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Editorial Board :- The Staff of the Faculty of Education, University of Toronto

Fublished monthly, except July and August

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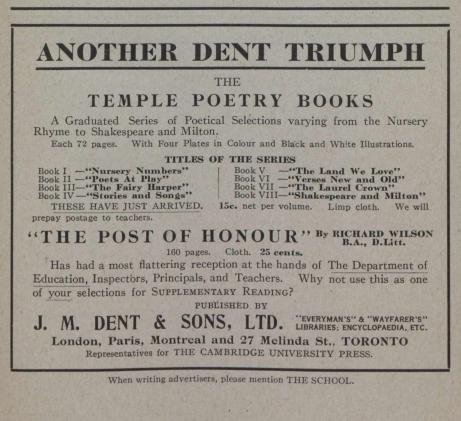
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Subscriptions are not discontinued until notice to this effect has been received. Remittances should be made payable to The School and must be at par in Toronto.

The School is published monthly, except in July and August, and is printed at the UNIVERSITY OF TORONTO PRESS TORONTO.

Subscriptions in Canada, \$1.25 per annum; in United States, \$1.50. Single copies, 15 cents.

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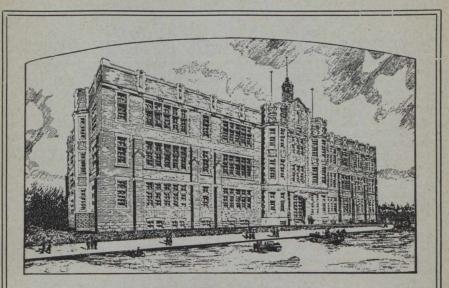
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TORONTO, Dec. 1st, 1917.

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Ontario Department of Education

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High, Continuation, Public and Separate Schools have the following number of teaching days in 1918 :

January 21	July
February 20	
	Sept 19
	October 23
	November
	December 15
119	79
	Total

DATES OF OPENING AND CLOSING

Open31	d January	Close
Reopen	8th April	Close
Reopen3rd	September	Close20th December

Note—Easter holidays (29th March to 7th April, inclusive), Midsummer holidays [from 29th June to 2nd September, inclusive], Christmas and New Year's holidays (21st December, 1918 to 2nd January, 1919, inclusive), all Saturdays and Local Municipal Holidays, Dominion or Provincial Public Fast or Thanksgiving Days, Victoria Day the anniversary of Queen Victoria's Birthday (Friday, 24th May), the King's Birthday (Monday, 3rd June), and Labour Day [1st Monday (2nd) of September], are holidays in the High, Continuation, Public, and Separate Schools, and no other days can be deducted from the proper divisor except the days on which the Teachers' Institute is held. The abovenamed holidays are taken into account in this statement, so far as they apply to 1918, except any Public Fast or Thanksgiving Day, or Local Municipal holiday. Neither Arbor Day nor Empire Day is a holiday.

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ted by ALICE STONE BLACKWELL. WITH FRONTISPICE. Crown Svo. Clotch, 82.00 The outstanding figure of the Russian voltre is Madame Catherine Breshkovsky, whom M. Kerenski, then minister of Justice, ordered liberated as one of the first acts of the provisional government. Now seventy-three years old, thirty of which she has spent in exile in Siberia, Madame Breshkovsky, affectionately known as Ba-boushka—in English "dear little grannie"—has lived to see her dream come true; her dream of a free Russia, delivered from the Romanoffs. As a child she scandalized her mother by giving away her little velvet cloak to a Russian peasant. Several years of her youth were spent in solitary confinement in a Petrograd prison, and two years of her youth were spent in solitary confinement in the record of her many half-century of devotion to the cause of Russian freedom is one of hardship and persecution theroically endured. Hard labor in the mines at Kara, solitary confinement in Irkutsk—these are some of the horrors Baboushka has borne for her faith. Twice she attempted to escape, but was recaptured, the last time in 1914, when dressed as a man she got away from Kirensk and evaded the police for several days. In 1904 she visited this country, where she made the acquaintance of many of the friends of Russian freedom, including Miss Alice Stone Blackwell, only to be arrested on her return. Miss Blackwell has assembled from many sources Baboushka's own words as given in interviews when she was in the United States and in letters to friends since her return. Seldom has so dramatic a story been unfolded; this is one of those rare human documents that cannot fail to make a profound impression on every reader.

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VOL. VI.

The School

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Editorial Notes

Summer Sessions. The Toronto Faculty of Education offers three important Summer Courses this year.

To the teachers who are graduates in arts it offers instruction in one-half of the subjects of the courses for the degrees in Pedagogy. The call for the educational expert was never so loud as to-day. These degrees have now become one of the hall-marks of the educational expert in Canada.

To teachers otherwise qualified it offers instruction in most of the subjects of the special course for Public School Inspectors in Ontario. The demand for Inspectors is now above normal. The work of the Inspector is attractive and becomes steadily more so. But the supply of inspectors declines. Why not seek an Inspector's certificate?

To Faculty Entrants and University graduates who hold Second Class certificates, and have taught successfully for *three* years, and are thus exempt from attendance during the regular session it offers instruction in the more important subjects of the course for First Class professional (grade B) certificates. The many advantages of a First Class certificate under the new Regulations should make this offer particularly attractive.

If any one of these three courses interests you, write at once for further information.

The Ontario College of Art.

There have been many changes in the school subjects of Ontario during the last decade. New subjects have been introduced; old subjects have

been renewed. No subject has come more quickly to the forefront than art. In the form of *drawing* it was an old subject. In the form of *art* it has been so transformed as to be in reality a new subject. In its new form it aims, like music or literature, to equip all pupils with a noble source of joy throughout life. As a method of expression and, therefore, as an instrument of culture it is not inferior to any of the other school subjects. Indeed "to know and love a beautiful picture is a liberal education". And then in its application to modern industries it is indispensable. Without it the Canadian artisan will be confined to the coarser and more brutalizing trades; with it he need call no foreign workman his master.

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The progress of the Ontario schools in art is due primarily to the wise provisions of the Department of Education. It prescribes very suggestive and practical courses in art for all elementary and secondary schools. To encourage better equipment and more extensive courses it offers generous grants to boards and teachers. It gives special thought to the training of teachers of art. The art courses of the training schools of Ontario reveal many evidences of this careful thought. But the best evidence is probably the Ontario College of Art.

The Department of Education suggested, and by Provincial Statute effected, the founding of this College. Since the founding the Department has never ceased to care for it. In the lean times that came with the war it did not hesitate to come to its rescue. And the Departmentand the Province-have their reward. Out of the College of Art have come during the last five or six years the teachers—and the spirit—which have transformed the art instruction of Ontario. What this has meant to the pupils of Ontario every teacher knows. What it will mean to the industries of Ontario no one dare prophesy.

Teachers' Salaries.

In the world of business there is a saying that the large salary is paid to the man who secures signatures "on the dotted line." That is, that the monetary rewards go naturally to the one who brings in the money.

Others in the same organization may spend as much, or more, time and energy but, unless their efforts result directly in bringing money into the firm's coffers, their salaries are not so large. This condition is due to the universal misconception of the meaning of the term "producer." The manager of a commercial institution produces manufactured articles, another employee produces sales of these articles and the payment given them bears some ratio to the amount of production. The farmer produces food and receives payment in direct proportion to the amount produced. The physician produces health for his patients, the lawyer produces favourable court decisions for his clients, and both are rewarded accordingly. What does the educationist "produce"?

The teacher produces citizens qualified for their work as such. But the finished product is not available for so many years after the raw material has been received and so many teachers usually have a share in each individual process of production that the work as a whole does not usually receive the appreciation it deserves. For the dull boy's lack of progress the onus is usually laid on the shoulders of the teacher, but if the bright boy advances rapidly his success is attributed to his own natural talents and rarely, very rarely, to his teacher's skill. For these reasons, the teacher is not popularly regarded as a producer and his remuneration is not proportionate to his real contribution to the social welfare.

Fortunately, the many changing conditions of these last few years seem likely to bring a new recognition of the importance of education, a new realization of the necessity for many improvements in educational systems and, as a result, a new economic status for the teacher. In England, "the cardinal reform in education must be the increase in teachers' salaries." And this same reform is an absolute necessity in Canada. Not merely because teachers should receive increased payment for their services, but because increased salaries will mean better teachers and better teachers will mean better work in every department. Larger salaries will keep good teachers in the profession and will encourage them to improve their academic and pedagogical attainments; larger salaries will attract and hold competent instructors.

From an educational standpoint, real tragedies occur almost daily on account of inadequate salaries. Instances there are of important positions that cannot be filled by the right men and women because the salary offered is no inducement to those properly qualified by personality and by professional equipment. There are other cases of teachers who have been eminently successful in certain posts and who are not retained because the remuneration cannot be made equal to that available elsewhere. In the so-called "higher" educational sphere such occurrences are not rare but in rural education they constitute practically the prevailing condition. How often it happens that a board of rural trustees will not retain the services of a teacher who has done exceptionally successful work merely because an additional hundred or two hundred dollars is the obstacle! To each ratepayer the increase would mean only a few cents and would be a thousand times outweighed by the advantage of retaining a competent and experienced teacher for a continuous service of several years.

Not many teachers realize the immense amount of labour that is required of the county inspector. His hours are long; his holidays are few; his correspondence is voluminous; reports interminable form part of his ordinary routine of duty. Yet he must travel long distances in all kinds of weather, visit his schools, bring inspiration, guidance, and counsel to his teachers. For this and much other work his salary is comparatively meagre. Recently the maximum salary for inspectors in Saskatchewan has been raised to \$2,400 and an expense allowance of \$780. Some say that Saskatchewan "sets the pace" in its treatment of inspectors; for verification of this claim the necessary figures are nor at hand. Perhaps the future will bring, in all Provinces, an increased salary and also office help for each inspector so that time needed for professional reading and for educational planning will not be spent on work that a stenographer might do.

That the amount of money spent on education in this country is entirely inadequate every thoughtful person will admit. In England, in war time, \$16,000,000 of 'new money' has been secured for higher salaries and pensions for teachers in elementary schools and over \$2,000,000 for teachers in secondary schools. Is any 'new' money in sight in this Dominion? For two years the Government of Ontario has been collecting a special tax of one mill for war purposes. When the war is over, might this taxation be continued and the proceeds used for educational purposes? The winning of the war is now our paramount national business. If, when the conflict is ended, we are to regain what has been lost by the ravages of war, if we are to build up a really great nation, education will be the nation's chief business and will be worthy of expenditures similar to those now devoted to the purposes of war.

Errors in Spelling.

In a class of forty pupils there were the usual number of good, average, poor, and apparently hopeless spellers. After marking several sets of

examination papers in various subjects and deducting the usual mark for each misspelled word, the teacher decided that spelling needed more attention, that a complete review of the work done during the term must at once be undertaken. Though this took a great deal of time and many tests, it produced little change in the general spelling in other papers. The time of the good spellers had been wasted on words already known, while the poor and the hopeless had blundered on through a terrifying maze of words, familiar and otherwise. It did not occur to the teacher that there might be an easier and less wasteful method.

On the teaching of spelling a great deal of time has been and is being spent. And yet any business man who wishes to take a fling at our educational methods remarks (and with some basis for his statement) that the schools are not really producing good spellers.

Many teachers compile, or have compiled for them, a list of the words which each pupil habitually misspells. To a considerable extent these lists overlap. The errors common to many then receive special attention and those peculiar to individuals are made a very personal matter. In this way difficulties are cleared up with a minimum expenditure of time and energy.

In these days of surveys, might it not be profitable to investigate some of the routine classroom work to see whether time can be saved in little things? In this field there are many opportunities for new discoveries. A few economies might give a different aspect to the muchabused "overcrowded curriculum".

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DEVELOPMENT OF THE IMPERIAL CONFERENCE 477

The Unusual Pupil.

All too rarely is the unusual pupil found in the classroom. When found, he is so frequently suppressed and discouraged because of his deviations

from the accepted order of procedure that his tribe decreases. And yet this old world needs, about as much as it needs anything, people who think original thoughts and do original things. In the stress of classroom work the teacher is apt to resent the numerous and the disconcerting questions of the unusual pupils. While the ordinary boy or girl quietly recites the names of the oceans, the 'peculiar' boy interrupts the lesson with, "Please, sir, why do we speak of the Arctic Ocean? On the globe it seems to be a rather small body of water lying between North America and Asia. It looks more like the Mediterranean Sea than like the Atlantic Ocean. Should it not be called a *sea*?"

The teacher's first impulse is to make a forcible request that this boy sit down and learn his lesson as it was taught him. A prominent lawyer in a Canadian city was, in the initial stages of his education, severely thrashed because he asked *why* two and two make four. There has been too great an inclination to try to make all pupils think the same thoughts in'the same way, to run them all through the same educational mould, to bring them all to the same dead level of uniformity. And then how everyone mourns the absence of originality, the lack of initiative, the scarcity of real thinkers! By every possible and legitimate means the unusual boy should be guided so that his natural love of activity will spend itself to the greatest advantage. He is not a nuisance; he is a 'find'! If properly directed he will be a credit to his teacher and to himself. It is the teacher's privilege to bring to view the latent beauties of the diamond.

