b) Mechanical or word memory         | {          | Acquires ..... |            |            |            |
|                                           |            | Retains. ....  |            |            |            |
|                                           |            | Recalls. ....  |            |            |            |
| 11. Imagination.....                      |            |                |            |            |            |
| 12. Reasoning or judgment (thought) ..... |            |                |            |            |            |
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| 14. Sense of right.....                   |            |                |            |            |            |
| 15. Greatest mental deficiency .....      |            |                |            |            |            |
| 16. Greatest physical deficiency .....    |            |                |            |            |            |
| 17. ....                                  |            |                |            |            |            |
| 18. ....                                  |            |                |            |            |            |
| 19. ....                                  |            |                |            |            |            |

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Age \_\_\_\_\_ 1st. month 3rd. month 5th. month 7th. month 9th. month

| Age _____                                 | 1st. month     | 3rd. month | 5th. month | 7th. month | 9th. month |
|-------------------------------------------|----------------|------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |                |            |            |            |            |
| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory         | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls. ....  |            |            |            |            |
| 10. (b) Mechanical or word memory         | Acquires ..... |            |            |            |            |
|                                           | Retains. ....  |            |            |            |            |
|                                           | Recalls. ....  |            |            |            |            |
| 11. Imagination.....                      |                |            |            |            |            |
| 12. Reasoning or judgment (thought) ..... |                |            |            |            |            |
| 13. Self control.....                     |                |            |            |            |            |
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| 15. Greatest mental deficiency .....      |                |            |            |            |            |
| 16. Greatest physical deficiency .....    |                |            |            |            |            |
| 17. ....                                  |                |            |            |            |            |
| 18. ....                                  |                |            |            |            |            |
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Age \_\_\_\_\_

|                                           | 1st.<br>month  | 3rd.<br>month | 5th.<br>month | 7th.<br>month | 9th.<br>month |
|-------------------------------------------|----------------|---------------|---------------|---------------|---------------|
| 4. Subject of deepest interest .....      |                |               |               |               |               |
| 5. Health.....                            |                |               |               |               |               |
| 6. Sight.....                             |                |               |               |               |               |
| 7. Hearing.....                           |                |               |               |               |               |
| 8. Observation.....                       |                |               |               |               |               |
| 9. Attention.....                         |                |               |               |               |               |
| 10. (a) Logical or thought memory         | Acquires ..... |               |               |               |               |
|                                           | Retains. ....  |               |               |               |               |
|                                           | Recalls. ....  |               |               |               |               |
| 10. (b) Mechanical or word memory         | Acquires ..... |               |               |               |               |
|                                           | Retains. ....  |               |               |               |               |
|                                           | Recalls. ....  |               |               |               |               |
| 11. Imagination.....                      |                |               |               |               |               |
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| 15. Greatest mental deficiency .....      |                |               |               |               |               |
| 16. Greatest physical deficiency .....    |                |               |               |               |               |
| 17. ....                                  |                |               |               |               |               |
| 18. ....                                  |                |               |               |               |               |
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| Age _____                            | 1st. month                         | 3rd. month | 5th. month | 7th. month | 9th. month |
|--------------------------------------|------------------------------------|------------|------------|------------|------------|
| 4. Subject of deepest interest ..... |                                    |            |            |            |            |
| 5. Health.....                       |                                    |            |            |            |            |
| 6. Sight.....                        |                                    |            |            |            |            |
| 7. Hearing.....                      |                                    |            |            |            |            |
| 8. Observation.....                  |                                    |            |            |            |            |
| 9. Attention.....                    |                                    |            |            |            |            |
| 10. (a) Logical or thought memory    | { Acquires<br>Retains.<br>Recalls. |            |            |            |            |
| .....                                |                                    |            |            |            |            |
| .....                                |                                    |            |            |            |            |
| 10. (b) Mechanical or word memory    | { Acquires<br>Retains.<br>Recalls. |            |            |            |            |
| .....                                |                                    |            |            |            |            |
| .....                                |                                    |            |            |            |            |
| 11. Imagination.....                 |                                    |            |            |            |            |
| 12. Reasoning or judgment (thought)  |                                    |            |            |            |            |
| 13. Self control.....                |                                    |            |            |            |            |
| 14. Sense of right.....              |                                    |            |            |            |            |
| 15. Greatest mental deficiency       |                                    |            |            |            |            |
| 16. Greatest physical deficiency     |                                    |            |            |            |            |
| 17. ....                             |                                    |            |            |            |            |
| 18. ....                             |                                    |            |            |            |            |
| 19. ....                             |                                    |            |            |            |            |

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|-------------------------------------------|------------|----------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |            |                |            |            |            |
| 5. Health.....                            |            |                |            |            |            |
| 6. Sight.....                             |            |                |            |            |            |
| 7. Hearing.....                           |            |                |            |            |            |
| 8. Observation.....                       |            |                |            |            |            |
| 9. Attention.....                         |            |                |            |            |            |
| 10. (a) Logical or thought memory         | {          | Acquires ..... |            |            |            |
|                                           |            | Retains. ....  |            |            |            |
|                                           |            | Recalls . .... |            |            |            |
| 10. (b) Mechanical or word memory         | {          | Acquires ..... |            |            |            |
|                                           |            | Retains. ....  |            |            |            |
|                                           |            | Recalls . .... |            |            |            |
| 11. Imagination.....                      |            |                |            |            |            |
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| 17. ....                                  |            |                |            |            |            |
| 18. ....                                  |            |                |            |            |            |
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| 5. Health.....                           |                |            |            |            |            |
| 6. Sight.....                            |                |            |            |            |            |
| 7. Hearing.....                          |                |            |            |            |            |
| 8. Observation.....                      |                |            |            |            |            |
| 9. Attention.....                        |                |            |            |            |            |
| 10. (a) Logical or thought memory        | Acquires ..... |            |            |            |            |
|                                          | Retains.....   |            |            |            |            |
|                                          | Recalls .....  |            |            |            |            |
| 10. (b) Mechanical or word memory        | Acquires ..... |            |            |            |            |
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| 17. ....                                 |                |            |            |            |            |
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| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
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|                                           | Retains .....  |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
| 10. (b) Mechanical or word memory         | Acquires ..... |            |            |            |            |
|                                           | Retains .....  |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
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| 17. ....                                  |                |            |            |            |            |
| 18. ....                                  |                |            |            |            |            |
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| 5. Health.....                            |                |            |            |            |            |
| 6. Sight.....                             |                |            |            |            |            |
| 7. Hearing.....                           |                |            |            |            |            |
| 8. Observation.....                       |                |            |            |            |            |
| 9. Attention.....                         |                |            |            |            |            |
| 10. (a) Logical or thought memory         | Acquires ..... |            |            |            |            |
|                                           | Retains .....  |            |            |            |            |
|                                           | Recalls .....  |            |            |            |            |
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|                                           | Recalls .....  |            |            |            |            |
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| 17. ....                                  |                |            |            |            |            |
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|------------------------------------------|------------|----------------|------------|------------|------------|--|
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| 5. Health.....                           |            |                |            |            |            |  |
| 6. Sight.....                            |            |                |            |            |            |  |
| 7. Hearing.....                          |            |                |            |            |            |  |
| 8. Observation.....                      |            |                |            |            |            |  |
| 9. Attention.....                        |            |                |            |            |            |  |
| 10. (a) Logical or thought memory        | {          | Acquires ..... |            |            |            |  |
|                                          |            | Retains. ....  |            |            |            |  |
|                                          |            | Recalls. ....  |            |            |            |  |
| 10. (b) Mechanical or word memory        | {          | Acquires ..... |            |            |            |  |
|                                          |            | Retains. ....  |            |            |            |  |
|                                          |            | Recalls. ....  |            |            |            |  |
| 11. Imagination.....                     |            |                |            |            |            |  |
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| 13. Self control.....                    |            |                |            |            |            |  |
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| 15. Greatest mental deficiency.....      |            |                |            |            |            |  |
| 16. Greatest physical deficiency.....    |            |                |            |            |            |  |
| 17. ....                                 |            |                |            |            |            |  |
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|                                         |          |       |       |       |       |
|-----------------------------------------|----------|-------|-------|-------|-------|
| 4. Subject of deepest interest          | .....    | ..... | ..... | ..... | ..... |
| 5. Health.....                          | .....    | ..... | ..... | ..... | ..... |
| 6. Sight.....                           | .....    | ..... | ..... | ..... | ..... |
| 7. Hearing.....                         | .....    | ..... | ..... | ..... | ..... |
| 8. Observation.....                     | .....    | ..... | ..... | ..... | ..... |
| 9. Attention.....                       | .....    | ..... | ..... | ..... | ..... |
| 10. (a) Logical or<br>thought<br>memory | Acquires | ..... | ..... | ..... | ..... |
|                                         | Retains. | ..... | ..... | ..... | ..... |
|                                         | Recalls. | ..... | ..... | ..... | ..... |
| 10. (b) Mechanical<br>or word<br>memory | Acquires | ..... | ..... | ..... | ..... |
|                                         | Retains. | ..... | ..... | ..... | ..... |
|                                         | Recalls. | ..... | ..... | ..... | ..... |
| 11. Imagination.....                    | .....    | ..... | ..... | ..... | ..... |
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| 13. Self control.....                   | .....    | ..... | ..... | ..... | ..... |
| 14. Sense of right.....                 | .....    | ..... | ..... | ..... | ..... |
| 15. Greatest mental deficiency          | .....    | ..... | ..... | ..... | ..... |
| 16. Greatest physical deficiency        | .....    | ..... | ..... | ..... | ..... |
| 17. ....                                | .....    | ..... | ..... | ..... | ..... |
| 18. ....                                | .....    | ..... | ..... | ..... | ..... |
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|--|---------------|---------------|---------------|---------------|---------------|
|--|---------------|---------------|---------------|---------------|---------------|

|                                     |               |       |       |       |       |
|-------------------------------------|---------------|-------|-------|-------|-------|
| 4. Subject of deepest interest      | .....         | ..... | ..... | ..... | ..... |
| 5. Health.....                      | .....         | ..... | ..... | ..... | ..... |
| 6. Sight.....                       | .....         | ..... | ..... | ..... | ..... |
| 7. Hearing.....                     | .....         | ..... | ..... | ..... | ..... |
| 8. Observation.....                 | .....         | ..... | ..... | ..... | ..... |
| 9. Attention.....                   | .....         | ..... | ..... | ..... | ..... |
| 10. (a) Logical or thought memory   | Acquires..... | ..... | ..... | ..... | ..... |
|                                     | Retains.....  | ..... | ..... | ..... | ..... |
|                                     | Recalls.....  | ..... | ..... | ..... | ..... |
| 10. (b) Mechanical or word memory   | Acquires..... | ..... | ..... | ..... | ..... |
|                                     | Retains.....  | ..... | ..... | ..... | ..... |
|                                     | Recalls.....  | ..... | ..... | ..... | ..... |
| 11. Imagination.....                | .....         | ..... | ..... | ..... | ..... |
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| 13. Self control.....               | .....         | ..... | ..... | ..... | ..... |
| 14. Sense of right.....             | .....         | ..... | ..... | ..... | ..... |
| 15. Greatest mental deficiency      | .....         | ..... | ..... | ..... | ..... |
| 16. Greatest physical deficiency    | .....         | ..... | ..... | ..... | ..... |
| 17. ....                            | .....         | ..... | ..... | ..... | ..... |
| 18. ....                            | .....         | ..... | ..... | ..... | ..... |
| 19. ....                            | .....         | ..... | ..... | ..... | ..... |

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Read : The Benefits, How to Use the Record, the Importance, and Practical Directions.

Record of \_\_\_\_\_ Date \_\_\_\_\_

1. Nationality \_\_\_\_\_ 2. Temperament \_\_\_\_\_

3. Leading feelings through which to govern \_\_\_\_\_

Age \_\_\_\_\_ 1st. month 3rd. month 5th. month 7th. month 9th. month

| Age _____                                 | 1st. month       | 3rd. month | 5th. month | 7th. month | 9th. month |
|-------------------------------------------|------------------|------------|------------|------------|------------|
| 4. Subject of deepest interest .....      |                  |            |            |            |            |
| 5. Health.....                            |                  |            |            |            |            |
| 6. Sight.....                             |                  |            |            |            |            |
| 7. Hearing.....                           |                  |            |            |            |            |
| 8. Observation.....                       |                  |            |            |            |            |
| 9. Attention.....                         |                  |            |            |            |            |
| 10. (a) Logical or thought memory         | { Acquires ..... |            |            |            |            |
|                                           | { Retains. ....  |            |            |            |            |
|                                           | { Recalls . .... |            |            |            |            |
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Age \_\_\_\_\_

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## TEMPERAMENTS.

IMPORTANCE : Any one who has to do with the management of human beings would do well to remember that different temperaments require different treatment.—*Hewett*.<sup>1</sup>

Supt. Greenwood of Kansas City, says: "The teacher who first prepares himself by a thorough working knowledge of the temperamental conditions of childhood, is better equipped for discernment of character and the various modes of treatment applicable to it, than one ignorant of these truths. Temperament determines the prevailing bias of disposition, whether natural or acquired, and upon it depends the sum total of our inclinations and prevailing tendencies."<sup>26</sup>

Prof. Ladd of Yale, says: "The psychological peculiarities which distinguish the two sexes are scarcely less a matter of debate than are those which serve to difference the four temperaments: Strong reasons exist for admitting that there is much truth in the popular impression of a characteristic difference (temperament) in the way in which the memory and the imagination of men and women 'work' as we are wont to say.' Few impressions are more firmly fixed than this, that different individuals (at least among the more highly civilized peoples) are possessed of different natural 'dispositions.' The term 'natural' expresses the current conviction that the foundation of their differences is innate and inherited, rather than the result of training and environment. Experience shows that a so-called 'disposition' (temperament) generally maintains itself under greater alterations in circumstances, and against effort, to the close of the indi-



vidual's life. Where it appears to be greatly modified, such modification is usually made at the expense of greater energy than is required even to break firmly acquired habits. Upon such patent facts the theory of temperaments is based."<sup>2</sup>

PRACTICAL DIRECTIONS: 1. Never put two pupils of the same temperament together. 2. Ask more questions of the lymphatic than of the nervous. Do not call attention to the errors of the nervous child publicly, but suggest quietly when with him only. Firm emphasis may be used when speaking to the lymphatic, but speak quietly and softly to the nervous. 3. To the nervous child it does no good to say "Be still." "Don't twist and jump around so much." A motion of the hand or a soft word will do more. 4. Remember that to the sanguine, scolding is poison. 5. "If the bilious temperament is mixed with a little lymphatic and a little nervous, there will often be difficulty of a serious nature. Outbursts of passion will not pass pleasantly away, but there will be sulkiness, moroseness, backbiting, and a disposition to stir up mischief. The best way to treat such a case as this is, (1) ask the doing of a favor; (2) show confidence by assigning some special work; (3) talk alone, and in a natural but decided tone of voice awaken conscience; (4) be unyielding in action, but use great care how you threaten or promise, or seem anxious to obtain personal favor; (5) If you have been wrong, say so in a manly manner, but not in a craven spirit; (6) keep the reins as in driving a horse, in your own hands."\*

Read:

\*Allen's Mind Studies, Allen's Temperament in Education, and Mantegazza's Physiognomy and Expression.

