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Editorial

The Minister of Education:

WE EXTEND to the Hon. Joshua Hinchliffe our heartiest congratulations upon his appointment to the portfolio of Minister of Education in the "Tolmie Cabinet," and we assure him that he will have, at all times, our full support and co-operation in every endeavour for the advancement of education in our Province.

It is, perhaps, not generally known that Mr. Hinchliffe is himself a fully qualified and certificated teacher, and hence has first hand knowledge of teacher problems. Before coming to Canada he served four years as a pupil-teacher in Yorkshire, England, and after passing the requisite series of Board of Education examinations, received his professional certificate and served for two years as an Assistant Master.

Upon coming to Canada in 1890 he continued his education at St. John's College, Winnipeg, from which he graduated with honours. He was ordained a Minister of the Anglican Church, and as a missionary among the Indians of the prairies, became an expert in native languages. From 1916 to 1918 he served overseas as padre. In 1920 he was elected to the Legislature as a member for the city of Victoria, and shortly afterwards took up the study of law, being later admitted to the Bar. He is also a splendid musician. It will readily be granted that this career has fitted him in a very special way for the important work he has now been called upon to undertake.

Aside, however, from academic and professional training, Mr. Hinchliffe has personal qualities which we know will contribute largely to his success as Minister of Education, for he is well known

T. Minister of Education

The Hon. Joshua Hinchliffe

as a man of pleasing personality and sterling character with broad human sympathies. Always a student of affairs, he is eager and anxious to investigate and consider matters on their merit, obtaining first hand information whenever possible. Having reached conclusions, he has the courage of his convictions.

Since entering the Provincial Parliament he has taken a keen interest in educational matters, and has on many occasions expressed himself in the House on educational questions. Some of his criticisms have been given rather wide publicity, and many comments of an unfair nature have arisen in consequence. An important point that has been overlooked by those who have not been present to hear his remarks is that he has often voiced his approval and commendation of the many excellent features of our general education system, and further that he has consistently supported most warmly the various measures proposed by the late Government for improvements and extension of such system. It is pleasing also to recall that he has on many occasions, both private and public, paid sincere tribute to the many excellent advances accomplished by Dr. MacLean's administration of the Education Department, a tribute which he reiterated only a few days ago, when, in one of his first official acts as Minister of Education, he opened a new school at Haney.

From a Federation viewpoint particularly, he has naturally been consulted during the last eight years concerning the many educational questions arising in the Legislature, for in our Federation, as in education generally, we are not concerned with party politics. We felt that all parties would support a fair and right project and so we sought the aid of all parties. It is only fitting that we should record at this time the fact that Mr. Hinchliffe's attitude was all that could be desired, for he studied every situation thoroughly, asked for all information which would be of assistance in forming judgments, and

THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA

FORESTS AND RECREATION

THE Province of British Columbia presents a pageant of scenery unsurpassed in its charm and infinite variety, and its popularity as a recreation centre grows from year to year. Naturally, the increased volume of travel upon our highway and through our Forests brings with it an increased fire hazard, and while it is gratifying to note the greater use of the forests for recreational purposes, at the same time one cannot but feel alarmed at the frequency of fires caused simply by carelessness. It is unnecessary to labour the fact that our forests, in addition to being the mainspring of our prosperity, are also the basis of the many charms for which our Province is noted, and that without them it would be a much less interesting and pleasant place in which to live. Ordinary care—the same care as one exercises in one's own home—would have prevented quite seventy-five per cent. of the fires which ravaged our forests last year.

To bring about some reduction in the number of fires caused through careless camping in the forests, the Legislature of the Province last year passed a law under which it is necessary to have a permit from some forest officer before any camp fire may be set in any forest or woodland. Be sure to obtain your camp-fire permit; have it always with you, and pay strict attention to its instructions. The consciousness of doing the right thing will add materially to your pleasure.

To build a fire, select a place
On sand or earth or bare rock face.
But NOT against a stump, and NOT
Where trees or grasses may be caught.

And leave your camp site neat and clean
And show yourself a woodsman keen.
Burn up your garbage, and DO NOT
Leave rubbish round to spoil the spot.

Before you go, your fire put out
Beyond the vestige of a doubt.
Whatever else you do, DO NOT
Go off and leave the ashes hot.

then gave strong and unqualified support to those things which were in the interests of progress and rational development, at all times placing high value upon the considered opinions of those actually engaged in the work of education.

We are of the very definite opinion that Mr. Hinchliffe will prove to be a splendid Minister of Education, and that under his regime education in British Columbia will continue to occupy the high position which it has attained under the able administration of his predecessor, and as a result of the worthy efforts of the many who have given faithful and devoted services throughout the years in the various ranks of our educational army.

The Hon. J. D. MacLean:

We wish also at this time to record our sincere appreciation of the excellent services rendered to education by the Hon. Dr. MacLean, who for twelve years has presided over the Department of Education. During this time very valuable progress has been made, and a system of which we have every reason to be proud, has been built up. We owe much to the vision and broad-mindedness of Dr. MacLean, and we know that he leaves office with the respect, esteem and good will of the teaching profession generally.

Though we are aware of the fact that, after the phenomenal amount of time and energy he has given in the service of the people, with the consequent strain on his health, he is well entitled to retire from such service, yet we share most heartily the general opinion heard on all sides that his undoubted ability and experience should not be lost to the Province.

A Special Issue:

This issue is largely devoted to an account of a practical research experiment conducted in the Franklin School, Vancouver, and we wish to express our thanks to Mr. Elmer W. Reid and his staff for the opportunity thus presented. A very definite part of the Federation's programme is the conducting of experiments by teachers in the interests of our own educational advancement. There is a great opening for such work. Modern methods of education are changing rapidly. World-famous educators are producing new theories and a new technique of teaching. New tests are being evolved for our guidance. The fact remains, however, that these things may not be successful in our British Columbia system if simply adopted without consideration of local conditions. With modifications, they may be most effective; without such they may be misleading and harmful. Hence the Federation Education Committee has for some time urged our members to study, investigate and suggest ways and means of combining the theories of the experts with the sound common practice of the best classroom teachers, and to make the results of such studies available for general discussion and adoption, if and when proved to be of effective value to us here in British Columbia.

Mr. Reid's contribution is therefore timely and of great interest. The Franklin reasoning test, and the Conduct Form, used in connection with the experiment, will doubtless prove of great use to teachers generally. As individual copies are necessary to hand to the

pupils, we have arranged to reprint these in such numbers as may be required, and to supply them at cost to all teachers wishing the same. This is being done purely as a Federation service. We ask all desiring same to apply to the Federation Office at the earliest possible moment, when orders will be filled in rotation.

The cost, inclusive of mailing, will be: Franklin Reasoning Test, 5 cents per copy, with answers, instructions and possible norms. Conduct Rating Card, 2 cents per copy.

Senate Representative:

We extend to Mr. G. W. Clarke, of the King George High School, our sincere congratulations upon the honour conferred upon him by his High School colleagues of the Province, who have elected him as their representative on the Senate of the University of British Columbia in succession to the late Mr. G. A. Fergusson.

Mr. Clarke has long been active in Federation work, and has previously been accorded the distinctions of election as President and chairman of important committees. His success in these positions and his wide knowledge of educational needs and conditions afford ample assurance that he will carry out his new duties to the entire satisfaction of those who have signified their confidence in him.

The Canadian Teachers' Federation Convention:

The Canadian Teachers' Federation meeting in Winnipeg this year was one of the best ever held. A full report will appear in the October number of the Magazine.

Ramblings of Paidagogos

University Extension.

During the recent summer vacation,—now alas! only a golden memory—one witnessed again the annual exodus of our teachers to Eastern Canadian and United States universities. This recurrent event implies so much of self-sacrifice and of indomitable courage that it would inspire even a lesser muse than mine, for there is an element of the sublime in the spectacle of weary and by no means affluent teachers undertaking an arduous and expensive pilgrimage in the sacred interests of the higher learning. At the present moment, and here I can speak with feeling as well as authority, the great majority of our teachers are balancing with extreme difficulty on a financial tight-rope.

Let it be said at once and emphatically that this is not an indictment of our Provincial University. We are proud beyond measure of the young giant on the heights of Point Grey. The teachers of British Columbia are fully cognizant and appreciative of the excellence of our summer school, and of the special assistance extended to those of us who live on the Lower Mainland. But we shall not rest satisfied until it is within the power of every teacher in this Province to advance to an Arts degree in a reasonable time and without impoverishment.

The Twentieth Century has witnessed a tremendous enlargement of the concept,—University. Here, [illegible] every valuable human institution, progress and growth are [illegible]able, since there must be continuous adjustment to the needs of [illegible]anging world. No longer can a university limit its ministrations to those fortunate individuals who are within its four walls; the very term "extra-mural" is significant of the new outlook. Every year it is increasingly recognized that the constituency of a university is at least co-extensive with the boundaries of the political area which it serves,—that its obligations must keep pace with its dignity.

And I believe that a university is peculiarly obligated to teachers, since its paramount duty is to permeate every class of society with culture and the love of truth, and it is by teachers alone that this far-reaching work can be done. Of necessity, the faculty of a university is comparatively small, and it is only through the medium of the common schools that "a little leaven leaveneth the whole lump."

Lest I be accused of impractical idealism, let me hasten to say that I am fully aware of the considerable financial background of all this. Universities, no more than teachers, can render comprehensive service upon a diet of high-sounding phrases; and a full program of extension work should be based upon a specific government grant. But one may nevertheless point out that in at least one Canadian university, extra-mural students not only carry their own financial weight, but assist their Alma Mater in no mean degree to support its ordinary activities.

To the Young Teacher.

It is the time-honored prerogative of the old to advise the young, just as it is the traditional right of the young to reject the advice. And it is chiefly on account of the latter clause that I am emboldened to offer a few words of wisdom to the eager comrades who are entering upon their first campaign. Let me admit at the outset that this is a task which I approach with increasing diffidence year by year, since I,—together with my fellows of a venerable and less effervescent vintage—begin to doubt our wisdom when we are confronted with the world-weary omnicience of modern youth.

But perhaps young teachers, who have at least chosen a life of service, may still have a few unshattered ideals, may still cherish a few illusions, and so may listen with patience, if not with edification, to the babblings of the aged.

No one need enter the teaching profession with the idea of acquiring wealth of a material nature; even the highest positions in its gift are not rewarded with a tithe of the remuneration so freely given in other fields. Yet eminence in teaching in a very real sense brings its own reward, and this altogether apart from the modest competency which assures one of a whole coat and an occasional luxury. There is a spiritual wealth that comes from association with noble books, a social wealth that is derived from abundant human contacts, and an abiding wealth in the consciousness of self-abnegating service.

The one certain purpose of life is the development of character,

(Continued on page 43)

Reasoning From Trained Observation

An Educational Experiment Conducted at Franklin School, Vancouver, B. C.