The Development of the Imperial Conference

(Continued from the January number)

G. M. JONES, B.A. Faculty of Education, University of Toronto

London, 1902.—Soon after the conference of 1897 the South African war broke out, and for three years the attention of British statesmen was centred on that struggle, which had led the colonies for the first time to go seriously to the aid of the Motherland. While the conflict was still raging, Canada showed her desire to strengthen trade relations with Great Britain by increasing the preference on British goods to $33\frac{1}{3}\%$ on July 1st, 1900. Only a few months later, January 1st, 1901.

the Australian colonies strengthened the Empire by uniting in the new Commonwealth of Australia. At the same time, however, two colonies, Jamaica and Newfoundland, were trying to establish such reciprocal trade arrangements with the United States as would have interfered seriously with Mr. Chamberlain's plans for inter-imperial free trade. The time seemed ripe for another conference, and, moreover, a fitting occasion was at hand, since the colonial premiers would be in London in 1902 for the coronation of Edward VII.

On this occasion the colonial premiers were accompanied by other ministers, but the latter were allowed to take part in discussions only when their special departments were concerned. Canada was represented by Sir Wilfrid Laurier and Messrs. Frederick Borden, Fielding, Mulock, and Paterson.

In his opening address Mr. Chamberlain urged the paramount importance of strengthening the bonds of the Empire, and proposed three subjects for their consideration: "I say the paramount object is to strengthen the bonds which unite us, and there are only three principal avenues by which we can approach this object. They are through our political relations, in the first place; secondly, by some kind of commercial union; in the third place, by considering the questions which arise out of Imperial defence. These three great questions were considered at the last conference, and I think it is clear that they must form the principal subject of our deliberations on this occasion, and, indeed, of those of any future conferences which may afterwards be held."

Mr. Chamberlain believed that imperial federation was feasible, but he preferred an imperial council. He urged the desirability and importance of a system of inter-imperial free trade. And, finally, he appealed strongly for adequate colonial participation in the defence and government of the Empire. "Gentlemen, we do want your aid. We do want your assistance in the administration of the vast Empire which is yours as well as ours. 'The weary Titan staggers under the too vast orb of his fate'. We have borne the burden for many years. We think it time that our children should assist us to support it, and whenever you make the request to us, be very sure that we shall hasten gladly to call you to our councils. If you are prepared at any time to take any share, any proportionate share, in the burden of the Empire, we are prepared to meet you with any proposal for giving to you a corresponding voice in the policy of the Empire".

The question of defence came up first. Lord Selborne, First Lord of the Admiralty, urged that Great Britain was bearing more than her share of the burden of naval defence, and that the colonies should supply not only more money, but men for the navy. Moreover, he

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objected strongly to the policy of confining the Australian squadron within prescribed waters. The military needs of the Empire were presented by Mr. Brodrick, Secretary of State for War, who proposed that each colony should maintain a thoroughly trained expeditionary force at the call of the Imperial Government for service abroad. He suggested that one-quarter of the colonial forces should be of this character.

The results of these proposals must have been very discouraging to the British ministers. Australia and New Zealand agreed to give £240,000 a year towards the cost of an improved Australian squadron. Cape Colony agreed to give £50,000, and Natal £35,000 towards the general maintenance of the British fleet, and little Newfoundland was willing to pay £3,000 for a drill-ship and a branch of the Royal Naval Reserve. Canada offered nothing, as she was contemplating the establishment of a local naval force. Great Britain got only half of what she wanted for the navy; and she fared still worse with regard to the army, for Australia and Canada successfully opposed Mr. Brodrick's proposal on the ground that the establishment of such special expeditionary forces "under the absolute control of the Imperial Government was objectionable in principle, as derogating from the powers of selfgovernment enjoyed by them".

The colonial representatives were not ready to accept such a system of inter-imperial free trade as Mr. Chamberlain suggested, but they were anxious that Great Britain should assist in establishing a system of Imperial preferences by remitting the war duty of one shilling a quarter on wheat and the corresponding duty on flour. Because of the opposition of the Chancellor of the Exchequer, the British Government refused this concession, and maintained that the Canadian preference was of no great value to Great Britain, since Canada still maintained a protective tariff. No general agreement was possible, but the President of the Board of Trade persuaded nearly all the premiers to agree to recommend to their parliaments certain preferences on British goods.

The only reference to the question of political relations, after Mr. Chamberlain's opening address, was a resolution in favour of holding conferences at regular intervals of not more than four years. The colonial representatives wished to turn the conference into a recognized and regularly organized means of consultation, but nationalist feeling was too strong in both Canada and Australia to permit the adoption of Mr. Chamberlain's scheme for an Imperial Council.

Many subsidiary matters proposed by the colonies were discussed, but little was accomplished with regard to them. Once more Mr. Chamberlain had been unsuccessful in bringing about a reorganization of the

empire, and his ill-success had been partly due to Great Britain's unwillingness to offer any preference to colonial products. This led him in 1903 to resign his post in the Government in order to lead an agitation for such a system of tariff reform in Great Britain as would enable her to offer trade advantages to her colonies, and thus to lay an economic foundation for a closer and a more permanent union of the colonies with the Motherland.

London, 1907.—The conditions under which the conference of 1907 met were very different from those of 1897 and 1902. Not only was Mr. Chamberlain no longer Secretary of State for the Colonies, but the Unionist Government had been replaced by a Liberal one, thoroughly committed to free-trade and not at all convinced of the necessity for a more highly centralized government for the Empire. Sir Henry Campbell-Bannerman, the new Prime Minister, Lord Elgin, the new Colonial Secretary, and other ministers represented the British Government. Sir Wilfrid Laurier and Messrs. F. Borden and Brodeur represented Canada. Among the other colonial representatives the more prominent ones were Mr. Alfred Deakin of Australia, Sir Jospeh Ward of New Zealand, Dr. Jameson of Cape Colony, and General Botha of the Transvaal.

Three main questions came up, all of which had been discussed at previous conferences. With regard to the constitution of the conference it was decided that an *Imperial Conference* should meet *every four years*, that a permanent secretariat for the conference should be provided by the Colonial Office, and that subsidiary conferences might be called on special occasions, or for the discussion of special topics. Thus was the colonial conference changed into an imperial conference with a definite constitution and with arrangements for regular meetings.

Once more British ministers urged greater colonial participation in defence. Mr. Haldane wanted an expeditionary force in each of the self-governing colonies, an imperial general staff, and an exchange of officers. Lord Tweedmouth wanted contributions in kind for the navy, preferably in submarines. This time less was secured than at the two last conferences. The plan for an imperial general staff was approved, but the staff was to be advisory only. New Zealand, Cape Colony, and Natal agreed either to continue their contributions to the cost of the navy, or to supply ships; but Canada made no proposal, and Australia announced her determination to create a navy of her own.

On one subject the colonial representatives were unanimous. They all supported a resolution moved by Sir Wilfrid Laurier, urging the British Government to grant "in the United Kingdom preferential treatment to the products and manufactures of the colonies, either by

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exemptions from, or reduction of, duties now or hereafter imposed". Mr. Deakin supported the resolution in a speech that took up more than a whole session, and he was ably supported by others; but the British Government was utterly opposed to the proposal, and Mr. Asquith, Mr. Lloyd George, and Mr. Churchill all presented elaborate arguments to show that Great Britain could not grant a preference to the colonies without unduly enhancing the cost of food and of raw materials for manufacturing. Of course, the British attitude defeated the proposal. The British Government had once more refused, even more resolutely than before, to be drawn into any system of preferences that would interfere with her system of free trade.

Although, on a number of subsidiary questions, important decisions were reached, the results of the discussion of the three main topics were very disappointing to men of the Chamberlain school of thought. An *Imperial Conference* had been established, but in it the representatives of the colonies now met as delegates of national governments, not as members of an imperial parliament, or an imperial council. Almost no progress was made in imperial defence. Finally, an impasse had been reached with regard to trade within the Empire.

Naval Conference, 1909.—During the early years of the 20th century great changes were taking place in the relations of the European nations. At the opening of the century the chief continental powers were grouped in two rival alliances. The triple alliance of Germany, Austria and Italy had been formed in 1882 and the dual alliance of Russia and France had been openly acknowledged by 1897. As a result Great Britain was isolated. She was a member of neither alliance and was on bad terms with both France and Russia. But a great change was brought about during the reign of Edward VII, and partly through his influence. In the first place, an entente was established with France. Great Britain was to have a free hand in Egypt, and France a free hand in Morocco. Then, partly through the influence of France, Great Britain and Russia were led to settle all their differences in Asia, and thus make possible the triple entente between Russia, France, and Great Britain. But Germany viewed these rapprochements with misgivings, and not only continued to press her claim to a place in the sun, but built a larger and larger fleet to protect her commerce and to assure her position in Weltpolitik. The first serious clash between Germany and her rivals was over Morocco in 1905, when she forced the calling of the Algeciras Conference to settle the rights of France and Spain in Morocco.

German naval rivalry at last alarmed Great Britain so thoroughly that in the spring of 1909 Sir Edward Grey told the Commons that the

British navy would have to be rebuilt. Such a pronouncement from a cabinet which had been markedly non-imperialistic, and was interested primarily in schemes of social and political reform, startled the colonies and called forth immediate offers of colonial assistance. As a result of these evidences of the desire of the Dominions to assist in an emergency, the British Government summoned a subsidiary conference to consider naval defence. Mr. Winston Churchill expressed the decided preference of the British Government for a system under which all parts of the Empire would "contribute according to their resources and needs to the maintenance of the British Navy"; but the Dominions preferred local navies under local control in time of peace, and finally entered into a agreement to build local fleet units.* Canada and Australia were to supply one each, mainly for use in the Pacific. Great Britain was to supply two units for the China and East Indian stations, and New Zealand was to build a dreadnought.

Australia and New Zealand proceeded at once to carry out their part of the agreement, and their ships helped to round up German cruisers in 1914. Great Britain for some unexplained reason failed to establish her two units in the Pacific. Canada altered her plans, and had only begun her fleet, when the Liberal Government of Sir, Wilfrid Laurier went out of power in 1911.

The Indian Head Public School Garden

W. J. STEVENSON. Inspector of Schools, Oxbow, Sask.

THE Indian Head Public School garden is one of the largest and most definitely organized projects of its kind in Saskatchewan, and is representative of the progress and present status of school gardening in this Province.

While attempts had been made towards the utilization of the school grounds for teaching this subject as early as 1910, lack of space and of enthusiasm had tended to nullify the efforts. In 1914, however, a definite project which would give opportunity for individual work on an adequate scale by every pupil of the eight departments was broached by the Principal. The project involved considerable expenditure for new

^{*} A fleet unit consists of a battleship and its attendant cruisers and small craft, "The Borden-Churchill correspondence has furnished the latest estimates of the cost of Dominion fleet units. Judging by these figures, Canada could maintain one fleet unit at an inclusive charge of not more than $\pounds1,000,000$ a year".—Jebb, The Britannic Question, p. 257, 1913.

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property, labour, and equipment; consequently, both the public and the board had to be educated as to the value and the necessity of the proposed programme. Articles were published in the local paper, and the cooperation of the editor, the inspector, the trustees, and sympathetic citizens was enlisted, and finally, in the fall of that year, it was decided to purchase three fifty-foot lots near the school for a school garden. The Trust Company holding the property selected, when informed of the purpose of the board, charged only a nominal price for the property, although it was located within two blocks of the Post Office. The trustees, feeling that the spirit of the community was behind the project, have since met every expense involved, for fencing, labour, equipment and seeds for the garden, and printing and prizes for the exhibitions.

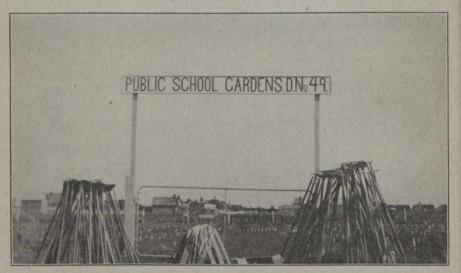
The garden, approximately 150 ft. square, was divided into 400 plots on the municipal plan, each $5\frac{1}{2}$ by $4\frac{1}{2}$ feet, and these were numbered as sections, townships and ranges, the location stakes being placed in the



northeast corner of each "section". The paths, each two feet wide, corresponded to the roads of the municipality, one section apart east and west and two sections apart north and south. This permitted the junior pupils to work as partners, while the senior pupils each had a double plot. Certain plots across the front of the garden were grouped, with the roads closed, as community plots or experimental plots. A roadway, ten feet wide, ran through the garden from the gate to the rear, and a border six feet wide for perennial flowers and trees was left around the four sides. A circular ornamental flower plot, ten feet in diameter, surrounded by a narrow path and a border of kochia was laid out in the centre of the garden.

Early in March of each year the pupils are assigned their plots, and the plans for the season's work are developed. The pupils are allowed a certain latitude in selecting their vegetables or flowers from lists previously determined and each pupil prepares his planting plan. Questions in arithmetic, such as determining the amount of seed required by each

pupil and for the whole garden, are a practical feature of this work. When the total amount of seed is determined the list is submitted to the board, and, as again illustrating the community interest, the seeds have been either donated by local firms or supplied at actual wholesale cost. The seeds are received in bulk and are measured and divided among the pupils, the actual calculation and measurement, as far as possible, being done by the pupils. The designing, constructing, and printing of the seed envelopes by the pupils furnishes a further interesting class exercise. The actual laying out of the garden into individual and class plots according to the prepared plan again calls for careful and accurate work in measurement by the older pupils.