## HEALTH.

By this we mean the condition of body and mind.

"The body is a garden in which God plants a human soul."

"The soul of a human being is not pure spirit but embodied mind."

The fullest activity of the mind requires a healthy body.

Professor Krohn in that most excellent book for teachers, "Practical Lessons in Psychology," says: "Only when the laws of growth are accurately known, is it possible to decide with certainty how much the growth of an individual exceeds or falls below the normal average; and without this knowledge, the regulation of mental labor, from a physical standpoint, is a venturesome groping in the mist rather than a scientific deduction. Fatigue, we know, arises from over-exertion, either mental or physical. It varies with the condition of the mind and body. Thus the child tires sooner when the work is distasteful, or when the organs are unhealthy, or when the body is poorly nourished; and the body is also wearied quicker when the mind is tired, and the mind quickly when the body is tired. The child tires more readily at some seasons than at others. The condition of the atmosphere, the weather, the time of day, all these affect the normal power of endurance. Also rapid growth diminishes one's power of endurance. The child that has grown up quickly tires easily. The great curse of this age is the demand for rapid education. Health is sacrificed for promotion, and the joyous, buoyant child is burdened with unnatural demands until such a thing as natural spontaneity is unknown."

Read:

Newsholme's School Hygiene, Horn's Practical Health Notes,  
Young's School Hygiene. Blaisdell's Our Bodies.

## SIGHT.

IMPORTANCE : Sight is, without doubt, the most valuable of the senses except the general sense of touch. Yet partial or complete blindness is not rare. One boy in twenty is color blind, and that defect, which is never found out by the individual himself, may be determined by the teacher in one minute. Color blindness unfits one for occupations as far apart as railway signal man, painter, dressmaker, and artist. Shortsightedness is prevalent to an alarming degree. In New York, from 3.5 per cent among children to 26.8 per cent among adults. In Philadelphia the general average is 13.7 per cent. In Chicago from 4 to 27 per cent. In our colleges 35 per cent in the Freshman to 47 per cent in the Senior year, are shortsighted.

PRACTICAL DIRECTIONS : Defective vision is caused by (1) Prolonged exertion of the eyes, especially in seeing near objects ; (2) inadequate amount of light ; (3) badly printed books ; (4) needlework ; (5) general ill health. To cure any disease or defect first remove the cause.

To aid the pupils in taking care of their eyes (1) be sure that they have sufficient light, about 30 square inches of glass for each square foot of floor ; (2) be sure that the direct rays of light do not enter the eye ; (3) avoid the angle of reflection ; (4) do not allow a stooping or a forward inclination of the head ; (5) do not allow pupils to read with the book in their laps ; (6) have the pupils hold the book from 13 to 18 inches from the eye ; (7) have pupils sit, especially when writing, so that the light falls over the shoulder ; (8) avoid poorly printed books. Pica is small enough type for a child ; (9) have the

eyes cleansed with pure soft water morning and evening. The use of the eye is actually beneficial to it, provided it be in a normal condition. Every faculty man possesses can be strengthened by judicious cultivation.

But it is not the hygienic side alone of which we wish to speak. A great field is open to the teacher for the uplifting of humanity, in leading pupils to see the beauties of the colors of nature and art. What is more common than an individual who is totally blind, *i. e.*, without power to see the beauty and harmony of the colors about him? Why is it that one woman or man sees the garment in which she or he will appear best, while another never sees a garment becoming to them? Of course it is the difference in the training of their faculties of observation and imagination, but what is that but training the eye to see things as they are? Is it not of practical importance that the eye shall be taught to measure distance? "Every free-hand artist, decorator, sign painter, tinsmith, and bricklayer," says Dr. Scripture, "depends for success on his accuracy of eye. A surgeon with a large average error will be liable to cut an artery that ought not to be touched, a seamstress will make uneven stitches. More than half the value of manual training lies in the education of the eye in this respect."

Read :

Newsholme's School Hygiene, Child Study Monthly, June 1895, and Cohn's Hygiene of the Eye, and Thinking, Feeling, Doing.

## HEARING.

DEFINITIONS : Through the sense of hearing we gain percepts of sound, of pitch, loudness, and musical tone. We can also, through the ear, judge of distance and direction.—*Roark*.<sup>14</sup> The sense of hearing perceives sounds as that of sight perceives colors and modifications of light and shade. As the mind infers solid shapes from light and shade, so does it infer from the various sounds we hear, their external origin, and the causes that produce them.—*Welch*.<sup>11</sup> Thus we see that hearing means not only power to perceive sound, but power to *distinguish* and tell the direction of sounds.

IMPORTANCE : It has been said that hearing is the most internal sense. No other sense affects the emotions so quickly or so deeply as hearing. This is seen in the effects of music and of tones of the voice.—*Hewett*.<sup>1</sup> The utility of the sense of hearing is evident. Sound not only reveals external objects, but, in certain cases, warns us of danger, and as employed in language is expressive of thought, feeling, or volition. To this sense we are largely indebted for the pleasure of social intercourse, and for enjoyment derived from the arts of music and oratory.—*Schuyler*.<sup>17</sup> Many people can not hear the sound of a cricket. Others cannot hear the squeak of a mouse, and they believe that we who do hear it just imagine it. An American journalist, Mr. Cowles, did not know till he was twenty-five, that he had defective hearing. He had never heard a bird sing. He said, "Up to this time I have treated all that I have read about the songs of birds as mere poetical fiction." He could not hear a high pitch but a low pitch was as easily dis-

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Small figures refer to list of books on page 2.

tinguished by him as by any of us. Though they do not know it, and many think it humiliating to own it, yet old people cannot hear high tones. When the tone is high they simply hear nothing and think that no sound is being made.

PRACTICAL DIRECTIONS : Children should be taught music, if for no other purpose, to train the ear. They should have lessons on the ring of different metals, just to train the hearing.

CARE OF THE EAR.—*From Blaisdell's "Our Bodies."*—"The ear is a very delicate organ. It is often carelessly and ignorantly tampered with, when it should be left alone. It is often neglected when skilled treatment is urgently needed.

"The ear canal should never be rudely or hastily washed out, either with a syringe or a wash-rag. The utmost gentleness in washing out the ear is all that is necessary for cleanliness. Children's ears should never be pulled or boxed. Even a slight blow has resulted in serious trouble.

"Never use ear-picks, ear-spoons, the ends of pencils, or penholders, pins, hair-pins, tooth-picks, towel-corners, etc., to pick, scratch or swab out the ear canal. It is a foolish, needless, and dangerous practice. There is always risk that the elbow may be jogged in many ways, and the pointed instrument pushed through the drumhead.

"Let the ear wax take care of itself. The skin of the ear grows outward, and the extra wax and dust will be naturally carried out if let alone. Never drop sweet-oil, glycerine, and other fluids into the ear, with the idea that the ear is cleaner for them. They do no good and often irritate the ear. Never advise or allow any of the many nonsensical things so commonly used, to be put into the ears to cure deafness. Cotton wads may be gently put into the ears to shield them from the

cold, or may be worn in swimming or diving, to keep the water out. Diving into deep water, or bathing in the breakers, often injures the ears.

"One should never shout in a person's ear. The ear is not prepared for the shock, and deafness has occasionally resulted. If the eustachian tube is closed for the time, a sudden explosion, noise of a gun or cannon may burst the drumhead. Soldiers during heavy cannonading open the mouth to allow of an equal tension of air.

"Flies, bugs, ants, and the like, sometimes crawl into the ear. This may cause some pain and fright, and perhaps lead to vomiting, and even convulsions with children. A lighted lamp put at the entrance of the ear will often coax insects to crawl out towards the light. The ear may be syringed out with a little warm water. Drop in a few drops of molasses or warm sweet-oil.

"When the ears run for any cause, it is not best to plug them with cotton wads. It only keeps in what should come out. Very cold water should never be used in the ears or nostrils if it can be helped. Use only tepid water. Do not go to sleep with the head on the window-sill, or in any position that may expose the ears to a draught of cold or damp air."<sup>125</sup>

[Since the above was written Dr. Percy's excellent article in *Child Study Monthly* for October, 1895, has appeared. In which he says, keep the mouth, throat, and nose in children in a state nearly normal, and acquired deafness will be known only from the memory of history. The transformation that can be made in the physical and mental life of childhood by care and attention along these lines cannot be expressed in words.]

## OBSERVATION.

DEFINITIONS : By observation we mean the degree to which we possess power to see all that there is about us. Observation may be defined as a mental process induced by the continued action of objects or units of attributes upon consciousness.—*Parker*.<sup>12</sup> Observation is a series of connected acts of attention. It consists in repeated and systematic efforts of attention directed to the discovery of some property or law of material objects.—*Welch*.<sup>11</sup> The habit of observation is the habit of clear and decisive gazing; not by a first casual glance, but by a steady, deliberate aim of the eye, are the rare and characteristic things discovered.—*Burroughs*. By observation we carefully note phenomena. I observe that two bodies fall to the ground with different velocities. I observe that a coin is heavier than a feather.—*D. F. Hill*.<sup>13</sup>

IMPORTANCE : The study of objects is the foundation of intellectual development.—*Rooper*. Particular importance should be attached to accurate observation, inasmuch as this is the indispensable foundation of all real education.—*Smyth*.

Suppose it were perfectly certain that the life and fortune of every one of us would, one day or other, depend upon his winning or losing a game of chess. Don't you think that we should all consider it to be a primary duty to learn at least the names and moves of the pieces? Do you not think that we should look with a disapprobation amounting to scorn, upon the father who allowed his son, or the state which allowed its

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Small figures refer to list of books on page 2.



members, to grow up without knowing a pawn from a knight? Yet it is a very plain and elementary truth that the life, the fortune, and the happiness of every one of us depend upon our knowing something of the rules of a game infinitely more difficult and complicated than chess. It is a game which has been played for untold ages, every man or woman being one of the two players in a game of his or her own. The chess-board is the world, the pieces are the phenomena of the universe, the rules of the game are what we call the laws of nature. To the man who plays well, the highest stakes are paid.—*Huxley.*

PRACTICAL DIRECTIONS: To strengthen the powers of observation, we must induce children to think about what they see. The value of work along this line depends upon the extent to which all of the observing faculties are called into activity. The child should not be told about the object, he must see touch, taste, hear, smell, etc., for himself. The intelligent teacher proceeds somewhat in this manner with her observation lessons: She never uses pictures when the real object may be brought before the pupil, she teaches the idea, then the names of the simpler attributes, hardness, softness, color, taste, size, shape, etc., proceeding gradually to the more complex. In his language lesson she has him tell what he has seen, make lists of the objects possessing the attribute that was the subject of the last lesson, and, if he can find any thing new, tell that also. She takes keen delight in his bringing things having these attributes, and showing them to her. As she looks at it she tries to lead him to see something more, connected with it. If he neglects to mention all the properties before learned, she asks him if he does not know something else about it. Perhaps she laughs at him because he forgot, at least she lets

him study a few minutes and then suggests just enough to put him on track of the idea. The next time his pride is at stake and he studies it more closely; he thinks over all that he has seen and heard about it. Then it comes to his mind, then the glee at his success; how anxious he is for more victories! away he goes in quest of new fields to conquer. As his powers increase she guides him to see deeper, from color to luster or polish, from the simple to the compound and the complex, thus bringing his faculties to act more and more vigorously; and in so doing, what is she doing but following that process which was going on from birth; carrying on that process by which the child learned more in six years before he entered school, than the average child learns during his school years.

Read :

Light's Outline of Mental Faculties, Parker's Talks on Pedagogics, Arnold's Waymarks for Teachers, Jackman's Nature Study, Ricks' Object Lessons, Wood's How to Study Plants, and Cromwell's How to Teach Reading.

## ATTENTION.

DEFINITIONS: Attention is the power the mind has to bring all its force to bear on one thing.—*Hewett*.<sup>1</sup> Attention is the concentration of mind upon a particular object or thought. *Patrick*.<sup>6</sup> Attention is the voluntary effort which any intellectual faculty puts forth to gain a knowledge of its appropriate object.—*Welch*.<sup>11</sup> By attention we mean purposeful volition, suffused with peculiar feelings of effort, or strain, and accompanied by a changed condition of the field of discriminative conscience, as respects intensity, content and clearness.—*Ladd*.<sup>2</sup> Attention is self-activity. It is will acting on the intellect. Attention selects one special field and refuses to be diverted from it. It neglects all else, and returns again and again to the object of special attention. Attention isolates one object from others, and concentrates effort upon it to the exclusion of all other objects. Isaac Newton ascribed his superiority to other men in intellectual power, simply to his greater power of attention.—*Dr. W. T. Harris*.

IMPORTANCE: The most significant word in a teacher's vocabulary is "Attention."—*Patrick*.<sup>6</sup> In order that a teacher may be of any service to his pupils, he must have the power to secure their attention.—*Hewett*.<sup>1</sup> All intellectual guidance of the young manifestly implies the power of holding their attention.—*Sully*.<sup>8</sup> The chief difference between the man of great reasoning powers and the ordinary man is that the former notices resemblances that escape the attention of the latter.—*Gordy*.<sup>7</sup> If children are really to be the better for what

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Small figures refer to list of books on p. 2.

we teach, if the truths we love so well are really to go deep into their conscience, and become the guiding principle of their lives, it is no half-hearted, languid attention which will serve our purpose.—*Fitch*.<sup>10</sup> You readily see that the great difference between the educated and the uneducated man is found in the fact that the former has greater capacity for close, steady, sustained, concentrated attention.—*Krohn*.<sup>9</sup> Attention is an important faculty in morality. Get the mind away from the wrong act to the result, and if you can hold it on the result to the exclusion of the act, you have conquered. But consent to an immoral idea's undivided presence, and you will commit the deed. If the drunkard can keep before his mind, "One drink more and I am a drunkard," he will not drink; but he keeps any other idea, rather than that—"Only this one and I will quit," or "This is a holiday." A few such thoughts and he is lost.

