

Art Work from Medicine Hat.

Drawings in colour by Clarence Taylor, Vera Robinson, Kitty Heath, Helen Stewart, and E. Spangelo, second year students of the Alexandra High School, Medicine Hat, Alberta.

See "Art for June" in this issue.

FOREWORD.

THESE are great purposes, and to achieve them we must draw upon all our resources, both material and spiritual. On the one side, the material side, the demands presented in these votes is for men, for money, for the fullest equipment for the purposes of war. On the other side, what I have called the spiritual side, the appeal is to those ancient inbred qualities of our race which have never failed us in times of stress—qualities of self-mastery, self-sacrifice, patience, tenacity, willingness to bear one another's burdens, a unity which springs from the dominating sense of a common duty, unfailing faith, inflexible resolve.

From Asquith's speech in the Commons, March 1, 1915.

The School

"Recti cultus pectora roborant"

Editorial Notes

A Museum on Wheels.—The United States Bureau of Education calls attention to the travelling museum of the schools of St. Louis, Mo. Some of the exhibitors at the St. Louis Exposition of 1904 donated parts of their exhibits to the Public Schools of the city. The Board of Education decided not to disperse the exhibits among the schools, but to assemble them in a motor truck and exhibit them, at intervals and as a whole, in school after school. Much care was taken in arranging the exhibits so as to illustrate the course of study. They included "food products, material for clothing, mounted animals, the life and occupations of different peoples of the world, charts and coloured pictures illustrating history, minerals and ores, and charts illustrating geography, astronomy, and physiology". No freaks of nature, curiosities, or monstrosities were admitted to the collection but every article, slide, view, chart, or photograph has a direct bearing upon the work of the schools. Arranged in this way and utilized wisely the museum brings facts home to the pupils as realistically as possible. "Thus by means of the cotton exhibit the children are taken to the cotton fields, where they study the plant, the method of preparing the soil, the harvesting; to the cotton gin, where the seed is separated from the lint; to the market to see the baling and shipping; to the cotton factories, where the lint is spun and woven into fabrics; and to the refineries to learn how cottonseed oil, oil cake, cottolene, and soap are made. The supply of the demands for cotton goods is shown by a comparison of the crude implements used by the inhabitants of the Philippine Islands with the magnificent machinery in the large eastern factories as pictured by the stereoscope and lantern slides".

Could not the Canadian National Exhibition provide many of our towns with the material for a museum on wheels?

Might not any Ontario town create a travelling art gallery?

The Speakers' Patriotic League.—When the next number of THE SCHOOL reaches its readers the war will have entered upon its second year. This second year will demand sacrifices in men and women

far beyond those of the first year and far beyond those of any war yet recorded in history. The Canadian people will make those sacrifices cheerfully so soon as they know what sacrifices are required. To help the people of Central Ontario to a true appreciation of these sacrifices a Speakers' Patriotic League has been formed at Toronto with headquarters in the University and with Dr. A. H. Abbott of the University Extension Committee as its secretary. The League stands ready to assist any town or society in Central Ontario in an educational campaign upon the war and its demands.

The Long Vacation.—Within a few weeks the schools of Ontario will close for the long vacation. For two months or more teachers will be free from school interests and school duties. It is well that this is so, well for pupils as for teachers.

This year's long vacation is unlike any vacation that has preceded it. The war has laid its heavy hand upon all schools and teachers. Disturbed economic conditions have reduced the number of withdrawals from the teaching ranks and filled the training schools with prospective teachers. The great midsummer migration of teachers from school to school and from Ontario to the West will scarcely be noticeable this year. Salaries will not increase, and where positions are vacated and filled, they may even tend to decrease. Teachers will not be free this year to choose their way of spending the long vacation. They cannot go to Europe, although the movement across the Atlantic has grown to great proportions in recent years. Uncertain financial conditions backed by the urgent appeals of Patriotic Associations will reduce seriously the numbers of those who will attend the Panama Exposition. Temporary positions in commercial centres, so eagerly sought by male teachers in the past, will not be numerous this year. Forced aside from these well-known ways of spending the vacation, many teachers will visit the holiday haunts of Ontario—the woods and waterways of the north, or will return to the home farm where the need of help has never been so great. Perhaps in greater numbers than ever, prompted by the serious temper of the times, they will attend the Summer Schools to improve their professional status.

Luckily for her teachers, Ontario's Summer Schools will be able this year to meet all possible demands. On the purely academic side these Schools offer instruction and examination in Model Entrance, Normal Entrance, and Faculty Entrance subjects and on the subjects leading to a degree in Arts. On the purely professional side they offer instruction and examination in agriculture, art, physical culture, the commercial subjects, manual training, household science, music, kindergarten-primary and auxiliary class subjects and in the subjects of the High

School Assistants', First Class Public School, and Inspectors' Courses and the courses for degrees in Pedagogy. The schools will be conducted by the Department of Education, the University of Toronto, and Queen's University.

"The School."—This number closes the third year of THE SCHOOL. The year 1914-15 has been an anxious one for all journals. Merchants could not sell and would not advertise. The public, preoccupied with the day's events, could not read journals and would not subscribe. Few journals have come through the year with profits and many have come through with losses. THE SCHOOL has been very fortunate. It has held practically all its advertising patronage and it has actually added to its subscription list.

Encouraged by the past THE SCHOOL enters upon its fourth year without misgivings. It has confidence on the one hand in the loyalty of its supporters and on the other in the soundness of its policy. It strives to be, not a text-book in the theory of education, but a very real help, an ever present friend, in the schoolroom. It will not discuss theories; it will apply them in the practice of the class. It will offer special help with the newer school subjects such as agriculture, nature study, art, and physical culture. It will not neglect the older school subjects. Each number of THE SCHOOL will contain, for example, a suggested treatment of a literature lesson from one of the Public School Readers or from the prescribed High School Selections. This practice will be followed in the other English subjects, in Public and High School mathematics, geography, and history. Typical examination questions and papers will be set in the belief that in a multitude of counsellors there is wisdom. Each number will contain a special article on primary work and practice, another on the events of the war in so far as they appeal to the school mind, and still another on some phase of the science of education. Reviews of educational books, school-room devices, notes and news about educational events in Canada will appear as heretofore. Special attention will be given in the Editorial Notes to changes in the Regulations or Instructions of the Department of Education and in Current Events to the happenings of the month which may be of interest to school children.

With such a policy THE SCHOOL commends itself anew to the teachers of Canada.

Examinations.—An American newspaper makes much ado about the answers to a geography question by candidates for teachers' certificates in an Illinois county. The question ran thus: What and where are Gibraltar, Klondike, Sardinia, Tasmania, Prague, Pampas? The answers were disconcerting. Gibraltar was everything and every-

where, a strait in South America, an isthmus between the Black Sea and the Mediterranean, a rock off the coast of Italy, a fort in South Africa. The Klondike was in Holland, while Prague was in Norway, Nebraska, Australia, Uruguay, Egypt, Holland, Belgium, etc. The newspaper is not surprised to note that out of 247 High School graduates who attempted the examinations only 35 were successful.

The paper finds in these answers and figures the text for a discourse upon inefficient High Schools and unscholarly teachers and teaching.

But are there not other inferences? Judged by the sample question the *examining* may have been inefficient. How many Ontario teachers will commend the *question* whose answers were disconcerting? Judged by the percentage of failures the examinations as a whole must have been unfair. Is an examination properly adjusted to an organized course of instruction if it "plucks" more than 85% of the candidates? Are schools and teachers to be attacked and the examiners and examinations to go scot free?

The self-made man was in a caustic mood. "These schools, ye know," he said, "they're no good. Don't give a boy no practical knowledge. See what I mean? Now, my son, he's supposed to be learning Greek, an' Latin, an' algebra. An' the other day I asked 'im to tell me the algebra for fried potatoes, an' 'e couldn't".

Teacher—"What is a fort?"

Pupil—"A place for soldiers to live in."

Teacher—"What is a fortress?"

Pupil—"A place for soldiers' wives to live in."

Johnny—Say, paw, I can't get these 'rithmetic 'zamples. Teacher said somethin' 'bout we'd have to find the greatest common divisor.

Pa (in disgust)—Great scot! Haven't they found that thing yet? Why, they were hunting for it when I was a boy.—*New York Times*.

The teacher had worked that morning explaining the injustices done by Nero, and believed he had made an impression on the boys. Then he asked questions:

"Now, boys, what do you think of Nero? Do you think he was a good man?"

No one answered. Then the teacher singled out a boy.

"Chancy, what do you think? Do you think he was straight?"

"Well," returned the boy, after a long wait, "he never done nuthin' to me."

Diary of the War

(Continued from May Number)

- March 1. A vote of credit for \$1,250,000,000 and a supplementary vote of credit for \$185,000,000 moved by Mr. Asquith in the House of Commons.
- March 2. Allied warships enter the Dardanelles Straits; Bulair forts bombarded by four French ships from the Gulf of Xeros. Russians defeat Austrians on the River Lomnitsa and take 6,000 prisoners. Village of Krasna occupied by Russians.
- March 3. Publication of Vice-Admiral Sturdee's despatches on the Falkland Islands victory and Vice-Admiral Beatty's despatches on the North Sea victory. Forty Turkish guns in the Dardanelles demolished to date; four English ships bombard fort E. British defeat Turks at Ahwaz (Persia) and Nakaila (Turkey). Rheims bombarded by the Germans.
- March 4. Demolition parties, covered by detachments of the Marine Brigade, land at Kum Kale and Seddil Bahr, at the entrance to the Dardanelles. German submarine U8 sunk by destroyers off Dover. French make progress along the Belgian dunes. Zeppelin L8 destroyed at Tirlemont. All the Clyde and Mersey strikers resume work.
- March 5. The Queen Elizabeth bombards forts J, L and T across the Gallipoli peninsula. A general attack on the defences of the Narrows begun. Smyrna forts bombarded by East India squadron for two hours.
- March 6. Bombardment of the Smyrna forts resumed. Greek cabinet headed by Venizelos resigns because of King Constantine's opposition to the intervention of Greece in the war. Fighting south-west of Warsaw assumes serious proportions.
- March 7. Ostend attacked by four naval aeroplanes. Liverpool steamer Bengrove torpedoed and sunk in the Bristol Channel. The batteries on the heights of Smyrna and Forts J, U, and E in the Dardanelles silenced.
- March 8. The Queen Elizabeth enters the Dardanelles. Fort Maidos partly destroyed by gun-fire from Gulf of Xeros.

- March 9. The following British steamers were torpedoed and sunk: Tangistan off Scarborough, Blackwood off Hastings, and Princess Victoria off Liverpool. Mr. Lloyd George announces the Government's intention to control certain kinds of factories.
- March 10. The British capture the village of Neuve Chapelle. British loss over 12,000. German loss about 18,000. British aircraft destroy the railway junctions at Courtrai and Menin. Bulair defences bombarded by two British ships. German submarine U12 sunk by destroyer Ariel. German auxiliary cruiser Prinz Eitel Friedrich reaches Newport News (and later interns).
- March 11. British troops occupy village of L'Épinette near Armentières. The armed liner Bayano torpedoed and sunk near Stranraer, Scotland. The Florazan torpedoed and sunk at the mouth of the Bristol Channel; the Adenwen torpedoed (not sunk) in the English Channel. A French division continues the operations against the defences at Bulair.
- March 12. The British cross the Les Layes brook and make progress towards Aubers. British steamers Headlands (not sunk) and Andalusian and Indian City (both sunk) torpedoed off the Scillies.
- March 13. British steamers Hartdale and Invergyle torpedoed (not sunk) off the Mull of Galloway and Cresswell. Swedish steamer Hannah torpedoed and sunk off Scarborough. British aircraft destroy the railway stations at Don and Douai.
- March 14. The German cruiser Dresden destroyed in Chilean territorial waters near Juan Fernandez Island by the Kent, Glasgow and Orama. British Government subsequently apologises for the mistake to the Chilean Government and apology is accepted. British steamer Atlanta torpedoed (not sunk) off Inishturck.
- March 15. Lord Kitchener makes a statement on the progress of the war and the insufficiency of the provision of war material in Great Britain. British lose some trenches at St. Eloi, but regain them later. Austrians defeated at Smolnik in the Carpathians; Russians bombard the Przemysl forts. The steamer Blonde attacked by German submarine off the North Foreland and the Fingal torpedoed and sunk off the Northumberland coast.

- March 17. Steamer Lieuwarden sunk by gun fire from a submarine off the Dutch coast.
- March 18. Bombardment of the Narrows. The British battleships Ocean and Irresistible and the French battleship Bouvet sunk by drifting mines. Russian squadron approaches the Bosphorus. Zeppelin attack on Calais; seven lives lost. Glasgow steamer Glenartney torpedoed and sunk off Beachy Head. Russians enter Memel in East Prussia.
- March 19. British steamer Blue Jacket torpedoed (not sunk) off Beachy Head.
- March 20. Admiralty announce the probable loss of the Karlsruhe at the beginning of November.
- March 21. Fortress of Przemyśl surrenders with 120,000 men to the Russians. Zeppelin raid on Paris, no lives lost and little damage done. The Germans recapture Memel. German aeroplanes attack two neutral vessels in the North Sea.
- March 22. British troops under Sir G. Younghusband defeat a Turkish force advancing on Suez.
- March 23. British merchant vessel Teal attacked by a German aeroplane in the North Sea.
- March 24. German submarine works at Hoboken near Antwerp raided by two British naval airmen. Russians win a decisive victory over the Austrians in the region of the Lupkow Pass in the Carpathians.
- March 25. French aviators raid Metz. Dutch steamer Medea sunk off Beachy Head by the U28. British steamer Delmira torpedoed in the Channel by U32.
- March 26. The Admiralty report the sinking of the U29 with all hands.
- March 27. Russian Black Sea Fleet attacks the Bosphorus forts. British steamer Vosges sunk by submarine shell-fire off the Cornish coast. Steamer Aguila torpedoed and sunk off the Pembrokehire coast. Belgian aviators bombard the German aviation ground at Ghisteltes, near Ostend.
- March 28. British liner Falaba torpedoed and sunk south of the St. George's Channel: over 100 passengers and crew drowned. German warships bombard the Russian port Libau.
- March 29. A deputation to Mr. Lloyd George from the Shipbuilding Employers' Federation demands total prohibition during the war.
- March 31. Effective air raid on Bruges by allied aviators.

APRIL.

- April 1. French and British steamers Emma and Seven Seas torpedoed.
- April 2. British steamer Eston, Norwegian barque Nor, three British trawlers, torpedoed. Russian victory in Bessarabia.
- April 3. Russian advance in Carpathians.
- April 4. Russians drive Austrians from Beskid range. British steamer City of Bremen torpedoed.
- April 5, 6, 7. Russians seize all commanding positions in Carpathians.
- April 8. Russians invade Hungary. French make progress at St. Mihiel.
- April 9. French capture Les Eparges.
- April 10. Belgian relief ship Harpalyce torpedoed.
- April 11. Kronprinz Wilhelm enters Newport News.
- April 12. German counter-attack at Les Eparges defeated.
- April 13. British vessels penetrate Dardanelles for 10 miles.
- April 14. Zeppelin raid on north coast of Britain.
- April 15. Zeppelin raid on east coast of Britain. French advance at Arras and in Alsace.
- April 16. French air-raid on Baden and Metz. British defeat Turks on Persian Gulf.
- April 17. Turkish torpedo boat Demir Hissar destroyed at Chios.
- April 18. British submarine E15 ashore in Dardanelles. Destroyed by Turks.
- April 19. British capture Hill 60 close to Ypres. Trawler Vanilla torpedoed. All hands lost.
- April 20. German troops reinforce Austrians in Hungary.
- April 21. Counter-attacks at Hill 60 repulsed by British. French and British victory in the Cameroons.
- April 22. Germans make progress at Langemarck by the use of suffocating gases. Stopped by Canadians.
- April 23. British steamer Orcoma sinks the German steamer Bayovar.
- April 24. Landing of allied troops begun at Dardanelles.
- April 25. German attacks repulsed at Ypres.
- April 26. Kronprinz Wilhelm interns.
- April 27. Germans driven from Lizerne and Het Sas. French retake Hartmann's Weilerkopf.
- April 28. German offensive at Ypres definitely ends. Zeppelin headquarters raided by allied aviators. French warship Leon Gambetta sunk by Austrian submarine off Italian coast. Queen Elizabeth sinks Turkish transport.
- April 29. Dunkirk shelled by Germans from a distance of 20 miles. Triumph bombards Maidos.
- April 30. Ineffective air raid on east coast of England.