By Elmer W. Reid

OUR very first word is an apology for presenting a treatise on education clothed only in the simplest of language, but it will cause our theory of learning, with the results of its practical application, to be comprehended readily by all who read. Mental activity, deep as feeling and wide as thought, which may express itself in the flash of wit, in the gleam of tears, or in the break of laughter, is analyzed and generalized by the psychologist into a cosmic significance and set forth with ponderous words into lengthy volumes that are as interesting to read as a lawyer's affidavit. The best preserved books on the shelves of a library are works on education. Nor do all of these authorities agree. So that if a critic informs us that our theory is wrong, we shall deal with him gently and tell him that as far as we are concerned, he is registered in the wrong school of thought.

To have left the followed course and to have plunged into the unknown seas of experimental education with a home-made chart and compass would lead us to expect the usual predictions of disaster that accompany the foolhardy, but the kindly interest evinced in our venture leads us to a deed of the utmost daring, that of publishing the results of our experiment with the good and just reasons that prompted its undertaking.

We have dug in our garden and found treasure. Digging is humble work and no credit is due us, for the discovery was bound to come to light sooner or later as a result of the new psychology, which has already been used in devising a system of testing human intelligence, but has not yet been applied to teaching. The findings of recent research logically demand a revision of subject matter and method in teaching, and, to be successful, it must be undertaken by those practically engaged in the classroom.

On the first of February, 1928, in the Franklin School, we divided a class of twenty-eight Grade IV-A pupils into two groups for the purpose of trying a new system of teaching. The average age of the pupils was 10 years 4 months. They were tested and paired by the Bureau of Measurements so that the groups should be as equal as possible in intelligence and achievement. They were classified by the National Intelligence Test, Otis Reasoning Test, Monroe Reading Scale and the Woody-McCall Mixed Fundamentals in Arithmetic. The Control Group, with thirty Grade IV-B pupils, was given to a very successful and conscientious teacher, fully interested in the scientific nature of the experiment and capable of teaching her class by the most approved modern methods. The Experiment Group, with thirty Grade V-B pupils, was given to an equally successful teacher who was desirous of trying the new method of Trained Observation.

The New Psychology

Because of their reverence for the human body, the ancient Greeks were so opposed to dissection that the greatest of their philosophers, Aristotle, himself the son of a physician, never understood that the brain was the seat of thought, but supposed that it furnished a fluid for moistening the eyes. Through the ages great thinkers have theorized on the laws that govern the working of the human mind, but what the mind and consciousness are has not been revealed to human understanding. However, the brain processes that control thinking are being explained as science advances. In the Great War, wholesale surgery laid bare the operation of nerves and nerve-centres and a new stimulus was given to the investigation of how the brain works.

So we have a new psychology which is physiological rather than mental, dealing with the brain processes giving rise to thought. In the brain there are millions of nerve-centres called neurones, each with a receiving end called an axone and a distributing end called a dendrite. Thought travels along well-defined paths of neurones, whose thread-like axones and dendrites are interlaced like the wires of a telephone switchboard. The stimulation of a neurone leads to thought, which, when received, tends to express itself in activity. This has been verified by delicate tests and measurements made in the laboratory. Thought can no more be stored in the brain without being used than one's voice can be stored in the switchboard of a telephone for use in the years to come. So the new psychology is sometimes called behavioristic psychology, because the process of thinking leads to expression in action or behaviour.

In a well-developed brain, the neurones have massed points of contact and the resistance is low between axone and dendrite, due to frequent transmission. Because thought tends to express itself in action, we can only think of one thing at a time, since our muscles can only co-ordinate to do one thing at a time. This may have something to do with the rise of consciousness.

Teaching Information

Every teacher honestly believes that her work consists in teaching a certain amount of definite information, along with such skills as ability to read, write and draw. And why should she not? Her own schooling was guided by that principle, the Normal School has trained her to impart certain information skilfully, the parents expect it and the School Course prescribes it. Confusing information with education is a barbaric blunder of which we have been too long guilty. Many take refuge in the saying that knowledge is power. True, if we understand that knowledge is not hearsay but experience; and notwithstanding all the advice that good old men give bad little boys, we can no more profit by the experience of others than we can work when nourished by the description of another person's dinner.

We have been pouring information into the minds of children, hoping that it might function in later life, but expecting it to vanish before the written examination is given for which it is intended.

Now we are told by those wiser than ourselves that there is no transfer of learning, that the mind is not a reservoir with storage capacity, and that knowledge is only retained by being put into use. Education is not built from memorized facts, remembered like a telephone number for ten minutes, but vague in an hour and vanished in a day. Education is training in how to use the mind and how to organize the habits of conduct. There is no use in teaching Johnny the rivers of China unless he uses those rivers today in contrast and comparison with a river that he has seen, thereby enlarging his concept of a river, or unless he is given a desire that will lead him some day to that mystery land through which they flow.

Trained Observation

What is Trained Observation? It is not the Montessori method of improving the senses by drill, for this has been gradually accomplished during the life history of the race. It is not an attempt to train children to remember all that they see, for while all the images of the outer world within the range of sight are recorded on the retina of the eye, actual vision is confined to those objects which excite our interest. Trained Observation is not visual education, which is the means of giving information through pictures, lantern-slides or motion-pictures. It is the process of reasoning about the activities and objects presented to our vision from the outside world.

The Art of Reasoning

Ever since the time when Socrates was forced to drink the fatal hemlock, the art of reasoning has been unpopular with the human race. A very few do the reasoning for the rest of mankind, because we have no system of training the masses to reason for themselves. We seldom venture a *"why"* and support it with a *"because."* Our actions are largely determined by what other people do. By the reasoning of a few do our people live, but how complete would be our lives if we were able to practise constructive thinking!

Take the farming situation in North America today. Nearly half of the people live on farms and they are having more difficulty each year in making a living. Farming experts, practical writers and impractical politicians are trying to find a reason for this calamity, but so far they have failed to discover what should be revealed by a few moments thought. Analyze the budget of any city family that has profited by the increase of wages. No so many years ago they would have spent nearly half their wages in food grown by farmers. Now the money that they pay for farm produce is the least of their expenditure. The income is spread out to meet the instalments on various luxuries which others in their circumstances are being paid to produce. Lighter labour has resulted from a universal use of machinery, so the working man eats less heavy food and his wife is dieting to retain her youth. Additional factors are the increase in farm wages, taxation, machinery and marketing expenses and the inflation of land values. Here is a vital problem affecting the whole country, but those only indirectly concerned scarcely give it a thought.

Reasoning from Observation

As living beings our problem is to live, first how to keep alive and then how to get the most out of life. Every day, from the cradle to the grave, we must regulate our activities to conform with our environment. We learn by doing and when action ceases, we are dead. Yet our school education is wholly from books. At six we start the child with a book and what we teach him about living is the printed word. It is not what children learn in school that gives them their real education, but what they learn out of school. The life of the adult is regulated by experience. In the morning a man does not take a book and seek guidance from it for his day's work. His success in life depends upon reasoning from observation.

The farmer notices the effect of the weather upon his crop. He observes the results of fertilizers upon plant growth and feed upon stock. General information from farm journals may be disastrous in application to his particular locality. Live and learn simply means that we learn by living. The doctor must see the patient in order to prescribe. It is useless to describe the symptoms, for he is a trained observer and must reason from what he sees. A college professor tried to describe a common flower to a botanist to ascertain its name. "Bring me the flower and I will name it," said the botanist. "Your description means nothing to me." Yet how often the teacher talks about something of which she has a concept and the children none! The mechanic is a trained observer in his particular trade. A carpenter looks at a piece of woodwork and sees how it is made. He knows at a glance whether a joining is square or true or even or straight. One can never learn how to drive an auto until he sits behind the steering wheel and the only way to learn how to swim is to jump into the ocean. At times we must close the books and take children into life situations and let them observe and learn how to act if our system of education is to fit them for living.

Conducting the Experiment

Let us return to the teaching of our Experiment Group. Certain questions must have risen already in the mind of the reader. Do we teach these children Trained Observation all day? Are they not to learn the ordinary school work? If Trained Observation is reasoning about life activities, is it possible that such young children can reason? Are the pupils interested in this work? Does the teacher find the method hard to teach? What results have been obtained after a half year's work?

The subject is taught half an hour daily. As it comprises Nature Study, that subject on which the Control Group spent fifteen minutes a day is absorbed and the other fifteen minutes are taken from the Arithmetic lesson, for Arithmetic occupies far too much time for its value in our school life. Special lessons in Trained Observation will be explained later, but there is such a range of material that there is little danger of the subject-matter being exhausted. The world was quite advanced in civilization before even simple articles were manufactured. Their properties are common to us through experience, but the mind of a child may be led through the stages of

reasoning that occupied the people who devised them in earlier times. So we not only teach all the other subjects, but by using Trained Observation in presenting them, the pupil receives training in reasoning and learns the subject better than by the usual method, as the tests have shown. Arithmetic, Spelling, Health, Reading and Composition as teaching subjects will be explained by the new method in the pages to follow.

Can young children reason about the activities of life? Thorndike says that children gradually learn to reason from the time they are six until they are twenty. He might better have said that they reason during the whole of conscious life, providing they have the proper data wherewith to reason. A Third Grade class, whose pupils were eight and nine years of age, was asked how the elevator man in a city office building knows when it is raining outside, and they gave the reason. Let us see how their minds worked in doing this.

One said: "The man looked at the weather carefully when he went to work in the morning." The teacher asked what was wrong with that answer. Here it is well to explain that in teaching children to reason, wrong answers must be analyzed to see why they are wrong, for in this way the children find the major premise by exclusion. A simple type of reasoning is to locate a knife which must be in one of five places. The reasoning process is called a syllogism, which consists of a major premise, a minor premise and a conclusion. Determining that the knife must be in one of five places is the major premise, not finding it in four of the places is the minor premise and the conclusion is that it is in the fifth place. In all scientific reasoning the major premise is built up by induction or experimentation.

Let us return to the elevator man. The answer was wrong, they concluded, because the weather might change during the day. Another said: "He might go to the door and look out." The class discarded that answer, because the door might not be in sight, and he has not time to go to the door. Then they got the major premise, that the rain must come in to him, since he did not see outside. The minor premise was also hard to determine: How did the rain come in? They found it. People came into the elevator from outside. Then the conclusion followed, that he saw the rain on people's clothing. We have followed how their minds worked in the syllogism, but only the conclusion to the steps of reasoning was expressed by the children.

A wooden pail is held up before the class and books are put away with pleasure. Here is something that they know about, have an interest in, and recognize as part of their life environment. Why is the pail round? Why is the top larger than the bottom? What should it hold when new? When old? What is its use? How is it used in the country? How is it used in the city? How should it be be shaped for use in a well? Why is it not all made of wood? How are the hoops fastened on? How is the bottom put in? Why could it not be nailed in place? Is the graining outside a special way of painting or native to the wood? From what kind of wood is it made? In what ways is a wooden pail better than an iron one? In what

ways is an iron pail better than a wooden one? How could you fill a pail exactly half-full of water? No answer is accepted unless in terms of reasoning, and we always ask: "How would *you* do this?" The pupil must put himself into the situation and not the indefinite *one*.