Equipment-Indian Head Public School Garden

Lessons in the proper preparation of the soil, measuring, marking, planting, and cultivation are given according to a carefully prepared plan in the various classrooms, previous to each respective operation in the garden. The "why" receives equal emphasis with the "how", and observation and reasoning are encouraged at every stage, while the need of system is emphasized. In preparing directions and suggestions for the teachers, the various government bulletins are utilized, and advantage is taken of the experience of the neighbouring Government Experimental and Forestry Farms as well as of practical gardeners in the vicinity.

While each pupil cultivates such vegetables and flowers as are practical in his or her individual plot, larger plots are reserved as "community gardens" for the growing of the more difficult or wide-spreading vegetables or flowers. Experimental plots are also utilized for the growing of grain under various conditions of planting, cultivation, and

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fertilization. The primary grades have community plots of their "very own", in which, however, most of the work has to be done by the older pupils.

Several plots have been utilized for the growing of trees from seeds and from cuttings, following the directions and bulletins of the Government Forestry Station. The border surrounding the garden was summerfallowed according to the directions issued by the Forestry Station to the farmers of the Province, and several hundred trees were also planted by the older pupils according to these directions on Arbor Day of 1916, the actual work being undertaken only after the bulletins and directions had been carefully studied in the schoolroom.

Actual practice as it should be carried on in the home gardens and farms, and as far as possible under similar conditions, is the aim of all this work. The seed grain is cleaned, tested, and treated for "smut" in the classroom. The potatoes are also treated for "scab" before planting. All garden plants required for transplanting are grown in the classroom, although these could easily be obtained from the neighbouring Experimental Farm.

During 1917, in harmony with the Government appeal for "Production and Thrift", the individual plots were largely restricted to such vegetables as from experience the teachers and pupils believed would find a ready sale at good prices in the vicinity. The flowers were confined to separate class plots, but these plots were so arranged along the main road as to give a vista of beauty and harmony.

During the growing season the individual plots are judged in June and again in September, being scored on the basis of general appearance, freedom from weeds, freedom from blight, rust, smut, etc., vigour and uniformity of growth, cultivation and care during the summer. Two prizes, donated by the board, are given to each of the eight departments. Representative farmers, act as judges, thus relating the school and the community. The double judging is aimed to encourage attention to the plots during the two months' vacation, but owing to the general exodus of the parents and children to "Lake Katepwe", ten miles or more north of the town, during this period, it has been found necessary to supplement the individual care by employing labour during the vacation.

The study of insect pests, such as the cabbage-butterfly and the cut worm, and means for their control, and the identification, habits of growth, and means of eradication of the common weeds has proven practical and profitable, mainly because a direct incentive to their study has been presented in the garden itself. The study of the soils, fertilization and conservation of soil moisture, has also proven practical and valuable. The garden has furnished abundance of material for art, constructive work, elementary arithmetic and language work. The

collections of weed seeds, weeds, leaves, flowers, plants, butterflies, insects, and soils have proven interesting, as have the weather charts, flower charts, bird charts and school garden records.

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The culmination of the season's work is the annual exhibition of the products of the garden and the co-related school work. Here parents and trustees are brought into close touch with the school and its activities, and a more cordial spirit of co-operation and sympathy has been the direct result. No money prizes have been granted to the pupils, appropriate badges having proved sufficient rewards of merit. War conditions have assisted towards this end, the pupils feeling that all proceeds should be used for Red Cross or patriotic purposes. All products are sold by auction, and the total proceeds of the sale as well as the admission fee or voluntary offering are used for these purposes. All incidental expenses are met by the school board—that is, the community of ratepayers.

While up to 1917 the work outlined above had been of a purely local nature, it was then felt that the time was ripe for extension, and the neighbouring rural school districts were invited to co-operate with the town school in behalf of rural education. The response was unanimous and enthusiastic, and a strong "Rural Educational Association" was formed. A decided impetus was given to school and home gardening, the prominent citizens of the community were directly identified with the work, and new lines of rural education, such as boys' and girls' clubs and stock-judging classes were formed. The community and the schools are now more closely related as a direct result of the school garden movement.

The Value of Drawing

ALFRED HOWELL, A.R.C.A. (London) Central Technical School, Toronto

(Concluded from the January and February numbers.)

THE cultivation of the memory through drawing would induce a greater taste for art. More people are hopelessly at sea in matters pertaining to art than in other things because the observation has not been sufficiently cultivated to retain the beautiful things seen, such as lighting effects, colour harmonies, arrangements, costume, character, any particular arrangement, or the colour scheme of a room, changes in atmosphere and their effect upon landscape.

THE VALUE OF DRAWING

When one has a well-trained memory, a journey, a view, a fine sky, a great work of art, a monument, instead of making an indefinite impression are indelibly stamped upon the brain with almost the accuracy of a photographic plate, and will be permanently recorded for use when required.

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We have seen that drawing is a useful medium of expression and is of far-reaching influence. Cultivate it, then, in its many branches, recognizing that all the store of impressions that is gathered is to be your stock in trade through life. Study Nature with deepest reverence, observe, visualize, and commit to memory all the useful things. Let all your work be guided by intelligence and proper selection and then the success that awaits all those who work faithfully will be yours.

But what of application? There is no branch of art in which application has greater results than in drawing. So far we have been speaking in general terms of drawing as a language, as a valuable subject for correlation, and as a powerful aid to the memory.

Now we must come down to the more personal note. Drawing is the basis of all art. It matters not how cleverly or dexterously one may manage material: without the aid of sound draughtsmanship it loses its force. There never was a time when the need for a more sincere attitude toward drawing was evident. Look through our exhibitions of pictures, and you will get entertainment in juggling and trickery without parallel on the vaudeville stage. There is the cow made of diamonds and squares, here the water mottled with confetti, here the shadow of a tree that has all the appearance of a piece of coloured green cardboard pasted on a yellow ground. It has even become fashionable to put slippers on the feet of a figure supposed to be touching the limpid water with her toes. What is the reason for this evasion of the truth? Simply that trouble and study are necessary to good work. It is all very well to pass that off before the public and say, "Here we have art at last". Some critics have even made bold to say so. Cubism, impressionism, and all the rest of the "isms" have come and gone, but there can be only one thing that will stand the test of time and that is truth. We know what it meant for Michael Angelo to produce the frescoes of the Sistine Chapel or for Raphael to create his immortal Madonnas. We know with what sorrow Flaxman worked at his wonderful illustrations, or how Stevens created, almost unknown to the world, his great designs. It was not by taking up a brush and "slashing it in", as we say.

Whilst their brothers slept, these men worked long into the night, brooding over great problems, letting nothing pass from their hands but what they felt was worthy of placing before the world. They toiled with devotion. And if we could ask them what made their work so successful we should probably get one reply, "drawing".

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It is all very well for the jugglers to juggle, but jugglers juggle only for amusement; and, though a crowd loves to be amused, a juggler has to be a very good one to make any lasting impression. Even so there are good jugglers and bad jugglers amongst artists. The bad jugglers will pass out as "also rans", and the good jugglers will stay for a little time to amuse their friends until a new fashion arises. The will-o'the-wisp in art is always busy, but we do not remember any will-o'-thewisps in the history of art. They have not been recorded.

The famous men of whom I spoke had only one maxim truth, and they knew that truth could be founded only on accurate drawing. Good drawing makes all the difference between good and bad art. It is useless to draw a thing at all unless we draw it well, or unless we strive to draw better than we have drawn before. Just as drawing is foundation work for the landscape painter, so with the sculptor or designer. An old professor of mine once said that he could do more with the student who could draw well than with the one who could manipulate clay with the greatest of facility. If we study the "Frieze of Horsemen" from the Parthenon at Athens we shall be assured of one thing-that the artist made innumerable sketches of horses before he committed his ideas to marble. So full is the work of fine drawing that one could almost forget the superior points of composition. No great school can be built up on any other foundation than that of drawing. As an illustration of this a division of schools of art in different countries might be mentioned.

It is certain that your work will become live and attractive only through constant application to the study of drawing. Take the question of design. You must study your plant with the utmost care and precision. You must take it to pieces, dissect it, analyze it, make note of its characteristic growth. You must know a good deal of the history and the evolution of the plant. Yet how often we despise the drawing of a plant! This is the outcome of ignorance. One can rarely pick up a biography of a great man in art in which some important reference is not made to his close and well-thought-out studies of plants. The reasons are obvious. First, the same principles of Nature exist in plant form as in any other branch of Nature. Second, the very study of plants in their different moods and textures creates a refining influence in the student that he will never lose in drawing other things. Third, observation is developed through the degrees of comparison that plants Fourth, the principles of growth and individual shape in plants present. are the very principles that, when modified, will create good design.

As an instance of the use of plants take Botticelli. His pictures teem with beautiful plant forms, whether used in their natural settings in the landscape, or as a means of decoration on costume or personal adornment. We find all the beauty of life-giving qualities of plants

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used as perhaps no master has since been able to use them. Amongst modern men we have only to examine the work of Leighton, Rossetti, Burne-Jones, in order to realize the importance of such study. For myself, I know no better scheme of work for the cultivation of drawing power than plant study.

To think that you are going to attain success in design or in any other branch of art without this work is out of the question. From the minutest piece of jewellery to the great wall coverings of a public building the plant will assert itself.

And, mark you, when I speak of plants I am not confining myself to flowers or sprays; I am including trees. This is a very necessary branch of the work. As a decorative element the tree has been extensively used in recent times by decorators and sculptors to embody certain qualities that are always of advantage if properly used.

Finally, we must accept the plain fact that drawing is the life and soul of art and the only sure way by which success in any branch may be achieved. Let everything that you do be true and sincere; then your work and study will not be in vain.

A PARENT'S PLEA.

My boy is eight years old, He goes to school each day; He doesn't mind the tasks they set— They seem to him but play. He heads his class at raffia work, And also takes the lead At making dinky paper boats— But I wish that he could read.

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They teach him physiology, And, oh, it chills our hearts To hear our prattling innocent Mix up his inward parts. He also learns astronomy And names the stars by night— Of course he's very up-to-date, But I wish that he could write.

They teach him things botanical,
They teach him how to draw,
He babbles of mythology
And gravitation's law;
And the discoveries of science
With him are quite a fad,
They tell me he's a clever boy,
But I wish that he could add.—P. McArthur in Life.

Worn out by a long series of appalling French exercises, a hapless High School mistress declared her intention of writing to Florence's mother.

Florence looked her teacher in the face. "Ma will be awful angry."

"I am afraid she will, but it is my duty to write to her, Florence."

"I don't know," said Florence doubtfully. "You see, mother always does my French for me."

Primary Department



WHITE SWAN S.D. NO. 3237, BEAR LAKE, ALBERTA Mrs. Jos. Wolters, Teacher

Send in a "snapshot" of your school for reproduction on this page.

[THE SCHOOL undertakes to answer promptly, by letter, all reasonable questions, if correspondents enclose stamped, addressed envelope. When this condition is not met, answers are given on this page as soon as space permits.]

Occupation for the Noon Hour

GRACE FLEGER. Barkway, Ontario

(1) I divided my class into four equal parts and over each appointed a captain, not the best boys, but the most mischievous boys. The captain whose "men" misbehave (i.e., push, use profane language, run around in the schoolroom, etc.) writes the names on the board. The captains try to have no names down.

OCCUPATION FOR THE NOON HOUR

(2) A better method is to have pupils engaged in a game in which all are interested. My pupils enjoy "Post Office" as well as any. Two pupils stand in the centre of the room and the others sit in their seats. One of the two standing goes to each pupil and whispers a name of a postoffice (Sadowa, Utterson, Kilworthy, Severn, etc.) and gives a name also to the other one who is standing. Then he calls out two names and those pupils change seats while the other who is without a seat tries to get into one of the vacated seats. If he succeds the new one left out stands and tries to get a seat next time names are called. An occasional call of "General Delivery" is given and all have to change seats. Fruit basket is played in the same way but names of fruit (apples, grapes, oranges, etc.) are given and the general call is "Upset the fruit basket". Anyone who pushes or is rough has to stop playing.

(3) A geography match is much enjoyed. Two captains are chosen and they choose their "men". The captain and his men, with slates and pencils, go to one side of the school and the other captain and his men to the other side. Someone suggests a letter, e.g., 'A'—Allandale, Asia, America, etc. At the end of ten minutes the pupils count the number of words and the captain announces the total number. The captain whose side has the larger number wins. A clap is usually given the winning side.

(4) Sometimes they take sides as in above but without slates and pencils. One captain gives a word, *e.g.*, Atlantic. The other captain has to give a word beginning with the last letter of the word given, *e.g.*, California. The first captain counts to ten. If a word is not given by that time the other one takes his seat and the word passes to the first captain's first man. The captain with the most men standing wins the game.

(5) Pupils enjoy finding places on the map. One gives the name of a place (Amazon, Arctic, Belgium, etc.) and the pupils try to see who can find it first.

(6) I allow the little tots to make "nice" drawings on the board. They illustrate games, stories told or read by the teacher, draw birds, animals, etc.

(7) Some bring magazines, cut out the pictures and make scrap books.

(8) Girls make card-receivers, hair-receivers, lamp-shades, etc., from paper or cardboard.

(9) Boys carve and make many pretty and useful things from wood.

(10) At recesses at one school I taught my pupils to crochet and knit. The girls made many Christmas gifts and knitted several pairs of gloves, socks, etc., for the Red Cross. The mothers told me how pleased they were with the interest the girls took in this work.