The Place of Science in Education

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[An Address delivered to the Natural Science Section of the Ontario Educational Association.]

THE place of science in education is a subject that cannot be adequately treated in the time that may with convenience be allotted to an address, and I must choose between treating it in a very general manner or entering into detail with regard to some particular part of it. My choice rests with the former method, largely because the subject has been treated so frequently and so thoroughly in most of its details that one who should attempt to cover the same ground would be exposed to the danger of comparisons which would probably be odious. Thus, the value of science from the direct utilitarian standpoint has received a very vigorous exposition by Herbert Spencer in his treatise on Education. In his clear logical style he maintains that scientific knowledge is the knowledge of most worth in all our relations to life, and complains that it is too much neglected in our curricula, that science is the household drudge in the family of knowledges, supplying all the conveniences and gratifications of life and yet continually "kept in the background that her haughty sisters may flaunt their fripperies in the eyes of the world". Mr. Spencer, however, ventures the prophecy that the time is at hand "when the positions will be changed, and while these haughty sisters sink into merited neglect, science, proclaimed as highest alike in worth and beauty, will reign supreme". We have not yet reached that stage of development, nor, in my opinion, is it desirable that such venerable dames as the classics and philosophy, haughty though they may have been in the past, should languish in utter neglect. They too have their part in a liberal education, and victory, whether in intellectual warfare or on the actual battlefield, should look not to the utter suppression of the conquered but to the subjection of his domineering spirit, his insolence, and the utilisation of the good that is in him.

And when all has been said about the utility of a knowledge of scientific facts and theories, the question will intrude itself whether, after all, the aim of education, especially in the primary stages, should be directly utilitarian, and by directly utilitarian I mean an education based upon the Gradgrindian method which declares "Facts alone are wanted in life. Plant nothing else, and root out everything else. You

can only form the minds of reasoning animals upon facts; nothing else will ever be of service to them... Stick to facts, Sir". Indeed, I would go a step further, adding theories to facts and seriously questioning whether an education framed for the acquisition of facts and theories as facts and theories is the sort of education at which we should aim. Is there not a broader, higher level in which facts and theories, instead of being the ultimate goal, are merely the tools whereby the pupil may be trained to make full use of the faculties with which he has been endowed? Is not the highest ideal in education that expressed by Browning in the words he attributes to Paracelsus:

"To know
Rather consists in opening out a way
Whereby the imprisoned splendour may escape
Than in effecting entry for a light
Supposed to be without,"

which pregnant saying may be thus translated into the cold commonplace of prose: "Education is the development of the inborn faculties rather than spoon-feeding with facts, some of which will prove to be theories, and theories many of which will be found to be imperfect or incorrect".

All education must necessarily be utilitarian in its aim. Its purpose is to equip the child or youth for the part he will be called upon to play in later life, and what purpose could be more useful than this? But there are degrees of utility, just as one star differs from another star in brightness, and my contention is that education should aim at the highest grade of utility rather than at that degree which may immediately present itself. I do not imagine that any will dispute this contention, but differences of opinion may arise as to what constitutes the higher utility. Perhaps an answer to this problem may be obtained if, instead of higher, the term broader be substituted and we endeavour to determine what principle should be adopted as a basis for education in order that the training acquired may be most widely adaptable to all the conditions to be met in future life. Is it not the supreme purpose of education to develop the individual's powers of adaptation to his environment? Knowledge is power, the copy-books used to tell us, and we are apt to think of this power as the ability to control the environment. But the laws of nature, which in the ultimate form our environment, cannot be controlled. They are immutable and implacable; we cannot modify them and if we offend against them the retribution may at times be slow but it is also sure. We may, however, adapt these laws to our purpose or rather, let us say, we may adapt our purpose and ourselves to these laws, and the greater our powers of adaptability the greater our chances for success in the struggle for existence, and

the greater the chance of being of use in our day and generation. This is the lesson biology teaches us. The dodo had little power of adaptability and a change in his environment, the appearance of man in his little world, brought about his extinction, while the little sparrow, with greater adaptability, flourishes, becomes almost ubiquitous, in spite of human intervention.

This then may be taken as a definition of education: the development of the individual's powers of adaptability, and in this we find the higher aim of education. Education should not be merely the acquisition of knowledge; that is only part of it. It is not knowledge that is power, but the ability to make proper and skilful use of knowledge. It is not, unfortunately, altogether without reason that the mirth-maker or buffoon of a comedy is so frequently a pedant, his head, may be, packed with learning, but for the ordinary vicissitudes of life altogether impractical. Indeed the idea that much learning, if it does not induce to madness, unfits its possessor for the ordinary affairs of life, is no novel one. "When the Goths," Montaigne relates, "over-ran and ravaged Greece, that which saved all their libraries from the fire, was, that one among them, scattered the opinion, that such trash of bookes and papers must be left untoucht and whole for their enemies, as the only meane, and proper instrument to divert them from all militarie exercises and amuse them to idle, secure, and sedentarie occupations". This is the same disdain for learning that we find in the modern Goth, and is it not just because with a gain of knowledge there has often been no gain in adaptability.

But how may this adaptability be brought out? Not necessarily by storing one's mind with facts and theories, for who can foresee the environment to which a child or youth will require to adapt himself in after years. Faust, in his day, might boast that he had mastered philosophy, law, medicine and theology—and be it noted he confesses that he was no wiser than before—but to-day so great has been the accumulation of facts that no one can master more than a small proportion of them, and how can we be sure that any group of facts we may teach a child will be those which will adapt him to his environment in the future? If we could determine the environment beforehand, how simple would be the problems of education. The question of selecting the facts and theories necessary for successful adaptation would be a comparatively simple matter. This is to some extent the case in technical or professional education; but even here some of the original difficulty still lingers. For, in medicine, for instance, and presumably it is the same in other professions, it is impossible to foresee the conditions which may be encountered, a margin of adaptability is still required, and a grounding in fundamental principles must be imparted so that new conditions may be met by new adaptations and progress be the result.

The development of adaptability is, then, an essential even when the character of the environment is largely determined; how much more is it necessary when the environment is almost unknown. Perhaps we may find an example of the greatest lack of broad adaptability in the scholastic education of the middle ages. Largely in the hands of the clergy and bestowed on those who were to enter its ranks, it left almost entirely out of consideration the wider environment of the everyday world. Possibly it was in harmony with the cloistered environment in which it found its headquarters, but with the cares and trials of the outer world it had little to do, the result being that its possessors were, as a class, divorced from mundane affairs, and had little part in human progress. With the Renaissance in the fifteenth century, however, a new factor was introduced, a spirit of self-reliance, an assertion of individuality, a tendency towards personal inquiry and investigation replacing the blind submission to authority which characterised the earlier period. In literature there was a return to the study of the original sources, and science began to assume its modern inductive methods and to profit by the example of such men as Leonardo da Vinci and Francis Bacon. The deductive methods of Greek philosophy were, however, very firmly implanted and the progress of the inductive method was slow; but gradually the cleavage between the two methods became distinct, the literary discipline remaining largely under the dominance of the older deductive and scholastic methods, while the sciences more and more were coming under the influence of the inductive method, which we now recognise as the scientific method.

And wherein does this consist? What is the characteristic of the scientific method? Von Baer in his autobiography defines it as observation, reflection and deduction; it consists in seeing, thinking and drawing a conclusion, three distinct processes, and each without the others more or less futile. To many people science means a process of weighing, measuring and describing, but this is only one of its three factors, that which furnishes the data which are to be studied and compared with others until they lead to some definite conclusion. The mere accumulation of facts is not science, any more than are the most brilliant coruscations of the imagination, or the profoundest meditations. Facts by themselves are of no more value than bricks lying in a confused heap by the roadside. They must be studied, compared and arranged in orderly sequence before they can yield results of value, results which point to further possibilities and so lead to progress.

That is the scientific method: see, think, deduce. But is not that just what we are doing all the time? Perhaps so. Perhaps, like Molière's *Bourgeois Gentilhomme*, who found that all the time he had been talking prose without knowing it, we have been using the scientific method

without knowing it. For Huxley has defined science as "organised common-sense". And yet it is curious how many people on inquiry will be found to have the scientific method but poorly developed. William James has commented upon this in his delightful way; he says "The aspiration to be 'scientific' is such an idol of the tribe to the present generation, is so sucked in with his mother's milk by every one of us, that we find it hard to conceive of a creature who should not feel it, and harder still to treat it freely as the altogether peculiar and one-sided subjective interest that it is. But as a matter of fact, few even of the cultivated members of the race have shared it; it was invented but a generation or two ago". I would place its "invention" farther back than "a generation or two ago", but certainly it is by no means a universal possession of all our fellow-men to-day.

The scientific method is the method we all must cultivate if we seek success under the complicated environment of to-day. The scholastic method may have been well enough for the seclusion of the cloisters, but we must struggle with a larger and more complex environment. We must observe, think and conclude that our actions may be adapted to the conditions in which we find ourselves. And there we are back again to the idea of adaptation. The development of the powers of adaptation, *that* is education, and we gain adaptability by developing our powers of observation, reflection and deduction. That is the place of science in education. Or let me say, rather, that is the place of the scientific method in education. Because it is the method that counts, and it matters not whether we make use of science or the classics or moderns or history or mathematics or what not, provided we use them as means to develop the method. True, the sciences lend themselves somewhat more readily to its development, but the application of the scientific method is not necessarily limited to those studies which we ordinarily include under the sciences; it is applicable to all studies.

I have no quarrel with the classics; far from it. I am not advocating the supplanting of the classics by the sciences. It is not necessary, for the classics may be taught by the scientific method and effectively used to develop the triad of processes which make up the scientific method. But the sciences have one great merit—to some it may seem a demerit—less evident in literary studies, namely their objectivity, their impersonality, their concreteness, and in this lies the great advantage they possess for developing the scientific method, which, as I have tried to show, is the method of education that most successfully makes for the development of adaptability to the environment.

Nor do I quarrel with the use of facts. We must make use of them, they are the tools with which we have to work, and if the facts thus employed be useful ones, so much the better. But we must regard

them, whether their utility be direct or indirect, merely as tools. The accumulation of a mass of facts is not education.

“Men have oft grown old among their books
To die case-hardened in their ignorance.”

Case-hardened because they made the accumulation of facts the ultimate goal and stifled their adaptability under a plethora of undigested facts. And, let me repeat it, the ideal of education is the development of adaptability. It is not a mastery of the classic languages and literatures, it is not a fluent facility in modern tongues, it is not a thorough knowledge of the facts of history nor of the facts and hypotheses of this or that science. Each of these is a valuable possession and means power if, and only if, with their possession, there goes a knowledge of how to make use of them in adapting to the environment in all its complex forms one's self and those for whom one has assumed responsibility. Back of the facts lies the method. Useful as the facts may be, much more useful, because more generally applicable, is the acquisition of the scientific method. The education that succeeds in making the scientific method a habit is indeed successful. All the facts that may be required by any one individual cannot be taught, but if the scientific method has become a habit, he will seek out the facts for himself, he will study their significance and he will draw conclusions as to how he may best adapt himself to the conditions of which they are the index. He will have learnt the true value of facts as means to an end rather than the end itself. He will appreciate the necessity for keen observation and the careful assembling and comparison of his facts. That is the method of the successful business man and it is also the scientific method.

My thesis then is that the value of science in education is its value as a means of developing the scientific method, and that the development of this method as a habit should be the ultimate aim of education. Whether in the primary school or the university the laying of a broad foundation should be the purpose of the teacher. The pupil cannot always remain a pupil; sooner or later he must build for himself, and he must build on the foundation that has been laid down during his pupilage. The responsibility for that foundation rests upon us teachers, so let us see to it that we make it broad and firm by making it the development of the powers of adaptability. Nature teaches us that potentialities for adaptation constitute the essential for success in the struggle for existence, and we have the right to assume that in the struggle for existence and for progress in which we are all engaged, what is needed is keen observation, clear thinking, and logical conclusions, that we may successfully adapt ourselves to the conditions that now are and later will be confronting us.

“Sight” Passages

A LESSON IN LITERATURE.

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THERE are times during the school year, as for example at the opening of the term, when pupils have no text-books in literature, and the teacher is perhaps at a loss to know how to “put in” the lesson period. On such occasions it is sometimes advisable to study with the class some passage in poetry that is not contained in a text-book. As a matter of fact the pupil is likely to be more interested in a poem which is developed in this way than in one which he sees before him on the printed page.

Let us suppose then that it is the first day of the term and that you wish to provide a lesson of this sort for your class. Your first problem will be the choice of a suitable selection. In the case of classes preparing for examinations it is generally possible to select one of the prescribed poems, but in junior classes you may choose what you please. If you have several lesson periods to provide for, you may prefer to take a longer story such as *King Robert of Sicily*, and read a part of it each day; but for a single period you must choose a short poem which you can complete in one lesson. The poem too must be of sufficient difficulty to challenge effort on the part of the pupils and must contain a concrete element which will hold the interest. With a lower school class such poems as the following are likely to answer these conditions:

Browning.....	<i>Boot and Saddle.</i>
Longfellow.....	<i>Excelsior.</i>
Bryant.....	<i>The Crowded Street.</i>
Macaulay.....	<i>Epitaph on a Jacobite.</i>
Longfellow.....	<i>The Warden of the Cinque Ports.</i>
Whittier.....	<i>Skipper Ireson's Ride.</i>
Wordsworth.....	<i>Reverie of Poor Susan.</i>
Browning.....	<i>The Patriot.</i>
Longfellow.....	<i>The Old Clock on the Stairs.</i>
Mrs. Browning.....	<i>A Musical Instrument.</i>
Whittier.....	<i>The Gift of Tritemius.</i>

The method which you follow in the study of the poem will depend upon its length and difficulty. In the case of a poem such as *Skipper Ireson's Ride*, where the story is simple, you may find it best to read the whole poem, and then question the class, to test whether they

have understood it. But in the case of a shorter poem where each stanza presents difficulty, it is better to develop the story stanza by stanza. A study of Browning's *Boot and Saddle* will help to illustrate the method to be followed.

Introduction.—The teacher asks the class to give careful attention to the poem, and to find out what the speaker says of himself.

The teacher reads the first stanza twice:

Boot, saddle, to horse, and away!
Rescue my castle before the hot day
Brightens to blue from its silvery gray.
Boot, saddle, to horse, and away!

Questions.—Who is the speaker? To whom is he speaking? What does he wish them to do? What time of day is it? What time of year? What is meant by "Boot, saddle, to horse, and away"? Where do you suppose the speaker and his companions are? Let us read the second stanza and see if it tells us:

Ride past the suburbs, asleep as you'd say;
Many's the friend there will listen and pray,
"God's luck to the gallants that strike up the lay,
Boot, saddle, to horse, and away!"

They are evidently in a city. How do you know? Why does the speaker say, "asleep, as you'd say"? In what danger do you suppose the castle is? Do you know of any struggle in English history in which an Englishman might find his castle besieged, so that he might need to "rescue" it? In this struggle between the Cavaliers and the Roundheads, where were the Cavaliers the strongest, in the city or in the country? To which party, then, does the speaker probably belong? Let us read the next two stanzas for further details:

Forty miles off, like a roebuck at bay,
Flouts Castle Brancepeth the Roundheads' array.
Who laughs, "Good fellows, ere this, by my fay,
Boot, saddle, to horse and away."—

Who? My wife Gertrude, that, honest and gay,
Laughs when you talk of surrendering, "Nay,
I've better counsellors. What counsel they?
Boot, saddle, to horse, and away."