Why are the children so intensely interested in such a lesson? So interested, that when they discovered that the pail was made in Vancouver some went to the mill and brought back staves for the class to see the notch, which they reasoned must be at the bottom. They are interested because it is part of their magic world of sight, sound and feeling. How alive young children are in this wonderful world! There is mystery in the shadow, wonder in the cloud and a thrill of adventure in adjusting themselves to every new condition of their surroundings. A world of magic to the child, but commonplace to us, because we have sold our birthright of enquiry and have never learned to investigate the world more fully. Here are the major premises reaching down to us that we might attain great heights of thought, but we are occupied with the petty things of life. We see the great mountains on the horizon and think that we know them, but how can we understand the spirit of the mountain until we climb its sides? We must look down yawning chasms, and fight for a foothold, as the ledge tries to hurl us below; we must gain a new conception of altitude, space, shadow and gloom. We must be separated from all human help and conquer solitude. Then we know the spirit of the mountain. So we must educate ourselves before we can educate the children.

Are the pupils interested in this new work? They have long ago passed the stage of being merely interested, they are thoroughly concerned. A boy who had always been indifferent and a problem to his teachers came after school of his own accord to say that he liked the new kind of teaching, and his work shows it, although he had never been told that it is a new method of teaching. There is never a day but the class reminds us of lessons undertaken weeks before, but never finished for want of time, as there is so much to investigate in the world about us. "Will you not ask us some more questions about the saw?" one asks. "I found how to measure the width of the teeth by the cut." When a young child bears a sustained interest for days in one of the many things about him, should not such a system of teaching over years lead to an alertness of mind and a desire to investigate that would need a new order of teachers to keep in advance of the pupils?

In looking over the evidence of the experiment carefully, while we are impressed by the finality of the standard tests, we are more enthusiastic about the interest shown by the children. For attention is fleeting and impressions vanish when interest is lacking. In teaching information that cannot be applied immediately in life situations we labor in vain, as one seeking content by pouring water into a sink. True knowledge is a tree that grows by self-activity, the stimulus is from within and not from without.

A new type of discipline and class control develops with the new

method. In the days of slavery, the wild captives were rendered submissive on the voyage across the Atlantic by being starved in the hold of the ship. The majority of pupils in school are passive because there is little to interest them in the lesson, so they are making plans for the moment when the release comes. Recently during a very instructive lesson, all eyes were fixed on the teacher, when he asked the pupils to assist him in his experimental work by each telling in turn what he or she was thinking at the moment. With that charming frankness displayed by children, before sincerity is alloyed with caution, they revealed the most amazing capacity for thought far remote from the lesson. The girls had been thinking about the teacher's necktie, the dresses worn by the other girls, the descent of a spider from the ceiling and a recent motion-picture drama. The boys were making plans for baseball, wondering about the prospects for dinner and the weather for Saturday. When forty children suddenly realize that the lesson is concerned with something that they have already formed ideas about, their enthusiasm is unbounded, but they soon learn that a reasonable answer is not always the first that comes to mind and that quietness is necessary for careful thinking. Every visitor to the class has kindly remarked about the tone of the room, and the teacher is as interested in continuing the method as the children themselves are.

Before announcing the results of the tests, it is necessary to devote a space to the nature of intelligence and the scope of intelligence tests in order to interpret the findings correctly.

The Nature of Intelligence

Intelligence is the activity of intellect, and in discussing its nature we are not concerned with the essence of mind, the thing in itself, which occupies the field of philosophy. Our domain is limited to how the intellect performs and this is embraced in the nature of intelligence as it is manifested in expression. A commonly accepted definition of intelligence is the ability to learn. If we add to this the ability to learn from experience, the definition is sound. To borrow from others and to report what they say is not a mark of intelligence. Spearman's idea that intelligence is manifested in the power of eduction, which is the ability to compare and differentiate the facts that are examined in building up the major premise of a syllogism, is strictly correct, because it simply means that intelligence may be gauged by the ability to reason.

It is commonly accepted that the activity of intelligence increases regularly from birth to the age of 14 or 16, when it becomes permanent. The different degrees of intelligence or the range of thought is determined largely by heredity, but the quality of thought varies with the subject-matter with which the mind is concerned. Herein lies the hope of education. None of us are functioning to our full capacity. An active brain is always active, even though it be concerned with trivialities, so that the content of thought is permanent in quantity but variable in quality, which quality depends upon the reasoning involved.

How can this quantitative latent ability be measured? No certain and sound way has yet been devised, because of the difficulty of separating it from achievement, which depends upon interest. If a child is not interested in reading and has not become acquainted with a wide range of words, he scores low on most group intelligence tests. So there is at present no way of measuring innate intelligence. A child of inferior ability can be trained to reason so that he will score higher on a reasoning test than a child of greater potentiality.

We are led to the following conclusions:

1. That while Intelligence Tests do not separate the quantity of intelligence from achivement, they are of immense benefit to the teacher in comparing the ability of the pupils and to determine whether a certain pupil's daily performance is commensurate with his ability.
2. That the Stanford-Binet as an individual test is far more trustworthy than a group test.
3. That the quantity of native intelligence depends upon heredity and is largely constant, but the quality of intelligence is variable and may be improved by education in reasoning.
4. That the Intelligence Quotient derived from a group test is unreliable and variable, being really an average of certain achievement quotients.
5. That we need a Reasoning Quotient which would indicate native ability in the uneducated and correct education in those trained to reason.

The National Intelligence Test

In the terms of this argument, let us examine the evidence from the findings of our experiment. The pupils in June were given, by the Bureau of Measurements, different forms of the same standard tests that were given at the beginning of the experiment in February. On the National Intelligence, every pupil in the Experiment Group raised his or her I. Q., the greatest increase being 28 and the class average 9.5. This must mean an increase of some sort, but of what nature? We must proceed very carefully and not jump at conclusions. It cannot mean that the pupils in five months have a greater intelligence range by being taught to reason, for there is very little reasoning in the National. Two of the tests are on achievement in language; the test on arithmetic is not a reasoning test, for the first half of the questions are those given to six-year-olds and the second half are difficult type problems, one is a knowledge test and the other is a concentration test.

The result can only be interpreted to mean that by being taught to reason by Trained Observation, the pupils are more alert, have improved the quality of their intelligence, have a greater interest in their work, and have gained skill in language by being taught to compare and judge words by the observation method. The pupil who increased his I. Q. by 28 is the boy who was lazy and is now interested in work. It is also safe to say that theNational Intelligence, while not a test of intelligence, is a splendid test of knowledge and of achievement in language and requires ability to perform.

A Special Experiment

A special method of teaching was used for the most difficult case in the Experiment Group. The dullest pupil was a girl whose I. Q. in February on the National was only 81. She had been a problem to her teacher, as she seemed to grasp very little of the work and was unresponsive. Since thinking leads to activity, we thought that activity might lead to thinking, so we gave the girl tasks to do that demanded thought. She was sent to the office to find and bring back three books whose names she was to remember. There are two doors to the office, so she knocked on the nearer door, met with no response and returned to the class. Her problem was referred to the class and she was advised to try the main door. When admitted she had forgotten the names of two of the books. The books were in a case in the outer office, which is quite dark without the electric lights, so she gave up her search because she could not see the titles of the books and again reported to the class. Completely disgusted, they told her to turn on the light. When she again appeared with this illuminating information, she had forgotten the name of the book.

We were not discouraged and the teacher gave her difficult errands to perform each day. In a month she seemed like a different child, for she gained confidence in herself when she remembered her tasks, took part in class discussions and was able to do errands for her mother at the store. Her I. Q. according to the National in June was 95. On the first of March her I. Q. on the Stanford-Binet was 83. This individual test is the most reliable and we are anxious to see how she responds to it in March of next year.

Results of Other Tests

The Otis Primary Form A Test, which depends very little on language, should not be used beyond the Third Grade, as Grade IV pupils make perfect scores on many of its parts. The Experiment Group gained 30 per cent more on this test than did the Control Group, but no interpretation can be placed on the result. Two girls in the Control Group raised their I. Q.'s by 18 each on the National, while the rest showed a gain of one per cent on the average.

When the classes were paired in February, the Experiment Group was ten per cent behind the Control Group on the Woody-McCall Mixed Fundamentals in Arithmetic. In June the two were even on another form of the same test, although the Experiment Group had fifteen minutes less Arithmetic daily. On the Monroe Scale Arithmetic in June, the Experiment Group averaged 36 and the Control Group 33. The latter test is far superior for this grade to the former, because it deals only with the four fundamentals on a time basis, while the Woody-McCall works into fractions, decimals and compound numbers.

On a form of the Monroe Reading Scale for comprehension, in February the two groups totalled the same number of marks, while in June on another form, the Experiment Group totalled 118 and the Control Group 109. All these tests have shown that the group taught by Trained Observation has gained in the ordinary subjects. Before showing how these subjects are taught by the new method,

brief mention should be made of our attempt to measure the performance of the Experiment Group in reasoning from life situations, since we advocate this as the most important part of education. A special test was devised for this purpose which we are naming the Franklin Reasoning Test. The use of this test, first for testing and then for teaching, will be referred to in different lessons to follow, while it is published in full at the end of this discussion. On a modified form of this test, the Experiment Group scored forty per cent more than the Control Group, made higher than the class a year ahead and tied with the Grade VIA class two years ahead.

The Doctrine of Interest

Before we open the school-room door and let you see how we teach by Trained Observation, let us impart to you the great secret that helps to make this method successful: "the teacher *must* be interesting." A teacher who has not a keen sense of humour is like a machine without oil. She feels all the strain of life because she has no shock absorbers and her attitude does not invite the confidence of children. There are teachers who are interesting and brilliant outside the school, but they put on an intellectaal mask at nine o'clock and could write all day with an icicle. If you have that saving sense of humour, be natural, but do not assume it, for then the effect is ghastly.

To interest the children a teacher must be sympathetic. A patient must have faith in the doctor or he cannot be cured and the child must have faith in the teacher or he cannot be taught. The two must be joined by the magic bond of sympathy, which soothes the little heart almost breaking or senses the delight that would invite confidence. Every week some pupil in the class has a birthday, when a word of felicitation from the teacher would never lead the pleased child to guess that the information was obtained from his record card. The writer is even pleased when the insurance company remembers his birthday, although they have a good reason for wishing many returns of the same. There is often sickness in the home, and then a word of enquiry or sympathy is appreciated. A new pupil in the district is often as lonesome as the Exile of Erin, but finding the child a new companion may form a triangular friendship without reproach.

An interesting teacher has the pupils decide on the right conduct without being ordered to do so. An illustration will suffice. When the new report cards are to be taken home for the parent's signature, one can hear a teacher saying: "Whatever you do, don't dare to touch these cards with your dirty hands. Now I know that some of you boys are going to lay them down when you play ball and step on them before you pick them up. Don't let me catch anyone handing in a soiled card tomorrow, and another thing——." And if two or three boys, who never thought of it before, do not step on the cards it will not be the teacher's fault. Can you hear another saying: "Do you know that a boy once went to a big firm to apply for a position when he left school and the manager said, 'Have you any way of showing that you are saving, careful, thorough and thoughtful?'