PRACTICAL DIRECTIONS: "You will not get attention by demanding it, by claiming a right to it, by asking it as a favor, by telling the child the importance of the subject, or by speaking to him about its being his duty. To get his attention he must be interested. In the words of Comenius, a teacher may hold attention (1) by bringing before his pupils something pleasing and profitable; (2) by introducing the subject in such a way as to commend it to them, or by stirring their intelligences into activity by inciting questions regarding it; (3) by standing in a place elevated above the class, and requiring all eyes to be fixed on him; (4) by aiding attention through the representations of everything to the senses, as far as possible, with drawings, maps, charts, etc.; (5) by interrupting his instruction by frequent and pertinent questions—for example, "What

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Small figures refer to list of books on page 2

have I just said?" (6) by asking a question before calling the name of the one who is to answer, and if that one misses, skip to the second, fourth, tenth, or some irregular distance from the first one called, and ask for an answer without repeating the question ; (7) by giving any one an opportunity to ask questions at the close of the lesson. When listening to a speaker, Professor James has found that it helps us to give attention to repeat the speaker's words as he says them.

Professor Hewett has given us seven excellent rules for gaining attention. They are (1) Look the pupils squarely in the eye. (2) Say nothing until you have the attention of your class ; stop, if you lose it. (3) Talk slowly and clearly. (4) Say a thing but once. (5) Hold the pupils strictly responsible for what you have said. (6) Do not put questions to your class in a fixed order ; propound the question then name a pupil to answer it. Do this habitually, (7) When the class need such discipline, stop the one who is reading or reciting, in the middle of a sentence, and require another to begin exactly where he left off.

Read:

Hughes' Securing and Retaining Attention, Krohn's Practical Lessons in Psychology, Chapter XVIII, Parker's Talks on Pedagogics, Chapter VI, James' Psychology (Brief Course), Chapter XIII, and Gordy's Psychology, Chapter VIII.

## MEMORY.

DEFINITIONS : The power which the mind has to reproduce its own former states is called memory.—*Roark*.<sup>14</sup> Memory is that representative power which brings before the mind concepts of absent objects as they are or were, and recognizes them.—*Hewett*.<sup>1</sup> Memory is the knowledge of a former mental state after it has already dropped out of consciousness.—*Krohn*.<sup>9</sup> Memory may be defined as the power of the soul to represent and know objects previously known or experienced.—*White*.<sup>15</sup> Memory is the knowledge of an event, or fact, of which meantime we have not been thinking, with the additional consciousness that we have thought or experienced it before.—*James*.<sup>16</sup> Memory as a faculty is both the capacity to retain and the power to recall, represent, and recognize our previous conditions.—*Schuyler*.<sup>17</sup>

IMPORTANCE : To be educated means, for one thing, to have the capacity to summon all one's knowledge of any fact, and to summon it quickly.

Soundness of judgment without a fair developed memory is impossible. To have a fine logical memory and a poor mind is an impossibility.—*Gordy*.<sup>7</sup> A moment's reflection will convince us that no power of mind is of more value than memory.—*Hewett*.<sup>1</sup> The value of a retentive memory is incalculable. It is simply absurd to claim that the power to recall weakens the power to create. Many of the greatest intellects have been men of extraordinary memories.—*Patrick*.<sup>6</sup> The value of memory in relation to the understanding of facts and the practical application of knowledge should never be lost sight of.—*Sully*.<sup>8</sup>

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Small figures refer to list of books on page 2.

PRACTICAL DIRECTIONS : There is no royal road to a good memory. All the new "schemes" have failed, so we must go back and cultivate the memory just as wise men did of old. This always has and always will be true,—good observation, good attention ; good attention, good memory. A healthy mind in a healthy body ; a vivid first impression ; clear, accurate reviews ; clear, logical associations,—if these conditions exist you simply can't forget.

To train the memory, the value of reviews and associations cannot be over-estimated. Other things equal, of two persons, the one who thinks over his ideas most, and weaves them into systematic relations with one another, will be the man with the best memory. The greater the number of other ideas an idea is connected with in the mind, the better it will be remembered. If we wish a child to remember an idea, we should present it to him through as many avenues as possible—sight, hearing, touch, etc. Let him read about it, see a picture of it, hear some one tell about it, and if possible feel of it. A child remembers what he does many times better than what he sees, hears, or reads. It has now been fairly well established that in teaching another language, more than three times as rapid progress can be made by learning from pictures as from merely placing the words of one's own language and the words of the foreign language side by side. How much quicker will a child learn the word *vest* (or any other word) if the word and picture are placed side by side?

Read :

Gordy's Psychology, chapter XX.; Krohn's Practical Lessons in Psychology, chapter XX. ; Roark's Psychology in Education, chapter VII., and Scripture's Thinking, Feeling, Doing, chapter XVIII.

## IMAGINATION.

DEFINITIONS: Memory reproduces imagination, modifies, combines, creates.—*Roark*.<sup>14</sup> Imagination is the power to modify and recombine the products of memory.—*White*.<sup>15</sup> Imagination is the power of self purposely to put his experiences into new forms.—*Baldwin*.<sup>18</sup> Imagination is the representation of an ideal object.—*Patrick*.<sup>6</sup> The power of the mind to form ideas of things not present is called imagination.—*Gordy*.<sup>7</sup> When the mental pictures are of data freely combined, and reproduce no past combination exactly, we have acts of the imagination properly so called.—*James*.<sup>16</sup> Imagination is the power to recombine and construct anew materials furnished by experience.—*Porter*. Imagination is the power to work our experiences into new forms.—*Sully*.<sup>8</sup>

IMPORTANCE: Every extension of our knowledge beyond the domain of personal experience and observation, involves some degree of imaginative activity. Have you ever seriously thought of the actual fact that what is known as understanding a teacher's description depends upon the success of the pupil's imaginative effort?—*Krohn*.<sup>9</sup> If it were not for imagination, improvements in the arts and sciences, and therefore in the general condition of peoples, would be due wholly to accident.—*Roark*.<sup>14</sup> Culture of imagination immeasurably increases human achievement and human happiness.—*Baldwin*.<sup>18</sup> A man of philosophic intellect must have a vigorous imagination. . . . By imagination we are enabled, as it were, to place ourselves in the situation of others, and to sympathize with them in their distress, or to participate in their sorrow,—*Tate*. The imagination is a most powerful auxiliary in the development of the mind and will.—*Adler*.



PRACTICAL DIRECTIONS: Imagination has been divided into various phases and kinds. We will consider the constructive or creative phase, or that phase which takes the parts of a number of objects, puts them together, and makes a new object from them. For example, a hat trimmer sees the pretty parts of a number of different hats. She puts all these parts together, sees in her imagination how they will look, knows from her ideal hat if the parts harmonize, and if it will pay to cut up goods to make a real hat like her imagined one. This same illustration may be used for the carpenter, the artist, the cabinet maker, the tinner, the designer, or the artisan of any kind. Is imagination of any practical value?

Among others, there are four quite distinct kinds or types of imagination—(1) Visual or sight, (2) tactile or touch, (3) auditory or hearing, and (4) motor or movement. If a child sees how a word would look if the letters were changed he has visual imagination. If he can imagine how the paper would feel if harder, softer, or damper, he has tactile imagination. If he can imagine how the word would sound with the syllables changed, he has auditory imagination. If he can imagine how it would feel to write the word, he may be said to have motor imagination.

To the painter, the dressmaker, or the ordinary artisan, visual imagination is of great value; and to the musician, auditory imagination is indispensable.

In training the imagination, it should be born in mind that observation and memory supply the material upon which it must build its ideals. Observation and memory are built of material furnished by surroundings, associates, and reading. If these are good the ideals will be good; but if these are low and impure, his ideals must be low and impure.

Reading forms the principal means by which the teacher can cultivate the imagination, and teachers are beginning to realize that it is of as much importance to teach what to read as to teach how to read. We find nine out of ten of our pupils follow the course of reading that we suggest to them.

The value of Fairy Tales should not be underestimated. As Max Adler says, "As they follow the progress of the story, the young listeners are constantly called upon to place themselves in situations in which they have never been, to imagine trials, dangers; difficulties, such as they have never experienced, to reproduce in themselves, for instance, such feelings as that of being alone in the wide world, of being separated from father's and mother's love, of being hungry and without bread, exposed to enemies, without protection, etc." But above Fairy Tales stand History and Biography. "They bring under our notice characters which transcend in grandeur the greatest of the works of nature—its mountains and its vales, its streams, its cataracts, and its precipices. Those who would train the mind to its highest capacity must furnish to the young the records of deeds of heroism, of benevolence, of self-sacrifice, of courage to resist the evil and maintain the good." In History and Biography, we may live with kings, queens, philosophers, and the good, and wise of all ages.

In short, to train the imagination, so that it will be a great, resistless power for good we must have (1) pure, wholesome surroundings, (2) true, good, intelligent companions, (3) reading matter from the best, purest, life-giving authors, (4) clear, accurate perception and observation, (5) strong, accurate memory, (6) encouragement to form ideals of the beautiful, the good, and the true, (7) stimulating, if sluggish, but restraining, if over active.

#### Read

Chapters VI. and VII. of Adler's "Moral Training of Children."

Chapter XXI. of Krohn's "Practical Lessons in Psychology."

Pages 106-108 Welch's "How to Study."

Chapter XVI. Roark's "Psychology in Education."

## REASONING.

DEFINITIONS : Judgment is the power to discern agreement or disagreement of ideas.—*Baldwin*.<sup>18</sup> Reasoning is the power to unite two judgments in a new judgment.—*Wundt*. A judgment is a decision that a certain relation exists between two objects of thought.—*Schuyler*.<sup>17</sup> Reasoning is the power to discern agreement or disagreement of judgments.—*Porter*. Judgment is the ability to predicate one idea of another.—*Sully*.<sup>8</sup> To judge, if the word be correctly understood in the general sense which is given it in pedagogy, is to separate the true from the false in all things. It is to possess that accuracy of mind which regulates the opinions and governs the actions of good and enlightened men.—*Compayre*.<sup>21</sup> Reason is the power to derive conclusions from premises.—*Sully*.<sup>8</sup> Reasoning is the elimination of the middle term in a syllogism.—*Boole*. In reasoning although our results may be thought of as concrete things they are not suggested by other concrete things, as in trains of simply associated thought. They are linked to concrete which precedes them by intermediate steps, and these steps are formed by abstract general characters articulately denoted and expressly analyzed out.—*James*.<sup>16</sup>

IMPORTANCE : Judgment is the essential act of the intelligence, and the culture of the judgment is the crowning point of intellectual education.—*Compayre*.<sup>21</sup> Since the operations of judgment and reasoning are the highest forms of thinking, it is the purpose of a systematic education to give these faculties their highest culture.—*Welch*.<sup>11</sup> Since our business, our poli-

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Small figures refer to list of books on page 2.

tics, our religion, our daily conduct in all lines of activity in which we may be engaged, are based on our conclusions, it is evident that the habit of reasoning rapidly and accurately should be formed early and thoroughly.—*Roark*.<sup>14</sup> A very good working definition of education is the development of the attitude of the soul towards truth. That attitude can be cultivated only by the self activity of the mind with unprejudiced judgment, intent on the direct discovery of truth.—*Parker*.<sup>15</sup>

PRACTICAL DIRECTIONS: We use the word reason in its popular sense, that is to mean judgment, thought, or "common sense." We have not the space to say anything about implicit and explicit reasoning. Professor Krohn, in "Practical Lessons in Psychology," has told it in finer style than we could if we tried ever so long. But inductive and deductive reasoning should be distinguished. To put it in as few words as possible, inductive reasoning is that kind used when, after finding that some fact is common (that is belongs) to a sufficient number of individual objects, we conclude that it belongs to every one of that entire class of objects. Deductive reasoning is that kind used when we take it for granted that a quality or attribute belongs to the class, and hence conclude that it belongs to one of the class. Inductive reasoning is that kind used in the natural sciences, while deductive is that kind used in geometry.

Quick, accurate reasoning depends upon, (1) close, accurate observation, (2) accumulation of a sufficient number of facts, (3) the power to see quickly and accurately just where and how these facts have a bearing on the subject. Thus we see that the power to reason well is a natural and sure growth from observation, memory, and imagination, provided these be well trained.

It is commonly thought that arithmetic is the all important study to train the reasoning faculties, but, as now generally taught, it does little or nothing in this direction. Professor Krohn thinks Physical Geography is the best study to train the reasoning powers, and it certainly is a good one. That idea does not contradict Professor Ricks who says: "Properly presented no lessons are so interesting and attractive to children as those which deal with living plants and animals; and none are more effective in the cultivation of habits of exact observation, accurate comparison, and sound reasoning."

Let a child form the habit of justifying whatever he says. Even allow him to expose himself to error, that he may be shown wherein he has failed in observing, collecting a sufficient number of facts, or judging. This will be one of his most valuable lessons. His loose, careless statements should be re-proved, not only as poor English, but as laying the foundation for poor reasoning and even lying. Training to reason means more than answering questions, the child must be questioned as to the reason or cause for things. Such questions if properly asked set children to thinking, raise new problems in their minds, and may lead them to see that everything has its cause, and so stimulate their minds to the highest action of which they are capable.

Enough has now been said to show that while we have treated the mental faculties separately, yet they are so inter-linked that to cultivate one is to cultivate all. The mental faculties are not only dependent upon each other, but they are so dependent upon health, hearing, and sight that for any of these to be in a perfect condition, the others must be in a sound healthy state.

## SELF CONTROL.

Self control (in psychology, called "voluntary motor ability"), is the power to make the body act just as the mind wills it shall act. It is the power to control one's actions, to energize one's powers, and to put down one's evil desires and tendencies. It is, "Thought entering the hands and feet and controlling the movements of the body."

Accuracy is honesty's twin brother. "If a man can write a better book, preach a better sermon, or make a better mousetrap than his neighbor," says Emerson, "though he build his house in the woods, the world will make a beaten path to his door. Give a boy address and accomplishments, and you give him the mastery of palaces and fortunes."