Here we are given the name of the castle, and we are told who is besieging it. How far do the Cavaliers have to ride to reach the castle? Is the castle likely to hold out? Question on *flouts* and *like a roebuck at bay*. Are there any signs that the castle is hard pressed? Who is defending it? How does she attempt to cheer up her men?

Conclusion.—Now re-read the poem, with expression, and ask one or two members of the class to give the substance of it orally, or the whole class to write an account of it.

Sometimes during the year the teacher wishes to take up with the class, poems that are suited to special occasions; and in such cases this method of reading and questioning, stanza by stanza, generally proves satisfactory. On the 31st of October, for example, immediately preceding Hallowe'en, the first two stanzas of Lowell's *All Saints* forms a very interesting sight passage:

One day, of holy days the crest,
 I, though no churchman, love to keep,—
 All-Saints—the unknown good that rest
 In God's still memory folded deep;
 The bravely dumb, that did their deed,
 And scorned to blot it with a name;
 Men of the plain heroic breed,
 That loved Heaven's silence more than Fame.

Such lived not in the past alone,
 But thread to-day the unheeding street;
 And stairs to sin and famine known,
 Sing with the welcome of their feet;
 The den they enter grows a shrine,
 The grimy sash an oriel burns,
 Their cup of water warms like wine,
 Their speech is filled from heavenly urns.

A passage such as this is more difficult for the pupil to carry in mind, and the teacher may find it advisable to dictate it to the class, or put it on the blackboard, four lines at a time.

Even in the case of prescribed work the teacher will sometimes find that his lesson is more effective if it is developed without the use of the printed page. When a lesson is taught in this way, the pupil must be on the alert, for if he misses a question or an explanation he has not the text to refer to. Besides, the average pupil likes the stimulus which comes from having to carry the details of the passage in mind rather than depend on the book. If a lesson of this kind proves a failure it is usually because the passage is too difficult for the pupil to follow, or else because the teacher does not present it clearly. In order to use this method the teacher himself must be familiar with the poem which he aims to present.

On the departmental and matriculation examination papers, “sight” passages always appear, and pupils should have some practice on sight work during the year. But in the case of these passages the teacher will prefer to give them in the form of an examination test, in which pupils will put their answers in writing.

The teacher was holding up a picture of a zebra.

“Now, children, what is this?”

“It looks to me like a horse in a bathing suit,” answered little Arthur.

The Western Campaign

(Continued)

E. L. DANIHER, B.A.

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THROUGHOUT the entire line there has been the almost inevitable daily artillery duel. At many places attacks have been made in smaller force but not pressed home. At other places, as where the plucky Belgian army is entrenched on the Yser, there has been fierce fighting but no change of ground. In four parts of the line definite results have been obtained, on the west front held by the British, in the Champagne and the Argonne region east of Rheims, in the district south of Verdun between the rivers Meuse and Moselle, and in the Vosges mountains on the Franco-German border.

During February and March the French exerted a continual pressure on the Germans in the Champagne at Perthes and Beauséjour, and at Bagatelle and Vauquois in the Argonne. General Joffre has since intimated the purpose of this—to see what could be done against the German positions, and to wear down the enemy's reserves of men and ammunition. These objects were achieved very satisfactorily; positions were taken that the enemy had been fortifying for months, and the foe was compelled to use thirty-three instead of eighteen regiments. The ground gained has been incorporated into the French lines.

The British attack on the Neuve Chapelle front was quietly planned for March 10th. Guns were massed, 350 of all calibres, on a front of about 2,000 yards. A terrific bombardment of half-an-hour was directed on the enemy's position to clear the way. The British then made a fine charge, carrying their line forward about two miles. In the meantime British aviators were destroying railways, thus interfering with the reinforcing of the German line. The battle went on for three days, the German losses being about 18,000 and the British about 13,000. The ground gained would have been more considerable and the losses less severe for the British, had not a battery, losing touch, continued firing, and had not an officer of reserves failed in a part of his duty.

Farther north the Germans had a plan of their own. The British salient at Ypres has been a constant menace to the enemy. As a counter stroke to Neuve Chapelle they now attacked, March 11th, at St. Eloi, where the line turns to the east to go round Ypres. The battle continued for three days with the outcome again favourable to the British. This

showed the enemy that he was dealing with a strong foe; he did not know whether or not another drive would be made, so he opened a violent bombardment all along the line to break up any attack that might be forming. After this, fighting slackened for about a month. During this month the Canadian troops were going into the line north of Ypres. The Germans were massing troops near their front.

During March the French had been making some progress in the Vosges, towards the Rhine. On the 25th they began their attack on the outermost hill, Hartmannsweilerkopf, the most important position in the region. They had held it before, but it had been taken and strongly fortified by the enemy. Now with pick, shovel and rifle they dashed at its slope and day by day went up. On March 29th, after a heavy cannonade, a brilliant charge cleared the summit in ten minutes. Desperate counter-attacks have been made with some success, but the position is still held by the French.

At the same time very fierce fighting was going on between the Meuse and the Moselle, where the French were trying for commanding positions on each side of the German salient at St. Mihiel. Considerable success attended these efforts, especially on the north side, where the plateau of Les Eparges was taken on April 10th, with heavy losses for both sides.

About the middle of April it was known that large bodies of troops were being massed in Flanders. No one was able to say whether it meant a new drive to the sea or not. South of Ypres the Germans were preparing a drive from Hill 60 which, together with an attack from the north, was to compel the British to evacuate that town. The British suspected the plans and took the initiative, capturing Hill 60 with great difficulty. The enemy countered several times and in the meantime prepared the attack from the north.

They advanced from Langemarck, preparing the way for the infantry by means of artillery and by the discharge of poisonous fumes. Overcome by the gases the French line was driven back. This left the north flank of the Canadian troops "hanging in the air". The men from Canada fought heroically and though they suffered very heavily we have the consolation of an official despatch stating that "their gallant work saved the situation for the British". The Germans advanced about three miles. The position of Ypres is very critical; the fighting still goes on (May 10th).

Small Child—"The man that made this geography must have been colour blind."

Teacher—"Why do you think so?"

Small Child—"Cause he's got Greenland coloured yellow."

June in the Primary

ETHEL M. HALL

Public School, Weston

DO you remember Kate Douglas Wiggin's description of a teacher? "She was toiling away in Wareham School, living as unselfish a life as a nun in a convent, lavishing the mind and soul of her, the heart and body of her in her chosen work. How many women give themselves thus, consciously or unconsciously, and though they miss some of the joys and compensations of life, God must be grateful to them for their mothering of the hundreds which are so precious in His sight".

Perhaps there are primary teachers who look back through the months of the year which is drawing to a close and feel a weight of discouragement upon their hearts. Do not waste these lovely June days in vain regrets. Remember that "God must be grateful" for the effort to do the best you could, and perhaps in the dim future, "after many days", you may see the result of the efforts which now seem to have been "cast upon the waters".

Turn to Nature and drink in all the beauty of this all too short month of the year. Like Elizabeth Barrett Browning, say:

The little cares that fretted me,
I lost them yesterday
Among the fields above the sea,
Among the flowers at play,
Among the lowing of the herds,
The rustling of the trees,
Among the singing of the birds,
The humming of the bees.

The foolish fears of what may happen,
I cast them all away
Among the clover-scented grass,
Among the new-mown hay,
Among the rustling of the corn
Where drowsy poppies nod,
Where ill thoughts die and good are born,
Out in the fields with God.

Nature.—1. *Bird study*: bobolink, yellow-bird or golden warbler, goldfinch, orioles, ruby-throated hummingbird. 2. *Flower study*: daisy, morning-glory, rose, nasturtium, pansy, sweet-pea. 3. *Insects*: fly, ant, bee, butterfly, moth.

Scripture Memory Work.—Proverbs III, 11-20.

Prayer.—Psalm 141: 1-3, and the Lord's Prayer.

Hymn.—Lead Kindly Light.

Legend and Story.—1. Legend of the Pansies—*Cosette*. 2. Legend of the Daisy—*Haeusser*. 3. Twilight and Dawn—*Johnston*. 4. Legend of the Buttercup—*Myths*. 5. Blue Flower of the Mountain—*Allan*. 6. Cruise of the Painted Lily—*Kohler*. 7. Saving a Bird—*Fitz*. 8. Little Bird—*Alcott*. 9. The Flower's Lesson—*Alcott*.

June Songs.—1. Glad June Time—*Riege*. 2. Sweet, Sweet, Sweet—*Rountree-Smith*. 3. Two Robin Red-Breasts—*Educational Music Course*. 4. A Wee Little Nest—*Jenks and Walker*. 5. Over in the Meadow. 6. June—*Eleanor Smith*. 7. Cuckoo Clock—*Riege*. 8. The Happy Bee—*Hartford*.

Picture Study.—Artist, Breton; Subject—Song of the Lark.

June Poems.—1. Back to Summer-land—*Eugene Field*. 2. June—*Lowell*. 3. Scarlet Poppy—*Jane Taylor*. 4. The Throstle—*Tennyson*. 5. Return of the Birds—*Wm. Cullen Bryant*. 6. The Sparrow's Nest—*Mary Howitt*. 7. Lullaby—*Tennyson*. 8. June—*Celia Thaxter*. 9. Butterflies—*A. S. Swinburne*. 10. Clover Blossom—*Alcott*.

Literature.—1. "Farm Yard Song"—*Trowbridge*. This is an excellent descriptive poem of farm life. The pictures in the stanzas are as vivid as any painted by an artist. It will create in city children a longing to fly to the open country and "list to Nature's teaching". 2. "Slower, Sweet June"—*Julia M. Hay*, which should be known more widely. Teach this charming supplication to the months. 3. "June" (From *Lowell's Vision of Sir Launfal*) is a perfect description of a beautiful day. 4. "Green Things Growing"—*Dinah M. Mullock*.

Composition.—Have a little garden in the class-room where the pupils can watch the germination of seeds. (a) Allow pupils to give a clear *oral* description of the seed in all stages of growth. (b) Place these descriptions on the blackboard. Let the pupils copy these into the work books. (c) Have them illustrated with drawings of the plant in different stages.

This plan may be extended in many ways.

Spelling.—Use June as a review month: (a) Phonic words. (b) Alphabetical lists. (c) Non-phonetic words. (d) Names of months. (e) Names of days of week. (f) Names of the seasons. (g) Flowers. (h) Birds. (i) Plants. (j) Insects. (k) Children's names. (l) Familiar places.

Phonics.—(a) General review of all sounds. (b) Application of phonics in sight reading. (c) Recognition of work in primer. (d) In supplementary readers.

Reading.—(a) Review of primer lessons. (b) Use of supplementary readers. (c) Cuttings from newspapers and magazines. (d) Voluntary readings by children.

Geography.—*Belgium.*

I. 1. Early and later history. 2. Promises of other nations (1914).

II. Descriptions of the country. 1. Sand dunes and digues. 2. Valleys—Meuse (Ardennes). 3. Rivers—(a) Meuse, (b) Sambre, (c) Lesse, (d) Semois. 4. Towns and cities—Brussels, Antwerp, Malines, Bruges, Courtrai, Ghent, Louvain, Lournai, Liège, Ostend, Mons, Charleroi.

III. Description of the people.

A. Manners and customs. (a) Games: archery, ball, cricket, golf. (b) Festivals: St. Martin's, St. Thomas, St. Nicholas, New Year's, Trick Day Innocents, Christmas. (c) Pageants.

IV. Language: 1. Flemish. 2. French. 3. Walloon.

V. Legends of Belgium.

VI. National Songs.

Manual Work and Art.

Draw or paint: "When I was down beside the sea,
A wooden spade they gave to me
To dig the sandy shore," etc.

Cut. 1. Butterflies, birds, daisies. 2. Children at play: swinging, sailing boats, making gardens, riding ponies or wheels, rolling hoops, playing ball, going home from school, etc.

Model: 1. Birds' houses, nests, etc. 2. Children at play.

Sand Table.—Illustrate and work out the poem "The Farm Yard Song".

Number.—Review the year's work: 1. Test the knowledge of combinations. 2. Test the knowledge of measurements. 3. Test time-measures, days in the week, months in the year, etc. 4. Knowledge of money values: (a) Sight knowledge of pieces. (b) To make accurate change. (c) Value of articles. (d) How articles are sold—pound, dozen,

score, quire, bushel, peck, quart, pint, etc. 5. Counting by 10, 5, 2, 3, 4, 6, 7, 8, 9, 11, 12. 6. Counting back by same from 100. 7. Knowledge of the Roman numerals. 8. Writing numbers in words. 9. Analysing numbers into units, tens, hundreds, thousands. 10. Easy problems having only one operation.

Only a bare outline of the year's work in the primary has been given. Success depends on the amount of personality which the teacher can put into her work. Be original! "Think for thyself". The world is full of mental parasites.

Book Reviews

College Physiography, by Ralph Tarr and Lawrence Martin. Published by The Macmillan Company of New York. The Macmillan Company of Canada, Toronto. Price \$3.50. 837 pages. We have been familiar so long with Tarr's many books on geography and have learned to appreciate their excellence that this most ambitious work of his creates high expectations. In many respects the book more than satisfies these expectations. It is probably the most exhaustive work on physiography in the English language; its only possible rival in this respect being Salisbury's well-known volume. All that it says is excellent and the illustrations are all that one would wish, though the coloured plates in some cases seem so much reduced that the details are not distinct. If there is any fault to be found it is with the omissions. When one turns for an explanation of the cause of tides he finds it dismissed in a line as a subject for students of higher mathematics, when the reader turns to the chapter on winds to find an explanation of the effect of the earth's rotation on the deflection of their direction he finds that no explanation is given but only a rule of thumb for finding the direction of deflection. While explanations of these phenomena might well be dispensed with in an elementary book, they can hardly be omitted from a book of such size without provoking some criticism. However, it is a book indispensable to all teachers of physiography and will long fill an honourable place in both colleges and high schools.

G.A.C.

The Victorian Era, 1837-1912. This is book VI of the Abbey History Readers published by G. Bell & Sons, London. 153 pages. Price 1s. It frequently happens that students of history are more definitely familiar with events of a thousand years ago than with those of our own times. With this little book in the school library, such a condition is not likely to exist, as the summary of events since 1837 is given so clearly and briefly that all students will enjoy reading it.

Nature Study for June

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THE SNAIL.

(a) **Instructions to the Teacher.**—There are no more fascinating animals that the pupils of a Public School may observe than the common land and water snails. They are easily secured and can be kept alive and well for a long time with little trouble. There is no more suitable month for the study of them than June.

Water snails are abundant in all ponds, marshes, swamps and slow streams. The boys should be directed to draw out of the water with a rake some of the weeds growing there. If these weeds are picked over carefully a good many specimens can soon be gathered. If different pupils get specimens from different bodies of water it is probable that all the kinds mentioned below will be procured. These snails should be placed in glass vessels with water-plants and may be left in a bright place. An aquarium such as has been described in this journal several times will be most suitable.

Land snails are usually not quite so plentiful but any boy can find them in half-an-hour by turning over old logs in a shady wood. Some quite large specimens will likely be secured and they are very interesting to study. Slugs are very easily procured. If any board in a backyard is turned over they are sure to be seen as elongated slimy masses. The land snails and slugs should be placed in a glass vessel without water, but with a damp cloth or sponge in the bottom of it to keep the atmosphere humid. A few lettuce leaves should be kept in the vessel and both the slugs and land snails will eat them eagerly. A piece of glass should be placed over the top of the vessel or the inmates will escape over the edge. Each pupil might keep a slug and a land snail in a tumbler either at home or at school and the observations should be made from these specimens. About twice a week the animals should be taken out and the glass vessel washed. They may then be replaced leaving the vessel wet so as to keep the atmosphere within quite humid.

The observations outlined below should be placed on the blackboard and the pupils given sufficient time to make them,—and it takes time, as only very slowly can all the habits be observed. If there are a few magnifying glasses accessible they will be of great assistance in making out some of the minuter structures and movements. The pupils should be required to make rapid sketches of the animals in characteristic situations, as in no other manner can careful observation be so well cultivated.