The boy rushed home and got his report card, which was clean and showed good marks in work and conduct in school. He secured the position and became an important man of business. I would rather see you come tomorrow with dirty faces than with soiled report cards. Why?" The children find the answer, that their faces could be washed and the cards could not. Then she asks how they could carry the cards back and forth without touching them. They decide to place them in their books and in doing so take pleasure in carrying out their own plans.

A teacher that makes the school a place of interest never discourages a child by telling him that he is stupid. The line between success and failure is often a hair's breadth and lack of self-confidence accounts for many of the skeletons by the highway of life. The unpardonable sin in teaching is to tell a child that he is stupid and in this we have all transgressed and have come short of the glory of unbroken faith. The inferiority complex, that keeps so many from high and noble attainment, usually has its origin in school. The teacher who has not the purpose to inspire the children to noble endeavour by giving them faith in themselves is a hireling and not a true teacher.

A skill which gives a teacher great power in interesting a class is that of blackboard illustrating. When teaching, if one is able to take chalk and sketch as he talks, keen eyes observe every movement. Diagrams, cartoons, animals and objects appearing in chalk at the right time are of the greatest assistance in any lesson, but particularly so in one on Trained Observation, where errors, similarities and differences all lead to reasoning. A course at Normal School should be provided for this important work and also at the Summer School for teachers.

An interesting teacher has the power of taking the children to great heights of enthusiasm and appreciation which she herself feels. A teacher once taught a lesson about a railway train. He had never outgrown his boyish enthusiasm for a locomotive and always felt that he should have been an engineer instead of a teacher. It is often so, and many a mild-mannered man behind a counter is in thought sailing the seas as a pirate, which does him no harm unless he mixes his dreams with his business. The teacher first sketched an engine on the board and then drew reasoning from the class, such as how one could tell an engine that had just brought in a train from one that was ready to start out, how high the water had to stand in the tank and the use of signals. Then he made the engine live as a giant, panting and throbbing with life, eager or tired, feeling the urge of the passengers' haste yet fearful for their safety. He told how the great overland draws into the station on a winter's night, piercing the darkness with its fiery eye, shaking the earth and pouring out hissing jets of steam, as with its increasing roar rising to a great shriek it rushes past the waiting crowd on the platform, with the engineer riding high, and certain of his control.

Then he told how he would like to be waiting with a fresh engine to hook on (the children saying how the passengers would know of

the change) and how he would drive on through the night and the storm, while the passengers slept without a thought of danger, because they had faith in his skill. He told the children that he felt that some day he might go and learn to be an engineer and if he did not ring the bell some morning, they would all know where he had gone. After the lesson every boy wanted to be an engineer and when holidays came, two little girls came to say good-bye to the teacher as they fully expected he was going away to be an engineer. Their simple faith in his sincerity was the supreme test of the lesson.

Arithmetic

There is a general feeling that too much time is spent in teaching Arithmetic. It occupies the first and best hour of the day, when half an hour should suffice. Much of the teaching during the long period is dreary and profitless. Think of the time wasted in the teaching of fractions, when these could be easily mastered after the children are old enough to understand them. How often in business does one use H. C. F. or division of fractions? Addition, subtraction, multiplication, division and percentage are the most practical uses of Arithmetic, particularly addition. The loss of a little money through making a mistake is the surest way of learning to be exact, in fact, only one lesson is needed.

Arithmetic could well be made a reasoning subject, but the way it is commonly taught places it with memory work alone. This is a very sweeping and heterodox statement, so we shall support our claims with just reasons. A type problem is a reasoning problem the first time it is taught, but when it is repeated and drilled until the pupils are familiar with it, then its solution becomes a feat of memory. When the children see a list of problems on the board for a written examination, they try to remember when they were taught problems of the same type. All their effort is spent in trying to recall the type instead of trying to solve the problem. The same type of problem should never be repeated until the pupils have had time to forget the former one.

Why are children so inaccurate and varying in Arithmetic, when they know their multiplication table and the dividing process? It is because they lack the power of observation. From careful checking over a number of years, we estimate that, beyond the Fourth Grade, 30 per cent of mistakes are due to illegible figures and improper spacing, 20 per cent to actual process mistakes and 50 per cent to lack of observation. It is just as important to teach children how to make the nine digits properly as it is to teach them how to write the letters of the alphabet correctly. In Arithmetic, definite training should be given in observation work. On the board place a division question in which a pupil has made a mistake and let it be found by the class. This is important training with a definite transfer to business situations, for when a man divides, he glances over his work to see whether he has made a mistake. If he has made an error and does not see it, he must either lose or make an apology if the mistake is to his credit. Next let the children find how the mistake was made. It may be 7 x 8, with the wrong figure carried or the wrong figure

brought down or the subtraction left unfinished. Such an investigation, regularly conducted, leads the pupils to an awareness that eliminates such mistakes. After one such lesson a Grade Six class increased its score by 56 per cent. A multiplication or division question containing a mistake should be placed on the board every day as part of the general scheme of making daily a change in the location of some article of furniture for the children to notice.

May we give the first lesson on area as an illustration of reasoning in Arithmetic? The Experiment Group had been taught perimeter and needed a knowledge of area for observational work. Without mentioning square inch or square foot, the teacher drew on the board two rectangles about the same size, but one longer than the other. The opinion of the class was divided on which was larger, so they expressed a desire to measure them. They measured the perimeter of each and decided that the one with the greater perimeter was the larger. The teacher then drw a very narrow rectangle, obviously smaller than the others but which the children found had a greater perimeter. They then reached a real conclusion in inductive reasoning that their system of measuring was wrong, and were asked to plan a unit that would measure the figures. They wanted to cut paper the same size as the rectangles so that they could work on them at a table—this from girls with a dress-making tendency. Do you not think that these children are different from others when you learn that they sat in their seats for twenty minutes studying the problem? When one had an idea, he would go to the table, cut out a unit, try it, discard it and then resume his seat for more thinking. When the time had expired, three children were cutting out square inches. Had the ones that sensed the general idea, but failed in getting the best unit, gained anything from the lesson? We believe that they gained an immense benefit by following the reasoning process, even though they did not reach the conclusion. Did you ever search through the house for a lost book, examining every hole and corner, cupboard, drawer and hiding place from basement to garret and fail to find the lost book, but in the process of searching discover your lost rubbers and several valuable letters and documents? As long as a child is occupied in solving a problem, he is gaining power in reasoning.

Spelling

We have had a new gospel of Spelling which will lead to that complete state of freedom where each individual will spell as he sees fit. Beside the slight drawback of others being unable to interpret one's written thought, the system lessens the reader's comprehension in the same degree as he deviates from standard spelling. This new gospel is based on the assumption that one does not need to be able to spell the words that he reads, but only those that he may need to write.

After the pupils had ben given the Monroe Scale, they were tested in spelling the hardest words they had read. There was found a distinct correlation (.64) between comprehension in reading and performance in spelling. A generation ago, the letters were taught

first and then the words were taught from the letters they contained, a very slow process, which was discarded for the better system of teaching the children first to recognize the word as a whole. This idea is now extended in primary work to the teaching of word recognition in groups, but it should be followed with the system of teaching the children by Trained Observation to notice how these words are constructed. When a child sees a word that he does not know how to spell, he sounds it mentally, and since it is not quite familiar, he hesitates, loses the context of his reading and experiences a disagreeable sensation because of the unfamiliarity of the word.

True in the present system the children are taught to spell a small list of words, which to them are "Spellings" that need to be closely observed, but all other words can be neglected. Why should children mis-spell easy words that they have seen hundreds of times? It is because they are not given definite training in word observation.

On the list of words from the Monroe Reading Scale, the Control Group in February spelled correctly ten per cent more words than the Experiment Group. The Control Group was taught the regular spelling lessons in a very thorough way, as the test below will indicate, while the Experiment Group during the half-year was never taught a regular spelling lesson, but was asked to observe all the words in a paragraph or on a page as a lesson in spelling. They found the words most alike and most different to train them in rapid word recognition; they took a word like "move" and learned its relatives, remove, movement, moveable, motion, promotion; they took the letters of a word like "basket" and made all possible words from them; they spelled new words from hearing the teacher pronounce them; and they supplied missing letters to words on the board, as s .. .. son. By every possible device they were given an interest in the appearance of words.

In four months the Experiment Group was able to spell 20 per cent more of the words from the Monroe Scale and 32 per cent more from the Thorndike List than the other group. Then the hardest words were taken from those the Control Group had been taught to spell during February and March and these pupils made an average of 90 per cent, which showed very careful teaching, but the Experiment Group spelled 83 per cent without having been taught these words at all. When the mis-spelled words were examined, it was found that the Experiment Group did not make such serious mistakes as did the others.

Oral Composition—Dramatizing Life Situations

A woman calls on her neighbour to borrow a dollar, but is unsuccessful. This is one of many in a series of life situations, which the children act to teach them good enunciation, correct language, clear thinking and observation. If education is to train us how to live, then dealing with life situations has a distinct transfer.

Two girls act the scene and the class observe and criticize while the action goes on, so that it may be corrected and repeated if necessary. The front of the room is the home, a chair on one side is the door. The caller knocks and the hostess from the centre of the

room says "Come in." But the lesson is stopped by one of the class, who explains that the hostess should go to the door. Before the visitor is properly admitted, many adjustments are made. The hostess adds a touch of reality to the scene by telling her children to keep away from the door. The teacher pauses here to have the pupils decide on the proper conduct of children in the home when a caller arrives. No wonder that the parents have discovered and appreciate the fact that we have a new system of teaching! "Hullo!" is not accepted by the class, but they decide on "Good morning, Mrs. White" as the best form of greeting a neighbour. When they are both seated, a conversation follows in which each tries to outdo the other with her list of ailments. The teacher here stops the talk to have it criticized by the others, who decide that one's ailments are more interesting to one's self than to others. As different pairs acted the scene, various reasons were given for wanting the money. The class would not accept the one for wanting to buy tickets from the milkman, because a woman would not sit down in a neighbour's house and ask him to wait.

Other situations are: A boy asking a lady for a subscription to a daily newspaper, arriving home from the theatre to find the house robbed, inviting a neighbour in for the evening, a boy asking his father to buy him a bicycle, and making a purchase at a store. There is no doubt about the benefit of this kind of work, but it was found to be the hardest type of teaching, especially before visitors. We feel that the topics should be assigned ahead to give the children time for preparation.

Written Composition

The different types of exercises used to aid the children in writing correct English are given below. To ask the pupils to write a story that has been told them is a good exercise twice a month. We endeavoured to mimeograph the best efforts in the form of a little magazine. This novelty excites great interest in the children and calls forth their best efforts, but a school needs a good machine for this work.