There is no calling that does not require the muscles to obey the mind. One girl breaks four times as many dishes as another. Why? Because her hands did not hold on, or did not set it where she should have ordered it set. One person makes a botch of everything. He knows how, but can't do it, because his muscles just won't do what he should be able to tell them to do. To the stenographer, the typesetter, the violin and the piano player, the penman, and the dressmaker, accuracy and rapidity are absolutely necessary to proficiency. How much would an inaccurate blacksmith, mechanic, carpenter, draughtsman, or chemist get to do? "Each act is the stone and mortar of your character, and the energy expended shapes the edifice. Right expenditure of energy will give beauty of action. Every voluntary movement of the body is an index of the thought that gives it birth."\*

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\*Welch's How to Study.

Educators owe a debt of gratitude to Dr. Scripture of Yale, for many experiments of great value to education. The following is one of them. It is quoted from his article on "The Education of Muscular Control and Power"\*:

## MUSCULAR CONTROL.

"In undertaking the experiments on muscular control, two questions were proposed: 1. Can steadiness of movement be increased by practice? 2. If so, is such increase confined to the muscles immediately trained, or, as in the case of discriminating sensitiveness of the skin, are the corresponding muscles in the opposite half of the body affected?"

The first, test of steadiness, consisted of putting a needle into a hole 0.1285 in. in diameter. "The vertical metal plate containing the hole was placed directly in front of the observer; the right fore-arm was rested on the edge of the table, the stick was grasped like a pencil and by a steady movement of the hand and wrist the [stick's] metal point was inserted in the hole. Any contact of the point against the side of the hole was counted as an error.

"The first set consisted of 20 experiments with the left hand; the result was 50 per cent. of successful trials. Immediately thereafter 20 experiments were made with the right hand, with a result of 60 per cent. of successful trials. On the following day and on each successive day two hundred experiments [same person] were taken with the right hand, the same conditions in regard to time, bodily condition and position in making the experiments being maintained as far as possible. The percentage of successful trials ran as follows: 61, 64, 65, 75, 74, 75, 82, 79, 78, 88.

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\*Studies from Yale Psychological Laboratory, vol. ii.

“On the 10th day the left hand was tested with 20 experiments as before, with 76 per cent. of successful trials, thus showing an increase of 26 per cent. without practice in the time during which the right hand gained, as shown by the figures above, 28 per cent.

“That the increase of steadiness was not due to mere training of the muscles is shown by the increase of steadiness in the unpracticed left hand. That it was due to a training of attention seems to be indicated by the following facts: 1. After a week's practice it was possible by special effort of attention to insert the needle into the hole successfully [without touching the sides] for any given ten times. 2. Any distraction of attention due to noises or other disturbances invariably lowered the per cent. of steadiness. 3. Either bodily or mental fatigue lowered the result.

“As to the effect of different directions of attention: concentration upon the muscular movement to be performed was unfavorable, fixation of attention upon the objective point to be reached by the needle was productive of the best results. Fatigue of the muscles of the eye was a more noticeable result than fatigue of the muscles directly practiced. To obviate this it was necessary to close the eyes for a few seconds between each series of ten experiments.

“From the results of these two thousand experiments the following conclusions seem justified:

“1. Steadiness of movement can be increased by practice.

“2. This increase of steadiness is not limited to the control of the muscles immediately trained, but affects the control of the corresponding muscles on the opposite side of the body.



“3. This training seems to be a psychical [mental] rather than a physical [muscular] order, and to lie principally in steadiness of *attention*.”

## MUSCULAR POWER.

In this experiment an apparatus for measuring and registering automatically, muscular power, was used.\* On March 7th, the left hand averaged 29.6 units, and the right hand 28.8 units. The left hand was tried no more until the 20th day of March, but the right hand was exercised on the apparatus each day with the following results: 28.8, 33.7, 35.6, 36.6, 40.9, 44.7, 47.0, 48.8, 48.6, and the left hand on the 20th, 42.3. That is, while the right hand by being used every day gained 19.8 units in strength, the left hand without being used at all gained 12.7.

These experiments seem to justify conclusions similar to those for “Muscular Control,” quoted above, especially 1 and 2.

“Gracefulness in voluntary action is the proper adjustment of rapidity and extent of movement; it is almost entirely a psychological [mental] affair. Gracefulness is the condition *sine qua non* [indispensable] for the artist, the decorator, the orator, the actor, the dancer, and every society man and woman. By education we usually mean the word cram and mind-deformation that characterize many of our public schools, whereas we ought to include every lesson, exercise, game, play, sport, or occupation that develops and improves our mental and bodily powers. There is as much education in *playing* (not watching) a game of football as in constructing a book of Virgil. Who will say that training in rhythmic action and gracefulness shall not have place in school beside percentage and syntax? The close connection that has arisen between the psychological laboratory and the gymnasium is an event whose importance

\* For full description, see studies from Yale Psychological Laboratory.

cannot be fully forseen. The education of *men*, instead of book-worms and mummies, will perhaps find, as it found in Greece, one of its chief exponents in the *mental* and physical training of the gymnasium."\*

We think the primary object of education is to so train the head that it will guide the hand to make those movements and only those, which will be the most beneficial. Teach a child self control and you teach him something that will last, something that will count for good in future life, something that will help him to become a thoughtful, helpful, law abiding citizen. Discipline should be individual, each controlling himself, and every school exercise should be, in part, a means to this end. Unless we control ourselves others will control us. Every act should be a definite act. The whole life should be under direct control of the will. The time to sleep, the time to get up, the time to begin, the time to quit, our efforts, our appetites, our passions, our desires, all should be controlled by the will.

Self control gives beauty to the body and its movements. And we must contend that beauty is wealth to the owner. Intellect is not the only ornament of man. Did God make man after his own image to see that image neglected, or marred and marked by our greed for gold or social position? It is a great mistake to ignore personal beauty. Others have not done so. The Greeks deified and then worshipped it. It has conquered rulers of great nations. It has been painted on canvass and cut in stone. If properly used, it makes one a happier individual, a dearer companion, of more use to humanity, and nearer like the image of his Maker.

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\*Dr. Scripture.

## SENSE OF RIGHT.

We use this term to mean the condition of the child's moral nature. Some one has said, "Man has three skylights through which he is looking heavenward—the physical, the intellectual, and the moral." We have now come to consider the last of these. Here the home plays a part that cannot be overestimated. The few hours that the child spends in the school may do much, but they cannot entirely counteract home influence. The good home is an ally, the bad home an enemy to the school's work in moral training.

That moral education is the most important of all education is readily admitted, yet in trying to avoid sectarian instruction, we have come or nearly come to where we have no moral instruction. It cannot be we forget that by attending to the moral education of the children and youth who gather in our public schools for instruction, it is possible for the teachers to do the state and the future a service surpassing everything ever gained by legislation or war. The great lesson of history, the downfall of all the great states, began in the decay of moral character and the destruction of the domestic ties. But this is a practical age. "If a thing is not practical it is not worth striving after." Is moral education practical? Moral education increases man's productive ability in two ways; it enables him to do better work, and it gives him a longer time in which to work.

We here much of what arithmetic will do for the reasoning faculties, geogaphy for imagination, etc. Let us have the opinion of no less an authority than Pres. Stanley Hall, the father of American Child Study :

"In learning to *read*, there are a limited number of combinations of the twenty-six letters. In learning to read the dye would tint a very small area of the brain, a limited number of cells and fibres. It would not be a serious loss, so far as the awakening of brain areas is concerned, if a child never learned to read. Charlemagne could not read, and he had quite an influence upon the world's history and was a fairly brainy man. Learning the deaf mute finger language would color about as large an area as learning to read. So would learning to play the piano.

"*Writing* is not of great educational value. Its tinting of the brain area would be slight. The learning of shorthand would awaken about five times as much of this area, and be proportionately effective in brain development. Typewriting and telegraphy are also more useful in this regard than writing, and even a system of gesture is as valuable.

"In *arithmetic*, the multiplication table has about 842 combinations. Experiments have been tried in having purely senseless combinations memorized, and a child will learn three times as many of these meaningless combinations, and remember them as well, as he will the multiplication table. To memorize two pages of ordinary print is as valuable in brain development as to memorize this table. An entire course of elementary or grammar school arithmetic, in the mechanics thereof, requires but about three times as much mental development as the learning of the multiplication table.

"In *geography*, a careful study has been made of the ordinary course in a grammar school, and the entire probable array of facts that will be learned and held in mind; and the hackman who knows half the streets in Boston has as much knowledge and brain development as the child that has taken a course in geography.

"There are upwards of 300 trades and industries in which ordinary men and women are engaged, and any one of these awakens as large an area of the brain and secures as much brain development as an entire course in reading, writing, arithmetic, and geography. Many of these are of much greater value.

"This mechanical learning of the regulation branches was for a long time the chief work of the school, and it affected a slight brain area. When the *objective work* came in its best form, the area awakened, strengthened and developed, was increased about threefold, and with the introduction of *manual training* in all its departments of Sloyd, cooking, sewing, and drawing, the *will areas* were reached, and five times as much area was awakened as in the mechanical. These areas literally grow, so long as there is earnest study that affects them.

"Even now, less than one-half of the areas of the brain are awakened by those who take a full American university course. The basal, automatic, sympathetic areas are wholly unprovided for in any curriculum.

"Religion, directly and indirectly, would influence vast areas that are now wholly fallow. No virtues of the secular school system can atone for the absence of all religious cultivation. We have much to learn from the Catholic church in this regard. The Catholic church is strong where we are weak, namely, in the worship of the saints. We have allowed our

prejudices to deprive us of one of the grandest features of brain awakening and mental development in this matter of saints. It is no sufficient answer that they do not get from the study all they might. There are at least sixty-three large books devoted to the saints of the Catholic church, while there are but three discoverable that attempt a similar work with Protestant children in schools or Sunday-schools.

“Our Sunday-schools and theirs ought to study pedagogics. The home leaves the child to the school for his mental training, and to the Sunday-school for his religious culture, and neither are equal to the demands placed upon them. This is especially true of the Sunday-school.”

The emotional life conditions the intellectual. Religion is, and has always been, the center of life. It always will be. There is no more interesting branch of Child Study than the investigation of children's ideas of right and wrong.

A teacher in Nebraska told a story to her pupils of a little girl whose baby brother had broken her doll, and asked them to tell how they thought the little girl felt, what she said, and did. Out of 339 children, 178 would have been sorry, 56 would have felt bad, and only 55 would have felt angry; 146 would have made some such remark as, “Oh, you naughty boy.” Another story—one of rivalry—was given, and the children asked to tell what they thought the injured boy felt, and what he said to his rival when the dishonorable act was found out. Of 320 children, 235 thought he felt sorry and bad, while 34 answered, angry. 191 thought he told the teacher, 24 thought he hit his rival, and 7 would have retaliated by the same act. Another teacher asked the pupils to write lists of things considered by them wrong. 700 answers were written by

children from the second to the eighth grade, inclusive. Stealing was given the greatest number of times. Murder was named by 26, nineteen of whom were class-mates of a girl whose brother recently committed suicide. Stealing, lying, swearing, drinking, using tobacco, whispering, etc., were given.

Those who have observed children, collected data, and sifted the matter as carefully as possible, have concluded that there are three causes of children's lying. First, just as he bats his eyes, so he may lie to shield himself from some harm or pain ; second, his imagination may be so vivid that he cannot tell fact from fiction. If we think hard, we may find in our lives some incident where fact and fiction blend. Third, he may lie from imitation—taught it at home. If this be true, and if lying is typical of all of a child's moral actions, then what a mistake for teacher or parent to deal with these little people as if they were morally responsible. Why not, if possible, remove the cause ? Have we not all imposed penalties upon children, thinking them guilty, when they were merely and innocently ignorant, when we were more ignorant and guilty than they ? How important that teachers should know what a child really is. To give another illustration of where we often blame when we should pity, I will quote from Dr. Krohn's article on "The Most Critical Period of School Life ":

"Mental similarity between boys and girls disappears at the coming of young womanhood or young manhood. Individual characteristics and idiosyncrasies then begin to spring up. As Clouston puts it, 'In the male sex the mental development takes the direction of energizing, of cognition, of duty ; in the female sex the mental development is in the direction of emotion, of the protective instincts, of a craving for admira-

tion and worship, of the mental creation of an ideal hero.' Of course these mental changes do not take place all at once in either sex.

Furthermore, there is no question but that it is during the period of pubescence and at the onset of early adolescence that the greatest of the hereditary qualities come out and the most dangerous of the hereditary defects manifest themselves. During this period nature is striving with all her might to evolve a perfect organism. At such a time the hereditary influences, the transmitted tendencies, that all the former generations have bestowed, manifest themselves in the most pronounced forms and come into their fullest existence in the youth or maiden. It is at this time that one suffers most for the sins of their ancestors. Medical authorities also seem to agree that nervous diseases, especially in the higher centers—the more subtle brain diseases—and also mental peculiarities, unquestionably select the onset of adolescence or the time near the close of pubescence for their first real appearance. On the threshold of life and vigor, there is always thus a liability of a temporary break down and even of total collapse.

“Now, what are some of the symptoms of *mental* disturbance at this time of life? One of the most annoying and perplexing of these mental disturbances is the one which assumes the form of exaggerated defiance of school authority, a like defiance of parental control, a morbid ‘self-will.’ Moral restraints, physical coercion, the assertion of rightful authority on the part of parent or teacher, the various punishments—all these are set at naught, and we hear it said of such children that ‘nothing can be done with them’ during such attacks. They are the despair and distress, the great perpetual bugbear



of parents, guardians, teachers, and school-officers. They will not get up in the morning nor will they do any work, and, as Clouston states, they will do daring acts of destruction—tear books, break furniture, threaten violence to themselves and others, contract debts for parent or guardian by purchasing all sorts of useless articles without any money to pay for them, or they leave home without any reason, take to purposeless deceit and lying, do scandalous things with bravado, and withal give the impression to others that they could help doing such things if they but wanted to do so.

“Great anxiety would be saved to parents and teachers if these morbid characteristics of children in our homes and schools were regarded in the light of brain disturbances, when this is actually the case, and such children should be treated from the very first upon the basis of the principles laid down by the pathologist. The usual harsh treatment, the various punishments seldom, if ever, do any good in such cases and often do much harm. The best thing to do for such a child is to take him temporarily from school, sending him from home for a time into the country under kind and firm companionship and in some cases even with medical supervision. Much exercise in the fresh air should be taken, and a large quantity of milk and other unstimulating but fattening food should be given such a boy or girl.