(b) **Information for the Teacher.**—Water snails and land snails all possess a single shell of a peculiar kind. It forms a spiral with an opening at the larger end from which the animal protrudes its body. The spiral shell may vary a good deal in shape. It may be perfectly flat with the small spirals within surrounded by the outer ones. Snails of this kind are called the trumpet-shells because of their resemblance to that musical instrument. Some of these are sure to be found by the pupils. Usually in the land-snail and in the other water-snails the shell is somewhat conical rather than flat, the small spirals projecting out from one side and forming the pointed end of the cone. In one kind of pond snail called *physa* the spiral runs in one direction, and in another very common one *limnæa* the coils run in the opposite direction. Across the spirals are successive transverse marks indicating the lines of growth of the shell. The last spiral is much larger than the others and is used as a room into which the body of the animal can be withdrawn for protective purposes. The slug differs markedly from its relatives in having no visible shell; hence it has not the same immunity from injury.

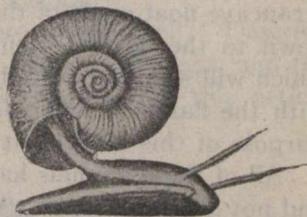


Fig. 1.
Trumpet Shell,

The general shape and appearance of the body is the same in all of the kinds mentioned above. When fully protruded an elongated flat part can be seen which is in contact with the glass; this is called the foot. At one end of it is the head, easily distinguishable by its projecting tentacles. The water-snail has only a single pair of tentacles which taper to a point, but the land snail and the slug have a large pair of tentacles on the top of the head. These terminate in knobs which are really eyes and below these is a very much shorter pair of tentacles. The eyes of the water-snail are at the base of the tentacles and one must

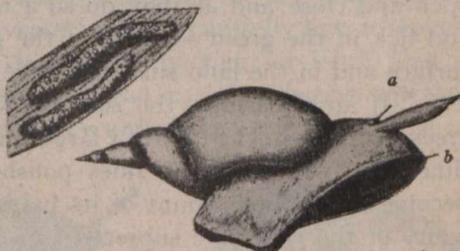


Fig. 2
Pond Snail and Eggs.
a—eye. b—mouth.

use a magnifying glass to see them clearly. If the tentacles are touched they rapidly disappear, being withdrawn inside. Above the foot is the body which passes up into the cavity of the shell. Where it enters the shell a fold called the mantle passes around the body.

Its method of locomotion is most remarkable. The foot is applied flat against the glass on which it is walking and waves seem to pass over the foot from one end to the other. The land forms secrete a slime as

they pass which seems to assist them, and when this dries it forms a glistening trail which can frequently be seen on boards or vegetation where the animals have passed. They always move at the same rate and never go backward, although they can turn to the right or to the left. The water snails have no swimming organs and yet they move up and down through the water with ease. They spin a thread of mucus which passes from below to the surface, where it is anchored by a concave float made of the same material. They crawl up this or drop down to the bottom along it with the greatest ease. Another habit which will soon be noticed is that of moving along the top of the water with the flat foot along the surface and the body hanging down. The purpose of this movement is not known with certainty.

All of these animals have a lung and get their oxygen from the air and not from the water. When one of them comes to the surface of the water an opening will be noticed along the back. Through this opening air has access to the lung. They come to the surface quite regularly to breathe. The land snail and slug have this opening also.

They are all vegetable feeders and live on the leaves of various plants. The land-snail and slug live on aerial leaves, while the water-snails live on submerged leaves or on the greenish scum that tends to grow on an aquarium, in fact they do great service in an aquarium in keeping it free from such growth. The method of feeding can be observed well in the water snails on the flat sides of an aquarium. At the front part of the body on the part in contact with the glass will be seen an opening, the mouth, with two lateral lips, which alternately open and close, and as they do so a tongue will be seen to project out and lick in the green scum from the glass. This tongue has a file-like surface and in the land snail it can be heard rasping off pieces from the leaf. If an aquarium, the side of which has become covered with green scum, is stocked with a large number of water snails, in a week's time they will have the sides polished like a mirror. The slug has become a pest on account of its habit of leaf-eating in the garden and many of the crops are subject to its ravages. It always comes out at night to feed, but its path can always be detected by the glistening, slimy trail which it leaves behind it.

As has been said, their chief method of protection is to withdraw into their shell, or perhaps it would be more accurate to say that they pull the shell down over the body. First the tentacles are retracted, then the body is contracted into a more compact lump and the shell completely covers it. During the winter the opening of the shell is sealed up with slime which hardens, and thus the body is prevented from being dried up.

A few days after the snails are placed in the aquarium little masses of jelly will be seen on the water plant, on the sides of the aquarium and on the stones in the bottom. Those on the sides of the vessel are in an excellent position for examination with a magnifying glass. They will be seen to contain little specks which are the eggs and these can be observed to change gradually as they develop into the snail larva.

(c) **Observations to be Made by the Pupils.**

(1) *The shell.*—How many pieces are there to the shell? Describe the shape of the shells of the different snails, making drawings, and try to distinguish with the assistance of the illustrations in this article physa, limnæa, and the trumpet snail. Hunt in running streams, ponds, marshes and swamps among the water weeds for all the different kinds of snails and make collections of the shells of each. In what part is the animal situated? Look under boards in the backyard for slugs with no external shells.

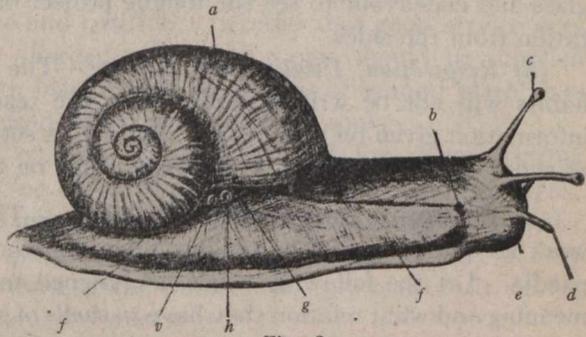


Fig. 3

Sand Snail.

a—shell. b—genital pore. c—eye tentacle. d—small tentacle. e—mouth. ff foot. g—collar. h—respiratory opening. v—vent.

(2) *Locomotion.*—Describe and make a drawing of each kind of snail as it walks on the side of the glass vessel. Watch carefully how it moves. Does it ever go backward? Can it turn to the right or left? Can it swim? How does it pass up and down in the water? Observe whether it moves along the surface of the water and whether it makes use of



Fig. 4.
Slug.



Fig. 5.
Physa fontinalis

its foot for this purpose. In the bottom of the vessel in which the land snail and the slug are kept, sprinkle some ashes at one corner, place the animal on the ashes and find whether it travels more easily on a smooth surface such as glass or on the ashes. (It moves very badly on a powdery substance). Suggest how plants could be protected from slugs.

[Figs. 1, 2, 3, 4, from *First Book of Zoology*; The Macmillan Co., Toronto. Fig. 5 from the *Century Dictionary*.]

(3) *Tentacles*.—How many tentacles have the water snails? How many have the land snail and the slug? Find four eyes at the end of the large tentacles on the land snail and the slug. Look for them at the base of the tentacles in the water snail. How could you distinguish by means of the tentacles a land snail from a water snail? Touch a tentacle and carefully study what takes place. What would you infer to be one use of the tentacles?

(4) *Food*.—Watch a water snail carefully as it moves on the side of the aquarium, and endeavour to find its mouth. What shape is it? Describe its motions. Look at it through the vessel with a magnifying glass and endeavour to see the tongue project out and lick in the vegetation from the sides.

(5) *Respiration, Development, Defense*.—The observations for these habits will not be written down. Let the teacher, after reading the information given on these topics, draw up a set of observations similar to those given above for the pupils to make on these points.

(d) **Economic Importance of Snails**.—This might be assigned as work for pupils to find by reading reference works such as the encyclopædia. Let the following terms be assigned to the pupil to find their meaning and what relation they have to shells of snails or related animals: money cowry, murex, wampum, pearl, mother-of-pearl, edible snails, periwinkle, purple of mollusca. If they read descriptions of the ornaments of any of the island peoples such as the people of Malay, Fiji, Solomon Islands or Sandwich Islands it will be found that they consist largely of shells.

“An Atrocious Parody”

(With apologies to Kipling and the reader).

When June's last school-day is ended, and exams have been given and tried,
 When the oldest teachers have wilted, and the youngest think to have died,
 We shall rest, and, faith, we shall need it,—lie down for a month or two,
 Till the law of our blessed province shall put us to work anew.

And those still tired shall be snappy, they shall sit in a broken chair;
 They shall scrub on a dusty blackboard with brushes worn and bare;
 They shall find real “dubs” to work on,—Elizabeth, Peter, and Paul;
 They shall work for an age at a lesson, and see no results at all!

And none will there be to praise us,—but many a mother shall blame;
 And each one shall work for money, for no one shall hope for fame,
 But each on a Friday morning with crayola, charcoal, or paint,
 Shall make for the art-supervisor, rare pictures of things as they ain't!

AN ONTARIO TEACHER.

The Decoration of School Blackboards

ROY F. FLEMING

Art Instructor, Normal School, Ottawa, Canada.



THE good blackboard should be (1) permanently solid and rigid, (2) in tone from middle value to black, (3) of a texture which will grip the chalk and yield' it again in erasing, (4) of convenient size and position. In order that good service may be afforded, all school rooms should be supplied with blackboards of slate or of ground plate glass backed with a green or dark tone.

The blackboards of our schoolroom are used for demonstrating work to the classes and for the written exercises of the day or week. They are an economical means of communication between the teacher and pupils. Their conspicuous situation causes them to play a very large part in the visual work of the pupils; the eyes constantly revert there both voluntarily and involuntarily.



Peacock Design.

But did it ever occur to Canadian teachers what very dull-looking and uninviting pieces of space these blackboards are? Indeed our blackboards are cheerless, uninteresting, dull, relentless affairs, with scarcely a suggestion that would cause them to be remembered with a pleasant thought. Surely such a condition is not essential to the success of the work of the school.

We propose that blackboards should have *decoration*, not so much of it that the efficiency of the boards may be interfered with, but sufficient to lend an inviting fragrance to the written exercises upon them. How much more interesting to the eye is the illumined page of the book than the plain page! How the eye wants to go on to that pretty page! The ideas there seem so much more enjoyable! How much better the

child tries to write with a beautiful new pen! And the first page of the new clean exercise book is so neatly done! So with the blackboard, a little decoration is so inspiring; it gives suggestion and encouragement to the pupil.

Besides the economic assistance decoration of blackboards may afford, there is an aesthetic advantage that may be gained. Let the eye play often on beautiful forms and colour relationships, and a love of that particular beauty will steadily develop. This love of beauty will extend itself to other things, and thus a distinct advance in the love of the beautiful will be gained.

If then decoration on the boards will be of both economic and aesthetic assistance, how is it proposed to decorate the blackboards? In several ways.



The peacock stencil repeated in a border for decorating the top edge of the blackboard.

FIRST.—For *special occasions*, such as a formal school function, the blackboards should have a full decoration in coloured chalks in harmony with the spirit of the event. The form of this decoration might be illustrative pictures, mottoes, or symbolic designs of the event or season, with subordinate ornament related thereto. The teacher should have artistic ability in order to organize and space out such decoration, for the more clever pupils to work out. For teachers who lack sufficient skill for doing such work, sometimes suitable blackboard picture stencils may be had. Tissue paper ones with pinhead holes for school use showing various festival seasons may be had at from 5 to 10 cents each.

SECOND.—Pictures and decorations on the blackboard, having a bearing on the *regular work of the school*. Certain permanent spaces on the boards might be kept for the *Honour Roll*, a *monthly calendar*, and an *illustration of some lesson*, which would be changed at regular periods.

THIRD.—How to decorate the blackboards when practically their

whole area is required for the school work. Was there ever a blackboard from which three to six inches along the top could not be spared for decoration? Not often. Here a narrow border in coloured chalk

SET No. 1
PEACOCK AND DUCK.



SET No. 2
BUTTERFLIES, INSECTS.



SET No. 3
SHELLS, ELEPHANT, RABBITS.



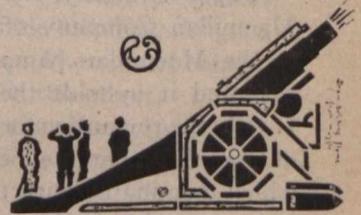
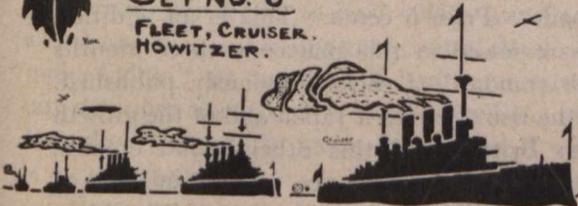
SET No. 4
GRAPE, MAPLE, HOLLY.



SET No. 5
VINE, ROSE, FLOWER TOPS.



SET No. 6
FLEET, CRUISER, HOWITZER.



Nineteen units of design in stencil form which may be used in the decoration of blackboards.

might be made of flowers, leaves, fruit, berries, landscape friezes, birds, butterflies, fish, quadrupeds, ships, cannon, flags, bells, ribbons, or a hundred other things, in colours suggestive of nature, but also related

to the other colours of the room. Sometimes too when space permits the border might be extended around the two end edges of the board and even the bottom of the board. Sometimes the teacher can design borders, or find suitable ones to be copied, and indicate the size in which they are to be carried out. Again, a mechanical means might be wisely resorted to by the use of decorative stencils of convenient size, in which case the unit of ornament is already made in the form of areas cut out of stiff cardboard, through which the chalk may be rubbed. The accompanying illustrations show a number of these stencil designs adapted for repetition in blackboard decorative borders. Those teachers who are acquainted with stencil designing could enlarge and cut some of these out on stencil paper. This set of stencils is published in size 3" to 6" deep by the Arts Design Co., Ottawa. With such a set of stencils beautiful borders may be put on the top edge of the blackboard in suitable colours, suggestive of the natural colours and harmonious with other prominent colours of the room, for example, the peacock design looks its best in very light blue and green with touches of yellow, the howitzer cannon looks well in charcoal and light blue.

In all blackboard decoration coloured chalks are required, and it is advised that the *soft dull colours* be obtained rather than the *common very bright ones*; charcoal in packages should be on hand as it is much blacker than the blackboard, as well as *white chalk*, which is often required to lighten the coloured chalk.

With the desire on the part of the teacher for more beautiful blackboards, and some appreciation of the artistic and the material necessities required, there is no reason why our blackboards should not cease their dull cheerless appearance and become more inviting, be things of beauty and joy every week of school.

Book Reviews

Japan our Ally, by W. Crewdson. 36 pages. Published by the Macmillan Company of Canada. Price 5 cents. This is an addition to the Macmillan pamphlets reviewed in this magazine three months ago, and it upholds the high standard of those previously published. It tells the romantic story of the rise of modern Japan and of the growth of friendly relations between Britain and this other island empire, which culminated with the Anglo-Japanese Alliance. Those inclined to form an unfavourable opinion regarding Japan's dealings with China, owing to the rumors in the newspapers, should first read this pamphlet and secondly secure complete and unprejudiced reports of the Chinese negotiations before coming to a final judgment.

Letters from the Front

[Our readers may be interested in the following letters from Captain G. A. Cline, B.A., a member of the staff of the Faculty of Education, University of Toronto. These are followed by an explanatory note written by another member of the same staff, Captain G. N. Bramfitt, B.A., of the Canadian Engineers.]

France, April 2nd, 1915.

Dear Mr. Cornish—

If I remember correctly, I wrote you last just before leaving England; which seems about a year ago, although it is really not quite two months.

According to the map, France is fairly close to England, but we didn't find it so, as our ocean voyage was about four hundred miles long and extremely rough. The boat that we were on managed to outstrip the others by about a day in crossing, but the captain wasn't at all sorry to get out of the storm and see land again. I think that a sailor should get two medals for every one that a soldier receives.