Types of exercises for Trained Observation in Composition:

1. Write a paragraph on the board without any punctuation and let the children divide it into sentences and punctuate. It may also contain two or more mis-spelled words for correction.
2. Supply the missing words: A man .... lost .... could not .... his .... in the .... so he .... until .....
4. Use the words Spring, tree and sugar in a sentence.
4. Supply three words each to rhyme with face, hour, hope, etc.
5. Give words to mean time that is to come, not getting a thing done, something that cannot be done, etc.
6. Supply the right word: (a) Of the two, John words the ..... (b) He has done his work .....
7. Write a sentence ending with ..... because he had forgotten the day of the week.
8. Rearrange these words into a sentence: Yesterday where the children are who were here.

Silent Reading

Silent Reading should not be undertaken to see how fast the children can read, but to give three distinct results, to allow the pupils to find the meaning of the selection, to lead to reasoning and to start new trains of thought. To train ability in the first two of these a good exercise is to write a paragraph like the following on the board for the children to observe:

His son got all this money; and he lived merrily, going to the masquerade every evening, making kites out of dollar notes, and playing at ducks and drakes on the seacoast with gold pieces instead of pebbles. In this way the money might soon be spent, and indeed it was so. At last he had no more than four shillings left, and no clothes to wear but a pair of slippers and an old dressing gown.

What would be a good title for this story? What two people are told of? Why do you think that the son did not earn the money? Where did he get it from? What was told about in the paragraph before? How did the son spend the money? How many separate possessions did he have at last? What do you think he did? What kind of a young man was he? Why did he value the money so little?

All literature is sacred or profane. It is sacred if it inspires us to new trains of thought. There is reading for children, and it is our duty to find such, whose possibilities have only begun when we think that we have the author's meaning. There is magic in this sacred literature, for it has the power to give each reader a different idea, and encourages the children to give scope to their imaginations. When I read with the class the story telling about the lad in Holland who loved the sea and went aboard his ship on his first voyage, I tell them the picture I see not described in actual words in the book, of red tiles and tulips and queer little people in queer wooden shoes, of the mother washing, mending and packing up her boy's few clothes, of the meal she prepared while he was sleeping, of how the brothers and sisters stood by to see him eat for the last time at home, how eager he was to leave and then the sudden anguish that swept over him when he looked on his home for the last time, and the broken farewell with his mother at the door, for she would not go to the ship, but would hide her grief at home, as mothers do. Then I would ask the pupils to read another paragraph and tell what they saw that was not directly told. If you strike the right chord, you will teach the children to appreciate the best in reading.

Trained Observation

In the preceding pages we have told how we use Trained Observation in teaching the ordinary work. We still have to deal with the exact teaching of Trained Observation during the half-hour daily lesson as it appears on the time-table. Beside the regular lessons, some time is necessary for the projects that the children undertake and report on as well as the matters of concern, which they daily observe. Their investigations out of school enrol their parents in a sort of University Extension Course. Each one of the ninety ques-

tions in the Franklin Reasoning Test at the back serves a triple purpose. They test and measure the child's ability to reason, they furnish a lesson in Trained Observation and they serve as types that admit of indefinite multiplication. Let us consider number 20 (on the hat) and number 41 (on the lobster).

The Felt Hat

After considering how felt is made and the story of the Australian rabbit; after having the class answer why a sailor does not wear a hat, how a man is certain of his own hat when he leaves a restaurant, how he knows the colour his hat was before it faded, and a dozen other such questions, the teacher asks the pupils to observe which is the front of the hat when both ends are the same. They will decide that the bow on the band is the determining factor, but they will not agree on which side it should be. Now we come to a very important point. Shall we tell the child or teach him how to gather the information himself? We put the matter squarely to the children. One says, "I will ask my father tonight," but the class will not agree to that, for they have learned the great [illegible] of inductive reasoning, that they must never be told what they [illegible] find out for themselves. So they decide that they will look at hats as they are worn and learn in that way. The teacher then asks, "If you see a man wearing his hat with the band on the left side, are you certain then?" They reply, "No, because he may have made a mistake." "What will be necessary?" "We must see a large number of hats worn and then decide." We noticed that afternoon a little girl of the group, who lives across the city, when she entered the street car, walking up the aisle and pausing at each seat to look at each man's hat. Do you not think that such training over a course of years would raise the quality of thinking?

The Lobster

If you want an interesting day in school, buy a lobster, tie it to a board and teach a lesson on it to half a dozen classes. In theory, one could eat the lobster for dinner and reduce the cost of the lessons, but at the end of the day one will not. The lobster is the pirate of the seas and from its build, the children can reason how it seizes and holds its prey and how it is protected from its enemies. From observation the pupils may reason how it walks on the ocean floor, when its legs are too weak to support its body on land, why it has teeth in one claw and pincers in the other, why it must moult in order to grow, why its eyes come out of its head and turn round, why its feelers are so delicately fine, and why the eggs are glued to the body of the female. A similar lesson was given next day on the salmon to a Grade VII class without a drawing or specimen for observation. Three weeks later, a test of twenty questions was given on each lesson. The class averaged 18 per cent. correct answers on the salmon, but 68 per cent. on the lobster.

The Heart of Youth

There is magic in childhood that knows no law and heeds not the rulings of fate. It is eternal hope, enriched by the treasure of time.

The bright eyes of youth see beyond the narrow present to the glorious expanding future. Their soaring spirits rebound from depressing conditions at home and unwise instruction at school. With no great passion for truth, no certain reason for their activities, and no desire for usefulness, they yet sense and appreciate all that is truly great and sublime. They fail, they falter and stumble, they picture misery at its depths, but hope ever carries them onward. The pain of the past is soon forgotten and only the pleasant endures; that is the blessing of childhood. Had a teacher but the gift of a seer, so that he could portray an audience with his young pupils thirty years hence, sending over the wide world to summon them back, some from their failures, many from commonplace duties, and a few from their fields of leadership, would he not feel that he was unworthy to address such a gathering? Would he not long to have them back as little children, that he might have a greater admiration for genius and a stronger sense of responsibility for guidance? Weary teacher, be thankful at night for the privilege the day has brought of watching youthful faces manifest the growth of intelligence; happy if you have directed their enthusiasm and shared their inspiration, for then you have felt the throbbing pulse of the mystery of life, the eternal hope in the heart of a child.

This is the picture of a bright little girl in the Experiment Group, whose I.Q. is between 150 and 160. She is only nine years and two months, yet she answered 64 of the 90 questions on the Franklin Reasoning Test. In June on form 2 of the Monroe Reading Scale she was first in both groups, having made a perfect score. She expresses the traits of gifted children in having unbounded activity, great concentration, keen observation, and a lively interest in everything. Her special ability is histrionic.

Teachers I Have Known

May I introduce to you a teacher who was great but not famous, and who was rich in good deeds but poor in worldly goods? His

technique was deplorable, his discipline variable and his judgment often at fault, but his passion was to inspire bright pupils to succeed in getting an education and using it for the benefit of mankind. He was principal of a village school and taught every subject on the High School course. Nearly every family in the district owed the success of an educated son to his influence. I can picture him now, a man of over forty with snapping black eyes, unkempt hair and black beard, with necktie almost undone, stamping up and down the aisle, bending a Virgil doubie in one hand and waving his other hand in gestures which caused nearby pupils to dodge their heads, while he declaimed about pius Aeneas. He never knew what went on behind his back and overlooked many short-comings, but when he was finally certain of a miscreant, the retribution that followed was swift and terrible.

In summer he worked his small farm one mile from the town, so the school year began when his early apples were harvested. The first morning of the term was always an eventful one. Many young men from the surrounding country, seeking academic honours, came to be enrolled, while the hardened lads of the town were there to plan mischief for the coming winter. On the dot of nine, the teacher would tie his horse to the fence, and pause outside the school door. Here was an historic gymnasium bar where the youths exercised, and here he would hand his black derby to one boy, his silver watch to another, his loose money to a third and his coat to a fourth. Then he would spring up and seize the bar, chin it twelve times, cross over through his hands, rotate several times and then hang from his legs. Several of the town boys would now change their plans for the winter's amusement in school. Although school stopped at four, he still kept on teaching any who wished to remain, and many did, for he had great skill in getting them through almost impossible examinations. Then he would depart with the last boy, walk with him to the post office, eagerly undo the newspaper and read it most of the way home. On arriving at his farm, he would pause at the gate and remember that he had left his horse tied to the school-yard fence.

Once at recess we broke into a nearby orchard and stripped a tree of apples. It happened that the owner was sick in bed or we would not have done it, and that he was poor, which did not occur to us. Our teacher told us that we should have brought apples and given them to him, instead of stealing from him, so next day he brought a bushel of the same late variety of apples and poured them under the tree. He never spoke of a pupil as being stupid or bad, but held to the good in him with unwavering trust.

At times, after school, he would join the boys at rugby football. Throwing his hat and coat to the winds as he entered the fray, he would join what he thought was the weaker side. By working in, he would seize the ball, knock every one down before him and dash for the goal. Finally he would be brought down with half a ton of boys on top of him, but even then he would succeed in making his way, inch by inch, on his hands and knees until he secured a touchdown. Then after repairing his clothing he would be told that he had scored in his own goal, to prevent which his own side had tried to hold him

back. This information would inspire him to a lecture on the fact that it is not what you do in life that really counts, but how you do it.

When I last heard of him he was still teaching, for such men die in the harness. Rare old L. D.! When your time comes to pass on, if St. Peter keeps the marks on the High School examinations, along with his other records, you will be entitled to admission for the pupils you have passed; and though you have totalled a big score on the credit side of noble example, yet even the Keeper of The Gate will have difficulty in detaining you, if you have made up your mind to enter!

Trained Observation in the First Three Grades

Trained Observation has a regular place in the first three grades. At present, too much time is being spent in Grades I and II on the mechanics of reading instead of using some time on the mechanics of thinking. Word recognition has become a fetish with us in the primary grades. Huey has the support of other great authorities when he states that little reading should be done by children until they are eight. The trouble with our system is that children lose interest in reading at about the time they should begin. A Grade I class was reading about the Country Mouse and the Town Mouse. A full page picture of the two was given, but only one pupil knew the mice apart. He said that the one dressed up was the city mouse, because it said on the page before that the city mouse took off her coat when she arrived. It is far better that these small children gather thought from their reading than to be able to pronounce and recognize empty words. Next year we expect to conduct an experiment on this phase of school work.

In Grades I and II we shall use Trained Observation to teach the need and meaning of words, and the need should come first. The children should feel different surfaces to understand the words soft and hard, smooth and rough. They should have daily lessons in comparing objects as to size, colour, weight and construction, telling how they are alike and how they differ. They should be shown a card to which is fastened a red pencil, a wooden clothespin and an increasing number of such articles for rapid recognition. Keen observation and language work follow from such a lesson. They should be sent to bring three or four different objects and should be given definite work in observation outside of the school, first to remember and then to report on in class, and they should be asked to name objects in pictures and to interpret their meaning.