“It would not be out of place for us to briefly note some of the characteristics of attention during this period. We all know that the chief point for the teacher to keep in mind is the necessity of some activity of attention on the part of the child from the very first and in every operation. No amount of skilled adroitness, no amount of persevering patience will be of the least avail unless the child’s attention, the *sine qua non*\*

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\*The most important thing.

of every act of learning, is secured. When there is attention the child's mind is working upon the subject presented by the teacher. So far as any educational relation is concerned where there is no attention the teacher might as well be asking questions from one of the remotest corners of the earth, and the child might as well be reading his "answers in the stars." No isolation on hermit isle can compare with the isolation of the non-attentive pupil. No separation of individuals, separation either in time or space, or both, is like unto the separation between teacher and pupil when the latter is not attending to the subject matter of the teacher's presentation. The work of securing attention from any pupil depends, to a certain extent, upon the patience and tact of the teacher. But it depends still more upon certain psychological and physiological principles that can be applied only by the child himself.

"*Principle I.* The act of attention demands mental effort. Ideas, if left to themselves, flow on without any real order, being governed by the principle of association. Under such circumstances we have that most annoying, perplexing and troublesome trial of the teacher—the *mind-wandering* pupil. It requires no mental effort to let the mind wander; it does require mental energy to interfere with these aimless, rambling mental associations—in other words, to produce attention. Now, I am compelled to contend, on the basis of facts gained by no small amount of observation, that both the boy and girl during the period of pubescence are less capable of making this mental effort than they are at any other period of their lives in school. The boy or girl during this most critical period of development is possessed of a large amount of natural inertia which is difficult to overcome. He cannot, unless carefully

'coached,' be made to manifest an active, vigorous, energetic habit of mind.

*"Principle II.* Persistence of the attentive interest is absolutely essential to a successful issue in the endeavor to learn. The scattering of the mental forces, is, if not the greatest, one of the greatest foes of attention. You have often times seen the non-attentive school-boy. One moment he attempts to work his problems ; the next moment he takes up his history ; then he must try his hand at penmanship ; then he becomes thirsty and must have a drink ; or he must look up a word in the dictionary ; then he must speak to a fellow-pupil ; next, perhaps, he borrows a knife ; and so on, a continuously interrupted round of activities. Such a child is being robbed of the most essential element of personality, namely, self-control or self-direction. In the strict sense such a child is not a *person*, he is merely a log drifting down the stream of time, a rudderless bark moving hither and thither by the wind of other men's breath. Now this dissipation of interest, which, next to mental laziness, is the greatest obstacle in the work of instruction, is very characteristic of both boy and girl during the years that usher in young manhood or womanhood.

*"Principle III.* Counterfeit attention must not be permitted, and yet, often during this critical period, do boys and girls manifest the outward form and attitude of attention while the mind is utterly out of connection with the subject presented by the teacher. They are of those who, having eyes, see not, and having ears, hear not. Or, my boy and girl friend may go so far as to give sufficient attention to grasp clearly the conception of the lesson as a whole. Such a pupil may comprehend the separate steps in the demonstration of a problem, yet fail to grasp either the problem itself or its demon-

stration as an entirety, because he can not bring to bear upon either the problem or the demonstration the higher power of attention that guarantees a mastery of the situation.

"There is one further point, fellow teachers and friends, which I would like to submit for your consideration. Learning by heart is specially characteristic of this period of pubescence in both the boy and girl. You know that the process of memorizing is seriously faulty for various reasons :

1. Learning by heart leaves the mind passive, for what is learned is impressed upon the mind, and not produced by the mind's self-activity.

2. The mind, by not manifesting this self-activity, but passive and only *receiving* impressions, is burdened by what it remembers.

3. The senses, rather than the whole mind as an energizing power, being employed, the habit of mind-wandering is induced. We should remember in our endeavor to develop the child rationally that memory is to be *formed* rather than *filled*. The idea that learning by heart improves memory is a great illusion. Experiment certainly shows that things mechanically disappear from memory. Simply learning by heart should be most mercilessly condemned.

"To sum up the whole problem, let me say that in all learning two equally essential features are involved: *Proper presentation of the material by the teacher, and proper attitude of mind on the part of the pupil*. Seldom, if ever, can the second feature be supplied by the boy or girl in the midst of the mental and physical evolutions and revolutions of pubescence. Need we proceed further into our subject in order to show

that the development of the mental faculties during the years that usher in young manhood or womanhood are of the most universal and intense interest?

“Now what remedial agencies may be employed to overcome some of the more serious disadvantages of the pubescent stage—disadvantages that are peculiarly great in the case of the boy at this critical period. Three remedies have been suggested :

“I. As proposed by Dr. Bayard Holmes and others, there should be separation of boys and girls in the public schools during the period of prepubertal acceleration, with male teachers for the boys, and female teachers for the girls. Earle Barnes, of Leland Stanford Junior University, has suggested that the difficulty which so many boys have with their teachers in the sixth and subsequent grades of the public school, is due to their unrecognized oncoming sexuality. The utter ignorance of the fact of the natural superiority of girls aged twelve to sixteen, both mentally and physically, over boys of the same age—ignorance manifested alike by parent and teacher—is almost criminal.

“II. The boys and girls may remain side by side during their public school life, but should have their latent mental energies appealed to quite differently. The peculiar aptitudes and defects of both boys and girls should be respectively recognized. For example, at the age of oncoming pubescence the average boy is not given to detail. He cannot tell the day of battles, the number of men engaged, the number killed and wounded, while the girl of the same age (about fourteen) in the same history class will have a mania for such detail. These sexual peculiarities should be considered by the teacher in assigning tasks for study and in questioning during recitation.

“III. Physical Exercise and Manual Training. Nothing is of so much avail in dealing with both boy and girl during this most critical period of school life as judicious physical exercise—physical culture in its true sense. The manual training departments of our best schools are the safety valve of many boys at this stage of school life, and cause them to be tided over the critical period without perceptible harm. The vigorous games of football, baseball, and also track athletics have saved many a boy to the schools until his course is creditably completed. The girl is less fortunate, for as soon as she begins to be a girl she must begin to be “proper.” Physical training is as necessary to the girl at this period as it is to the boy, but how seldom she receives it. For the sake of the best development of girls we should encourage them as they essay tennis, rowing, golf, hand-ball, or even the bicycle. We should not regard these as mere human innovations, but as necessary items in the general scheme of Providence for the betterment of the race. The school of the future will give every encouragement to physical training under competent instructors. Both pupils and teachers need systematic physical exercise as they need food; every artery should be filled with fresh blood, every muscle should be invigorated by means of the proper movements, every nerve and brain cell should also be rejuvenated by means of healthful physical activity.”\*

The means for giving moral culture are unlimited, and there is no doubt but the public school, in many respects, is far superior to the private tutor.

The following moral aids, regularity, punctuality, silence, and industry, are indispensable to any well regulated school.

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\*Child Study Monthly, June 1895.

In addition to these, example, punishment, play, and reading are some of the means by which the teacher may give moral culture.

For a treatment of *example* the reader is referred to Page's "Theory and Practice," White's "School Management," Patrick's "Practical Pedagogics," or Compayre's Lectures.

The efficiency of corporal punishment is questioned. It seems, nevertheless, to be nature's way of teaching children, but before resorting to it the teacher should answer questions like these: Will this punishment be an atonement for the offence committed? Will it build up the child, within? Will the child by, this punishment, be led to feel that the inconvenience, discomfort, pain, or disgrace is the natural consequence of the wrong deed? Will it make him a better child? Will it lead him to see that no sin or wrong-doing can be committed that does not bring its own punishment? Will it enable him to always associate some form of punishment with every evil act?

For a "natural consequence" punishment, take this as an example: A boy, neglectful of instruction, left his ink bottle on the desk; it was knocked off, and the ink spilled on the floor. "I am sorry," said the teacher, "it will take you some time to clean it up. Here is a cloth and some sand-paper; wipe it as well as you can, then, after it is dry, rub off the stain with the sand-paper." Of course it was a humiliating job, but at length it was finished. "I hope Eddie will not be so careless again," remarked the teacher. "I never will," he replied, and his ink found a place *in* the desk after that. Another example: A teacher made the rule that each one seen whispering should stay in the next intermission, five minutes for

each offence. Willie just could not control himself enough to keep from whispering. The teacher's first impulse was to let him off, because she knew he tried hard. Then the thought came, "If he conquers, it will give him self control." She told him she was sorry (and she was) that he must stay in all recess and ten minutes at noon, but it would be unfair to have the others stay in and let him go. He saw it and acknowledged it just.

Play is essential to moral training. It is the only place where we may get a just estimate of the child's "Sense of Right," as it is the only complete means of self expression a child possesses. Dr. Hughes says :

"The benefits of play are incidental. This is a most important advantage. Incidental results are most lasting in all educational work. The man who takes exercise for the benefit of his health never improves so much as the man who takes the same exercise for some other purpose. \* \* All healthy children love to play, and play is the best agency for making children healthy. Play helps to restore harmony to those child natures in which the physical, the intellectual, and the moral powers are not properly balanced. It increases the power of vital life producing organs more than any formal exercises.

"The intellectual and moral advantages of play are fully as great as the physical benefits. The intense interest developed in playing, the unequaled concentration of attention on all the details and exigencies of the game, the quickness of judgment essential to success, and the determined and persistent efforts to execute the child's own decisions are the most perfect processes for the accomplishing of the most important of all intellectual results. \* \* \*



"Play has many moral advantages. Weakening self-consciousness is overcome by social intercourse with other children under stimulating conditions. Self-control, both positive and negative, is acquired through the duties and exigencies of the game, which require both the direction and the restraint of power. Respectful submission to authority and recognition of law become second nature to the child who voluntarily obeys the laws of a game, knowing that ready obedience to these laws is an essential element in achieving success.

"Self-reliance is defined and increased because each player must do his own part in winning the game. The consciousness of individual worth and responsibility is developed by the constant presentation of the fact that one poor player weakens his entire side."

The subject of reading as an aid to moral culture will be left to the next chapter.

Read :

Adler's Moral Instruction of Children.

Harrison's A Study of Child Nature.

White's School Management.

Welch's How to Study.

Cromwell's How to Teach Reading.

## LANGUAGE.

No where will Child Study do more for the teacher than in the reading and language work. It will enable her to get the child's elements of thought, and to use his vocabulary as he uses it, *i. e.*, to attach the same meaning to words that the child does. As we study the process of learning to read, we find that *we* sometimes recognize the words and never get the thought that was intended to be expressed. For example, one of my pupils (a teacher) says when she reads or hears the word Ohio she thinks of a little  $2 \times 2\frac{1}{2}$  in. map, when the word Mississippi is seen or heard, the first idea that comes to her mind is "a crooked, lightning-like, white or black line;" the term United States calls up a  $4 \times 6$  in. "checkered, various-colored" map; England means "a little, irregular affair on a blue background." How much of their geography study was of any practical value? But while teachers know better when they "stop and think," children actually *think* such ideas. A little girl knew a mountain was a very high hill, had trees on it, some mountains had smoke issuing from the top, so she said, but when asked to show how high a mountain was she pointed to part of her finger nail. She received her idea from a definition and a map. The stories of "Rocking on the pillows," "the consecrated cross-eyed bear," and "Dianah Moore," as the boy understood the hymns, are familiar.

It is not what definition the dictionary gives, or what definition the child would give, if asked to define a word, that is of importance to him in his reading, it is what idea the word calls

up, *i. e.*, makes him think of then and there. Doctor Sherman says, "I vividly recall an example in connection with the theological term *grace*. The object assigned to this at first hearing was a shovelful of gray wood-ashes such as I had seen my mother remove from the grate. The word did not cease to call up this image insistently until long past boyhood."

Since poetry is to be felt rather than understood, it is of especial importance that in poetry the correct ideas be associated with the words. When reading Milton's *L'Allegro*, I am sure to feel a chill creep over me when I come to the line, "And the mower whets his sithe." My thumb was cut by a scythe. One of my pupils tells me he shudders to hear, "The ploughman homeward plods his weary way." That pupil's last ploughing was done on a cold, wet, dreary day. Some years ago I heard a young man tell in a revival meeting, how he and his chums had broken their bottles of liquor. Tennyson's beautiful little poem, "Break! Break! Break!" always called up that idea, until Professor Hamill explained how it was written about a girl whose lover had sailed away from the foot of the crags, and with her it was, "But O for a touch of a vanished hand! And the sound of a voice that is still." What is "In Memoriam" to us, with the story of Arthur Hallam unknown, or, "Ay, tear her tattered ensign down!" if we know nothing about "Old Ironsides?" If this be true with us who are older, how much more must it be true with the child? Therefore the teacher should be careful to have every word associated with the idea for which it stands. If a word stands for an emotion, whenever practical let the child experience the emotion. One of the greatest mistakes of this age is that we begin by educating the child's intellect rather than his emotion. The emotion that may be aroused by, "And

I hope the boys and girls are few that love not that flag—red, white and blue—that floats from the mast, that holds the sail, that moves the ship that Jack built,"\* is worth half a dozen ordinary reading lessons. Children whose emotions of patriotism have vibrated to such sentiments all along the way up the first, second, third, fourth, and fifth readers, do not become our anarchists, strikers, criminals, or law-breakers.

While preparing her lessons, whether it be the reading or any other lesson, the teacher should keep constantly in mind the answers to these questions: Why do I teach this branch? What precisely do I wish to accomplish with this lesson? What have I at my command that I may use to this end? Of course this includes the child's *experiences*, knowledge, etc.

Now in reading, the first object is to get the thought from the printed page. This requires words. So a vocabulary is an essential of every reading lesson, yes, every lesson. M. Compayre says, "Without words, only vague impressions possess the spirit, a mental state relatively passive. The use of words thoroughly comprehended implies, on the contrary, work, effort, and shows a high degree of self-activity."

In the primers and the first readers, the sentences must necessarily be short, and limited to a few words. It is, therefore, only by having the children deeply interested in the subject matter that there may be sufficient association of ideas with the limited text to arouse interest in what the words say. It is here that color and form may be used to such an advantage to create interest. For we know that a child may be made to get his lessons, can be given any quantity of information, can be crowded through the examination, and not be receiving an education. Unless interest in the subject is

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\*Barnes' Second Reader, Lesson IX.

awakened, the inevitable end will be failure. But once get a child thoroughly interested and he can educate himself along that line, at least.

In the primary, is the place to teach color. Suppose it does take time, how much would have been added to your life and to the lives of all of us, if we had had a systematic course in color? The study of form, though deep enough for Ruskin, yet may be presented simple enough for the child of three. What an opportunity the country teachers have to teach form and color! Think of the dull, dreary lives that would be quickened, would have a new world opened to them if taught form and color.