On arrival we were given a trip across France in a "special" train consisting of flat cars for the vehicles and cattle cars for the horses and men. We travelled at the average rate of ten miles an hour and moved north and then east at this rate for nearly two days. We were then billeted in a small-sized town for three days, after which we moved about twelve miles to smell powder while attached to another brigade. We were there a week, then moved again and took over a piece of line for ourselves which we held for a month. Last Saturday we moved again and are now in a fair-sized town "resting"; what is in the wind I don't just know and of course couldn't tell if I did. Letter writing is extremely hard, because when one can't say what he wishes to say, it is like writing an essay.

Up to the present our warfare hasn't been very exciting. We have had several lively hours while our town was being bombarded. Our house was struck one day but not much damage was done. It is a very novel sensation to hear a shell whistling through the air and to wonder just where it is going to land. This warning whistle stood me in good stead one day. I was just going out of the door when I heard one coming and—I didn't go out until it had burst outside in the street. I went out then and found that it had finished one of the signallers of the Fifth Battalion not twenty yards from where I was. This artillery business is a queer game.

Here our only excitement is a few bombs dropped daily by German aeroplanes. They do not do much damage, however.

By the time this letter reaches you, you will be thinking about the usual May examinations. It is certainly a new experience for me to

miss a year of school work. I shall soon have forgotten all that I ever knew about physics.

You should hear my attempts at French. I usually manage to get what I want in a shop, but the combination of English, French and sign language would make Mr. Ferguson's hair turn grey. I shall always hold the teacher of modern languages in great respect in future. You see it is like this—you walk up to a person with a sentence nicely prepared on which you have been working for the past fifteen minutes or so. The unlucky Frenchman whom you have addressed hails you as a born linguist and rewards you with a flow of eloquence in which you manage to grasp every tenth word or so. As you are then forced to acknowledge that you do not "comprehend", the Frenchman regards you as an impostor or fool and you slink away feeling like a wolf in sheep's clothing.

I have been hoping to bring back a record of our travels in snapshots. This hope was shattered last week, however, when our kodaks were called in. Expect someone wants to start a second-hand store and is going to steal them from the mails. I made very good use of it, though, while I had it.

The country around here is very flat and uninteresting. We are very little above sea level and the sides of the roads have been regular quagmires all winter. We are having nice sunny weather now, however, and things are drying up rapidly.

One outstanding feature here is the religion of the inhabitants. Nearly every room in the houses has a small crucifix in it, and every two miles or so you encounter a little shrine or crucifix by the roadside.

Another thing that impresses one is the indifference of the people to the shelling. You see a farmer ploughing happily in one field while shells are dropping in the next. One Sunday I stopped at a farmhouse to fix a broken cable and the Germans were dropping a few reminders about one hundred yards away. The lady of the house came out quite unconcerned and got a ladder for me. Then one of our batteries hidden nearby got going and the good woman laughed happily to think our "artillerie" was paying them back in their own coin.

Talking of linguists, here is one for you. One of our batmen had lost a glass and went to our landlady with the demand "Who pinched the beaker?" Naturally she didn't understand and he repeated in a very grieved tone of voice "Who pinched the beaker? Ain't that plain enough?"

Well, I think I have written enough to make up for my long silence. Give my best regards to everybody on the staff and drop me a line if you can find the time.

Yours sincerely, GEORGE A. CLINE.

France, April 11th, 1915.

Dear Bramfitt—

I am writing this from a Chateau in France through which "belle pays" (have just looked it up and found that it should be "beau pays") we have been touring for the past two months. Since our arrival here we have been billeted in six different towns, our longest stay in any one being one month, during which time we held a portion of the line against the attacks of the barbarians—as Cæsar would say. While in that place we (Brigade Headquarters) were shelled with painful irregularity. Sometimes they would awaken us at half-past five or six in the morning and sometimes they would try to catch us napping in the afternoon. Sundays seem sacred to gunners as days on which they should make the most noise possible. Taken altogether I have come to the conclusion that a big gun is an invention of his Satanic Majesty and that anyone having anything to do with them jeopardizes his chances of a peaceful hereafter very much. The worst of a shell is that it leaves so little of a person to collect after it hits him. If you find the identity disc you are lucky.

You can hear a shell coming for about two seconds before it strikes. In those two seconds you have to find the best funk-hole possible and it is amazing how sprightly one can be under the circumstances. We spent one very uncomfortable hour one Sunday afternoon waiting for a "Willie" to come into our telegraph office through the window. However, the worst that they did was to hit the upper storey of the building and disarrange the orderly officer's bedroom, cutting three of our wires with falling bricks. Next day I got busy and rigged up a duplicate office into which the operators could retire when they heard them coming. Truly "discretion is the better part of valour". It is amusing to see the other fellow—not yourself—ducking for a shell or rifle bullet.

I see Irving quite often and believe that the company is doing very good work. Of course none of us have had a chance to show what we could do in a pinch. What happens then depends very much on circumstances, and one can only hope that he will not make a mess of things.

This continual moving about makes communication work difficult. At present there are about ten units in this brigade area to which we have to deliver by telephone or orderly. It took over three drums to come here from Div. Hdqrs. and it has taken about five miles to connect up our battalions. Your old cable wagon is still doing duty but I think your l.s. wagon was left in England. I discarded mine in favour of a g.s. limbered which is not so easily broken.

The next signalling manual that comes out will be about three-quarters cable work and the remainder visual, *je pense*.

The brigade is being inspected to-day by the G.O.C. 2nd Army Corps, but as my outfit is pretty well employed we haven't turned out.

With best regards to the Cadet Corps and our confrères at U.T.S.

Yours sincerely,

GEORGE A. CLINE.

THE WORK OF THE SIGNAL COMPANY

The communication within a division is maintained by the Divisional Signal Company consisting of 5 officers and 157 men. It is divided into Headquarters and Nos. 1, 2, 3 and 4 sections. No. 1 section consists of 3 field cable detachments under the command of a captain (in the Canadian division of Capt. F. C. Kilburn, who was on Lord Kitchener's Staff in Egypt and Africa). A detachment consists of a cable waggon carrying four drums of woven cable, heavily insulated, which is unreeled as the waggon moves and is left lying upon the ground so that it may be reeled up in case of an advance or retirement. Each drum holds two miles of wire, while two extra drums are carried in a light spring waggon. This explains Captain Cline's reference to 3 drums (6 miles), and "your cable waggon and l.s. waggon"—these having been under Captain Bramfitt's command since 1911. Each cable waggon carries three vibrator offices, one of which remains on the limber of the waggon; these can be used while the detachment is moving, either for Morse, or, if the "earth" is good, for telephone service. The duty of No. 1 Section is to maintain communication between the H. Q. (Headquarters) of the division, and each of the three infantry brigades.

Nos. 2, 3, and 4 sections each connect the H. Q. of each of the three brigades with the H. Q. of each of the four battalions and with units or details of mounted troops, artillery, engineers, etc., within the brigade area. Capt. Cline speaks of ten units in his brigade area. This communication is carried on by light telephone lines (laid frequently from a drum upon the back of a pack-horse), by flag, by heliography or lamp, by motor-cyclist, by cyclist or by mounted orderly. On account of the nature of the present operations flags are of little use. Thus Captain Cline, commanding No. 3 section, must receive and despatch messages to all these ten units and keep a strict record and an exact copy of each message sent or delivered.

The intercommunication between the parts of each battalion is the concern of the battalion signallers.

In the kind of warfare in which the Canadian division had been engaged up to the date of Capt. Cline's letters, his section would not, strictly speaking, be upon the "firing line", but the telegraph office, of course, would be the objective of hostile shell fire whenever it was

located. Until the attack upon the wood in which the Canadian division so recently distinguished itself, it had apparently been used in the reserve, being moved from time to time to a point in the rear of any expected attack or proposed offensive. In this action, too, we are glad to see that no members of the signal company have yet been reported in the appalling list of casualties. However, it must not be thought that it usually occupies a position of safety; for in the South African War the casualties among the telegraph corps were even greater in proportion than among the infantry. A similar condition may be expected as soon as the game opens out in Flanders.

The work of the signal company is of the utmost importance for the intricate co-ordination of units in modern warfare. For example, without close touch with and support from their artillery, infantry, either in attack or defence, would be utterly annihilated. The part of the signal company is simply hard work, conscientiously done, with a determination to offer no excuse for failure.

Book Reviews

Who Caused the War, by Edward Kylie, Professor of History in the University of Toronto. Published by Oxford University Press, Toronto. Price 10 cents.

A good many have attempted to read the official diplomatic correspondence concerning the cause of the war and have found themselves much confused. This pamphlet has disentangled the confused web admirably and has placed the essential parts of all the official books and papers in their proper relation. It is written with vivacity and great skill. This pamphlet can be recommended to the teachers of Canada, who will find in it much that will be of assistance to them in teaching the causes of the war.

G. A. C.

The Chicago Art Course. Books 4-8 and a Manual. Published by Scott, Foresman & Company, Chicago. This course contains an abundance of very useful reference material of a high order. The drawings in colour (chalk or water colour), in charcoal, in brush and ink, and in pencil are the productions of experts, and cover a well graded and systematic course in object drawing, in lettering and design, and in figure and landscape composition. The course is well calculated to fulfil its purpose as "an inspiration and a guide to pupils, . . . to stimulate their imagination through the language of art". Price 65 cents for the complete set and Manual.

S. W. P.

The Successful Teacher

F. H. SPINNEY

Principal, Alexandra Public School, Montreal

JUNE is the month for taking stock of our entire professional equipment. It is the time for making note of the mistakes that we have made during the year in order that we may profit thereby when undertaking the work of a new term. Our mistakes teach us more than our successes.

It is the time for daily jotting down new devices and methods for next year. Of course, we can occasionally follow that practice during the holidays; but I have found that it is right in the thick of the fight that we have the best thoughts.

The new devices and new methods may be no better than those which we have used during the present term; but their successful application will keep us in the line of growth—the primary essential of a successful teacher.

What the child feels and resolves is sometimes of far more concern than what he learns; and he will not imbibe any tendency to feel and to resolve in the right direction from a teacher who has ceased to grow. Thus is it of the most vital concern that we should keep our minds alert for something fresh, something different from what we have been doing and thinking all the year.

To reform the whole programme may be the more difficult when we are remaining in the same school, influenced by the same conditions and the same associations, than it is when we are going into fields utterly strange and new. In the latter case, we can well afford to trust to the new surroundings for suggestions of devices and methods which we have never tried before.

If we are remaining in the same school, let us begin our variation of programme with the very opening lesson. What has been our first item on the daily programme this year? Whatever it may be, let us change it for next year. One term I had the children in a specified row of seats tell me orally how they had passed the time since the close of the session of the previous day. I once visited a teacher who made up an entirely new programme for each day. The first thing she did was to write it on the board, and allow the children to copy it on paper, so that she could have all the board space for active work.

Perhaps we have been dismissing too formally at the close of each session. Are we not strong enough now to allow a little more freedom? A High School teacher once said to his class at the end of the opening day: "Now, ladies and gentlemen, you are dismissed". One boy acted rudely, as he was not accustomed to liberty. The teacher had learned his name during the day. So he said, in a mild firm tone, "I observe, Richard, that my remarks were not adapted to you. Please remain, and pass out alone". That reprimand was never repeated during the term.

The teacher who is going to a new school cannot be too well prepared for the opening day, no matter how long may have been the previous experience.

I wish briefly to outline the plan followed by one successful teacher. She reached school early, and placed on the board a number of questions for the older pupils to answer on paper, which she had brought for that purpose. Some of the questions were as follows—

What is your name and age? How far from the school do you live, and in what direction? How many years have you attended school? What study did you like best last year? Why? What study did you find most difficult? If you have had a favourite teacher, why did you like her? What useful work do you do at home? Do you like it? What story book do you like best? etc.

While these questions were being answered, the teacher moved about the room, taking down the names of the pupils according to their positions. Then she sat down at her desk, and studied a few of the names, so as to know them well. She made it a point to be sure of the name of one pupil in each aisle. This helped to avoid awkward situations later in the day. If she observed a boy who showed symptoms of being "troublesome", she made sure of his name, and planned to keep him active until she had time to study into his individual tastes and tendencies. In this way, she won his good will, which lasted throughout the term. "Troublesome" boys like to be *active*.

She next allowed twenty minutes for the preparation of some *new* lesson. Some teachers begin the first day with "review" work. I believe that is a mistake. The review is necessary; but it should not be introduced the first day. The pupils have been "promoted"; and they are expecting something *new*. Do not disappoint that expectation.

While the pupils were preparing the new lesson, the teacher was reading from each paper the most pertinent of the answers to the questions that she had asked. As she did so, she glanced towards the pupil whose answers she was then reading. She gave the most particular attention to the boys. She could well afford to postpone a careful study of the girls to a later date.

"I once asked a boy, after dismissal on the opening day,
"Well, Tom, how do you like your new teacher?"

"I like her fine?"

"Why?"

"Because she kept us hustling, and we forgot all about the time."

When we forget about the time, it indicates that we are enjoying it to the very fullest extent.

When the teacher heard the "New Lesson", she took down the names of the pupils who had prepared the most and prepared it the best. There had been no limit fixed to the assignment; they were to prepare all they could in the given period. Some pupils prepared more than double what others did in the same time. Does not such an outcome offer a valuable suggestion to the thoughtful teacher? Is she to treat all these children exactly alike? Is she to expect the same standard of work from all? If she does expect the same standard there is sure to result trouble and disappointment.

There is no better way in which we can spend the leisure moments of June than in thinking out ways and means for the ensuing year. The more thoroughly we do this, the more eagerly shall we anticipate the opening day of school as well as the opening hour of every day of the term.

"Now, Tommy," said the teacher, "what is a simile?"

Tommy hesitated visibly. "I—I—I fergit now," he finally answered.

"But if you said, 'My hours at school are bright as sunshine,' what figure of speech would that be?"

"Irony," responded Tommy.

Teacher—Where is the Dead Sea?

Tommie—Don't know, ma'am.

"Don't know where the Dead Sea is?"

"No, ma'am. I didn't even know any of the seas were sick, ma'am."

—*Yonkers Statesman.*

Joan was a most conscientious pupil, eight years old. During one of the school study periods the teacher noticed her searching a large atlas intently with a most puzzled expression. After a few minutes she asked the child what she was looking for.

"Oh," said the anxious student, "Miss Kane said we were to find all the places spoken of in the history lesson on the map, and it says that 'Columbus was at the Point of Starvation,' and I can't find it anywheres!"



Drawings by Archie Hawthorne, Leslie Moorhouse, and Wilfrid McKay, first-year students of the Alexandra High School, Medicine Hat, Alberta.

Art for June

- I. MARGARET D. MOFFAT, Assistant Supervisor of Art, Toronto
- II. W. L. C. RICHARDSON, Faculty of Education, University of Toronto
- III. S. W. PERRY, B.A., Faculty of Education, University of Toronto

[Teachers may write THE SCHOOL asking for information regarding Art Work. These suggestions will be answered in the next available issue by Miss Jessie P. Semple, Supervisor of Art, Toronto, and Miss A. Auta Powell, Instructor in Art in the Normal School, Toronto. If individual answers are asked for, return postage should be enclosed.—EDITOR.]

I. Junior Grades.

Design.—Last month we studied the planning of border designs, including sources of material from which to design our units and the restriction of colour necessary to produce pleasing results.

All that was said in regard to sources of material, adaptation to purpose, and limitations of colour, applies equally as well to surface pattern. Colour may be extended to include the use of a colour and one of its hues in addition to tints and shades of colour. For example, we may make a wall paper of yellow-green, with the pattern in green, or we may leave the paper white, and make our pattern partly yellow-green, and partly green. Similarly we can use green and blue-green; violet and blue-violet; violet and red-violet; orange and yellow-orange; orange and red-orange.

For surface patterns we find fruitful sources of suggestion in flowers, birds, insects, etc.