In Grade III the same work should be extended and the properties of wood, iron, coal, water, oil, leather, cloth, etc., should be studied. The children should discover that wood is lighter than iron, harder than cloth, stronger than coal and sheds water. It resembles coal in that it can be burned, and iron in firmness, paper in that it can be marked on, and cotton in that it comes from the plant world. Wild animals should be compared from blackboard drawings, and leaves of trees should be compared for resemblances and differences, as well as objects like chair and table, kettle and pail, chalk and pencil. All this work is eduction, the first steps in building up the major premise

of a syllogism. Opposite words and definitions of common objects should also form regular lessons.

Memory

Memory is the main function of consciousness without which we would have no experience or power of learning. We speak of good and bad memories, as though memory were a faculty, when it is only the impression or path made in the neurones of the brain by a certain sensation or experience. We remember what we are interested in because it makes an impression on our brain, so that we have the power of recall. Some spend most of their time in looking for what is lost, not because they have poor memories, but because they are not interested in placing things where they may be found. Some have a poor memory for faces due to the fact that they are not interested in human being in general. Remembering one thing will not help in remembering another, but the power of recall may be strengthened by using the laws of association. If I wish to remember a stranger, I must learn his name, associate him with another of the same name, say the name of a person that he resembles, find out where he lives and what he does. Then I have a number of neurones to point to his path in my brain. But in a few hours I must recall that knowledge or it will vanish. Before going to sleep, one should recall the events of the day.

If I want my class in school to remember forever a certain fact, I say, "This is Monday at 10:15. On Friday morning at nine, I want you to tell me this fact." On the stated time every hand is up. Why have they remembered? Because they charged their minds to produce the information at a certain time, and their brains are just as faithful as the sexton who will ring the church bell at a quarter of eleven on the Sabbath morning. If you meet a friend and ask him to come and see you sometime, he says that he will, but you know that he will never come and he knows that you do not expect him to come. But if you ask him to come next Thursday evening at eight and he says that he will, you may rehearse your best stories, for he will be there. This most important and practical training seems to have been overlooked by educators. It has a further use in our next topic.

Concentration

The question is often asked: "Why do very bright pupils in school often make failures when they grow up?" The answer is plain. They have never had the training in, or the desire for, sustained effort. They are brilliant but lazy. To succeed, one must first be intelligent, but native intelligence does not lead one far along the road of success. The important positions are held by the plodders, those that never know when they are beaten, but with bulldog determination hold opportunity by the throat. The self-made man very often comes from the country, because on the farm the boy has learned to work and to endure hardships, while the city lad is often handicapped because life is too kind to him. Great civilizations have fallen for no other reason than this, and the competition of our next generation against other races will be disastrous to our own, unless we teach our young how to work and give them the power of concentration.

It is interesting to analyze the habit of laziness. One has a task to perform, but he puts it off until the urge becomes vague and finally vanishes. But let one say: "To-day at three I shall do that task." Keep one such appointment with Father Time and your life will be filled with orders, like the dance program of a debuntante. Then when you do a thing, do it thoroughly and well and think of nothing else until this is done. If it is only putting on your shoes, make it a work of perfection. Examine them to see whether you are walking properly, clean them, tie them to stay all day and do not worry about your work until you reach it. These two habits, an exact time and careful performance, should be taught to children. If education is to teach them how to live, can anything be more important? To measure and increase concentration, let the pupils add a number of problems and then find the correct grand total, if it takes a week. There is more transfer of training in this exercise, then in finding how many mistakes they can make in a certain time.

The Cost of Education

The cost of education is a growing burden to the taxpayer and in graded schools the tendency is toward larger classes. With the many classes to be taught in ungraded schools, the idea we have in mind should be of interest to all teachers. Suppose that a teacher starts with 40 pupils and her class gradually increases to 50. In what way is the increasing number a burden? The following are some of her problems: More papers to correct, insufficient time to give extra help to an increasing number of backward pupils, additional confusion in class, and fewer questions for each pupil. There is a solution which is used in large families unable to keep servants, the older ones dress and help to take care of the younger ones, and the responsibility does them much good. In an ungraded school, the older ones may be assigned to help the younger ones, and in a graded school, the more proficient pupils may assist the backward ones.

Beyond Grade III, each of the five ranking highest for a month has charge of a row of pupils. When the teacher mentions, during the day, that this girl needs help in oral reading, that this one had forgotten the previous day's work in Geography, and another did not get the right answer in Arithmetic, the one in charge of each pupil makes a note of the fact, and for ten minutes after school each corner of the room is a hive of industry. When a large lazy boy has to be shown by a small girl how to work a question in Arithmetic, and endure her sarcasm as well, he reforms.

Health Education

Those who will live in a wiser age than ours will make health education the main topic in school, increasing in importance in the High School and University. It is a sad commentary on our system of education that the teachers at the present time have not sufficient knowledge of the functions of the different organs of the human body to teach health intelligently. The human body is the acme of creation in God's universe, built, the doctors tell us to last at least two centuries. But we are placed in charge of this delicate mechanism with no knowledge of the laws governing it except the responses of pleasure and pain, so that we are worn

out at an age when we are just beginning to know a little about living, or our bodies are ditched and wrecked before they are fully matured. What could be more important than to know about ourselves? Yet we spend years in studying a dead language in preparation for living and never even learn the effects on the human body of the different foods that we eat.

Still we can do a little in school, and Trained Observation helps us. First we give the children a definite object instead of general advice. They are delighted to join a Hundred Year Club, where if they observe certain rules of health, they will likely live to one hundred, not as crippled mummies, but hale and vigorous at the century mark. Deep breathing, (not the kind usually spoken of in the school, but real deep breathing), regular sleep, care of the teeth, exercise of the eye muscles, correct posture, no tobacco, tea, coffee or candy, and right and regular kinds of exercise. The observation is used in noticing the effect so that the exercise or habit may be reported on and continued.

Moral Conduct

Our rating in society depends upon our actions, but no mark has been awarded a pupil in school for his conduct. If the object of schooling is to teach information, then how can we mark a child for conduct, which has nothing to do with his ability to name the capitals of the European countries? But if education is to teach a child how to live and rationalize the loose ends of life to make them serve his needs or, to be more utilitarian, to serve the needs of the community in which he lives, and if his conduct shall measure his usefulness in life, should not his conduct in school be measured also? Let him first judge himself by observation and then mark the conduct chart that follows. Then let the teacher check it and assign him a mark. When conduct is stated in such definite terms, would not the child learn to become reasonable and recognize that others have rights, and would not the problem of discipline largely disappear in our schools, when we train the children by observation to follow one of the greatest maxims of the ages, "Know thyself"?

As a concluding word may we express the hope that our modest experiment will lead other teachers to test its value and to try other experiments as well? We have only used a method which many good teachers have used to a greater or less extent, but fortunately we set up a test situation and measured its results. The experimental method must ever be our guide in education as in all lines of human endeavour. The writer regrets that lack of space has often made it necessary to state merely conclusions or at best partial reasons. Since his philosophy of education is original, having been built up by observation over a number of years, he has had many anxious moments during the past few months in searching for support for his ideas from leading authorities, but only to find that his fears were groundless. Spearman places eduction or the ground work of reasoning as the gauge of intelligence; the validity of the I. Q. is an open matter of dispute; Thorndike believes that very young children can reason; Judd feels that real education must follow from observation and Woodrow advocates a technique of reasoning for children in these words: The education of powers of judgment and reason is bound up with that of memory and attention. The child may be taught the

technique of reasoning and led to apply his powers in this respect to problems lying in many useful fields of human endeavour. He may be encouraged to exercise his powers, and given the chance to acquire the knowledge upon which the success of their exercise is dependent. The first stage in the training of reasoning plainly is the provision of a wide experience extending beyond the class-room and embracing first-hand observation, os that the child may acquire a considerable knowledge of facts; for one cannot reason without facts. In higher stages, the child's attention may be directed to problems which lie in those fields of his own experience most likely to prove of value in later years. Here he requires help and encouragement, particularly in the matter of learning to test the correctness of his solutions by experiment."

Code of Conduct—Rating Scale

This Code of Conduct was prepared by J. E. Brown, Strathcona School, Vancouver, for use in his school. Mark up your conduct, using the letters "A," "B" and "C" for rating.

1. RELIABILITY—*"An honest man's the noblest work of God."*

(a) I keep a promise			
(b) I hand in work on time			
(c) I am never unnecessarily late for school			
(d) I return lost property to its rightful owner			
(e) I make good use of study periods			
(f) I return promptly all borrowed articles			
(g) I work faithfully when not supervised			
(h) I finish to the best of my ability any work I start			

2. LOYALTY—*"I will be True, for there are those who trust me."*

(a) I obey rules made for the good of all even though they inconvenience me			
(b) I do my bit to keep the grounds clean			
(c) I take pride in the appearance of my classroom			
(d) I speak well of people in their absence			

3. COURTESY—*"Of Manners Gentle, and Affections Mild."*

(a) I consider the rights of others in class, on the playground, etc.			
(b) I talk and laugh quietly			
(c) I help the weak and aged			
(d) I excuse myself if I unavoidably inconvenience anybody			

(e) I say "thank you" when a favor is done			
(f) I speak to my teacher, classmates and other friends in a gentlemanly or ladylike manner			
(g) I am polite in all arguments			
(h) I am pleasant and agreeable even when I can't have my own way			

4. KINDNESS—*"Just the art of being Kind is all this sad world needs."*

(a) I make new pupils feel at home			
(b) I do not laugh at others' mistakes			

5. SELF-CONTROL—*"No man is such a conqueror as the man who has defeated himself"*

(a) I train my hands to obey my mind			
(b) I train my feet to move briskly but quietly instead of scraping along			
(c) I keep my temper			
(d) I obey requests			
(e) I carry myself well, head erect and chest high, while standing and sitting			

6. THRIFT—*"Who heeds not a penny shall never have any."*

(a) I spend less than I earn			
(b) I employ my time usefully			
(c) I am careful in the use of papers and pens			
(d) I obey orders and signals promptly and so save time			
(e) I do not waste money on candy or unhealthy foods			

7. PURITY—*"Be good, sweet maid, and let who will be clever."*

(a) I think clean thoughts			
(b) I speak clean words			
(c) My action are always a credit to my parents and my school			
(d) My companions are those who think, speak and do rightly			

8. SELF-RELIANCE—*"To thine own self be true."*

(a) I always express my own thoughts and not those of others			
(b) I try not to borrow, I supply my own needs			
(c) I depend on myself			

(d) I show ability to start things without being told			
(e) I show courage and perseverance in work and play			
(f) I show self dependence after having once been shown my work			

9. HEALTH—*"My body is the temple of my soul."*

(a) I desire to be free from disease			
(b) I have formed good habits of exercise, eating, sleeping and cleanliness			
(c) I refrain from giving in to insignificant ills			

10. SPORTSMANSHIP—*"Play up, school, and play the game."*

(a) I would rather lose a game than win unfairly			
(b) When my opponent wins I congratulate him heartily and cheerfully			
(c) I cheerfully take any position which is for the good of my team			
(d) I am always willing to give others their turn			
(e) I accept responsibility for my own acts and am willing to admit a fault			

11. CO-OPERATION—*"I'll help you and you'll help me, thus what a happy world 'twill be."*

(a) I take an active interest in all class and school activities			
(b) I respond cheerfully and promptly to requests of parents and teachers			
(c) I promptly attend to physical defects on advice of the nurse			

The Franklin Reasoning Test

(1) On a day in December, Susie received many presents. Her brothers and sisters were not given any presents. What important day for Susie was it? .....