Pictures in the primer and first reader may furnish a basis for imagination, but they should be omitted from the second reader up, unless they are pictures of animals or objects that cannot be shown the pupil. For if pictures are needed in stories to increase the interest, explain the story, etc., something is wrong with the constructive faculty. The imagination should be able to build a picture that will serve the child better than any printed picture. And while the imagination should have free play, pictures limit it. Pictures appeal to the senses, while mind and heart should be the interpreters.

All of the ordinary High School course in botany and zoology, except classification, should be taught in connection with reading. Upon examination, it is found that our readers furnish all that is necessary for the pupils along this line, since pupils are benefited by what they see for themselves and not by what they read about plants and animals. These object lessons may all be taught before pupils reach the fourth reader. In Barnes' Second Reader we find lessons about the bee, bird, monkey, cow, kite, pigs, moose, snail, kittens, sheep,

squirrel, tea, wrens, apple core, park, deer hunt, rabbits, bridge, hens, parrot, rat, bear, harvest mouse, white bear, spider and fly, etc.—50 of the 55 lessons on natural history objects. In Barnes' Third Reader, 28 of the 59. In Swinton's First Reader, 19 of the 37, Swinton's Second, 34 of the 65, Swinton's Third, 26 of the 68 lessons are on natural history objects. In Harper's readers a still larger proportion.

In Stickney's First we find about 40 lessons, in the Second about 45, in the Third the same number, and so on up, affording ample material for the teacher who knows the subject to carry on an extensive course in observation lessons.

But the most valuable work in observation has a direct bearing on the reading. Suppose a child has a funny expression to read, can he express the idea if he has paid no attention to the way people express such ideas? Let the teacher tell him to watch his schoolmates; to notice how they, when playing, express such ideas. Tell him to imitate them. Then read the passage in the same manner. If they have a question to read, ask if they have noticed how their companions ask questions of one another. Imitate them, then read the question. Emphasis should be taught the same way. How did their companion speak when he made such a statement, or told such a story? How did the person feel? How do we talk when we feel that way? When a pupil emphasizes a word let him be held to account for it. Some lively discussions may be had by a pupil and the class. Let the pupil defend himself or acknowledge his error. What more valuable observation lessons can be given?

Words have different meanings for different persons. Some interesting time may be spent selecting words that have pleasing associations, harmonious words or words that sound

like the ideas which they are intended to express, melodious words or words that have a pleasing sound, and poetic words and phrases.\*

The reading class offers a golden opportunity for moral culture. In no other branch can we so well train pupils to think of pain, degradation, loss of friends, etc., in connection with every evil action, and to think of pleasure, happiness, esteem of playmates, etc., in connection with every good action. This is accomplished largely by means of what we call Character Study, "Effects, or Hints."\* Supt. Skinner gives this example, "A little boy with a bloody nose and torn head of hair was running towards home. When asked what was the matter, he said: 'I hit Billy Smith's dog with a stone.'

"1. What was it that he did not tell in plain words? 2. Did he need to tell that? 3. Did he hint enough for you to account for his condition of nose and hair? 4. What kind of a boy was he? 5. What kind of a boy was Billy Smith? 6. Count the number of hints given in the boy's reply."\*

At the close of the following, we *feel* that Frank is a good boy. Why?

"Frank, I am going to drive my new pair of horses. Do you wish to go with me?"

"O yes. May Jane go, too?"

"Yes. We will go out to see Fred, and look at his bees."†

Take this from McGuffey's Second Reader, as another illustration:

Under a great tree in the woods, two boys saw a fine large nut, and both ran to get it. James got to it first, and picked it up.

\*For full treatment see "Studies in Reading and Literature," an excellent little work on reading in the lower grades, published by J. H. Miller, Lincoln, Neb. See also, "Analytics of Literature," Ginn & Co., and "How to Teach Reading," by A. D. Cromwell.

†Lesson I., Barnes' Second Reader.

"It is mine," said John, "for I was the first to see it."

"No, it is mine," said James, "for I was the first to pick it up."

What kind of boys do you think these boys were? Why?

One day while reading the Vision of Mirza, when we came to the sentence, "As I looked upon him [The Genius] like one astonished, he beckoned to me, and by the waving of his hand directed me to approach the place where he sat," I asked the class if they thought Addison obeyed. "Yes," said a little girl. When I asked what made her think so she answered, "Addison was a good man." She had just read how his last words were, "See in what peace a Christian can die."

Supt. Skinner says, "As pupils study the effects reported, and discuss them, they have this question forced upon their consciousness, 'What effects are my words and actions daily proclaiming to the people about me?' One teacher told me that he had seen his class so affected by this thought that the recitation hour became a period of most intense and yet interesting solemnity, and that, too, without any apparent personal application of effects."

In this work, pupils should read the lesson, clear up all questions of pronunciation and meaning of the words, and make plain to the teacher that they get the thought of the lesson. Then, if it is a story lesson (it may not necessarily be about boys and girls) the teacher should ask, what kind of a boy, girl, horse, or whatever it may be, do you think it is? Then let the class go back and select the "hints" that made them feel so. Let us illustrate with Lesson IV. Barnes' Second Reader:

One time when Frank was going to school, he found a poor little bird in the grass. It had got out of its nest, and could not fly back.

Frank took the bird up in his hand.



He could not put it back as the nest was too high up in a tree.

He did not know what to do with it. At last he said, "You poor little bird! I will take you home, and ask sister to put you into a cage.

"When you are large and strong, you will fly back to the tree."

So Frank took it home to his sister. She gave it food and water, and put it into a cage.

Pretty soon the bird began to sing a little every day.

Frank liked it very much, but one day he let it fly out of its cage to go back to its old home in the tree.

After reading the lesson, clearing up questions on diction, pronunciation, etc., ask pupils how they like Frank. What kind of a boy do you think he is? Then go over the lesson again to see what made them feel that way toward Frank. As we go back we might notice that sympathy is touched by *poor* in the first sentence; also by the author's placing the bird out of the nest. Would we care so much for a bird that was not a *poor little* bird? That was not *out of its nest* and *could not fly back*? But these are points that we notice incidentally. We are hunting for what led us to like Frank. First, we notice our sympathy was aroused; second, he took the bird up; third, he thought at once of putting it back; fourth, he resolved to take it home and let his sister help him care for it. Do we like boys who trust their sisters? fifth, he concluded to let it go as soon as it was able, and he told it so; sixth, he fed and cared for it; seventh, though it began to sing, and he must have desired to keep it, yet he let it go. My reader, would you or I have done that, or would we have thought up some excuse for keeping it? "It must be happy because it sings, the cat might get it, or something might happen to it." Do you suppose after such a lesson a boy will like his sisters less or be cruel to a poor little bird? Of course we want each

pupil to *feel* the personal application, but we should not tell him so, or lead him to think that we are giving it as a sermon for him.

If the teacher has more time she can spend it very profitably by questioning the pupils about birds—what kind of a bird do you think this was? in what kind of a tree did it build its nest? What birds are here now? What birds stay here all year? how do birds fly? do birds hear? how do you know? how do they get their food? etc.

Read :

Welch's How to Study, Cromwell's How to Teach Reading, Skinner's Studies in Reading and Literature, Sherman's Analytics of Literature.

## EXPERIMENTAL CHILD STUDY.

Ruskin says: "The more I think of it the more I find this conclusion impressed upon me, that the greatest thing a human soul ever does in this world is to *see* something and tell what it *saw*, in a plain way." The purpose of this chapter is to tell "in a plain way" a few of the things which investigators are now seeing with regard to the development of a child.

"The embryo of the future man begins life, like the savage, in a one-roomed hut, a single, simple cell. This cell is round and almost microscopic in size. When fully formed it measures only one-tenth of a line ( $\frac{1}{200}$  in.) in diameter, and with the naked eye can be barely discerned as a very fine point. An outer covering, transparent as glass, surrounds this little sphere, and in the interior, imbedded in protoplasm, lies a bright globular spot. In form, in size, in composition there is no apparent difference between this human cell and that of any other mammal. The dog, the elephant, the lion, the ape, and a thousand others begin their widely different lives in a house the same as man's. At an earlier stage indeed, before it has taken on its pellucid covering, this cell has affinities still more astonishing. For at that remote period the earlier forms of all living things, both plant and animal, are one. It is one of the most astounding facts of modern science that the first embryonic abodes of moss and fern and pine, of shark and crab and coral polyp, of lizard, leopard, monkey, and man are so exactly similar that the highest powers of mind and microscope fail to trace the smallest distinction between them. But let us watch the development of this one-celled human embryo."\*

\*"Ascent of man," Drummond.

"For some time bodily growth (in size and complexity) seems to be the only growth. And here, as regards man and animals, the animals seem to have the advantage. At birth the animal is better able to care for itself. It grows quicker and is often the child's superior in intelligence.

"Concerning the mental life before birth we, of course, know nothing directly. Careful consideration of the conditions nevertheless leaves little room for difference of opinion on this point. There would be a kind of sensation arising from the processes of growth, determined largely by the variations in the condition of the blood of the mother. The activity of the child's heart would probably influence this embryonic mind. The very great activity of its other large muscles certainly reacts powerfully on such mind as may be existent. Next to this source, the sense of pressure furnishes the greatest stimulus. A vague sort of consciousness is doubtless present; as this is caused by diffused stimuli, or arises from the less differentiated senses, it can be nothing more than an indefinite feeling, whose differences are most marked along the line of pleasure and pain. *Yet this is the beginning of mind.*

"At birth the body of the normal child seems to be about perfect. Careful examination of the tissues shows that this is true only in a general sense. The organs that have never acted are, many of them, ready to begin acting, but seldom is one of them able to act to very good purpose. The lungs, perhaps, most suddenly begin their proper work. It is indeed fortunate for us that the lungs can, in a way, begin work without delay and without much previous training. \* \* \* The digestive system is quite imperfect, and only slowly comes to perform its proper functions."\*

\*Dr. H. K. Wolf, North-Western Journal of Education," October, 1895.

TOUCH is believed to be present before birth. It is undoubtedly the first of the senses to be awakened. The sensibility of different parts of the body to touch is very great from the first. The lips and tongue, from the first, have an extreme delicacy. Next come the parts of the eye, the palm of the hand, etc. Tests made on older persons show that individuals differ widely in sensibility to touch, and the parts of the body also differ. For instance a test with the compasses to see how far apart the points must be to be felt as two or one shows that on the tip of the tongue they may be felt as two points, if they are .04 in. apart, but on the sternum they must be nearly 1.76 inches, on the palm of the hand .08 in., on back of the hand 1.23 inches, while on the back of the neck they must be 2.11 inches apart to be felt as two points.

The value of an educated touch is easily seen, if we think of the person buying cloth, the dry-goods clerk, or the banker who must rely largely on touch to distinguish good from bad money.

TASTE. "Numerous careful experiments show that the child is capable of *bona fide* sensations of taste in the earliest moments of life; and that, though he is for some time more obtuse and more uncertain in this respect than the adult, yet when a sapid object is introduced into his mouth, the resulting sensation really takes place by way of the gustatory bulbs and nerves, and is not merely a species of touch sensation, as some have held."\*

Some interesting experiments may be tried here, because few of us really know whether we taste or smell. We can hardly distinguish between water and a solution of essence of clove in water, unless we have the nostrils open. Many dis-

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\*Tracy, Psychology of Childhood.

criminations that are easily possible with the nostrils open are difficult or impossible with the nostrils closed. It may not be out of place here to speak of the cultivation of the appetite. It is of the greatest importance to the child. The sense of taste was given to us that we might relish and discriminate—to relish that we might have a pleasing sensation in the mouth or stomach ; the power to discriminate that we might tell wholesome from unwholesome food. Discrimination being the *proper* office of *taste*. An education to subordinate appetite to will is the greatest blessing we can bestow on a child.

Children should be taught from the first to eat food, not for its pleasant taste, but for its after effects. Attention should be directed to the after effects of good wholesome food as compared with the after effects of unwholesome food.

As Froebel says: "In the early years the child's food is a matter of very great importance ; not only may the child by this means be made indolent or active, sluggish or mobile, dull or bright, inert or vigorous, but, indeed, *for his entire life*. Impressions, inclinations, appetites, which the child may have derived from his food, the turn it may have given to his senses and even to his life as a whole, can only with difficulty be set aside, even when the age of self-dependence has been reached ; they are one with his whole physical life, and therefore intimately connected with his spiritual life. Parents and nurses should ever remember the following general principles: simplicity and frugality in food and in other physical needs during the years of childhood, enhance man's power of attaining happiness and vigor—true creativeness in every respect."

SMELL and taste are so hard to distinguish that they might almost be considered together. As we saw, the taste of

spices and other substances is largely dependent upon smell. It has been established beyond a doubt that new-born babes are susceptible to *strong* odors. Tests were made on both sleeping and waking babes and strong odors disturbed a child in both conditions. Yet, in regard to smell, man stands below many of the lower animals.

Though this sense is entirely neglected, yet it might, if educated, be of great service to man. In to-night's paper I read, "Over one hundred people poisoned at a wedding supper."

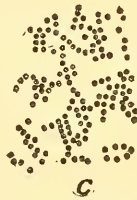
It is a curious fact that we have no names for odors. We must say odor of camphor, of cloves, of onions, and so on. We have names for taste, sight, touch, and hearing—sour and sweet, blue and gray, hard and soft, loud and musical, etc. but for odors we have none.

The sense of smell may be easily fatigued. Hold camphor gum to the nose, and breathe of it continuously for five or ten minutes. But, strange to say, fatiguing smell to one odor does not necessarily fatigue it to others. Fatigue it to essence of cloves and then try it with camphor, or any other odor.

An instrument, the olfactometer, has been constructed for measuring sensitiveness to odors. It consists of a small glass tube telescoped in a larger tube which contains a sheet of blotting paper scented with an odor. The smaller tube has a rubber tube running to the nostril, and so arranged that all air entering the nose must come from the farther end of the small glass tube. The larger tube is fastened to a board register, and as the smaller one is slid back towards the blotting paper the distance that the smaller one must be slid back before the person breathing through it can tell the odor, is used as a unit, by which other odors may be measured in the same olfactom-

eter, or other persons may compare their sensitiveness with the individual who first distinguished the odor.

TEMPERATURE.—By this we do not mean sensitiveness to touch, but sensitiveness to heat and cold. Physics tells us things are cold because there is an absence of heat, but uneducated people say, “things are hot because they are *hot*, or cold because they are *cold*, just as lead is lead, and gold is gold.” Now, strange as it may seem, they are right so far as we are concerned. A thing is hot because it affects our hot spots, and another is cold because it affects our cold spots. If we take a blunt-pointed instrument, cool it, then move it over the skin we may find certain spots do not feel it cold at all, but just feel it as a blunt point in contact, while other spots will feel it as decidedly cold. Try the same, by having it really warm, and discover the hot spots.