Regularity of spacing is important in designing borders; it is equally so in surface patterns, order being the first law of design, almost design itself. This spacing over a surface requires great care on the part of the child. For junior classes the units should be placed far enough apart that the background spaces do not enter in as part of the pattern.



Fig. 1

As a preliminary exercise let the pupils take a flower, simplify and balance it, modifying it in as many ways as possible (Fig. 1.) Each child will then choose from his own modifications the most pleasing unit and use it for his pattern.

The simplest form of arrangement is seen in figure 2, the units being regularly placed on the corners of squares. Another simple arrangement is shown in figure 3.

Stripes may be used, either singly or in groups, to give variety to the work, the flower unit being used also as shown in figure 4.

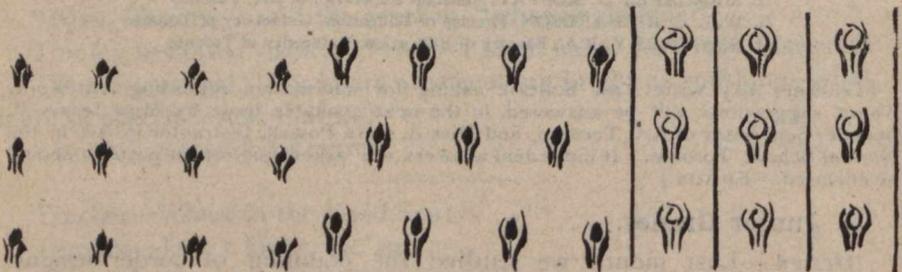


Fig. 2

Fig. 3

Fig. 4

II. Third and Fourth Book Grades.

Give your pupils this month at least an introduction to the delights of landscape study. Inoculate if possible even the germless ones, and if the fever of landscape sketching breaks out just before the closing of school, there is the possibility that it may not be entirely checked till well on in the summer vacation.

Before beginning the subject make a large collection of photographs of landscapes from magazines devoted to photography, country life or geographical interests. Sketch one of these on the blackboard before

your pupils. Using a finder, show them how to select and frame in particular sections of this picture to form new compositions, and thus guide them to a knowledge of a few important principles. From one of these new compositions let them make an enlarged copy in charcoal or pencil. They will thus learn something of your method of rendering trees, sky, water, etc.

Now let each pupil choose one from your collection of photographs and, by using his finder, select a new composition, and translate it into a pencil sketch on tinted paper. Thin colour washes may be applied over the pencil work with good effect.

When your pupils gain some ability to select a good composition from a photographic reproduction and to translate it into a pencil landscape, let them look through a finder at actual trees, hills, houses, water and sky, and find beautiful compositions, eliminate as many unimportant details as possible and sketch in pencil and colour some of these pictures.

Encourage your pupils to make notes during their summer vacation of interesting bits of scenery that they would like to remember and use next term in a picture.

TEACHERS' HELPS.—Many requests have been made by beginners for a list of the best books which they should read for downright, straight-to-the-point helpfulness.

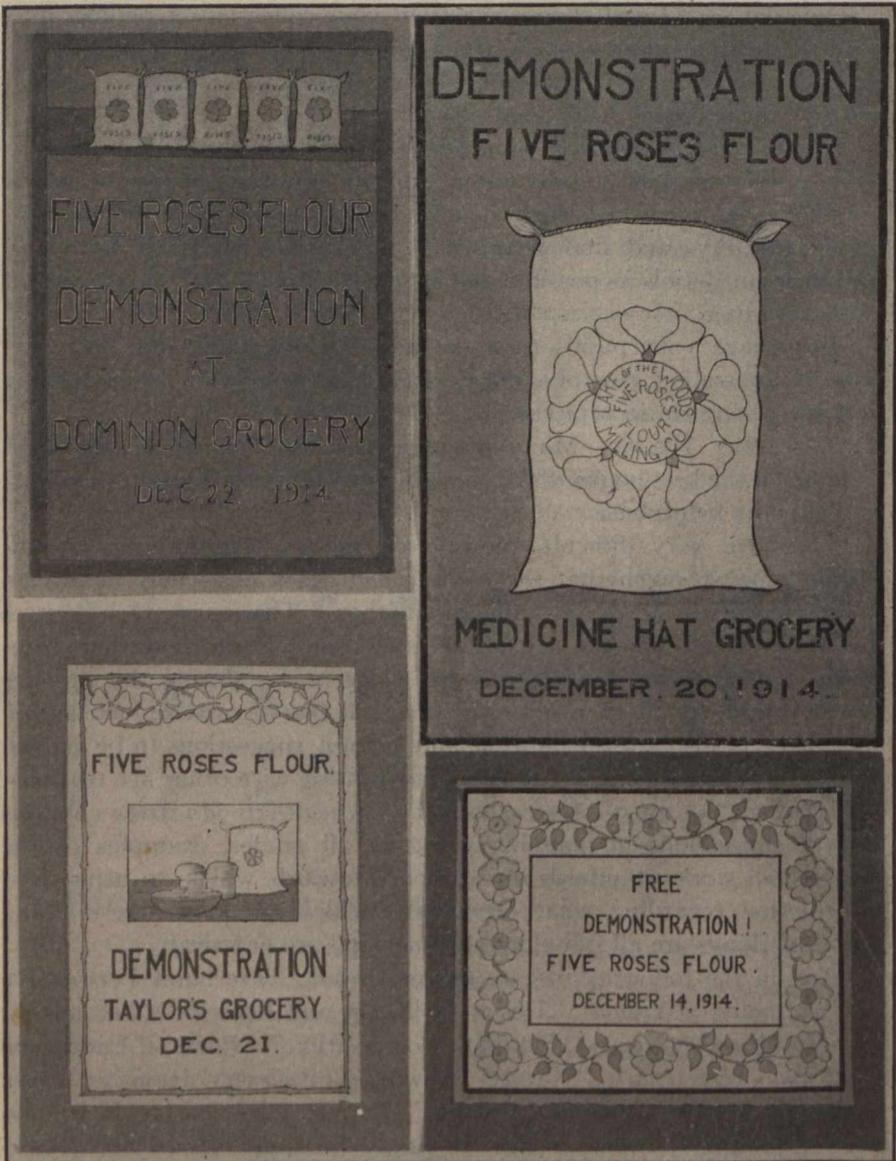
This is a very difficult question to answer satisfactorily, as conditions vary so much that the books which seem absolutely indispensable at one time are of no value at another. There are other sources too from which the art teacher receives more inspiration than from books. Attendance at the Ontario College of Art during the summer session has much to offer, not only along the line of capable instruction, but there is also the inspiration and helpful suggestions to be gained from fine examples of work and from association with other art teachers.

However, we must have books. The *School-Arts Magazine* contains helpful suggestions in planning work for all grades, examples of the best school work, standards of excellence towards which to aspire and information regarding what others are achieving. The latest Prang Series of Books are all full of good things and are practical.

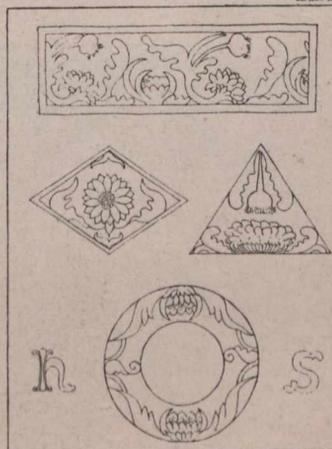
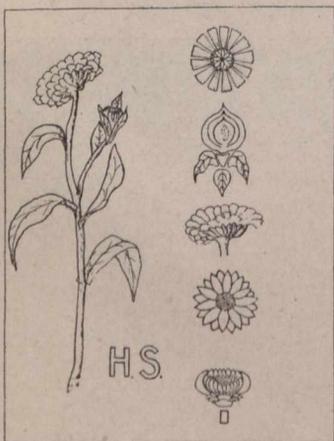
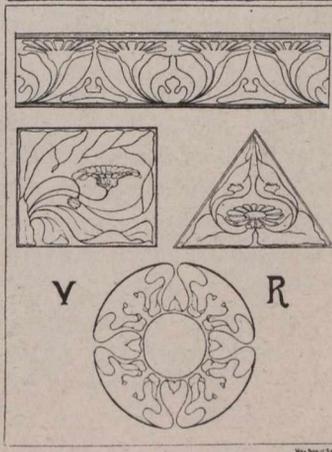
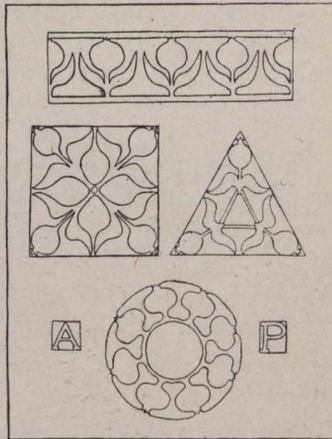
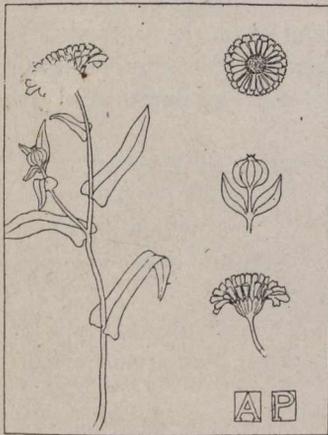
Any in the following list are recommended: "Freehand Perspective and Sketching" (*Norton*); "Design in Theory and Practice" (*Batchelder*); "Composition" (*Dow*); "Pictorial Composition" (*Poor*); "Landscape Painting" (*Harrison*); "Nature Drawing" (*Bailey*); "How to Study Pictures" (*Coffin*); "Booklet Making" (*Bailey*); "Decorative Plant and Flower Studies" (*Foord*); "How to Enjoy Pictures" (*Emery*); "Blackboard Sketching" (*Whitney*).

III. With June Art Classes at the High School.

As the departmental and promotion examinations approach, the teacher of art will give his classes special drills in rapid sketching, from the object and from memory, of common objects manufactured in the square and in the round, once more emphasizing the perspective laws



Designs by Edna Matchett, Hugh Macdonald, May Lewin, and V. Tessier, first-year students of the commercial class of the Alexandra High School, Medicine Hat, Alberta.



Drawings and Designs by Anna Pearen, Vera Robinson, and Helen Stewart, second-year students of the Alexandra High School, Medicine Hat, Alberta.

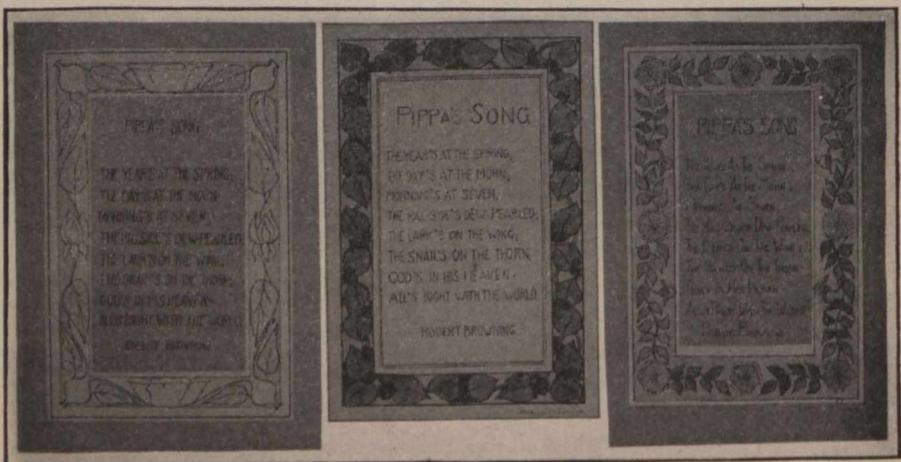
of convergence and foreshortening. Rectangular book-racks, foot-stools, books; pails, pieces of pottery and of crockery; fruit baskets and strawberry boxes provide excellent studies for this review. A few drawings should be finished in tones showing lights and shade and shadow.

A second review exercise might be given in the drawing and colouring of seasonable vegetables and flowers. It should not be forgotten that while the flower provides the best subject from which to obtain motifs for subsequent work in design, the more sombre hued vegetables often supply a better test of skill in colouring.

A third profitable review would come from designing a decorative spot or border with a unit of design obtained by conventionalizing some part of a flower previously drawn.

A little time should also be given to a review of a few favorite pictures, studying them from the structural as well as from the story viewpoint.

Accompanying these notes are the much more suggestive drawings of pupils of the Alexandra High School, Medicine Hat, Alberta. The Art Supervisor, Miss Ida M. Hillman, is to be congratulated upon the high standard attained by her pupils; and the Board of Trustees is to be commended for their wisdom in providing facilities for the development of the talent of so many gifted students. An excellent Commercial Course includes "drawing, simple lettering, decoration and design". The General Course encourages specialisation in art by providing a specially trained teacher, a suitably equipped art room, and a well planned course. THE SCHOOL takes pleasure in reproducing in this issue such creditable drawings as the pupils of this up-to-date High School have made.



Lettering and border design by Kitty Heath Harold Ferguson, and E. Spangelo, second-year students of the Alexandra High School, Medicine Hat, Alberta.

War Maps and How to Use Them*

G. A. CORNISH, B.A.

Faculty of Education, University of Toronto

ALTHOUGH there has been fierce fighting in all parts of the war area during the last month the changes of position have been so small in most parts that even on a large scale map they cannot well be shown. In the west, while the Germans have advanced a couple of miles at Langemarck, north east of Ypres, this can scarcely be shown, though now the line should be drawn west of St. Julien instead of east of that village.

On the Russian front the advance has been more marked. The line of battle is approximately the same as far as where the upper Vistula runs along the South of Poland. But from there the line now passes east of Tarnof through Krosno, east of Dukla Pass, follows the Carpathians to the east of Uszok Pass, and from there follows much the line of March 10th. It is probable that by the time this appears the Russians will be driven still further east and may be along the line of the San river.

The Turks have advanced from Baghdad in Mesopotamia eastward into Persia and now occupy Kerind and probably Kirmanshah.

The Dardanelles has also become a great centre of interest. The British and French have now landed troops on the peninsula and occupy the south western part of it. The map of the Dardanelles that appeared in *THE SCHOOL* last month should be placed on the wall and a row of red pins should be placed across it to indicate the position of the allies. The line begins just north of Fort BB, passes south through Krithia to Fort B, and will probably be much further advanced by the time this number appears.

Books on the Present War

"ATLAS OF THE WAR". Nelson, 35c.

A good atlas, 88 pages, at a very low price. Contains many pictures and diagrams illustrating the war.

ATTWOOD, E. L. "The Modern Warship". Cambridge University Press, Dent, 25c.

A brief account of the modern warship written from the naval architect's point of view.

"EX-ROYAL NAVY". "British Navy from Within". Hodder, 75c.

* The *Daily Telegraph* maps referred to in previous articles may be obtained from the Students' Book Department, University of Toronto, at 30 cents each.

Current Events

“The gallantry and determination of the Canadians undoubtedly saved the situation. Their conduct has been magnificent throughout.” So reads the official bulletin of the British War Office recording the battle of Langemarck, April 24th. Just north of the Canadians the long battle line from Switzerland to the sea had been held by the French. There the line was broken by waves of poisonous gases, which, heavier than air, were slowly carried by the wind across the trenches. Through the gap poured the concentrated hosts of Germans like a wedge. Exposed on a flank, pressed back by overwhelming force, the Canadians retired. But a mile or two to the rear of the former British line, they made their stand. Strengthened by their supports which had rushed up, they charged, under a hail of bullets, the advancing German hosts, made their ground and held it. The German advance was checked; soon the lines of the Allies knit and held. Slowly the enemy was pushed back, and much, though not all, of the former ground retaken. Such glory is not won without heavy cost. The Canadian casualties numbered six thousand.

Had anything been necessary to strengthen the grim determination that this heavy sacrifice shall not have been in vain, it was furnished by the news which came to us to-day, May 8th, that the steamship *Lusitania*, unarmed, carrying 2,000 non-combatants, ordinary transatlantic passengers, including hundreds of women and children, had been deliberately torpedoed and sunk without warning, with a loss of nearly 1,400 lives. Words fail us to describe the horror of such a deed.