Of course, circumstances and individuals differ in different localities but I trust some of these hints may assist the teacher who asked for help. I am suggesting only indoor games as I think this is what was required. On bright days I like pupils to wrap up and go outdoors to play.

Equipment of the Rural School

BESSIE A. GOODHEAD. Hayter, Alberta

N answer to the enquiry by an Ontario rural school teacher, I wish to tell my experiences, if she will listen to one who is just learning.

I have found that the maxim, "Providence helps those who help themselves," proves good in teaching as well as in everything else. When I came to my school, we had no equipment of any sort. The children and I tried to get a few things and soon we had the trustees so interested that now, eight months' later, we have a fairly well equipped school and are getting more equipment all the time. We are even able to serve hot lunches at noon, although, as yet, they are made on a tiny oil stove borrowed for the purpose.

The noon hour problem I cannot help solve but I shall tell what we have done for a "desk or library case". We had made different collections of stones, bones, bugs, feathers, pressed leaves and so on, and had no place to put them. I appealed to the pupils and one said, "Wouldn't a box do?" We took the suggestion up and every family brought a box to school. We arranged them according to size, in different groups, one on top of the other, and this made the shelves. Some of our "cupboards" we lined with either newspaper or wrapping paper and also covered the outside of them in this way. But for our "best cupboards" we bought a cheap, but neatly patterned, cretonne which, when tacked on the top box and allowed to hang down, made a very pretty curtain. A piece of cretonne a yard square was sufficient for a desk made out of three apple boxes. These sets of shelves were used for books, collections, busy work, material, the children's cups, lunch baskets, etc., etc.

The children then brought medium-sized match boxes which were covered and labelled in manual training class. These were for keeping together smaller articles and were placed on one of the shelves. In one we keep clippings, in another words (cut from magazines) for sentence building, in another letters for word building, and still others contain catalogue pictures, etc.

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EQUIPMENT OF THE RURAL SCHOOL

The catalogues and magazines, I find, are excellent helps for busy work. The children cut the pictures from the catalogues either at school or at home and use them for "playing house". Each desk is a house and is divided off into rooms and the children furnish them very carefully after a little practice.

In the middle grades we use the same pictures, along with toy money, to play store and the children become very quick in changing and counting up money. Although moving around, they soon learn to do this very quietly.

From almost any school supply house sewing cards are easily obtained and afford excellent busy work, especially if the designs are attractive. When finished, they can be strung together and used as a pretty decoration as well as a display of the pupils' work.

Once started, many other suggestions will occur to a teacher's mind which will help her to "invent" equipment, to follow out her Course of Studies, to make the community more interested, and also to help improve her certificate.

The Problem of the Noon Hour

CRETA KEARNEY, Thedford, Ontario

N September the activities of my pupils were directed along lines of agriculture, "school grounds beautiful", and games, so it was no abrupt change when new ideas were announced for those who remained in the classroom at noon hour.

First, I taught them inside games at recess, and these were also participated in at noon hour. Secondly, I introduced manual training by having necessary shelves put up during the noon hour. The spirit of keeping the schoolroom tidy was started here.

As we hadn't a numeral frame, the pupils arranged to make one. (This will also help the teacher in securing other equipment from the trustees). The pupils when interested in this way will bring lumber, nails and hammers from home; saws and planes will be smilingly loaned by neighbours.

In December my pupils were busy with paper and scissors (borrowed) making lanterns, baskets, etc., for Christmas decorations. "How pretty!" "How was it done?" queried the trustees. My answer brought nine pairs of new scissors.

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I have plenty of lumber for several bird houses which we are going to commence immediately, and have them ready for the birds in the spring.

These lessons are applications of those in arithmetic and geography, and a few minutes when the teacher returns at noon is all that is needed for observation, criticism and instruction, if required.

Dramatization in Kindergarten and Primary

ETHEL M. HALL

Kindergarten-Primary Form, Ryerson Public School, Toronto

T is only during very recent years that *dramatic interpretation* has meant anything outside of preparing and staging some old or new play. It never seemed to dawn upon the minds of the educators of former days that drama is the foundation stone in child life.

From its earliest years the child lives in a world of his own—a pretend world. He is perfectly happy when imagining he is someone or something other than himself.

Therefore dramatic interpretation may be introduced into all the work of the classroom—a vital spark of life dropped into the lap of formalism and routine.

All work which is imaginative, constructive, and vivid is dramatic. It is this interpretation of drama rather than its more limited phase of dramatic play which should be introduced into every kindergarten primary school. Every subject on the time-table may be presented dramatically. If we cannot infuse *emotion* into the ideas to be instilled there can be no connecting link between *those facts* and *life*. Knowledge is necessary but the child must feel it in its relation to life in order to appreciate its value.

Dramatic representation is instinctive in every child and by such interpretation his life leaves its narrow bounds and he reaches out far beyond his present environment and sees vistas which might otherwise be forever closed to him.

Put a cocked hat on the head of a tiny boy and a flag in his hand and he is every inch a soldier fighting the battles of the king.

Stevenson realized this instinct in children to the full.

- "Bring the comb and play upon it, Marching, here we come.
 - Willie cocks his Highland bonnet, Johnnie beats the drum.

Mary Jane commands the party, Peter leads the rear, All in time, alert and hearty,

Each a Grenadier.

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All in the most martial manner, Marching double quick, While the napkin like a banner Waves upon a stick".

In "We built a Ship upon the Stairs", "The Dumb Soldier", "The Little Land", "The Land of the Story Books", "My Kingdom", "My Ship and I", "The Land of the Counterpane", he illustrates the child's power to dramatize life. The child is what he pretends to be, "What we long for that we are for one transcendent moment".

Dramatic interpretation is a personal thing and must be original in order to possess *life*. The child must put *his own* interpretation into it. *Spontaneity* and *originality* together will bring the necessary result. There is nothing so monotonous in the world as slavish imitation. The teacher's interpretation would be simply a parrot performance on the part of the child.

Do not dramatize the same thing twice. There is the whole world of literature from which to choose and life is too short—besides in *freshness* and *originality* lies the *charm*.

I remember a child who absolutely refused to wear a pretty dress because her mother had lent the pattern and it had been copied three or four times. She took her punishment quite calmly. It was the novelty of the style which had appealed to her, not the dress itself.

"An inspired artist never repeats a masterpiece and the great sculptor destroys the mould that there may be no imitators." Each original interpretation of anything in life is the product of a soul and the command "Take off thy shoes from off thy feet for the place upon which thou standest is holy ground," is quite as easily applied to original work. Yet some will walk in boldly "where angels fear to tread".

The very soul of the child shines in his eyes when he is dramatizing unconsciously. Such was a representation of the simple rhyme "Little Miss Muffet". The interpreters had forgotten time, place, and observers and I held my breath lest they might suddenly awake. Miss Muffet was Miss Muffet and the spider was *very* black and *very real*.

What nonsense to talk of dramatizing a lesson in number! Why not? Do you think the tens and units are any more real to the little tots when they go altogether by their prosaic names ten, eleven, twelve than when *ten* is the mother and the *teens* are the children of the *ten house*. It is simply an adaptation of a game played by children day by day. A drama of life. Why not adopt it if it instils *life* into the number lesson?

Most of the nursery rhymes can be dramatized. If drama is too complicated pantomime may be used. Originality on the part of the teacher is absolutely necessary. *Dead* dramatization is worse than useless.

"If we spend too much time dramatizing nursery rhymes, we can never cover the primer." What is reading? The primer is an authorized means to an end. When we make butter we skim the cream from the milk and use that.

All 'action' words can be dramatized. Take the words *hide* and *find*. Each word is a complete sentence with capital and period and should be written thus when first placed on the blackboard. A review of each action word previously learned should be taken first and a list left on a side board. Now for the new words. In a whisper instruct some child to hide a ball, while the others close their eyes. "What did I tell you to do with the ball?" "Hide". Place the word on the blackboard, erasing each time until sufficient drill is given. Ask some pupil to find the ball. "What did I tell you to do with the ball?" "Find". Repeat the drill. Then combine the two, using and as hide and find, find and hide. Then combine with known words as run and hide, run and find, hide and hop or hide my ball, find my ball, hide my top, find my cap.

But some teacher says, "I can't dramatize; I feel so foolish skipping around the room like a child". Then you belong in another school, because "Except ye become as a little child ye shall in no wise enter the Kingdom of Childhood". For the Kingdom of Childhood is all imagination and make-believe.

The group-game is the simplest form of dramatization—such games as, "Kitty, Kitty Casket—a green and yellow basket"; "How oats, peas, beans and barley grow"; "The farmer in the dell"; "Mulberry Bush"; "Little Sally Watters." These may not seem of literary value but there is an orderly process and climax which lends rhythm and artistic merit. The tune may be adapted to some more poetic words—poems you wish impressed. The group-game is the foundation of drama because it channels the activities and disciplines the pupil, thus preparing him for spontaneous acting later.

The rhythmic dances of the kindergarten and primary are a *second* introduction to dramatization. Such dances as "How do you do, my partner", "Dance all in a Ring", and some of the folk dances train and control the physical movements of gesture, pose and poise. They are closely related to the rhythm of poetic literature and may be performed to the rhythmic recitation of poetry.

Charades are perhaps the third step in dramatization and are closely related to language work in the kindergarten and primary. They contribute to the vocabulary of the child and sharpen the wits. The language game may be used occasionally but not too often, as it is monotonous.

Impersonation comes to the very heart of drama. The child is what he represents. He is not an imitator. He is the soldier, sailor, or

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animal. He is Little Jack Horner or Little Boy Blue. Listen to Stevenson again:

"This was the *world* and I was *King*, For me the birds came by to sing, The little minnows too".

"O it's I who am the captain of a tidy little ship".

"For I mean to grow as little as the dolly at the helm,

And the dolly I intend to come alive".

"I was the *giant* great and still That sits upon the pillow hill".

"I have just shut my eyes To go sailing through the skies, To go sailing far away To the pleasant *Land* of *Play*".

"This is the very foundation of literary appreciation. The door through which we can enter into the feelings and situations of the characters represented in story, poem, or drama. It is this which gives the grip of reality to literature; it is this which turns the appreciation of literature to *culture*, so in a very real sense one may substitute literature for *experience*. It is easy to utilize this passion very early, turning it in the direction of art."

Why cut short the dreams and imaginations of children too soon? Even at the expense of some more practical things let them live in the beauty of their dream-world and they will emerge not crawling worms, in a literary sense, but beautiful butterflies. Most children dramatize easily and naturally. If there be any stiffness or awkwardness let the teacher show the way by breaking through all unnecessary restraint and taking an enthusiastic part in the dramatization. Leave the selfconscious child alone and he will fall into place naturally.

Dramatic interpretation is indispensable in the proper reproduction of stories, but there is a great difference in the dramatic value of the stories told. "How the Indians got Fire", "How Brother Rabbit fooled the Whale and the Elephant", "The Brahmin, the Tiger and the Jackal", "The Three Little Pigs", "The Little Pigs' House", "The Three Bears", "Little Red Riding Hood", "How the Robin's Breast became Red", "The Three Goats", "The Hare and the Tortoise", are splendid stories to dramatize. There are many stories which even little children will recognize as impossible 'to play'. In poetry, do not try to dramatize a lullaby or even such nursery rhymes as "Hey, diddle, diddle."

Do not look for perfect work. Let the staging be such as a child will create. A table will make a piano, a feather an Indian warrior. Let the dramatization be a spontaneous, happy and natural outlet for the expression of the individuality of the actors. Use as many children as possible in order to encourage the less talented ones. Take part in the drama occasionally. Some one may walk in just at the moment when

you are performing a *very* childish part. You may never fear the sympathetic observer who always sees below the surface. Congratulate yourself if you have actually been a *child* in the play.

Superficial criticism does not count. Keep in mind that the office of the kindergarten and primary school is to create a *new world* of *joyous work* for the child who long ago cried out through his beloved Stevenson:

"O dear me! That I could be A sailor on a rain-pool sea, A climber in the clover tree, And just come back a sleepy head, Late at night, and go to bed".

Primary Number Work

FLORENCE M. CHRISTIANSON. Niagara Falls South

THE first day in our number class 0, 1, 2, 3, are taught objectively by means of stick-laying, counting bits of chalk, pencils, books, or whatever objects are at hand. These numbers are written on the blackboard. Names are given them and much drill is provided in writing them on the blackboard, in the air, on the slates and in tracing them.

Each time we get the number objectively a child goes to the board and attempts the reproduction of the figure. Much is made of getting it to resemble the teacher's model, which is left on the board in a convenient place.

It sometimes requires a couple of days to establish these number facts and longer to get their proper form. We review and drill on them daily, every time we have a lesson, so as to keep the form and the fact before the mind. The best work is not accomplished by sticking to a thing everlastingly but by everlastingly going away from it and persistently coming back to it.

Once these number facts are established we get at them concretely. A child is asked to bring two apples, three books, one pencil, etc. These articles are placed on a low bench (made for us by some of the Second Book boys) and are arranged a little distance from one another so as to emphasize the unit-idea. Then a pupil is called on to place a symbol or figure-card (that corresponding to the unit on the bench) beside the unit-objects on the bench. Thus we associate the concrete with its proper number form.