A COLD-SPOT MAP.

From "*Thinking, Feeling, Doing.*"

A child is sensitive to cold at birth, and some believe a child is sensitive to cold even before. Preyer found the warm bath, from the first, was enjoyed, but the cold was disliked. He also thinks the mouth especially sensitive to heat and cold. Yet but few satisfactory observations as to temperature sensitiveness, have been recorded.

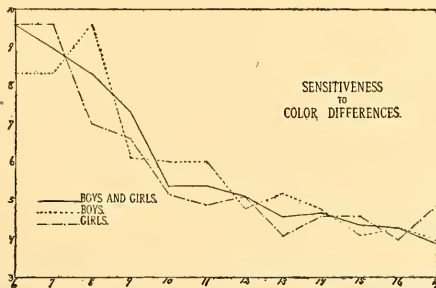
HEARING.—Since we are treating of the senses in the order of their development, we take just enough space here to



say; that it is highly improbable that a child is sensitive to sound before birth, though many believe it is immediately sensitive to sound during the first day after birth, but it is some time before it *distinguishes* sounds. Dr. Kime's child could not tell the direction of sound, the third month. It is generally believed that a child will not turn his head in the direction of sound till about the fourteenth week. Some believe hearing is the last sense awakened.

SIGHT.—While sensitiveness to light seems to be one of the first, or the first feeling, yet it is some time before a child can *see things*, as we generally use the term. Though a child may have his eyes open towards an object, yet if he points the pupil of his eye away from the object, we should not conclude that he sees it. Some think a child is from four to six months old before he can tell the smile of his mother or nurse from the smile of a stranger. It is probable that a child is a number of months old before he ever distinguishes colors.

Preyer, by his color tests—(1) naming a color and having the child select the object; (2) selecting the object and having the child tell the color—gained no results when he tested children twenty months old, but in the first part of the child's third year eleven correct answers and six incorrect answers were given.



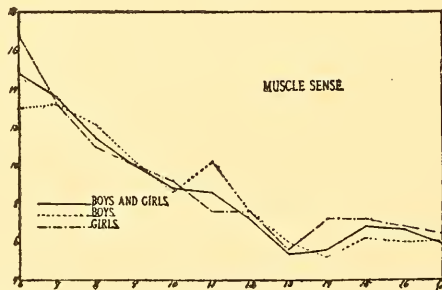
From "Yale Psychological Laboratory Studies," vol. 11.

Figures at bottom of cut indicate age.

MUSCULAR FEELINGS seem to be present from birth. But till about the third month they are very vaguely apprehended. About the third month begins the discernment of weight. The child seems to take delight in lifting, squeezing, pulling (your hair), etc., due probably to the constitutional need of exercising the muscles.

Dr. J. A. Gilbert made some very careful tests of school-children's power to distinguish weight by muscular feelings, or "hefting." Each child was given a box containing a number of cartridge-shaped blocks, and asked to select all those which seemed to him to be of the same weight. The child was protected from fatigue, noises, and anything that disturbed his attention.

Fig. 2.



From "Yale Psychological Laboratory Studies," vol. II.

Figure 2 gives the results. The figures at the bottom indicate age, those at the left weight.

"The results show a gradual increase in ability to discriminate, from the ages of 6 to 13. At 6, the worst year of any for discrimination, the least perceptible difference was 14.8%, with 38 per cent. of non-discriminations; at 13 years

only 5.4%, with 2 per cent. of non-discriminations. After 13 there was a gradual falling off of 6.8%, none failing to discriminate, and then another gain till at 17 it was 5.8%, with 1 per cent. of non-discriminations. Boys and girls, considered together, gradually increase in ability, but when they are considered separately, marked differences of sex appear. At 7 they have the same ability. From this on, they gain with equal pace to the year 13, with the exception of the abrupt falling off for boys at 11. From 13 to 17 the difference in ability again becomes manifest in favor of boys. In general it may be said that superiority of boys in sensitiveness to difference in weight increases with age, irregularities being noticeable, however, from 6 to 7 and from 12 to 14."\*

MEASURING THOUGHT AND MOVEMENT. To measure the time that it takes a person to think, we find it necessary first to find the time that it takes him to move. This time, between the instant that a signal is given and the instant that the person moves, is called his reaction time. *Reaction time then means the time between the signal and the movement.* Let a number of persons take hold of hands and form a ring. One squeezes the hand of the person on his left; that one, as soon as he recognizes it, squeezes the hand of the one on his left, etc., on around; the time that it takes the signal to go around, divided by the number of persons, gives the average reaction time. Or let a number of persons form a ring, each one places his right hand on the head (or shoulder) of the person in front.

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\*Dr. Gilbert, "Studies from the Yale Psychological Laboratory." Vol. II.



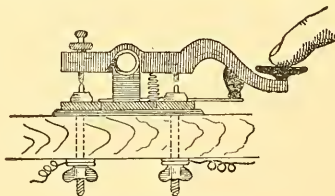
CHAIN-REACTION.

*From "Thinking, Feeling, Doing."*

The signal-man holds a watch, a stop-watch is best. The others close their eyes. They are told the instant they feel a pressure from the hand on their head to press immediately on the head of the person in front. The person with the watch starts the pressing, watches till the signal goes around, notes the seconds, divides the number of seconds by the number of persons, and has the average reaction time. Suppose there are 15 persons and it takes 10 seconds for the signal to go around, 10 divided by 15 gives  $\frac{2}{3}$  second as the average reaction time.

By letting one of the first number of persons drop out and another person take his place, we may find whether all of the party react in same time. This is a crude way of getting reaction-time.

For getting more accurate results, an electrical apparatus that records the instant the signal is given and the instant the muscles move, has been invented. The person with his finger



READY FOR A RECORD.

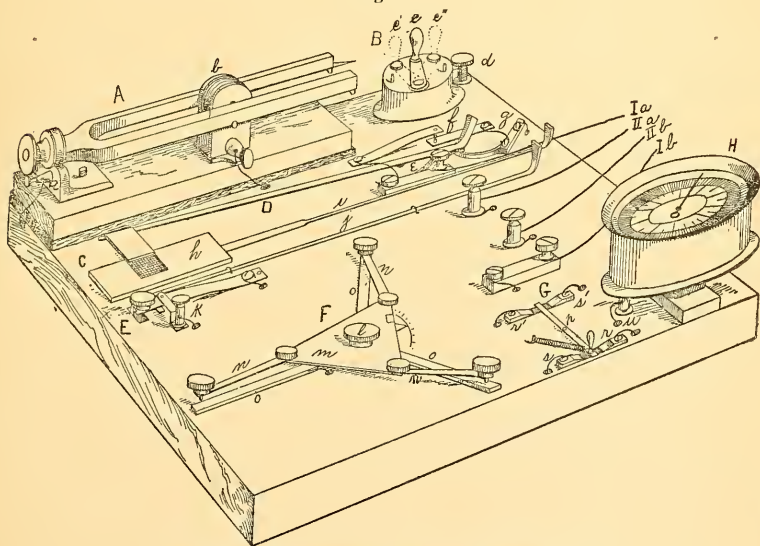
*From "Thinking, Feeling, Doing."*

on a telegraph key, watches for the signal, then as soon as he sees it, he presses on the key. The time between the signal

and the pressing is his reaction time. Now if we wish to get his *thought time*, we tell him we have a number of signals, but we will give a certain one, and he must wait till he knows whether it is that one (a red for example), then as soon as he sees it is the one chosen, he is to act. If we have his reaction time, then get the time that it takes him to press the key after finding out whether it is the right signal, subtract the reaction time from this, we have his *thought time* or *discrimination time*. Then tell him to wait till the given signal makes him think of something, that is till he associates something with it, subtract his *discrimination time* from this and you have his *association time*.

The apparatus used for securing accurate records of children's Voluntary motor ability, Reaction time, and Reaction with discrimination and choice, consists of a tuning-fork A Fig. 3 which vibrates 100 times per second. When the tuning-fork vibrates it starts a current at b by means of an adjustable wire, which can not be seen in the cut. Every time this current is started it starts the needle on H. The tuning-fork is kept in constant motion by means of two Grove batteries connected to

Fig. 3.



From "Yale Psychological Laboratory Studies," vol. II.

Ia, Ib and IIa, IIb. The child with his finger on the telegraph key at E, is told, when he sees the card (check between c and h) on the end of lever D move, to press on the key E. The person taking the record moves the switch at B to C, which starts the tuning-fork A and the needle at H, and at the same instant the lever D moves. Then the child by pressing on the key E stops the needle. Now the number of hundredths of a second over which the needle passed is the time between the signal and the action of the child, or the child's Reaction time.

The bar D is arranged so that it may be slid toward or pulled from the end c, thereby exposing a red or blue card, as the operator chooses. This of course is used for discrimination.

The part F is so arranged that it records taps made with the key on the bar *n*.\*

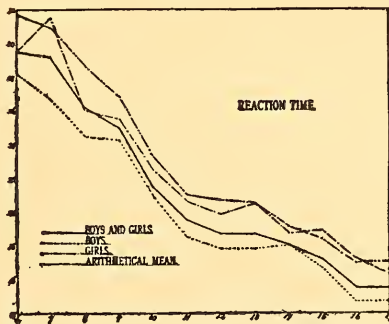
Dr. Gilbert found: "The time of simple reaction decreases with age. Boys and girls at 6, when averaged together, react in 29.5 hundredths of a second. This decreases to the age 12 where the time is 18.7 hundredths of a second. From 12 to 13 no increase is made, remaining at 18.7 for 13 also. From 13 on there is a gradual increase until 16, when the time is 15.5 hundredths of a second. At 17 no gain is made.

"The results, when considered for girls and boys separately, show marked difference in sex. Girls are slower at 7 than at 6. At 6 the time required was 29.5 while at 7 they required 31.5. At 8 there was a gain to 26.0. From this on there was a gradual gain in ability and a decrease in time till 12, where the time was 19.8. At 13, however, 20.5 hundredths of a second were again required, leaving the girls only one thousandth of a second better at 13 than they were at 11. After this there was an increase again till 17, where the reaction time for girls was 16.3."

\* For complete explanation of how to make, to operate, etc., see Yale Psychological Studies, Vol. II.

"The curve for boys shows no change from the general law of increase from 6 to 7. From 12 to 14 there is a marked difference in the rapidity of increase. At 12 the time required was 17.8, at 13 it was the same; at 14 there is a loss in ability, the time being 18.0. Thus the boys were worse at 14 than at 12, and but very little better than they were at 11. After 14 they again increased with almost the same rapidity as they did before 11 until 16 and 17, where 14.7 hundredths of a second were required. Both boys and girls seemed to increase less rapidly from eight to nine than at the other ages. Boys were quicker than girls throughout."\*

Fig. 4.



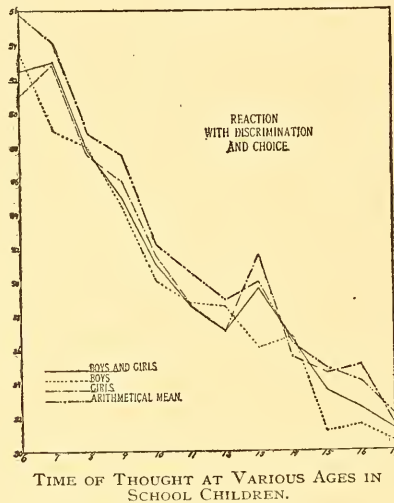
From "Yale Psychological Laboratory Studies," vol. II.

As Dr. Scripture says: "The importance of rapid and accurate reaction and discrimination is evident. Astronomers have difficulty in recording the moment at which a star passes a line in the telescope. The sportsman must pull the trigger at just the proper moment. The foot-ball player, the fencer and the boxer are trained in rapidity of discrimination and reaction. It is evident that a player or a pugilist who takes a long time for discrimination, choice and volition, will give a decided advantage to a quick opponent."

\* Studies from Yale Psychological Laboratory, Vol. II.

To Dr. Gilbert's tests on "Reaction with Discrimination and Choice," I am again indebted for the following results: But to make these results interesting to the reader, he must have clearly in mind what we mean by "Reaction with Dis-

Fig. 5.

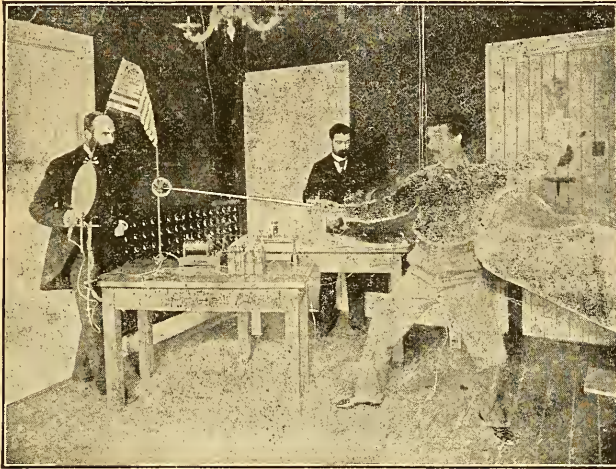


*From "Thinking, Feeling, Doing."*

crimination and Choice." By that we mean that the child with his finger on the telegraph key, watched for the signal, knowing that there might be any one of a number of signals given, but he was to tell (discriminate) which one, and then, if it was the chosen one, to press on the key. That is he was to discriminate the signals and then choose between movement and no movement of the key. It is to be remembered that in all of Dr. Gilbert's tests, about 100 children of each year from 6 to 17 inclusive were tested. It must also be remembered that the children were tested by a trained scientist, who had no pet theories to try, but who wanted to see just what public-school children can do.