It is idle to say that the *Lusitania* was trying to run a blockade, that the passengers had been warned. The German notice of February 4th has been shown by subsequent events to have been utterly futile so far as the establishment of an effective blockade was concerned. All the force the German submarines were able to muster had been shown to be powerless to check the tide of British commerce by sea. It can only be regarded as another example of the doctrine of “frightfulness” by which a desperate nation seeks to postpone for a time the end it has begun to fear. Probably its only military result will be to stimulate recruiting throughout the British empire, to estrange more effectually the sympathies of neutral nations, and to convince the world, if it still needed convincing, that every sacrifice must be made to hasten the downfall of that evil power which now holds Germany in its grip, and which has shown that it will not allow considerations of good faith or of humanity to stand in the way of its military success. The invasion

of Belgium in the face of the most solemn engagement, the bombardment of unfortified towns where no military advantage could possibly be gained, the deliberate execution of hundreds of non-combatants, and the destruction of their towns and cities for actions they could have done nothing to prevent, the dropping of aerial bombs by chance, at night, over sleeping villages with no armed force within miles,—but the list is too long. If considerations of humanity and good faith did not prevent the forces of the Allies from adopting the German code of war, it might be the task of the next generation to construct anew the bases of civilisation.

Meanwhile all eyes are turned towards the greatest of neutral nations, the United States. When the German submarine blockade was first declared in February, the United States officially refused to consider it as a legitimate act of warfare and gave notice to the German government in these words:

“It is, of course, not necessary to remind the German Government that the sole right of a belligerent dealing with neutral vessels on the high seas is limited to visit and search, unless a blockade is proclaimed and effectively maintained, which this Government does not understand to be proposed in this case. To declare or exercise the right to attack or destroy any vessel entering the prescribed area of the high seas without first certainly determining its belligerent nationality and the contraband character of its cargo would be an act so unprecedented in naval warfare that this Government is reluctant to believe that the Imperial Government of Germany in this place contemplates it as possible.

“The suspicion that enemy ships were using a neutral flag improperly can create no just presumption that all ships traversing the prescribed area are subject to the same suspicion. It is to determine exactly these questions that this Government understood the right to visit and search to have been recognised.

“If the commanders of German vessels of war should act upon the presumption that the flag of the United States is not being used in good faith, and should destroy on the high seas American vessels or the lives of American citizens, it would be difficult for the Government of the United States to view the act in any other light than an indefensible violation of neutral rights which it would be very hard indeed to reconcile with the friendly relations now so happily subsisting between the two Governments. If such a deplorable situation should arise, the Imperial German Government can readily appreciate that the Government of the United States would be constrained to hold the Imperial Government to a strict accountability for such acts of their naval authorities, to take any steps which might be necessary to safeguard

American lives and property, and to secure to American citizens the full enjoyment of their acknowledged rights on the high seas."

Subsequently, on May 1st, the American oilship, *Gulflight*, carrying contraband of war to Great Britain, was torpedoed and sunk with the loss of three lives. According to the rules of international law, the *Gulflight* was, of course, liable to seizure, but not without search, nor were those on board liable to destruction. This will be the test case for the United States Government. If they should be led to the conclusion that this is not legitimate warfare but piracy, what action will they take? The settlement of the question with peace and honour is made infinitely more difficult by the indignation aroused everywhere in the United States by the policy of "frightfulness" which has prompted the sinking of the *Falaba* and the *Lusitania*.

W. E. M.

The history lesson was in progress, and in vain the teacher coaxed her class to answer. At last she brightened up. "Now, Tommy," she said, "Mary followed Edward the Sixth, and who followed Mary?"

"Her little lamb, teacher," said Tommy, and the class rocked with laughter.

Teacher—"Why, Jimmy, Jimmy! Have you forgot your pencils again? What would you think of a soldier going to war without a gun?"

Jimmy—"I'd think he was an officer."

Returning from school the other afternoon, a little girl informed her mother that she had learned how to "punctuate".

"Well, dear," said her mother, "and how is it done?"

"Why, when you write 'Hark!' you put a hat-pin after it; and when you ask a question you put a buttonhook."

The teacher was giving the geography class a lesson on the cattle ranches. She spoke, according to the *Youth's Companion*, of their beef all coming from the West, and wishing to test the children's observation, she asked:

"And what else comes to us from these ranches?"

That was a poser. She looked at her shoes, but no one took the hint. She tried again:

"What do we get from the cattle besides beef?"

One boy eagerly raised his hand.

"I know what it is. It's tripe," he announced, triumphantly.

Books on the Present War

DANE, EDMUND. "The Story of the German Advance". Hodder, 35c.

Two *Daily Telegraph* War Books giving journalistic accounts of the advance of the German armies and the resistance of the Allies.

KENNEDY, J. M. "The Campaign Round Liège". Hodder, 35c.

A connected account of the brave resistance of the Belgians.

SIMONDS, FRANK H. "The Great War". Kennerley, \$1.25.

One of the best accounts of what has actually happened since the war began. Valuable for the explanations of the strategic moves of the various armies.

"EX-TROOPER". "French Army from Within". Hodder, 75c.

This book describes the organisation, arms, and tactics of the Service, and the daily life of the officers and men.

HALL, CYRIL. "Modern Weapons of War—by Land, Sea, and Air". H. Copp (Blackie), 75c.

Deals with guns, explosives, torpedoes, mines, as used on land, on sea, or in the air. Illustrated by pictures from the present war. Informing, and attractively written.

"How Armies Fight". Nelson, 35c.

An admirable account of the organisation and operations of a modern army, with many maps and diagrams.

VAMBERY, ARMIN. "The Story of Hungary". Putnam, \$1.50.

Another volume in the "Story of the Nations" series.

SCHURMAN, J. G. "The Balkan Wars, 1912-13". Princeton University Press, \$1.00.

A compact history, illuminatingly written, of the two Balkan wars of 1912-13.

HOLLAND, CLIVE. "Belgians at Home". Little, Brown, \$3.50.

A work "far from superficial" dealing with Belgium and her people from the point of view of a ramble in her cities and along the highways. The first chapter contains a brief history of Belgium; then follow descriptions of the people and of such places of interest as Louvain, Malines, Brussels, Waterloo, Antwerp, Bruges, etc.

"The Oxford Survey of the British Empire". Edited by A. J. Herbertson and O. J. R. Howarth, in collaboration with thirteen contributors; six vols., 3,198 pages, 403 photographs and figures, 27 maps in colour: I. British Isles; II. Asia; III. Africa; IV. America; V. Australia; VI. General Survey. Oxford University Press, \$21.75 per set, or \$4.75 per volume.

FITCHETT, W. H. "Deeds that Won the Empire". McClelland (Smith, Elder & Co.), 25c.

A Glossary of Military Terms

(Continued)

H. A. GRAINGER, B.A.
University Schools, University of Toronto

Chlorine was discovered by a brilliant Swedish chemist, Scheele, in 1774, and by him named dephlogisticated marine acid gas. Till 1810 it was regarded as a compound of hydrochloric acid gas (now known as hydrogen chloride) and oxygen, when Sir Humphry Davy proved its elementary character and gave it its present name which refers to its colour.

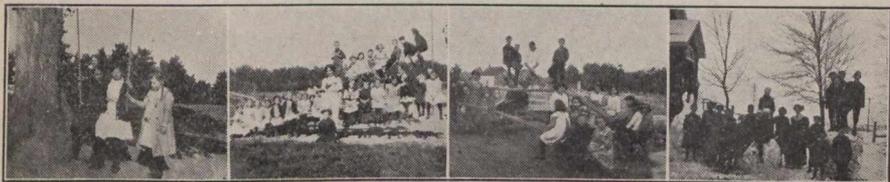
Its use by the Germans in warfare may make a brief statement of some of its properties of interest to the public. It is a transparent non-inflammable gas, about 2.5 times as heavy as the air and of a greenish-yellow colour. Its smell is most disagreeable and powerfully suffocating, acting as a violent irritant, producing coughing, with inflammation of the mucous membranes of the throat, nose and lungs. If a little be breathed for some time it causes an irritating cough attended by spitting of bloody mucous, and if inhaled in the pure state even death, doubtless from asphyxiation. Some relief is obtained by long deep inspirations of fresh cold air; alcohol fumes or ammonia also counteract its effects somewhat.

Chlorine can be condensed to a golden-yellow liquid by pressure at a suitable temperature. In this form it is an article of commerce, being marketed in iron bottles lined with lead. In such receptacles the Germans have conveyed it to the trenches. When the wind favoured their nefarious practices, the opening of a valve permitted the rapid escape of the gas by a system of branched tubes. Such containers placed every few yards could liberate a great volume of gas in a short time, and its great density keeps it close to the ground where it would be difficult to avoid.

Great quantities are used in the manufacture of chloride of lime. In this form it is used for bleaching linen and cottons. Liquid chlorine is used for the extraction of gold. One of the most recent uses is that of water purification, as it destroys poisonous germs of infectious diseases.

Parapet—In fieldwork, a mass of earth thrown up to form a protective barrier, the work thus consisting of a ditch and a bank of earth.

Traverse.—A bank of earth designed to give lateral cover, such as a mask protecting a rampart.



The Public School Play Ground

CHRISTINE CAMERON
Public School, Douglas, Ont.

NO longer is it necessary to say, "a wall so blank that my shadow I thank for sometimes falling there," with regard to a schoolroom. The school which makes no attempt at beautifying and decorating its walls is no more. But what of the playground. Is it a playground in name only?

It has been said that "the noon hour is a greater factor in determining the future of the child than the rest of the day;" hence it behooves the teacher to busy herself to improve this precious hour.

There should be a spacious, well-drained, enclosed ground. As the children are of different ages amusements suited to each age should be provided.

No modern, up-to-date live teacher spends intermission in the class room. That her presence is essential in the play ground has been proven long ago.

The teacher in the play ground will soon see what is required. Look at that shy small boy "sitting" by himself. He does not know how to play. Take him to the rest of the little tots and play "Fox-and-Goose" or "Toss-the-Bean-Bag", or a similar game. You will be amply rewarded by the glowing cheeks, sparkling eyes and merry laughter that result.

There must be swings in the play ground. If there is no "elm tree bough", have two posts put into the ground at the desired distance apart; join them at the top with a heavy scantling and suspend, side by side, as many swings as there is room for. With these in the play ground, there will be no moping boys and girls. Our swings were contributed by the parents. The janitor erected a double teeter with material supplied by the teacher.

Once the School Board understands what is wanted there is no difficulty in securing sporting goods. A teacher suggested to one of the

trustees that a lawn tennis set was required. The answer was, "Write out an order for a good one, not a cheap one; cheap things do not pay." The school board and teachers contributed to the cost of this set; the pupils who played were charged twenty-five cents for the first season only; and outsiders paid fifty cents for the season. In this way the O.A.C. idea of making the school ground the "local play-ground" was carried out.



1. A swing in an elm tree bough. 2. A teeter covered with little folks. 3. The boy with folded arms has walked two miles to school; yet he is on the teeter before 9 a.m. 4. Children like to play with the snow.

In another school a Play Ground Club was organized among the boys. This club met with the teacher and considered what was needed to make the playground pleasant for everybody. It was decided that the president and the secretary should call on the Chairman of the Board and suggest to him that they needed a double teeter, a slide and a swing. They handed the chairman a letter containing this request, and also a catalogue. One of the committee said that his father would give the lumber, and a member of the Board planed and painted the planks for the teeter. Another member of the Board hung a swing. Under the auspices of the Play Ground Club, a grand patriotic field day was held, the proceeds to be used for the Patriotic Fund and in getting supplies for the school.

Questions on the War

(Continued)

A. N. SCARROW,
Faculty of Education, University of Toronto

7. Tabulate in parallel columns what you consider Britain would have gained and what she would have lost by remaining neutral in this war; what do you find to be the chief difference in character between the gains and the losses?

8. Taking into consideration the fact of Belgium's suffering, do you think it would have been better for her to have allowed Germany to pass through her territory without opposition? If you answer in the negative, give your reasons.

9. After answering the two questions immediately preceding, state what you believe to be the motives which should actuate a civilised power in her dealings with other powers.

10. If Belgium and Britain had allowed Germany to attack France from Belgian territory, consider the differences it might have made in the war; and then state who, you believe, would have been the greatest losers, France and Russia on the one hand; or Belgium and Britain on the other.

11. What was the reason given by Italy, as a member of the Triple Alliance, for not joining Germany and Austria against the Allies? Do you consider that her reason was sufficient? What considerations seem to be influencing the Italian people in favour of the Allies? Do you consider these reasons satisfactory?

12. What is the Trentino? Why does Italy desire this territory?

13. If the Allies are successful in taking Constantinople, what are the arguments in favour of making an international waterway of the passage between the Mediterranean and the Black seas?

14. How might such a disposal of the Dardanelles and the Bosphorus affect Canada or the United States? What are Britain's reasons for usually favouring the "open door"?

Books on the Present War

KLUCHEVSKY, V. O. "History of Russia". Three volumes. Dutton, \$2.50 each.

Author was late professor of Russian history in the University of Moscow. Not a simple narrative of political or international happenings, but a remarkable study of Russian social, economic, and international historical sources of the subject.

Hints for the Library

The Child's Word-Garden, by J. S. Lansing. 96 pages. Ginn & Co. This little book is a primer designed to precede and accompany the Jones and other First Readers. The method used in this primer approximates most closely to the "Sentence Method" which was described in an earlier number of THE SCHOOL. By means of an attractive page—and we must confess the author has made it very attractive—the child's interest is awakened and he is led to enquire, *what does it say?* The sentence is then presented as a sentence; in time these are analysed into words and finally these words into sounds.

The book is worthy of any primary teacher's consideration, especially since these are the days when all methods of teaching primary reading are receiving their just share of attention and criticism and the whole problem of the primary seems to be in the melting pot. F. E. C.

Historical Course for Middle Forms. Volume III, English Constitutional History by P. Meadows. Volume IV, English Political History by B. L. K. Henderson. 254 pages each. Price 2s. each. G. Bell & Sons, London. The first two volumes of the series have already been reviewed in these columns and were recommended for High School libraries. The distinctive features of the series are: (1) A four-years course is provided for the period between 12 and 16 years of age; (2) each volume is adapted to a year's school work; (3) to each chapter are appended passages from writings of the period; (4) the important aspects of national history are treated separately; and (5) questions are given which will necessitate on the part of the pupil reasonable exercise of comparison and judgment.

The Real Atlantic Cable, by A. W. Holland. 176 pages. Price 1s. 6d. G. Bell & Sons, London. A good story of the relations which have existed between Great Britain and the United States (and the American colonies) from the beginning of the latter. His "Atlantic Cable" consists of "links", the old links—blood, language, government—and the new links—steam, trade, and literature. This book will make a valuable addition to the school library.

A French Picture Vocabulary, by J. H. B. Lockhart. 74 pages. Price 1s. G. Bell & Sons, London. On each of the first thirty pages appear twelve pictures. Following these are lists of words, with phonetic transcription, numbered to correspond with the pictures. There follows again a German vocabulary, the words being numbered so as to apply to the pictures. The pictures illustrate nouns, verbs, and adjectives. The book is well adapted for teaching French and German to elementary classes.

Notes and News

[Readers are requested to send in news items for this department].

"The most important and pressing educational problems to-day are those which have to do with the betterment of rural education". Is this quotation in accordance with the facts? In order to obtain for its readers an answer to the foregoing question, THE SCHOOL makes the following offer: For the best statement of any important problem which a rural school teacher has to face, and a proposed solution of the problem, a two-year's subscription will be given; for the second best, one year's subscription.

The conditions of the contest are as follows:

(1) *The statement of the problem and its solution must not be longer than 450 words.*

(2) *The essay must be the work of a teacher who is engaged in a one-roomed rural school.*

(3) *Essays will be valued by a committee of three chosen from the staff of the Faculty of Education, University of Toronto.*

(4) *All essays must reach this office before September 15th, 1915.*

Subscribers are requested to notify THE SCHOOL promptly of change of address. See page ix in this issue.