From day to day, as fast as we are able to receive them, a new digit is added and is established in a similar manner. In getting the digit

PRIMARY NUMBER WORK

4, for example, we never lose sight of the fact that it is a relative of our old friend *three*, with our other familiar *one;* that 3 sticks and 1 stick are 4 sticks, or 3 and 1 are 4, and so on with each of the others up to 10. This is the logical way, the most natural, and hence the easiest.

When we have advanced as far as 4 the digits are written promiscuously on the blackboard, the pointer is placed in a child's hand and he is sent to the board. The name of one of the numbers is called and the child points to it. Other pupils go up as called and a lot of excellent and exciting drill is the result, for all are watching for blunders and hands go up offering corrections.

Another time we drill with our symbol-cards which are spread out promiscuously on the low bench. Three or four pupils are called out of class and take places before the bench. The name of a certain number is called, and there is a scramble to get the right figure-card. As soon as a child finds it he returns to his place in the class, concealing the face of his card the while. When all have chosen, a signal is given and each shows the face of his card. Sometimes a child fails to get the proper card. He is then put through the process of finding the number objectively and the symbol is associated with it. Thus the number is established in all cases after a little practice. Other children are drilled in turn, those most needing it getting the bulk of the exercise.

In a week or ten days the following can usually be established permanently: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. We make much, from the very first, of getting the pupils to make good figures, and by "good" figures we mean figures that can be read by anyone and that will not be mistaken for others. To this end we write them on the board, slates, paper, in the air and trace them on the ground (when we have our lessons out-of-doors) from good models.

The next step is the analysis and synthesis of these numbers. In each class we review the digits. This is done (1) By placing the symbol-cards in logical order along the chalk-trough. (2) By asking for volunteers to write the given figure on the board till the list is exhausted. (3) By counting orally. (4) By letting one pupil have all the cards and placing them on the bench as the numbers are called.

After this preliminary skirmish the teacher takes 3 horse-chestnuts in her hand. How many nuts have I? 3. Then one of the 3 is put in the other hand. How many have I in this hand? 2. In this? 1. Two and one are how many? 3. One and two? What numbers make 3? Nothing and three? Three and nothing? One and one? Two and nothing? Nothing and two? Nothing and nothing? One and nothing? etc.

These usually come readily. If there is any hesitancy it is only necessary to open the hands and show the elements. Then the result is

given at once. Then while interest is running high the teacher says, "Let us see how these would look on the blackboard."

<i>(a)</i>	3	0	2	1	
			1		
	-	-	1-1	11-1	

The row of small lines is made so as to insure a *straight* line and show them how to write the first combination. Who will write nothing and three for me? Volunteers. Two and one? One and two? Thus our table stands complete as at (a).

These, they are told, are families of numbers. This at (a) is the family of 3's. We follow with the family of 2's and of 1's. Now the children fancy that each combination is a child of the family and are most zealous to see that no child is left out when they write these families on the board or for seat work.

3	0	2	1	2	0	1	1	0	Families
0	3	1	2	0	2	1	0	1	completed.
-	-	-	-	12/1-1		14	-	1. T.	

Thus daily in our number classes do we get the families and recall our number facts, adding a new digit that we already know as a whole from time to time as fast as we can master it. In six weeks or two months at the most we know all the digits up to 10 that we started with and the addition number-facts of each.

For blackboard drill, say to the class, "Let us make the family of 10's to-day".

10	0	8	2	7	3	9	1	5	4	6	Family
0	10	2	8	3	7	1	9	5	6	4	completed.

(To be continued.)

Busy Work

OLIVE M. FISHER, Instructor in Primary Work, Normal School, Calgary

B^{USY} WORK is an ever-present problem of the primary grades. That problem does not come because of any lack of variety in subjects or in materials with which to work; but the chief difficulty is in "following up" the recitation lesson so that the efforts made there may be re-enforced during the seat work period. To place the stress upon content and avoid monotony by frequent repetition—this is not always the least of our trials.

BUSY WORK

To quote Gesell, who seems to be a 'prime' and a primary favourite to-day, there are five essentials to be observed in all this "busy-ness". 1. The work given must not be too hard, nor too easy. The 'something accomplished, something done' idea is a satisfaction to children as well as to grown-ups. 2. There must be short periods; fifteen minutes is quite sufficient usually. 3. The children should know the "what" and the "how" of their tasks. "Having something to do is very different from having to do something". Simple and definite instructions are necessary. 4. There must be variety. Monotony cannot be tolerated. 5. Seat-work must be *looked over* by the teacher. This is necessary for the formation of good habits in work.

In the articles written, or in the suggestions given, for busy work, the children who have been at school for some weeks, are provided for sufficiently. They have had work in phonics, some number work and various other things; busy work then is comparatively easy. But we must not neglect the children who are just beginning school. Again, there seems to be a difficulty in basing seat-work on reading material during the first few weeks. The following devices may be found helpful:

'1. A rhyme is taught during a language period. Then it is placed on the board for reading. For seat work, the children are given squared paper on which the rhyme is written. They cut these along the lines and place the words in a large envelope in which the rhyme is written. (a) Place in piles the words that are alike, *e.g.*, *This*, *little*, *pig*. (b) Make two lines of the rhyme on the desk. (c) Make the whole story on the desk. Children learn many more words in this way than those stressed in recitation periods.

2. Using mail order catalogues or old magazines, have the children cut out pictures. These are mounted by the class, and a pack of cards is made. (a) The teacher writes the word in two places under the picture. One is cut out and all are placed in envelopes—then used for matching exercises. (b) The words may be written on the back. The children learn to recognize words without having to turn to see the picture.

3. By using the above materials children make their own picture books, the teacher writing the word under each picture.

4. Objects around the room are labelled. Different children remove these labels and others replace them.

5. When sounds are taught there is much variety. "Families" or word-endings are given and words based on these are written on the board. The children are allowed to make "dictionaries" and on each page is written the whole group. A picture is drawn if the word is 'drawable'. On the next page is an effort of this kind.

In language work we have been stressing the "group" idea in written work. Beginning with single sentences—a record of the day's events—

this is written on the board by the teacher. The class copy; and when it is well done, they copy it into their little "diaries". Later, short stories are used. Below is the group story of a Grade II class at the beginning of September.

THE SUNBEAMS.

One bright morning some little sunbeams woke up very early. They put on their fairy wings and golden dress and started off to see the world.

When they got there they played hide-and-seek among the grass and flowers. In a little while a shower came. The tall white lilies invited the sunbeams to come in so they would not get wet.

After the shower each little sunbeam jumped out with glee and said, "I am going to kiss my lily". And now all the lilies have gold hearts.

Jim and Bob were just getting over chickenpox and were not allowed to mix with other children, but were well enough to play in their own yard. They were apparently tired of the yard and ran off to the hills with their sleigh. On their return I said to them: "I hope you have not been near any other children?" Bob, who is five years of age, answered: "Oh, mother, I just told all the kids we had chickenpox, and they beat it; so we had the hills all to ourselves."

The Decoration of Rural Schools

EVELYNE LEES. Carlos P.O., Leslieville, Alberta

NLY too often the rural classroom is so bare and uninviting that the teacher shrinks from the labour involved in making it more cheery and homelike. This extra work can be reduced to little more than the planning if the pupils are allowed to help; and, since all children possess more or less strongly a primitive love of decoration, they usually thoroughly enjoy doing anything that will improve their surroundings. This pleasurable excitement and feeling of personal ownership in the schoolroom is just the attitude of mind most favourable to the teacher's work of developing in the child that subtle knowledge of what is good taste in house decoration which will prove invaluable to the adult. So by all means let the children earn, bring, or make the objects that are to beautify their schoolroom.

First of all, good pictures will be required, for no room which contains even one masterpiece ever looks dreary. There should be one or two pictures large enough to be seen plainly by the children when seated at their desks. In choosing these, it is a good plan to make a selection from the list laid down in the Art Course for the various grades, so that they may be used for picture study lessons. At the end of the lesson the pupils should be advised to study the picture closely and quietly whenever they have a spare moment. Then, from the teacher's standpoint, these large pictures will form not only a schoolroom decoration, but a delightful occupation for the quick pupil who finishes his "busy work" before the others.

The one disadvantage is the fact that these pictures are expensive, a picture 22 x 28 inches costing when framed at least \$5.50, exclusive of freight charges. The money can, however, be easily and profitably raised in various ways. Part of the proceeds of a school entertainment may be spent in purchasing one of these large pictures. At many agricultural fall fairs prizes are offered for school work, and not only for such individual exhibits as seed collections, drawing, painting, and penmanship. but also for such class work as drill, singing, basketball, and junior baseball. Usually the children will readily vote the money thus won by the teams for the purchase of a good picture. One of the very best ways of raising the money is to compete for one of the prizes offered in each inspectorate for physical culture. The prize money could be expended on a good copy of some famous painting and a suitably inscribed metal plate affixed to the frame would be all that is necessary to make an unusually interesting trophy. The frame should be per-

fectly plain and, if possible, of the same colour as the largest dark masses in the picture. In order to make the actual subject stand out boldly the mount should be pure white or pale cream and the finished work of art should be so placed that the light falls directly upon it.

In addition to one or two large pictures to decorate the bare walls, several smaller ones may be placed between the windows. These should be placed on glass and held in position by passe-partout binding. The work should be done by the higher grades, for as a manual training problem it affords splendid exercise in accuracy of spacing and neatness of finish. The children should realize that carelessness in framing is an insult to the artist—that even the slightest fault in the corners or the least unevenness in width of binding will attract attention from the picture itself and will weaken whatever feeling the painter has tried to arouse in the mind of the spectator.

Before the rural school teacher can obtain even these small pictures, both time and money will be required, but in the meantime there is no need that the schoolroom walls should be bare and cheerless. Many pictures on calendars, though lacking perhaps the depth of thought, definiteness of purpose, and strength of execution, which make a great work of art are nevertheless very beautiful in the eyes of children. The picture itself should be cut out in rectangular shape and mounted on white drawing paper or cardboard. If, however, the calendar already has a white ground, it would be more effective to use a piece of darkbrown building paper. It is really surprising what an improvement decorations of this type will make in the appearance of any classroom and sometimes they furnish valuable material for an incidental art lesson.

Blackboard borders are almost as important as pictures in schoolroom decoration, and, if the design, stencilling, and actual drawing be entirely the pupils' own work as a practical part of the art course, they involve no extra work for the teacher. The designs must, however, be quite narrow, for all available board space is usually required for classwork; sometimes they may be pricked with darning or harness needles along the lines instead of being cut out as an ordinary stencil, thus providing good "busy work" for Grades I and II. The design is transferred to the board by tapping the dotted lines with a chalk-laden duster. In bad weather the children may be allowed to change the board decoration often, for they enjoy tracing and colouring and the work is a profitable recreation for the occasional spare noon hour. Additional interest is given to the border if the design is correlated with the work of one of the grades or with the season of the year.

An ornamented "memory gem" corner is another very useful decoration for a rural school. Either a piece of blackboard material or a little-used corner of the blackboard itself is bordered with some appro-

THE DECORATION OF RURAL SCHOOLS

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priate design and in the centre a well-known verse of poetry is written. Its beauties, context, and author are pointed out to the children and they are advised to learn it in spare moments. The decoration makes it a pleasing spot for the eyes to turn to and if the children know that at the annual school concert they will be required to step forward in turn and recite a memory gem, they will have little desire to waste time or cause trouble when their seatwork is finished. The simple decoration shown in the illustration was suggested by a branch of pine in the window and a design in the Teachers' Manual. As the board was high the wider border was placed at the top in order to lower the verse as much as possible.

The heights by great men reached and kept Were not attained by sudden flight, But they while their companions slept Were toiling upward in the night. From By Birds of Passace. H.W. Longfellow

Closely allied to the ornamented memory gem corner as a useful schoolroom decoration is the notice board. This may be placed either in the anteroom or at the back of the classroom and is made by nailing on the wall a large strip of burlap or a sack washed and dyed. Strips of wood between one and four inches wide, simply carved, sandpapered, and stained by the older boys are nailed around the edges of the burlap to hold it in place. The children are asked to bring newspaper cuttings and pictures illustrating current events and these are tastefully arranged and pinned to the burlap. By this means not only is a bare wall space

The "Memory Gem" Corner

pleasingly broken, but isolated country students are kept in daily contact with the great world movements.

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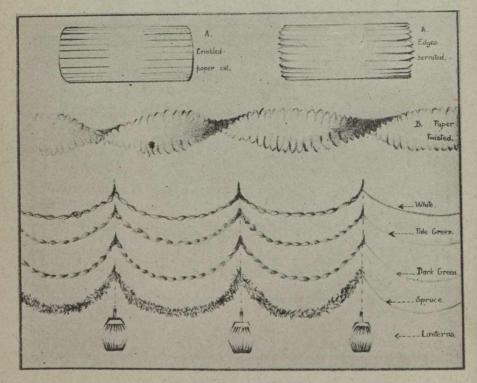
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Children's class work may be used for one type of decoration though too much of it should not be shown at one time; it is usually better to change the exhibited drawings, paintings, or penmanship frequently. Pressed autumn leaves, pleasingly arranged and mounted on cardboard by Grade I, and the pressed seeds of the higher grades, make interesting winter decorations. When there is no cupboard space available for a museum shelf, a bracket can be fixed to the wall to hold any collections of insects, rocks, soils, or seeds that the children may have made.