Speaking of the results of "Reaction with Discrimination and Choice," Dr. Gilbert\* says: "Here, as in the other mental tests, ability increased and the length of time [reaction time] required, decreased with advance in age. This test implies



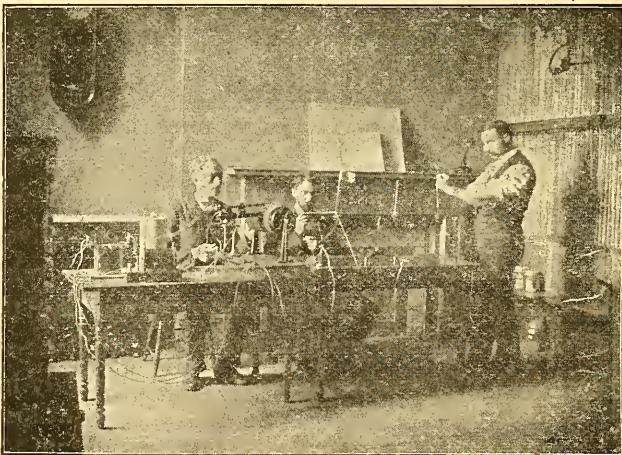
MEASURING MENTAL AND MUSCULAR TIME IN FENCING.  
From "*Thinking, Feeling, Doing.*"

Dr. Scripture's experiments show that a trained scientist thinks and moves as quickly as a trained fencer.† more complicated mental activity and, as would be expected, the influences, which affect mental life, show themselves more plainly in the results. For some cause or other development between 6 and 7 is arrested for girls here, as well as in the tests on reaction time. Boys seem to suffer no such back-set, but, starting at 53.5 hundredths of a second, continually increase from 6 till 13. From 13 to 14 they suffer a slight loss, after which they gain till 17, losing slightly, however, from 15 to 16. At 17 the time required for boys was 30.5 hundredths of a second. Boys may be said to undergo only one loss, that

\* Now at University of Iowa, Iowa City, Iowa.

† "Yale Psychological Laboratory Studies," vol. II.

being also of small moment. Girls suffer two marked losses, the first from 6 to 7, increasing the time required from 51 hundredths to 52.8 hundredths of a second. After 7 girls increase in ability very rapidly till the age 12, where the length of time was 37 hundredths. From 12 to 13, however, girls lose just as much as they gained during the two years preceding 12, thus requiring 41.5 hundredths of second at 13, which is the same length of time required as at age 10. After 13 comes another very rapid gain till 17, with the exception of a small loss from 15 to 16, similar to the loss experienced by boys at that age. At 17 the time required for girls was 31.5 hundredths of a second. Boys are better in this test than girls. The average of all the boys of all ages [6 to 17 inclusive] is 39.8 while that of the girls is 41. Not quite so much difference is seen here, however, as in the simple reaction time, where the average for boys was 20.2, while that of the girls was 22.3."



MEASURING HOW RAPIDLY A PUGILIST THINKS AND ACTS.

*From "Thinking, Feeling, Doing"*

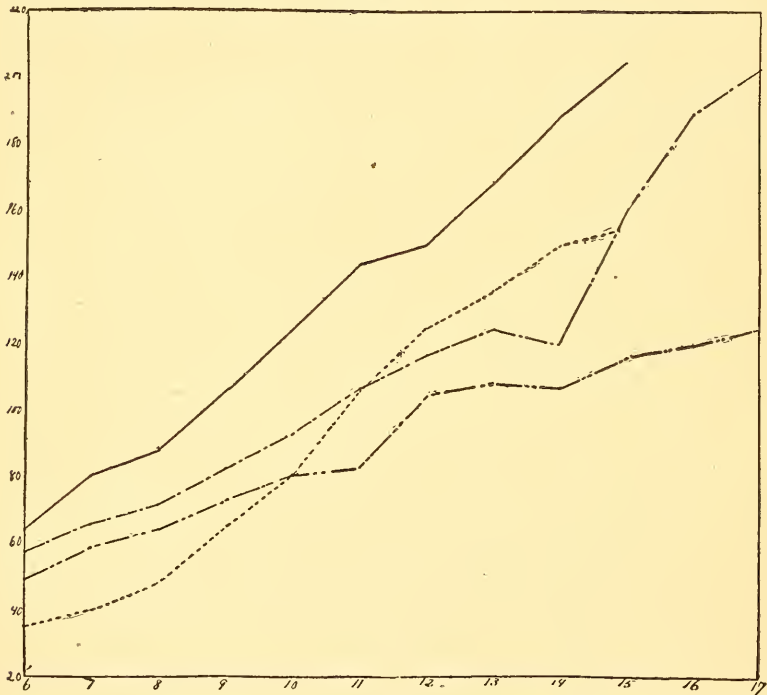
\* "Studies from Yale Psychological Laboratory," which see for full description of apparatus, results, etc.

If we have a person's "reaction time with discrimination and choice," we may get his actual thought time (association time) by telling him to wait till the given signal makes him think of something. For example, suppose we tell him that the signal will be a word, the word horse, for instance, and he is to wait till he thinks of some horse before he presses the key. Suppose it takes him 52 thousandths of a second for his reaction time with discrimination, that is to tell whether the word which he sees is the correct word or not. Now, when he waits till he thinks of something, suppose it takes him 90 thousandths of a second, .090-.052.038 of a second, the time it took him to think of an object after seeing its sign.

The importance of a quick association time is evident. Ordinary judgment is mere association. Most of the work in Arithmetic, History, in fact the "common branches," is mere association. It has been a wonder to me that Collège Presidents and others, when trying to convince a boy that he should go to school, have never called attention to the fact that an education makes one think quicker. I am now trying a series of experiments to see how much quicker a country boy, who has never been to school much, can think after one year's schooling. So far I am led to believe that some boys, who enter the commercial course, increase their thought time one half in one year, students in the other courses do not gain so much. And I have my doubts whether a course can be followed that will do as much in the same time for any other pupil as a commercial course will do for a *very green country boy*, and that is the boy I refer to above. In a good commercial course *slowness of thought*, in "rapid calculation," in "journalizing," in penmanship, in fact throughout the course, and especially in shorthand, *is failure*. In this day and age when life is reckoned

by thoughts, does it not seem as though more attention should be given to thinking quickly? The business man who thinks twice as quick as another, stands twice as good chance of making a good bargain, or else a chance of making twice as many bargains.

Fig 6.



From "Yale Psychological Laboratory Studies," vol. II.

- Private school boys.
- - - - - Private school girls.
- - - - - Public school boys.
- - - - - Public school girls.

Figure 6 gives the comparative lung capacity of School Children.

Numbers at bottom indicate age, at the left cubic inches.

While not all courses may be equal to a commercial course, yet teachers may do much to increase children's speed in thought. Every problem, conjugation, declension, etc., should be given quickly. Answers should be given quickly. It should be noticed here that nervous, fidgety persons often have slower thought than quieter, more sedate persons.

Read :

"Yale Psychological Laboratory Studies," Vol. II.; "Thinking, Feeling, Doing," "Psychology of Childhood," by Tracy.

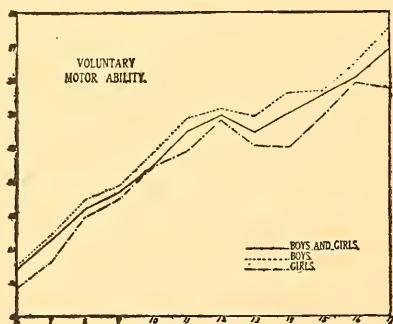
## HABIT.

This work would be incomplete without a word or so on habit. If I had no apparatus with which to get reaction time, or association time, and perhaps if I had, I would use 18 and 19 of the outlines for Language and Habit.

Teachers may increase a child's usefulness or productiveness by increasing his rate of thinking, but above this teachers may increase a child's usefulness both as to amount and kind of productiveness by inculcating habits of the right kinds.

Dr. Maudsley says: "If an act become no easier after being done several times, if the careful direction of consciousness were necessary to its accomplishment on each occasion, it is evident that the whole activity of a lifetime might be confined to one or two deeds—that no progress could take place in development. A man might be occupied all day in dressing and undressing himself; the attitude of his body would absorb all his attention and energy; the washing of his hands or the

Fig. 7.



Form "Yale Psychological Laboratory Studies," vol. 11.

Figure 7 gives the voluntary motor ability of School Children.

fastening of a button would be as difficult to him on each occasion as to the child on its first trial ; and he would, furthermore, be completely exhausted by his exertions. Think of the pains necessary to teach a child to stand, of the many efforts which it must make, and of the ease with which it at last stands, unconscious of any effort. For while secondarily-automatic acts are accomplished with comparatively little weariness—in this regard approaching the organic movements, or the original reflex movements—the conscious effort of the will soon produces exhaustion. A spinal cord without memory would simply be an idiotic cord. It is impossible for an individual to realize how much he owes to its automatic agency until disease has impaired its function.”

Habit simplifies our movements, makes them accurate, diminishes fatigue, and diminishes the conscious attention with which our acts are performed.

“Every one knows,” says M. Leon Dumont, “how a garment, after having been worn a certain time, clings to the shape of the body better than when it was new; there has been a change in the tissue, and this change is a new habit of cohesion. A lock works better after being used some time ; at the outset more force was required to overcome certain roughness in the mechanism. The overcoming of their resistance is a phenomenon of habituation. It costs less trouble to fold a paper when it has been folded already ; and just so in the nervous system the impressions of outer objects fashion for themselves more and more appropriate paths, and these vital phenomena recur under similar excitements from without, when they have been interrupted a certain time.”

And Dr. James adds, “Habit is thus the enormous fly-wheel of society, its most precious conservative agent. It

alone is what keeps us all within the bounds of ordinance, and saves the children of fortune from the envious uprisings of the poor. It alone prevents the hardest and most repulsive walks of life from being deserted by those brought up to tread therein. It keeps the fisherman and the deck-hand at sea through the winter ; it holds the miner in his darkness, and nails the countryman to his log-cabin and his lonely farm through all the months of snow ; it protects us from invasion by the natives of the desert and the frozen zone. It dooms us all to fight out the battle of life upon the lines of our nurture or our early choice, and to make the best of a pursuit that disagrees, because there is no other for which we are fitted, and it is too late to begin again. It keeps different social strata from mixing. Already, at the age of twenty-five, you see the professional mannerism settling down on the young commercial traveller, on the young doctor, on the young minister, on the young counsellor-at-law. You see the little lines of cleavage running through the character, the tricks of thought, the prejudices, the ways of the 'shop,' in a word, from which the man can by-and-by no more escape than his coat sleeve can suddenly fall into a new set of folds. On the whole, it is best he should not escape. It is well for the world that in most of us, by the age of thirty, the character has set like plaster, and will never soften again.

"If the period between twenty and thirty is the critical one in the formation of intellectual and professional habits, the period below twenty is more important still for the fixing of *personal* habits, properly so called, such as vocalization and pronunciation, gesture, motion, and address. Hardly ever is a language, learned after twenty, spoken without a foreign accent ; hardly ever can a youth transferred to the society of



his betters unlearn the nasality and other vices of speech bred in him by the associations of his growing years. Hardly ever, indeed, no matter how much money there be in his pocket, can he even learn to *dress* like a gentleman-born. The merchants offer their wares as eagerly to him as to the veriest 'swell' but he simply *cannot* buy the right things. An invisible law, as strong as gravitation, keeps him within his orbit, arrayed this year as he was last ; and how his better-clad acquaintances contrive to get the things they wear will be for him a mystery till his dying day."<sup>16</sup>

And now we find this work drawing to a close. Let me urge upon you that you read Dr. James's chapter on "Will" and the one on "Self," and if you intend to "teach more than this term," some of the work outlined along back. And with all this, how does Child Study benefit the child? It has opened the eyes of the world to the astonishing varieties and variations of childish tendencies and inclinations, to the rise of these various and natural inclinations at an age much earlier than most of us thought, in fact, it has proved that many of these are present at birth. It has shown how strong these natural tendencies or likings for certain subjects manifest themselves from the first before the leveling tendencies of our public schools have time to take effect. It has shown how boldly children will manifest tendencies, unless turned out of their natural course by artificial means. How many of the failures, the pains, and the sorrows of this world are directly chargeable to the system of bringing all childish minds under one form, to work all for the same end, however far that end may be from the child's natural bent? How much character has been dwarfed, how much intellect impoverished, how many hopes and ambitions destroyed by this system in which

the will and wish of the individual must be perfectly subservient to a set form ?

But the time will come, and that soon, when sound educators, whether parents or teachers, will adopt as their guide the principles and methods laid down by the results of the Child-Study movement that is so rapidly gaining our best men and women to its cause, for by its principles and methods alone can educators assign to the various actions and appearances of the child their right places in the vast structure of human development.

Ignorant of his past, ignorant of his real needs, ignorant of himself, man has blundered up the thorny path of progress for centuries. By following blind guides, pursuing wrong paths, mistaking their destination, millions have been hurled to their destruction in the perilous ascent. And how may we without knowing something of a child's characteristics, his tendencies, and his attainments, become safe and sure guides up this path of intellectual and moral development? Child-Study, the new science of education, steps in, offering the records of what the child has been and is, and the wise teacher reading the future by the unwavering light of the past, may confidently offer himself as the youth's guide and instructor, ready to conduct him by sure steps, upward and onward to the highest summit which his nature is capable of attaining. And who dares set a limit to that?

## REFERENCES.

## CHILDREN BELOW SCHOOL AGE.

|                                                                       |      |
|-----------------------------------------------------------------------|------|
| Psychology of Childhood, Tracy, D. C. Heath & Co.....                 | .90  |
| First Three Years of Childhood, Perez, E. L. Kellogg & Co.....        | 1.50 |
| Infant Mind, Preyer, D. Appleton & Co.....                            | 1.50 |
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| Senses and Will, Preyer, D. Appleton & Co.....                        | 1.50 |
| Mental Development, Baldwin, Macmillan & Co., N. Y.....               |      |
| A Study of Child Nature, Harrison, Chicago Kindergarten College...    |      |
| Notes on the Development of a Child, University of California Series. |      |

## CHILDREN OF SCHOOL AGE.

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| Moral Instruction of Children, Adler, D. Appleton & Co.....                                                                          | 1.50 |
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| Intellectual and Moral Development of the Child. D. Appleton & Co.                                                                   | 1.50 |
| Child Study, M. V. O'Shea (in preparation), D. E. Heath & Co.....                                                                    |      |
| Series of Articles on Child Study, by M. V. O'Shea, now (Sept. 1895) running in "Intelligence" (Chicago)                             |      |
| Series of Articles on Child Study, by H. K. Wolf, now (Sept. 1895) running in "North-Western Journal" of Education (Lincoln, Nebr.). |      |
| Thinking, Feeling, and Doing, E. W. Scripture, Flood & Vincent, Meadville, Penn.....                                                 | 1.50 |
| Studies from Yale Psychological Laboratory, E. W. Scripture, New Haven, Conn.....                                                    | 1.00 |
| Hand Book of Child Study, Ill. Society, Nos. 1, 2, each.....                                                                         | .50  |
| Child Study Monthly (Chicago) per year .....                                                                                         | 1.00 |
| Pedagogical Seminary, Worcester, Mass., per year .....                                                                               | 4.00 |
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