This number of THE SCHOOL contains a title-page and an index for Volume III.

Morley S. Lougheed, B.A., of Winnipeg, a third-year student of Medical College, has been selected as the Manitoba Rhodes Scholar.

Regina will appoint a school dentist.

Edward M. Wrong, of Balliol College, Oxford, son of Professor Wrong, of Toronto, has been awarded the Beit prize. This is the first time that a Canadian has attained the high honour of winning the Beit prize. It is one of the four best prizes awarded by Oxford University.

London Board of Education decided to provide free text books and supplies for the Public School pupils of the city. The estimated cost is \$4,500 per annum.

The Canadian Branch of the League of Empire presents two medals each year for the best essays written by pupils in the schools of Ontario connected with the league. The winners of the medals for 1914 are Grace West, of Dewson Street School, Toronto, for pupils over 12 years of age; and Florence Irene Annis, of Dunbarton, for pupils under 12 years of age. Irvine Edward Gage, of Paisley, and Eleanor Valentine of Dewson Street School, Toronto, received honourable mention.

The chair of pathological chemistry in the University of Toronto left vacant by the resignation of Professor J. B. Leathes has been filled by

the appointment of Dr. Andrew Hunter, a distinguished graduate of the University of Edinburgh.

Miss E. M. Eadie, instructor in the Faculty of Household Science of the University of Toronto, has been appointed professor of Household Science in the Manitoba Agricultural College at Winnipeg. As instructor in the Faculty of Household Science, Toronto, Miss Eadie was also lecturer to the teachers-in-training in the Faculty of Education. Her success in both spheres has brought this recognition from Manitoba.

The following changes in the staff of the Toronto Public Schools have been recommended by Chief Inspector Cowley. Those appointed to the permanent staff are: Messrs. G. F. Lavis, H. B. Kerruish, R. C. Cameron, C. R. Jarvis, B. J. Prueter, A. M. Ross, Misses E. E. Farnell, M. Mac-taggart, O. Purvis, M. M. Beecroft, M. Kitchen, O. Flett, L. E. Robinson, G. I. Strongman, Jean Mitchell, M. C. Allen, F. Rothwell, H. Harris, H. M. Fieldhouse, Cherry Milne, M. Castle, V. Hobbs, M. Porter, F. Munro, Margaret Clark. The new kindergarten teachers are as follows: Misses I. K. Houston, A. Muir, G. Mackey, V. Hopkins, D. Plant, M. Hyslop, V. Mitchener, N. Stollery, V. Stewart, R. Wilson, J. Ormiston, E. Farrell, C. Matthews, and M. Taylor. The teachers appointed to the temporary staff are: Miss M. Meldrum, Davisville; Miss Mamie Robertson, Earls court; Miss Christena Knott, Keele street; Miss P. Somerville, Keele street; Miss N. A. Macdonald, Kent; Mrs. Alice Outram, Kent; Miss F. C. McDonald, Palmerston avenue; Miss A. M. Johnston, Church street. Other changes in the staff recommended are: That Miss Constance Liddell be transferred from Dewson street school to Essex street school. That Mr. William J. Moffatt be appointed to the position of Manual Training instructor in Kent school centre.—*The Toronto Star*.

Mr. R. N. Merritt, B.A., Principal of Newmarket High School, has been appointed Principal of Barrie Collegiate Institute.

Our May number contained a report of the results of the examinations for degrees in Pedagogy at the University of Toronto. By an oversight the results of the same examinations at Queen's University were not included. These are as follows: Courses for the degree of Doctor of Pedagogy—*Educational Psychology*—Samuel Huff, S. J. Keyes, F. A. Jones. *School Administration*—Samuel Huff, S. J. Keyes, F. A. Jones. *Section B* (former regulations)—J. M. Hutchinson. *Section A* (former regulations)—C. H. Edwards, W. J. Karr. Courses for the degree of Bachelor of Pedagogy:—*History of Education*—Andrew Stevenson. *Science of Education*—W. A. Stickle, *Educational Psychology*—W. A. Stickle. *Section A* (former regulations)—A. D. Colquhoun, J. C. Norris. J. C. Norris has completed his course for the degree of Bachelor of Pedagogy.

Lieut. Alex. Firth, Principal of Orangeville High School, and Secretary of Dufferin Teachers' Institute, has left for the front with his regiment.

The dates of the Ontario Departmental examinations for 1915 are as follows:—*Junior High School Entrance*, June 21st, 22nd and 23rd. *Junior Public School Graduation*, June 16th to June 23rd inclusive. *Lower School examination for Entrance into Normal Schools and Faculties of Education*, June 16th to 21st inclusive. *Model Entrance*, June 14th to 22nd inclusive. *Senior High School Entrance*, June 14th to 22nd inclusive. *Senior Public School Graduation*, June 14th to 21st inclusive. *Middle School Entrance into Normal Schools*, June 24th to 30th inclusive. *Upper School Entrance into Faculties of Education*, June 9th, 10th, 11th, 14th, 15th, 16th, 17th, 24th, 25th, 28th, 29th. *Pass Matriculation*, June 11th, 14th, 15th, 16th, 17th, 24th, 25th, 28th, 29th. *Honour and Scholarship Matriculation*, June 9th, 10th, 11th, 14th, 15th, 16th, 17th, 24th, 25th, 28th, 29th, 30th. *Supplemental Examination (Pass Junior Matriculation)*—September 7th to September 17th inclusive.

Panama-Pacific Exposition.—To all teachers who attend the Panama-Pacific Exposition in San Francisco Ginn & Company are extending a cordial invitation to visit their exhibit in the Palace of Education. In this exhibit there are displays showing how text-books are made, striking facts about the text-book business, motion pictures, and an interesting collection of early American school books. There is also a rest room which has been made attractive with chairs, tables, desks, a fireplace, and other furnishings in the New England Colonial style.

Teachers will find this a comfortable place to use as their headquarters at the Exposition grounds. An attendant who is familiar with all the details of the Exposition will be found ready to render any possible services at Ginn & Company's booth and to offer suggestions about seeing the Exposition, which, by the way, covers an area over two miles in length. Each teacher who visits Ginn & Company's exhibit is presented with a facsimile copy of the New England Primer and an attractive souvenir pamphlet printed in two colours, entitled "Quality and Cost".

If you are not yet sure of your San Francisco address it may be convenient to have your mail sent as follows: Care of Ginn & Company, Panama-Pacific Exposition, Palace of Education, San Francisco

A British American War Relief Fund appealing to those who sympathise with Great Britain in this struggle has been organised in New York under an influential committee. It asks for warm clothing, comforts and necessities. All contributions in kind and all communications to be addressed to Mrs. Ralph Sanger, British American War Relief Fund, 200 Fifth Avenue, New York City, and all money contributions will be

gladly received at the same address by Mr. Henry J. Whitehouse. The Fund is under the patronage of the Presidents of St. Andrew's Society, The St. George's Society, The St. David's Society, and the Canadian Society.

The \$25 prize offered by Mr. Justice Craig of Toronto at the Renfrew Fair for the best essay upon "How to Make Rural Life Attractive to the Young," has been won by Miss Nora Guthrie of Kinburn, a fourth form pupil of Renfrew Collegiate Institute.

NOVA SCOTIA.

Colchester County is the first county in the province to adopt Medical Inspection in rural schools. The town of Truro employs two Victorian Order nurses, of whom one not only visits the town schools but goes into the rural districts as well.

New Glasgow has recently opened an up-to-date school building. The grounds will be landscaped; and a model school garden will be part of the equipment.

In several schools throughout the province, the customary public examination is, this spring, taking the form of a school exhibition. Collections illustrating commercial geography, manual training, domestic science, nature study material, etc., will take the place of the time-honoured recitations and match-spelling classes. The manual training and domestic science exhibits are articles made by the children at home, except in towns where these departments exist in the schools. In one or two instances, Arbor Day and the School Exhibition are combined.

The spring class in rural science and elementary agriculture has opened in Truro with 45 members. The regular summer class promises to be larger than usual.

QUEBEC.

A short summer course for rural elementary teachers will be held again this year at Lachute under conditions similar to those in previous years. The same staff will assist Principal McBurney of Lachute Academy who has charge of the course. A large number of students receive the rural elementary diploma after two summers' study and one year's successful experience in teaching. As a result, inspectors are now less troubled with the problem of untrained teachers in the country districts.

The quadrennial revision of authorised text-books and of the course of study is being made for protestant schools. The Committee of the Teachers' Convention, which has been examining text-books, revising the course of study and holding periodical meetings for the last 18 months, has completed its labours. A similar task has been performed by a committee of the Protestant Committee of the Council of Public Instruction.

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This latter body will consider their recommendations at the regular spring meeting, make the final selection, and draft the new regulations. As many changes are contemplated both in the textbooks and the curriculum, the matter is of vital interest to both teachers and pupils, parents and trustees.

Mr. H. C. Atkinson, B.A., has resigned his position as Principal of Strathcona Academy.

A short course was held at Macdonald College for the Protestant school inspectors of the Province in nature study and elementary agriculture.

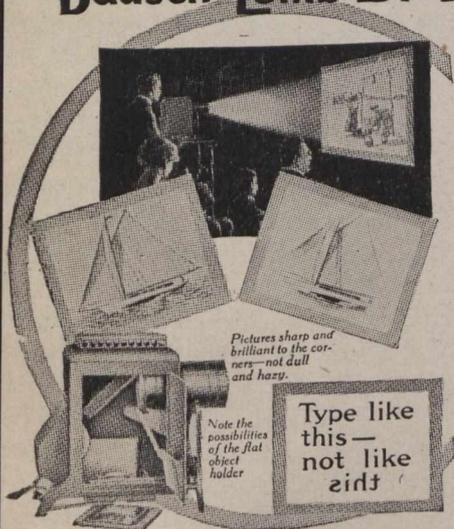
The summer session in nature study and elementary agriculture with supplementary courses in manual training and art will be held at Macdonald College from August 2nd to August 28th for certificated teachers. No fees will be charged and travelling expenses and a bonus of \$15 will be paid to those teachers who complete the course successfully. The number to be admitted is limited to about one hundred. The expenses of this course will be paid by the Provincial Government out of the Federal grant for agricultural instruction.

The following appointments have been made recently: Miss Myrtle E. Thompson to Milan Model School; Miss Mary Savage to an elementary school in the township of Stanstead; Miss Beatrice Rowe to a school in Sherbrooke; Miss D. Rothera to Granby High School; Miss Lillian Pounds to Victoria School, Quebec; Miss Jean F. Penney to Athelstan Model School; Miss Irene Moore to the primary department of Waterville Academy, Waterville; Miss Margaret McLeod to Brook District School, Lingwick; Miss Alice McKenney to the Model department, Knowlton Academy, Knowlton; Miss Hilda Laurin to Pointe-aux-Trembles; Miss Bertha Galbraith to Kingsey Model School; Miss Irene Elmes to Farnham High School; Miss Alberta Dawes to Earl Grey School, Lachine; Miss Blanche Barr to Hemmingford, District No. 3; Miss Marjorie Baker to Dunham Model School; Miss Mamie Geddes and Miss Margaret Hooker to Ormstown; Miss Hazel Cairns to Lachute, District No. 4.

SASKATCHEWAN.

The Administrative Section of the Saskatchewan Educational Association met at Regina on March 11th and 12th and was very largely attended by representatives from the various boards of trustees in the province and by the Inspectors of Schools. Addresses were given by the Hon. Walter Scott, Premier and Minister of Education; Mr. A. H. Ball, Deputy Minister of Education; Dr. R. A. Wilson, Principal of the Normal School, Regina; Mr. S. P. Grosch of the Local Government Board, Regina; W. H. Magee, Inspector of Schools; Mr. J. O'Brien,

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Inspector of Schools and others. Mr. R. J. Westgate was elected President and Mr. J. J. McCarthy, Regina, Secretary-Treasurer.

The Elementary and Secondary Section of the Association met at Yorkton on April 5, 6, 7 and 8. The principal speakers were the Hon. Walter Scott, Premier and Minister of Education; Dr. Murray, President of the University of Saskatchewan; Dr. R. A. Wilson, Principal of the Normal School, Regina, and Prof. John McNaughton of McGill University.

The following officers were elected for the ensuing year: Hon. President, Honourable Walter Scott, Premier and Minister of Education; Hon. Vice-Presidents, D. P. McColl, B.A., Superintendent of Education, Regina; J. T. M. Anderson, B.A., LL.B., Inspector of Schools, Yorkton; President, Joseph A. Snell, B.A., Principal of the Normal School, Saskatoon; First Vice-President, Miss L. O'Connor, High School, North Battleford; Second Vice-President, G. A. Brown, B.A., Superintendent of Schools, Prince Albert; Third Vice-President, Miss C. McClain, Assistant to the Principal, Strathcona School, Regina, Sask.; Secretary-Treasurer, Chas. Nivins, B.A., Normal School, Regina.

The Agricultural Instruction Committee, which was recently appointed by Hon. Walter Scott, Minister of Education, held its second meeting on April 10th. This committee is composed of D. P. McColl, Superintendent of Education, chairman; A. H. Ball, Deputy Minister of Education; J. W. Rutherford, Dean of the Agricultural College; A. F. Mantle, Deputy Minister of Agriculture; F. W. Greenway, Director of extension work of the College of Agriculture; A. R. Greig, Professor of Agricultural Engineering in the College of Agriculture; J. A. Snell, Principal of Normal School, Saskatoon; Dr. Wilson, Principal of the Normal School, Regina.

At this meeting a number of matters of importance in connection with agricultural instruction in the schools of the Province were considered, and a forward policy decided upon. Particular attention will in future be paid to the subject of agricultural instruction in the schools, and two directors of this work were appointed in the persons of F. W. Bates and A. W. Cocks. Professor Bates has for several years been director of agriculture and physics in Regina College, and Mr. Cocks, who was formerly principal of Oxbow High School, is a graduate of an English agricultural college.

These gentlemen will be closely associated with the two Provincial Normal Schools, Professor Bates being assigned to the northern half of the province and Mr. Cocks to the southern half. They will follow up the work of the teachers in their respective districts both in Public and High Schools. They will also be *ex-officio* members of the above-named Agricultural Instruction Committee.

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Short courses in agriculture for teachers in elementary schools will be held at the University of Saskatchewan, Saskatoon, from July 5th to July 23rd.

A corresponding course in household science will be held in the Provincial Normal School, Regina, during the same period.

It is probable that a short special course in science and agriculture for Inspectors and teachers of science will be held at the University of Saskatchewan from July 19th to July 30th.

Mr. Frank M. Quance, B.A., has been appointed Principal of the High School at North Battleford.

Mr. W. N. Finlay, B.A., was recently appointed Principal of the High School, Yorkton.

The board of trustees of the High School at Wilkie have appointed Mr. A. M. Walker, B.A., a recent graduate of the Provincial Normal School, as Principal of the High School.

A teacher signaled the reopening of school by asking her class to write an essay on London.

Later she was surprised to read the following in one attempt:

"The people of London are noted for their stupidity." The young author was asked how he got that idea.

"Please, miss," was the reply, "it says in the text-book the population of London is very dense!"

Teacher—"Now then, Tommy, give me a sentence containing the word 'seldom'."

Tommy (triumphantly)—"My father had two horses last week, but yesterday he seldom!"

"I'm at the head of my class, papa," boasted Willie.

"Good, my son. How did it happen?"

"Oh, the teacher asked us this morning how to pronounce C-h-i-h-u-a-h-u-a, and nobody knew. But when it was my turn I sneezed—I just had to, papa—and she said I had it right!"—*American School Board Journal*.

"How did your daughter pass her examination for a position as teacher?" asked one.

"Pass!" was the answer. "She didn't pass at all. Maybe you wouldn't believe it, but they asked that girl about things that happened long before she was born."—*Lippincott's*.