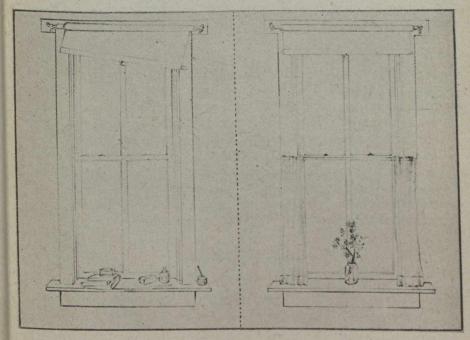
Decorations for Special Occasions

Almost indefinite scope is allowed for original plans when decorating for special occasions. A most effective and artistic scheme was used last Christmas in Washington Heights School. Rolls of crinkled paper were cut, *before unwrapping*, into smaller sections 1½ inches long, and then cut and separated, as shown in A. The paper was then unwrapped and twisted, as shown in B. Long strands of white, pale green and dark green were looped round the room; strands of still darker green pine and spruce hung below, while from the points of the festoons were suspended white and green paper lanterns made by Grades I and II. Altogether

THE DECORATION OF RURAL SCHOOLS

the room, pretty at any time, looked really striking! When crinkled paper cannot be obtained, pretty Christmas chains can be made from the gaily coloured "dodger" paper used by printers for handbills. In the autumn, sprays of berries and coloured foliage make effective trimmings, especially when interspersed with flags or pennants. Red, white, and blue bunting can be made very cheaply by washing and dyeing numbers of flour sacks and running strips of the desired width together. This, of course, is very useful for special occasions.

Since windows occupy such an important place in the school building, it is only fitting that they should claim a proportionate share of attention



A Shelf or a Window. Cheesecloth, dried grasses, berries, and pine sprays make the difference,

in school decoration. While everyone acknowledges that house plants add considerably to the beauty of a room, it must be confessed that their care during winter and midsummer is a serious consideration to the rural teacher. As in many school districts there is not one home where a choice plant could be wintered safely, it follows that only hardy annuals should be chosen for the classroom windows. One or two cans for each window should be painted dark green; old saucers for holding water, and quantities of loam, rotted leaves and barnyard manure should be collected; such seeds as the aster, mignonette, nasturtium, verbena, or petunia should be obtained and then, when all danger of severe frost has passed, an agriculture or nature study period may be spent in

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planting. The children will, of course, attend to their growing plants, (though constant watchfulness is required to check neglect or unwise zeal) and during vacation they will have them at home. In this way, it is possible for a rural school to have the house-plants which so much improve the appearance of any room.^{*}

Short sash curtains of muslin or bleached cheesecloth are very useful in winter, for when drawn they prevent the glare of the sunlight falling on the pupils' book. The curtains may be hemmed or hemstitched by the girls and, if desired, may have a stencilled border, designed and painted by the children. It is by such work as this that the teacher is able, not only to beautify the room where so many hours of her life are spent, but also to introduce into the life of the community that industrial art which induces even the most narrow-minded opponent of the teaching of drawing and painting in Public Schools to become one of its enthusiastic supporters. And the children who have carried out such schemes of inexpensive decoration, having once experienced the delight and wonderful satisfaction that is the reward of those who make an object of beauty out of a commonplace thing, will never in after years be content to live in cheerless homes as long as they have brains to plan and fingers to carry out those plans. They certainly will forget many of the facts of history and geography, many of the rules of arithmetic and grammar that have cost hours of hard teaching—but if they carry through life an active desire for beautiful surroundings, then the teacher's work in decorating the interior of the schoolroom will not have been in vain.

Soil Study

J. M. SCOTT, B.A. Science Master, High River, Alberta

A^T THIS season when outdoor work in agriculture is impossible, soil study may be very profitably conducted in the classroom, provided the teacher sees that the pupils obtain most of their information from the results of experiments and not from a book on the subject. In this article a few simple experiments are outlined which may be easily performed by Grade VIII pupils.

One of the most important constituents of soil, from a chemical standpoint, is lime. This serves as plant food, sweetens sour soils, and performs many other valuable functions in connection with plant growth. Most of this lime has been formed from the well-known rock-limestone

SOIL STUDY

and it is well to have the pupils thoroughly understand the action of natural water on this rock. Pure water containing no dissolved gases has little, if any, effect on limestone. To illustrate this point have a pupil either collect some rain water in a clean granite cup, or melt some snow which has not come in contact with the soil. Boil the water for a few minutes in order to expel the gases dissolved in it. While the water is still at the boiling point pour it into a bottle containing about one quarter of a teaspoonful of powdered marble, immediately cork the bottle tightly and pour melted paraffin over the cork to ensure its being airtight. Where marble cannot be obtained, ordinary gray limestone may be used, although this rock, as found in nature, usually contains clay and other substances mixed with it. This water from which the dissolved gases have been expelled may be kept in contact with the limestone for months without any appreciable effect being observed. To show how slight has been the solvent action of the water, open the bottle at the end of two or three weeks and in a granite vessel evaporate to dryness some of the liquid. Little, if any, residue will be found, an indication that the limestone has not been dissolved by the water.

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Unlike the water prepared in the experiment cited in the preceding paragraph, the water which passes over rocks has dissolved in it a considerable quantity of carbon dioxide which it has absorbed from the air. All natural water is thus really a weak solution of carbonic acid. Carbon dioxide is often called carbonic acid gas because when dissolved in water it forms carbonic acid. This carbonated water readily dissolves the limestone. Later, owing to the evaporation of the water or the action of other agencies, this limestone is deposited in the soil. In order to show the effect of carbonic acid on limestone prepare some lime-water by placing a teaspoonful of lime in a quart sealer filled with water and allowing the contents of the sealed jar to stand for a few days. Then have each pupil put a tablespoonful of the clear lime-water in a small bottle and blow his breath into the lime-water through a straw, one end of which is immersed in the water. (If straws such as are used at soda fountains cannot be obtained, ordinary straws, goose quills, or rubber tubing may be used). After blowing his breath into the lime-water for a short time have pupil note the fine white particles formed in the solution. These particles consist of calcium carbonate, of which lime-stone is one variety. The calcium carbonate has been formed by the carbon dioxide of the breath uniting with the lime dissolved in the water. Have the pupil continue the blowing operation and he will find that the lime-water gradually becomes clear because the carbon dioxide acts on the water, forming carbonic acid which then reacts with the calcium carbonate, causing it to dissolve. For the benefit of teachers who have studied chemistry the following equations are given: CaO (lime) $+H_2O$ (water) =

Ca $(OH)_2$ (calcium hydroxide); Ca $(OH)_2+CO_2$ (carbon dioxide) = CaCO₃ (calcium carbonate) + H₂O; CO₂ + H₂O = H₂CO₃ (carbonic acid); H₂CO₃ + CaCO₃ = Ca (HCO₃)₂ (calcium acid carbonate). Calcium acid carbonate, unlike calcium carbonate, dissolves quite freely in water.

In the following series of experiments is outlined a scheme for the mechanical analysis of soils which is sufficiently accurate for elementary work on the subject.

Procure about a pound of moist, rich, garden soil and weigh accurately to the fraction of an ounce. Then spread it out in a thin layer on a sheet of paper and with a ruler break up the lumps of soil. Place it in a sunny or warm place and stir it up daily until it appears to be quite dry. Again weigh the soil. The difference between this weight and the former gives the amount of moisture present in the soil in the form of gravitational and capillary water. The capillary water is the chief source of moisture for plant growth. Now empty the soil into a metal dish and heat in an oven at a low temperature for two or three hours. After cooling, again weigh. The loss in weight is due to the evaporation of the water which clung so tenaciously to the soil particles that it was not removed when the soil was exposed to the action of the air. This water is known as hygroscopic moisture and is of very doubtful value to plants. The soil is now said to be moisture-free. While carrying out all the analytical work on a weighed portion of the soil, the teacher should have a considerable quantity of material treated by the same processes for examination by the pupils.

Have the pupils examine the soil and note its colour. Then place the material on a piece of tin and burn it on the hot coals in the stove for at least an hour. Allow it to cool, and weigh. The loss in weight is due to the burning of the plant and animal matter in the soil, to which the term *humus* is usually applied. Upon examining the soil the pupils will find that it has become lighter in colour because humus usually imparts a dark colour to soil.

At this stage the pupils should examine the soil in regard to the different sizes of particles present in it. After carefully breaking up any lumps of soil, use a piece of wire window screen as a sieve to separate the soil into two parts. The material which does not pass through the screen may be classed as gravel. Now have the pupils observe whether the soil particles which pass through the screen are all of uniform size. Get the pupils' ideas in regard to the different constituents still present in the soil. In all probability it will be suggested that the soil contains sand.

The following experiments will enable the pupils to discover whether the soil residue consists entirely of sand. Small quantities of pure sand and clay are required. To obtain pure sand shake up two or three

SOIL STUDY

tablespoonfuls of ordinary sand in a quart sealer of water, allow material to settle about ten or fifteen seconds, and pour off the water. Shake up the residue with water and allow it to stand as before. Again pour off the water and continue the process till the water is quite clear after standing for the time stated. The material left in the sealer may for our purposes be considered pure sand. To procure pure clay repeat the experiment just outlined with a burnt soil, allowing the material to settle for at least thirty seconds and saving the muddy water which is poured off. After this water has stood for a few hours, pour off the liquid and use the residue as pure clay.

Shake up a tablespoonful of pure sand in a bottle containing ten inches of water and have the pupils note how quickly the sand settles on the bottom of the bottle. Repeat the experiment with the same quantity of soil that has been put through the screen. The pupils should observe that, although a good deal of sand settles, there is also some other constituent in the soil which remains suspended in the water and makes the water muddy. In order to find out what this substance is, shake up about half a teaspoonful of pure clay in ten inches of water and note that clay makes the water muddy. From this we obtain a method of separating any burnt soil into sand and clay. Shake up a tablespoonful of burnt soil in ten inches of water, allow it to stand for thirty seconds and pour off into another vessel the muddy water which contains the clay. Shake up the residue with ten inches more of water and again allow it to stand thirty seconds and pour off the muddy water. Continue the process until the water is clear. The residue in the bottle is sand.

Where it is desired to find the actual percentage of sand in the soil, take an accurately weighed portion of soil (not more than two ounces) and separate the sand as in the preceding experiment, using only one tablespoonful of soil at a time. As each portion of pure sand is obtained, transfer it from the bottle to a tin pan, using a little water to rinse off any sand which adheres to the sides of the vessel. Place the pan on the stove, evaporate the water, allow the sand to cool and weigh the dry material. The percentage of clay may be determined by deducting the sum of the percentages of all the other constituents from 100.

It is wise to have each pupil separate one kind of soil into sand and clay by this method. using soils from different gardens and having them compare the relative amounts of sand and clay in the different soils.

Mrs. Kawler. "I'm glad to hear you say you wish the war were over, Bobby. It's a very cruel business."

Bobby. "'Tain't that. War makes history, and there's more of that now than I can ever learn."—C. E. World.

Rainfall and Vegetation of Asia

JOHN B. BRENNAN, B.A. Principal, Queen Victoria Public School, Toronto

[In the December issue there appeared the outline of a method on teaching the geography of a continent from a rainfall map. This article gives an application of the method to the geography of Asia.]

N considering the rainfall of Asia the following points should be noticed:

1. The great extent of the continent. Four times as large as Europe, and larger than North and South America together.

2. The continent has no western coast line.

3. The general direction of the mountains is east and west. Some of these mountains are of prodigious height. A number of them are from 5,000 to 6,000 feet higher than the highest summits of the Andes.

4. From latitude 40°N the prevailing winds are the westerlies.

5. India, the southern part of China, the Indo-China peninsula, and the Malay peninsula have the benefit of the north-east trade winds. The southern part of the continent is also affected by the south-west monsoons which prevail from May to the end of September.

Many parts of the continent, being cut off from oceanic influences by mountains, have an insufficient rainfall. Hence, much of the interior is desert-land. This is also the case in the south-west, because the ocean winds deposit most of their moisture on the African coast.

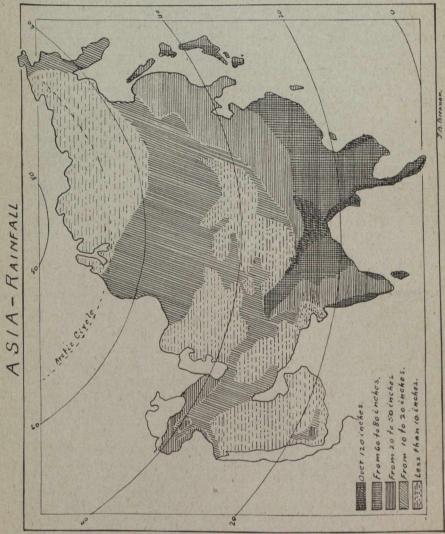
On the other hand, in the monsoon area of the south and east, the inflowing winds of summer bring an abundant rainfall, the distribution of which is affected by the mountains of the western Deccan, Burma, and the eastern coast. On the north-west coast of India near the Indus river the monsoon winds are very weak. As a consequence, the rainfall is scanty. This region is known as the Indian Desert, sometimes called Thar Desert. The monsoon season is a time of great anxiety to India because the failure of the monsoon rains affects the fortunes and even the lives of the people. Failure of the rains means death by starvation to many thousands.

The Malay peninsula, Ceylon, and the islands of the Malay Archipelago have the double rainy season characteristic of sub-equatorial regions. The western coast of Japan also receives abundant moisture, and the snowfall is of phenomenal depth.