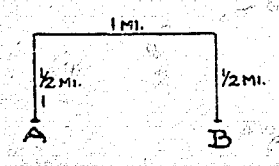
(2) x x x x x x x x x
x x x x x x x x x
x x x x x x x x x
x x x x x x x x x
x x x x x x x

43

There are 43 x's in the group. Without counting them all, place a fence around the number of x's that the 4 stands for.

(3) If the days are getting longer, what do you know about the nights?

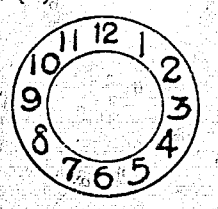
.....



(4)

A man walks from A to B and back again by travelling along the line. How many miles out of his way does he walk? .....

(5) How can a bee tell that a flower is round a corner? .....

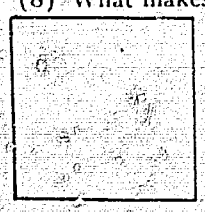


(6)

Draw the hands on the clock so that they will show a quarter of nine.

(7) Mr. Richards goes to bed every morning at eight and sleeps all day. Why does he do this? .....

(8) What makes you think that Mr. Richards lives in the City? .....



(9)

Divide the square into four equal parts by drawing two lines inside it. Do not use a ruler.

(10) A man fell off a bridge and could not swim. Several people ran with ropes, but not one was long enough to reach him. What should they do? .....

(11)

Add a line to this drawing to show that it is a lake and not an island.

(12) What number is to 10 as 2 is to 4?

(13) If a stone is too heavy to be carried it may be.....

(14) What about the appearance of the rabbit tells you that he is a timid animal? .....

Why? .....

(15) Dorothy is taller than Lucy, and Mary is shorter than Dorothy. Which one is the tallest? .....

(16) A policeman saw an auto parked on the street. He came back an hour later and saw the same car there. How did he know that it was the same car? .....

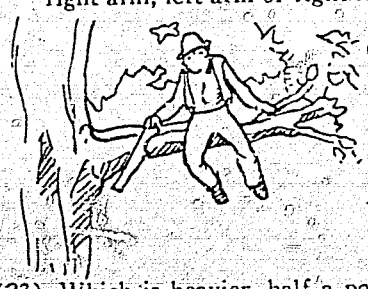
(17) **KLIM** What food is this product made from? .....

(18) What number is half way between 6 and 12? .....

(19) At what time of day is a person's shadow the shortest? .....

(20) Put an X on the front end of the hat and a cross on the part that told you.

(21) A man wrote that he had broken a limb two days before, but was able to mail his letter at the post office. Did he break his left leg, right arm, left arm or right leg? .....



(22) What is wrong in this drawing?

.....

(23) Which is heavier, half a pound of cotton or half a pound of iron?

.....

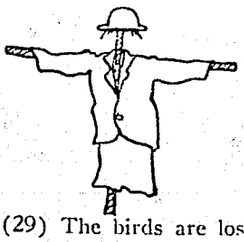
(24) If a loaf of bread has crust all around it, it has not been.....

(25) What is wrong in this drawing? .....

.....

(26) How do you know that cream is lighter than milk? .....

(27) If a north-west wind is blowing, in what direction is the grass leaning? .....



(28) What should appear in this drawing beside the scarecrow? .....

(29) The birds are losing their fear of the scarecrow. What should the farmer do to make them think that it is a real man? .....

(30) Two miles east of four miles west is how many miles from where you are? .....

(31) What word is printed between the circles?

.....

(32) My shadow is in front of me in the afternoon. Which way am I facing? .....

(33) Finish the drawing of the sheep.

(34) I eat my breakfast sitting down, yet I am moving. Where am I?

.....

(35) Read correctly: I ees a nam gniklaw no eht daor.
Why? .....

(36) 19 is 15 less than what number? .....

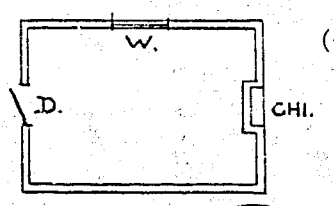
(37) Of what use is his tail to a fox?

.....

(38) Three stores are in a row. The grocery is on the right of the bakery and the drugstore is on the right of the grocery. Which store is in the centre? .....

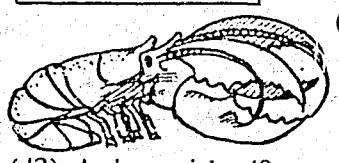
(39) Fred and Joe were making an axle for their wagon. Fred sawed off a piece of wood, but it was 2 inches too short. Then Joe sawed off a piece 4 inches too long. Which made the worse mistake? .....

(40)



This is the plan of a kitchen. Put an X where you would place the stove.

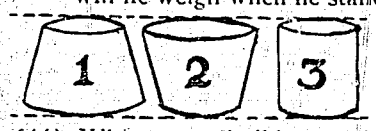
(41)



Why do you think that this creature lives on animal rather than on vegetable life? .....

(42) A dog weighs 40 pounds when he stands on 4 legs. How much will he weigh when he stands on 2 legs? .....

(43)



Which of the three tubs will hold the most apples? .....

(44) When a man builds a rowboat in a basement or in a workshop, what must he first consider when planning the size of the boat? .....

(45)

How do you know that this paper was not folded twice and notched at one cutting?

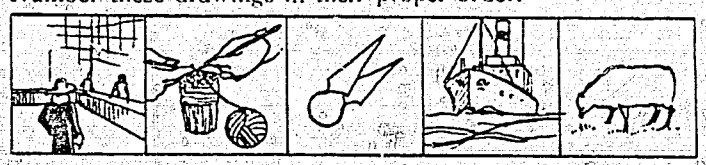
.....

(46) What is the thing that we can live without for the shortest time?

.....

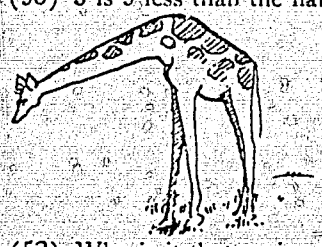
(47) How does the elevator man in a city office building know when it is raining outside? .....

(48) Number these drawings in their proper order.



(49) How would you pile the empty tubs together in No. 43, so that you could carry them all at once? .....

(50) 3 is 5 less than the half of what number? .....

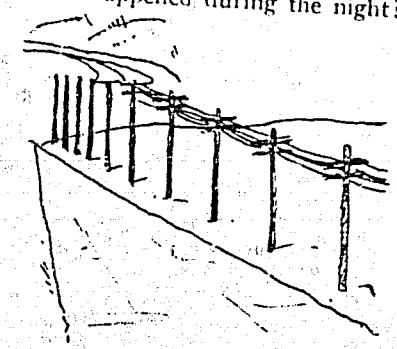


(51)

How can the giraffe drink without bending its knees, when its neck is too short to allow its head to reach the ground? .....

(52) Why is it that a nine-year-old boy does not often observe the hands of a clock at a quarter of ten? .....

(53) A tree was standing at dark and was lying flat at daybreak. What happened during the night? .....

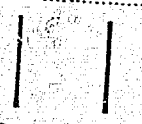


(54)

What is wrong with the appearance of the telephone line? .....

(55) If I go to a house in the evening and find it in darkness and it is early, I think that the people are .....; but if it is late, I think that are are ..... In either case I can find out by .....

(56) The lion's supply of food depends upon the quantity of grass in the neighbourhood of its African home. What is the lion's chief food? .....

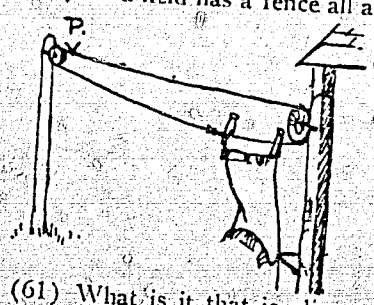


(57)

Add three lines the same length as these and a capital letter will stand in its right position.

(58) In meeting a person, if I turn myself to the right to pass him, the other person must turn himself to the .....

(59) If a field has a fence all around it, what else must it have? .....

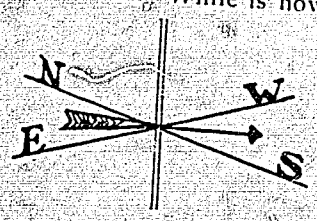


(60)

This is the drawing of a wire clothes-line, running through two pulleys. The first article of a line of clothes is on Mark where the point P comes when the line is full.

(61) What is it that is alive and travels more quickly than an animal? .....

(62) Willie is 3 years older than George, who is 2 years younger than Fred. Willie is how much older than Fred? .....



(63)

What is wrong with this picture? .....

(64) Which way is the wind blowing in No. 63? .....

(65) What man likes best to see a rain in summer? .....

(66) If I stand in a house and see the outside of its outside door, how is the door standing? .....

(67) The two glasses are the same size and shape. How would you fill one exactly half full of water? .....

(68) A mother going out told her daughter coming in that the cake in the oven must bake for half an hour altogether. What question should the daughter ask the mother? .....

(69) Water on the east, water on the west, water underneath, but no water on the north and no water on the south. Where am I? .....

(70) Draw the shape of a piece of paper that would cover the whole side of this box.

(71) How can I walk in a rainstorm, have my hair and clothing thoroughly wet and my hat dry? .....

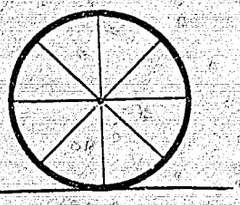
(72) Willie's father is 30 years older than Willie. In 2 years Willie will be 9. How old will his father be then? .....

(73) A——————————B

These lines are all the same distance apart. Draw a line from A nearly as long as AB so that these lines will cut it into four equal parts.

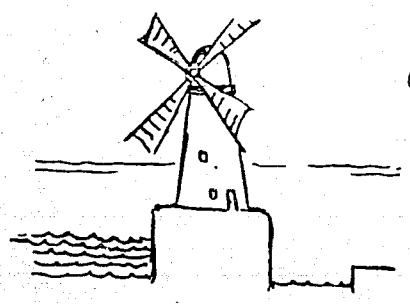
(74) How could you see to the bottom of a dark well on a sunshiny day without lowering a light? .....

(75) If I mix clay and sand with water in a glass jar and the sand is seen beneath the clay, what do I learn about clay? .....



(76) How can I measure the distance around the rim of the wheel without a tape or a string? .....

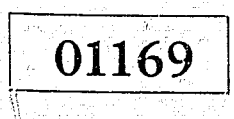
(77) Xjmm bssjwf jo Uspspup ofyu Uivstebz. This is a code for "Will arrive in Toronto next Thursday." What letter would stand for m in this code? .....