The heaviest rainfall in Asia occurs in Assam. The extraordinary fall in this region is accounted for by the fact that in summer time there exists an area of low atmospheric pressure in Baluchistan which causes the south-west monsoons to be diverted up the Ganges valley, changing

RAINFALL AND VEGETATION OF ASIA

them to south or even south-east winds. As these winds are warm and pass directly over the Bay of Bengal, they are heavily moisture-laden. A fall of more than 600 inches has been recorded in a year on the slopes of the Khasi Hills.



VEGETATION.

In the frozen regions of the tundras along the Arctic coast, inhabited only by nomad hunters and fishermen, vegetation is restricted chiefly to mosses and lichens, stunted shrubs and berry-bearing bushes. South of the tundras lies a forest belt of coniferous trees, larch, pine, etc.

Farther south the deciduous trees familiar to temperate Europe are met. South of these forests are the grassy plains of the steppes. Wherever the rainfall is sufficient or irrigation is used, these regions yield splendid grains and fruits. Where the rainfall is scanty, the steppes gradually pass into the deserts which occupy a large part of the interior of Asia.

The Himalaya slopes have been the chief producers of pine, oak, walnut, maple and other timbers. Teak is found throughout India. Sandalwood, boxwood, sal, various palms, and dyewoods are also indigenous trees of commercial value.

In densely populated countries like India and China, pasture must be limited, except where the rainfall is scanty and there are no facilities for irrigation. In these countries there are grown immense crops of wheat, rice, cotton, and tea. India is now the greatest tea-producing country in the world. China for a long time was the chief producer and still exports large quantities.

NOTE.—Chief Wind Belts of the World. In paragraph 2, page 430, of the article in the February number on this topic, a line was omitted after line 6 (page 430). The sentence should read, "The air of the more humid region, being lighter, will ascend, while the heavier air of the drier regions will flow in below and take its place."

Diary of the War

DECEMBER, 1917.

- Dec. 1. German East Africa reported by General Van Dewenter cleared of the enemy; General von Lettow Vorbeck takes refuge across the Rovuma in Mozambique. British succeed in regaining nearly a mile of front lost near Gouzeaucourt. Germans, however, cause the evacuation of the Masnières salient. Dominion Victory Loan subscriptions in Canada reach \$416,000,000.
- Dec. 2. North of Passchendale the British take 120 prisoners.
- Dec. 3. Germans renew attacks south of Cambrai and force the withdrawal from La Vacquerie and east of Marcoing; enemy repulsed at other places; Germans claim 6,000 prisoners and 100 guns to date. Krylenko and his Bolshevist troops capture the Russian Headquarters; General Dukhonin, the Commander-in-Chief, assassinated by the mob; General Korniloff escapes. British capture the Sakaltulan Pass north of the River Diala; Turks from the hills north of Deli Abbas are forced to retire up the Kifri road towards Jebel Hamrin.

Dec. 4. British abandon Bourlon Wood, and some villages without casualties and unknown to the enemy. President Wilson addresses Congress on the war aims of the Allies. Enemy renew attacks on the salient from Mt. Sisemol to the Brenta and storm Mts. Badeneche and Tondarecar. At the Allied Conference at Versailles General Weygand is to represent France; General Foch to remain Chief of Staff.

- Dec. 5. Conference to discuss terms for an armistice opens between the Russian and enemy Governments. Austro-German attacks resumed on the Italian mountain flank; some ground including Mts. Zomo and Castelgomberto lost to the enemy; Germans claim 11,000 prisoners and 60 guns. General Marshall crosses the Nahrin and drives the Turks out of Kara Tepe. Enemy attack near La Vacquerie but are repulsed after severe fighting.
- Dec. 6. Terrific explosion at Halifax caused by the collision of the French munition ship Mont Blanc, and the Belgian Relief ship, Imo. Thousands injured and loss of life almost 1,300. A large part of the city wrecked, the damage being estimated at \$25,000,000. The British, U.S., and Dominion Governments each subscribe \$5,000,000 for relief, and lesser sums are donated by various cities. Aeroplane raid on London by 5 or 6 machines; two raiders brought down; 7 killed and 22 injured. Enemy break deep into the Meletta group of mountains and capture Mt. Sisemol; 15,000 prisoners to date claimed by the enemy. Roumania agrees to an armistice. Lisbon in turmoil against the Portuguese Government; Provisional Government under D. Sidonio Paes reaffirms solidarity with the Allies. The U.S. destroyer Jacob Jones torpedoed and sunk; 37 survivors.
- Dec. 7. United States declares war against Austria. British under Allenby take Hebron in Palestine. British improve their line by the capture of German trenches near La Vacquerie.
- Dec. 8. Jerusalem attacked and isolated by the cutting of the road from Jerusalem to Jericho, and also the road to Shechem.
- Dec. 9. Fall of Jerusalem to General Allenby. French and British re-inforce the Italians on the Northern Front. Italians torpedo two Austrian battleships of the Monarch type in Trieste; the Wien sinks. The Cossacks under Kaledin and Korniloff on the Don and Dutoff in the Urals revolt against the Lenin Government.
- Dec. 10. Panama declares war on Austria-Hungary. British carry a German post east of Boursies, Cambrai front.
- Dec. 11. General Allenby enters Jerusalem on foot with representatives of Italy, France, etc. British bomb Pirmasseus railway junction. German aeroplane destroys British airship of non-rigid type carrying crew of five in the North Sea. Russian Constituent Assembly meets in Petrograd; it is attended by Cadets and Revolutionary Socialists, but boycotted by Bolshevists. Cuba declares war on Austro-Hungary.
- Dec. 12. A convoy of eight merchant ships, H.M. destroyer Partridge, and four armed trawlers sunk off the Tyne. H.M. destroyer Pellew disabled. German destroyers also sink two steam trawlers and two neutral merchantmen in the same vicinity. One of H.M. destroyers sunk after a collision; 2 drowned. German attack between Bullecourt and Quéant succeeds in capturing a salient to a depth of 500 yards. General Allenby captures advanced line north of Midieh between Jaffa and Jerusalem and Budrus and Sheikh Obeid Rahid. Funchal in Madeira is shelled by a German submarine.
- Dec. 13. Sir Eric Geddes in the House of Commons states that Germany is building submarines faster than we are destroying them, and that we are losing merchantmen faster than we are building them. British improve their position near Bullecourt and capture enemy post south of Villers-Guislain. Austrian attack on Mt. Grappa defeated; a slight gain in the Orso salient; French batteries reported at work. General Allenby takes 140 prisoners and extends his line northeast of Jerusalem. The members of the Constituent Assembly are dispersed by the Bolshevists.

- Dec. 14. Germans attack British positions east of Ypres and gain 300 yards near D Polderhoek Château. French cruiser, *Chateaurenault*, torpedoed and sunk by submarine, with loss of 10 of her crew; submarine destroyed. Enemy gain Col Caprile, one of the defences of Valstagna.
- Dec. 15. Armistice for a month's truce from Dec. 17 concluded between Russia and Germany; peace negotiations begun. General Allenby advances on a five mile front northeast of Ludd to a depth of $1\frac{1}{2}$ miles. Desperate fighting on the Italian front. General Sarrail recalled from Salonika; he is succeeded by General Guillaumet.
- Dec. 16. Italians regain the positions lost on Col Caprile.
- Dec. 17. Dominion elections show a victory for the Union Government, the majority being estimated at 44. Bolshevists send an ultimatum to Ukraine demanding free passage of Bolshevist troops.
- Dec. 18. Aeroplane raid on London by six groups of raiders, of which 5 machines reach London; 10 killed 70 injured. One raider brought down. Austrians capture Monte Asolone and claim 2,000 prisoners. General Allenby occupies the high ground east of Abu Dis, two miles southeast of Jerusalem; 117 prisoners. Rostoff captured by Kaledin.
- Dec. 19. American submarines F_1 and F_3 collide; F_1 sunk with loss of 19 lives. Italians recapture part of Monte Asolone; fighting on the Piave. Ukrainians demand from the Bolshevists the recognition of the Ukranian Republic.
- Dec. 20. Lloyd George in the House of Commons states that owing to the collapse of Russia and the Italian defeat fresh demands will be made on the manpower of England. British cross the Nahr-el-Auja river and advance four miles along the Palestine coast. Germans capture an advanced post east of Messines.

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- Dec. 21. Italians retake the whole of Monte Asolone.
- Dec. 22. Air raid on Kent; one raider crosses coast but is forced to descend; crew captured, no casualties. Germans drive in British advanced posts a short distance on a front of 700 yards near the Ypres-Staden railway. H.M.S. Stephen Furness announced to have been sunk in the Irish Channel; 101 lives lost. Three British destroyers mined or torpedoed off the Dutch coast; 193 lives lost. Peace negotiations under presidency of Herr von Kühlmann opened at Brest-Litovsk.
- Dec. 23. Enemy renew their attacks in the Frenzela Valley taking Val Bella and Col del Rosso, west of Brenta; 9,000 prisoners claimed. Conscription defeated in Australia by about 175,000 votes. General Allenby makes further advances in Palestine.
- Dec. 24. Italians retake Monte Melago. British air squadron bombs Mannheim.
- Dec. 25. Enemy gain further successes on the Val Frenzela front and reach the village of Sasso. Enemy demand, in reply to Bolshevist proposals, that Russia's Allies will recognise and carry out "conditions binding all nations in the same manner if the suppositions of the Russian *exposé* are to be fulfilled". British forces pursue enemy across boundary of German East Africa; their patrols reach a point 40 miles south of Rovuma river.
- Dec. 26. Sir R. Wemyss succeeds Sir J. Jellicoe as First Sea Lord. Austrians make further advances. Eleven enemy aeroplanes brought down by British and Italian squadrons. German attacks on French lines at Caurières Wood, north of Verdun, repulsed. Attacks on British lines north of Jerusalem repulsed.

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Dec. 27. British advance north of Jerusalem to a depth of 2½ miles on a front of 9 miles. Germany's reply to Russian peace proposals published. Germans retreating before British forces into Mozambique capture Portuguese post on Mt. M'Kula.
 Pec. 29. General Allenby advances another three miles, taking Bireh, 9 miles north of

Dec. 29. General Allenby advances another three miles, taking Bireh, 9 miles north of Jerusalem, on the Shechem road; further advance on the Jericho road and northwest of Beth Horon. Padua bombed by Austrian airmen.

Dec. 30. Germans attack south of Cambrai and penetrate two small salients.

Dec. 31. British counter-attacks regain some of the lost positions near Cambrai.

The Western Front, 1917

(Continued from the February number)

E. L. DANIHER, B.A. University of Toronto Schools

Arras and Vimy Ridge.

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Ludendorff had hoped that his yielding in the centre would prevent the British army from coming to grips with his main forces and would com-

pletely disarrange any British offensive moves. But, even while the pursuit in the centre was being carried on, preparations were being made to attack the unyielding, pivotal positions on the wings of the retreating German armies, at Arras in the north and at the Aisne in the south. The Allies had by this time more than met the German devices in gas, liquid-fire, mortars, and artillery. They had accustomed the enemy to "hit-and-run" raids and then, having thus learned completely his dispositions, had developed the final raid into a "rush".

On April 9th, 1917, between Lens and Arras, the final bombardment came to an end. Before the sun set that Easter Monday the main part of Vimy Ridge was in the hands of the Canadians. The remaining north spur was carried that night. And so fell what the Germans considered an impregnable rampart! On two separate occasions French armies had come to grief here in 1915, and a British army in 1916. Vimy Ridge will live long in the annals of Canadian military history. The line was advanced two to three miles; 9,000 prisoners and hundreds of machine-guns fell to the victors, besides vast supplies taken in the subterranean caverns. To the north and to the south of the ridge other British forces pushed forward with scarcely less spectacular success.

Haig's generalship shows up well in this blow at Arras. Beyond the ridge a few miles was the uncompleted Drocourt-Queant 'switchline' in the Hindenburg system. Drocourt was defended by Lens—and Lens, in turn, by Vimy. It was absolutely essential, then, for Ludendorff to

hold Lens, and that in spite of the unfortunate position of his armies in the plain, dominated as it was by the British artillery on the newlycaptured higher ground. He was forced to try to off-set, at a tremendous cost in German life, the magnificent victory won by the Canadian and Scottish divisions. Haig had his own way in the matter. Under these favourable circumstances the battle went on. April 13th saw another lunge forward for a mile gain on a twelve-mile front, from Loos north of Lens to the Scarpe river east of Arras. In the massed defensive counter-attacks carried out by the enemy a terrible toll was exacted. Thousands of prisoners were taken and hundreds of guns, not counting machine-guns. A large portion of the one million of reserves was used up. Ludendorff could have evacuated much more territory with less loss. But he had not only failed to prepare the German people for a further retreat, but rather had led them to stake all on the "Hindenburg myth": and he now had to live up to the expectation he had fostered. Furthermore, the German people and leaders were depending on the submarine war, and Ludendorff probably thought the thousands of German lives were well-spent in holding the line just east of Arras.

Second Battle of the Aisne.

The left wing of the retreating German armies was based on an even stronger rampart. The heights north of the Aisne had held up the Allies

in 1914. These heights, extending from La Fère south to Soissons and eastward along the north bank of the Aisne, were thickly wooded, especially the region of St. Gobian. Caves and corridors in the limestone rock afforded ample protection for thousands of troops. The French must needs cross a 300-foot depression on their way.