(78)

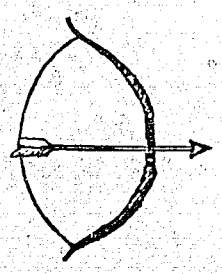
The land in Holland is below the surface of the ocean. Of what use are the windmills? .....

(79)



This is the mileage guage on an automobile. A man wishes to test his car to find how many miles it will make on a gallon of gasoline. How can he plan his drive so that he leaves home and arrives home after driving exactly 20 miles? .....

.....

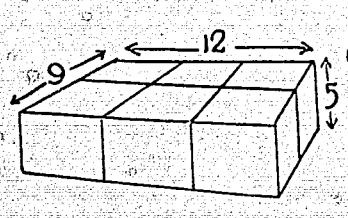


(80)

What is wrong with the drawing of the bow and arrow? .....

(81) My father's daughter is not my sister or step-sister. Who is she?

.....

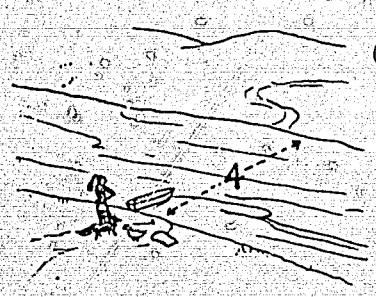


(82)

Of what material is the box likely made? .....

Why? .....

(83) Find the length of the ribbon on the box .....



(84)

In the picture a man has a fox, goose, and bag of corn to take across the river. He can only take one at a time, but makes four trips, so the fox will not eat the goose, or the goose the bag of corn. How does he do it? .....

(85) Fred, John and Will are all nine. Fred's birthday comes in 18 days, John's in 34 days, and Will had his 22 days ago? Which is youngeset? ..... Why? .....

(86) Arrange in a sentence: Every hope to us let better day do.

(87)

In the picture a tame ape has seized the baby and climbed with it to the top of the house. How is the best way to rescue the baby? .....

(88) An auto which in the United States makes 20 miles on a gallon of gasoline will, in Canada, on the same kind of roads and the same kind of gasoline, make 25 miles. How do you explain this fact?

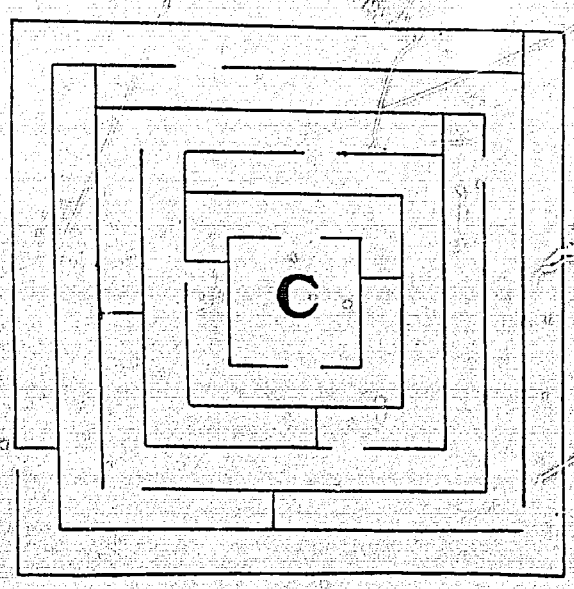
.....

(89)

This sea-gull flew from Labrador across the Atlantic to France, where it was picked up on the beach. How did they know that it had flown from Labrador? .....

(90) Why does the moon look larger when rising on the horizon than when it is higher in the heavens? .....

(91)



Put your pencil on C and trace your way through the openings out of the maze.

(Continued from page 8)

an enterprise that can only be carried out through the social milieu. Self-realization is attained by sacrificing the self towards the progressive development of others; for "he that loseth his life shall find it."

Perhaps I should apologize for this moral vein, but for once in a way I have no intention of doing so. There are moments of clear sight—lucid intervals no doubt—when our profession appears in its true perspective, and is seen to possess advantages such as are found with difficulty in any other field of human endeavor.

Let the young teacher therefore regard his calling with pride and affection, for it assists him to achieve the central purpose of his being.

A Warning

We would warn all our readers against signing forms or contracts with any agents without full investigation of the various clauses of the documents to be signed. Several cases have been reported to us where salesmen have orally stated the conditions of a contract, vowing that they were identical with those contained in the printed statement, and teachers have signed on this assurance only to discover later that there were financial obligations differing from those brought to their attention.

Reliable firms would not use such measures and teachers would be wise to be sure of the people with whom they were dealing.

Objectives in High School French

By Dr. N. F. Black

Chairman, Modern Language Section, B. C. T. F. Convention

IN OUR own special field we modern language teachers recognize certain fundamental aims that should be shared by us all, whatever the age and scholastic status of the pupils studying French or German under our tuition. We should be enlarging their sympathies, broadening their national or racial horizon. We should be equipping them with new sources of intellectual pleasure. We should be training them in the use of at least the tools of literary study in a new language. We should be cultivating correct habits of speech and training the ear to differentiate sounds that to the English speaking student must at first be strange and difficult to grasp. All these considerations are important, but for our present purposes there are others still more important. It is for us to clarify in our own minds, and make evident to whoever is concerned, the particular objectives that differentiate high school teaching of French in this particular province from the teaching of the same subject in other institutions in British Columbia or in the high schools of other provinces and states.

The objectives which we should adopt must be objectives that are possible of attainment by high school classes in British Columbia schools. At present, as we all very well know, an exceedingly large proportion of our pupils are attempting things impossible.

In the second place, the particular objectives that differentiate our work from that of others should be definite. At present we are navigating a rocky shore in a dense fog.

Thirdly, the objectives of high school French must rest upon interest and motives normal to children of high school age. As it is, we and they are immersed in unmotivated toil, drudgery that, as far as our pupils can see, has no more relation to their needs and desires than to those of the hypothetical inhabitants of Mars. Work without sufficient motive always fails. If the motive be not personal and natural, one works without the joy that is the true reward and proper accompaniment of personallly and intelligently motivated labour.

Now, what definite thing is it that, in the time at our disposal for such purposes and in teaching conditions such as those prevailing, we and our ordinary high school pupils can confidently hope to accomplish with the pleasure that rightly accompanies self motivated labours, however strenuous these may be?

Let us proceed by eliminating certain objectives that may be suited to other modern language teachers but are not proper to us.

We will no longer devote 90% of our labour to the impossible objective involved in any expectation that our high school classes can

or should be expected to write on things in general in accurate French. We in this room have ben teaching and studying French now for many years, but there are very few indeed among us who would care to submit an article to a French literary magazine. We know that the mastery of a language is a task for a lifetime not for a few distracted hours of giddy adolesence. We shall continue to teach what French composition we can and what French grammar we can, but we shall no longer break our own hearts and those of our pupils by demanding impossibilities. We then abandon, as a characteristic high school objective, the ability to write French like a Frenchman.

In like manner, we must tell the world, with whatever iteration and emphasis may prove necessary, that it is not our business to make our pupils acquainted with French literature. We will enjoy the enjoyable in what we read with our pupils and we will share our enjoyment with them insofar as their immaturity and ignorance of the new language may permit. But our job is not primarily literary. It is for us to teach the boy to read easily and intelligently within the range of a reading vocabulary practicable to a British Columbia high school student.

Finally, we abandon any futile notion that it is our task to teach pupils to speak French so that if and when they miraculously find themselves in France they will be mistaken for Frenchmen. It cannot be done and, even if it could, there is among our pupils no natural motive adequate to justifying an attempt to do it.

What then can we reasonably be expected to accomplish in a three-years high school course in French?

If we discard objectives that are not ours as high school teachers, we can teach our pupils to read with ease and pleasure a considerable amount of very easy French; we can teach them to ask and answer in French, intelligent questions based upon the text before them or on ordinary classroom situations; we can teach them to write at dictation in French approximately as well as Grade III children can write at dictation in English, and to write in French correct answers to comprehension questions such as are ordinarily used in English Silent Reading Tests; and withal we can teach them to love and enjoy French, to do with a zest the hard work that all linguistic studies entail, and to turn their minds toward avenues of thought and study for which they are as yet too immature but for which a proper training in the mother tongue of the French nation and of approximately two-fifths of our Canadian fellow-countrymen constitutes a suitable introduction.

As regards required vocabulary, the limits to be covered in the various years will have to be determined experimentally, on the basis of scientifically based word lists comparable to the Thorndike English Word List. A reading vocabulary may and should be very much wider than a speaking or writing vocabulary and involves infitely less labour.

TEACHERS!

Here Are the Answers

Question 1: How may I have a summer-holiday ocean voyage, and at the same time earn a salary?

Answer: By taking the Wireless Telegraphy Course in the Vancouver Night Schools, by passing the Federal First-Class Wireless Examinations, and by afterwards obtaining a position as a Wireless Officer.

Question 2: Where may I obtain tuition which will prepare me for the High School Commercial Teachers' Examinations?

Answer: In the Commercial Department of the Vancouver Night Schools.

Question 3: Is it possible to prepare for Junior or Senior Matriculation in the Vancouver Night Schools?

Answer: Yes. Tutorial Courses in all Junior and Senior Matriculation Subjects are given in the Evening Classes, by experienced high school teachers.

Question 4: Where may I learn Gregg or Pitman Shorthand?

Answer: In the Evening Classes at the High School of Commerce, Broadway and Granville.

Question 5: Is Spanish taught in the Vancouver Night Schools? If so, may one learn to speak the language there?

Answer: Spanish is taught by the direct method, and students learn to speak the language fluently in a few months.

Question 6: What technical subjects attract the largest number of teachers?

Answer: Drafting, Electrical Engineering, Cabinet Making, Motor Engineering, Ignition, General Woodworking, and the Courses in Mining.

Question 7: What new Courses are offered in the Vancouver Night Schools this year?

Answer: Courses for Painters and Decorators; Courses for Chefs and Restaurant Employees; Courses in Penmanship and Gregg Shorthand; Courses for Cost Accountants; Courses in Commercial Law and Business Practice; Courses in Motor Engineering.

Question 8: How many Courses are offered in the Vancouver Night Schools?

Answer: Seventy-three.

Question 9: How much does it cost for six months' tuition?

Answer: Six months' tuition costs from $5 to $10.

Question 10: How may I obtain a Syllabus of all the 1928-29 Night School Courses?

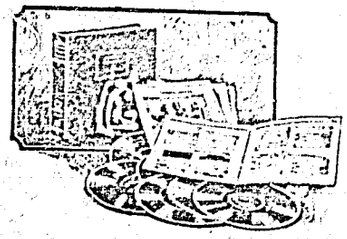
Answer: By telephoning the School Board Offices, Hamilton and Dunsmuir, Sey. 4760.

W. K. BEECH, M.A., Director of Night Schools.

The B. C. Teacher

"It's all very well to have courage and skill,
And it's fine to be counted a star;
But a single deed with its touch or thrill
Doesn't tell us the man you are.
For there's no lone hand in the game we play;
We must work to a bigger scheme,
And the thing that counts in the world today
Is, 'How do you pull with the team?'"

So that your pupils may fully appreciate good music



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