General Nivelle, who had distinguished himself elsewhere, notably at Verdun, was in charge of the French armies. He seems to have entertained rather sanguine hopes for the new attack. It was designed to break the German lines in the south while Haig operated against them in the north. Success here would have broken the direct communication between the German forces and the Laon and Verdun sectors, and the French would then have been fighting along the chord of the arc instead of on the outside as at present. This high hope was instilled into the minds of the French troops; the orders spoke of it as "a decisive day in France's history."

Owing to the difficult terrain and the lack in heavy artillery the way could not be as thoroughly prepared as in the case of Vimy Ridge. The front covered in the operations extended from Soissons to Rheims—a distance of 25 miles. The French assault was beyond praise; in spite of terrific losses they pressed home the attack. The subterranean corri-

THE WESTERN FRONT, 1917

dors, that would have meant comparative safety in the face of a slower or less resolute foe, turned out to be traps for the occupants. The prisoners taken during the first three days numbered 17,000. But a powerfully organized counter-attack, directed against a vital point in the French centre, perceptibly slowed up the advance. In early May the battle flared up again; the Craonne plateau and the highroad, Chemin des Dames, were practically all taken by the French. By the middle of May the French offensive had virtually come to an end; the yielding German line was exacting, as in the later stages of the Arras battle, a toll of French lives out of proportion to the advantages gained. The French. temporarily exhausted by the great effort they had made, attempted no operations of first importance during the rest of the year. Such moves for position as there were will be dealt with in their place. One of these followed the Aisne battle-the effort to force the enemy out of the high ground to the north-east of Rheims whence that city was continually bombarded. After initial success this enterprise was allowed to lapse because there was not enough force left to drive the blow home.

Concerning the degree of success of the French operations on the Aisne quite distinct opinions have been expressed. Certainly it did not fulfil the exaggerated hopes current in the French army; measured by any other standard the success was very considerable indeed. But the disappointment and discontent led to another shuffle in French leadership, both in Paris and in the field. There have always been two schools of thought—those who have favoured sustained offensives with the idea of breaking through, and those who have advocated numerous local offensives carefully conceived and economically carried out, so as to avoid the heavy losses incident to the later stages of a prolonged struggle. The significance of the changes was chiefly that they indicated the definite adoption by France of the offensive-defensive method. Petain, understood to be a strong champion of this system, was appointed commander of the French armies after the Aisne battle in May.

Note—While these larger matters were engaging the attention of the world, very sanguinary conflicts were occurring along the new German line between Lens and Laon. Especially bitter were the struggles at Bullecourt and at St. Quentin. Both were crucial points in the enemy defence. Bullecourt protected Queant, a junction point for no fewer than three 'switch-lines' in the Hindenburg system.

The Australians fought here with fine spirit; at one time they were actually facing west, so mixed up had they become in the maze of trenches. The stubbornness of the fighting was due to the invisible nature of the new defence system. But they stuck to it, and finally carried the place in the latter part of May.

Because of the general policy of distinct offen-

Messines Ridge

sives now adopted, and because of the new problem of the elastic German defence, the logical thing for the British to do was to institute a drive at some new point where the old trench system was still in vogue. The danger to Ypres, its importance from a military point of view, and its bearing on the submarine war, made the salient south-east of Ypres the logical place in which to carry on the fight. Here the line bent west, threatening Ypres from the south. The strength of the salient lay in the Messines Ridge, an elevation of 250 feet, dominating all the surrounding country.

On this occasion the British superiority in the aerial branch was most decisive; 24 German machines were destroyed, and 23 were driven down out of control; the enemy was blinded. The seven days' intense bombardment ended on the morning of June 7th. The signal for the launching of the infantry attack was the discharge of 600 tons of explosive placed under the whole crest of the ridge. By special arrangement Lloyd George was advised of the time and was able to hear the explosion in London. The 3rd Bavarians, one of the choicest divisions of German infantry, was defending; the attack was delivered by English and Irish troops. The whole affair was a brilliant piece of work. At a single stroke nearly 7,000 prisoners fell into British hands; the threat against Ypres was dispelled; valuable ground overlooking main roads and railroads to the east was captured, a point of departure for new advances.

Third Battle of Ypres.

With the exception of Messines Ridge, June and July were comparatively quiet for the British. At the mouth of the Yser, near Nieuport, the Germans

had cleverly entrapped and captured 1,300 British troops, driving our forces back across the Yser. This was an effort to divert impending operations of the British farther south.

August, September, and October saw the main effort of the Allies being put forward in the Ypres salient. The capture of the Messines Ridge in June had really been the first move. At the beginning of August. after thorough artillery preparation, the wall of the salient was pushed out two miles over a front of 20 miles. In mid-August the Westhoek Ridge in the centre, directly east of Ypres, was cleared, and Langemarck, St. Julien and other historic ground retaken. Then came rumours of plans of the Germans to flood all the country beyond the ridge. Could such a thing be done further action on the part of the Allies in this direction would be rendered useless. A month's lull followed to enable them to get their bearings.

At the end of that time they seem to have been convinced of the correctness of their plans; the attack was resumed in mid-September. Hav-

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ing established a strong centre on the Westhoek Ridge they struck forward with the right and left wings in turn, and then moved up in the centre. The fighting in the centre for the Passchendaele Ridge was very stubborn. Canadian battalions are given a good deal of the credit for its final capture in October. A remarkable stroke of luck aided the British here. In raising their barrage for their infantry to advance, the British artillery unwittingly was showering with shrapnel five German divisions massed for a counter-attack that was scheduled one hour later. They wrought terrible execution and rendered impossible the offering of any organized opposition to the British advance.

The purpose of this effort of the British and French at Ypres is still in doubt. It is probable that it was not a determined effort either to threaten Lille on the south, or to free the Belgian littoral on the north. Rather, because of the Russian debacle and the consequent impossibility of forcing a decision in 1917, this was a struggle for position. The honours plainly rest with the Allies; the situation around Ypres is, for the spring of 1918, better than it has been for some time.

While the British were gradually carrying the fighting to the north-Arras, Messines, Ypres-the French were carrying it to the east-Aisne, Champagne, Verdun. At Verdun, the French "Ypres", attacks were made in August on both sides of the Meuse over a front of 11 miles. A few days later they progressed still farther on the east side, taking Regnéville and Samogneux. The French are now in a position at Verdun nearly as good as that possessed in the fall of 1914.

Cambrai.

Only one matter remains to be mentioned-the closing battle of the year at Cambrai, when the struggle returns to the centre where it had been in the spring. The explanation for such an effort is not far to seek. It is not at all likely that the British hoped to crumple up the whole German line. But there was one thing that they aimed at and attained-they so threatened the enemy that no more troops could be transferred to the Italian front to deal the knockout blow there.

There were two or three most remarkable features in this battle. First, it was a "raid" on a vast scale; there was practically no artillery preparation, the always-expected signal of serious efforts. It was a complete surprise; the Germans were caught literally asleep. Second, the "tanks" were used in larger numbers than ever before. The Germans could do nothing to stop the progress for some time; a wide deep bend was made in the line towards Cambrai, breaking through the Hindenburg line. Unfortunately, it was not long before the Germans counterattacked and recovered most of the ground they had lost.

Viewed as a whole, the year 1917 presents a very favourable balance for the Allies. Especially is this true when we remember the breaking of the Allied superiority somewhat by the defection of Russia, whereby a state of comparative equilibrium was established. With the accession of the strength of the United States in 1918 the scale will be again in our favour as much as it was in January, 1917.

Feeding the Army*

JAMES G. WORKMAN, B.A. University of Toronto Schools.

THE British soldier in the present European war is probably the best fed fighting man the world has ever known. His food is plentiful, varied, and chosen not only to suit the requirements laid down by dietetic experts but to meet his own peculiar tastes. Moreover, so observers tell us, Tommy never misses a meal. However the tide of battle may flow, whether he and his comrades are merely holding the line in rain-sodden trench or muddy shell crater, or charging the opposing line amid the scream of shell and rattle of machine gun, his commissariat is close at hand. The work of the British soldier in the present war may be strenuous to the last degree, but he is at least well fed.

It is estimated that the official daily ration of a British soldier costs forty-five cents. Meat, of course, constitutes one of the most important items on the menu. Thomas Atkins is not a vegetarian and must have his beef. The regular daily ration is one pound of fresh or frozen meat. In addition to this he is given four ounces of bacon, usually for breakfast. Bread constitutes another substantial part of his fare. Of this he receives daily one pound or ten ounces of biscuit or an equivalent ration made up of the two. On certain days of the week he gets a ration made up of meat and vegetables, cooked and canned, or of pork and beans. Minor items in the normal daily allowance are ten ounces of rice; two ounces of butter, which is served three times a week; three ounces of jam; fiveeighths of an ounce of tea or coffee; two ounces of cheese; two ounces of oatmeal three times a week; three ounces of sugar; one ounce of condensed milk; an ounce of pickles three times a week; two ounces of potatoes; eight of fresh vegetables, when obtainable, or two ounces of dried vegetables; salt, pepper, and mustard.

*The writer acknowledges his indebtedness to an article on this subject in a recent issue of the Saturday Evening Post.

FEEDING THE ARMY

Rum is issued at the discretion of the general officer commanding. Its issue depends upon various circumstances; in cold weather a small portion is given every day.

The ration just described is the regular issue. It is subject to infinite substitution as circumstances permit. Experience has shown that variety in diet is of immense importance in keeping the men physically fit. Consequently, changes in the menu are provided whenever possible. In permanent camps, the men are encouraged to raise their own vegetables, and in some places ambitious individuals have even been known to undertake the raising of pigs and rabbits with a view to supplementing their regular fare. F ish, too—much of it from Canada—is now finding its way to the front. The War Office has established a great chain of sausage factories, and the product of these now takes the place of the fresh meat one or two days in the week.

One other interesting item in connection with the food supplied to the men on active service should be noted. Great Britain's Army in France is possibly the strangest assemblage of fighters in point of race variety ever gathered under one flag. Men from all her dominions have gathered at her call. White, black, yellow, and brown men, Brahmin, Mohammedan, Chinaman, Kaffir, Egyptian, East Indian, West Indian, and South African, all are gathered at the imperial mess-table. John Bull believes that if these are to be efficient fighters their peculiar eccentricities of taste must be met and satisfied. It is reported that at one base supply depot, seventeen different diets are supplied.

In some cases religious or national customs have to be respected. Thus the East Indian troops will eat only goat and sheep meat and this only when the animal is killed according to certain very sacred rites. To satisfy this demand a huge goat and sheep farm has actually been organized and is conducted by native troops. Here Indian priests attend to the killing of the animals with the necessary oriental ceremony.

The Chinese require little meat, using instead a larger amount of bread and rice with certain oils as dessert. The Egyptian troops also use a diet largely vegetable. Thus the peculiar national tastes are pandered to with the result that one potent source of friction is removed and the great human war machine is kept running smoothly.

So much for the actual rations issued to the troops on active service. Now let us turn to the work of supplying this ration to the soldiers. When we remember that the individual ration described above has to be multiplied by some two or three millions, and that all this vast amount has to be transported over thousands of miles of water, it is possible to get some faint conception of the task involved in feeding an army.

Since all the supplies of the British Army reach France by water, the problem of shipping is an extremely important one. Six French ports

have been given over to the use of the British troops, three being devoted entirely to the Northern Army and three to the Southern army. These ports are known as base supply depots. Each port specializes in certain goods. Thus, one of the largest handles almost entirely forage, frozen meat, and flour. The economy of such an arrangement is obvious. Immense docks and sheds have been built and every conceivable device adopted to facilitate the unloading and storing of food stuffs and their reloading as required at the front. Railways have been built where necessary, or greatly enlarged where formerly inadequate to handle the immense traffic.

At each base supply depot huge field bakeries are installed. These are constantly in action, for bread is truly the soldier's staff of life. The average output of the largest field bakery is 220,000 two-pound loaves a day. These bakeries are manned by men who before the war were bakers. They are under expert supervision at all times. The flour that goes into them and the bread that comes out is subjected to rigid laboratory inspection. The bread our boys eat at the front is safeguarded by every means known to science.

From the base supply depot the supplies are carried by rail up-country to an advanced supply depot. Here the goods are loaded into squadrons of motor trucks, technically called the divisional supply column. These haul the supplies to still more advanced posts called refilling points. This marks the last stage in mechanical transport. As the firing lines are approached the roads become more nearly impassable and the horse and the mule are called into action. Henceforth, and up to the time the food is delivered to the troops in action, it is conveyed by the divisional train, which is horse transport. A divisional train consists of 455 men, 375 animals, and 198 wagons.

When the food finally reaches the unit for which it is intended it is unloaded from the wagons and taken in charge by the battalion quartermaster who divides it into five parts, one for headquarters, and one for each of the four companies. In the company the quartermaster-sergeant puts it up in sacks and gives it to carrying parties who convey it to the trenches.

The manner of cooking depends on the nature of the operations being carried out by the unit. Sometimes the food is cooked behind the line and carried up at night in large food containers. At other times it is cooked in the communication trenches or even in the front trench itself.

Just a word in conclusion with regard to the personnel of the troops known as the Army Service Corps who are responsible for distribution of these all-important supplies. Their work may be less spectacular than that of the fighting troops, but it is quite as essential to victory. Nor is it without its peculiar dangers. Nothing gives the German gunner

keener delight than to plant a high explosive shell in the midst of a wellladen supply column.

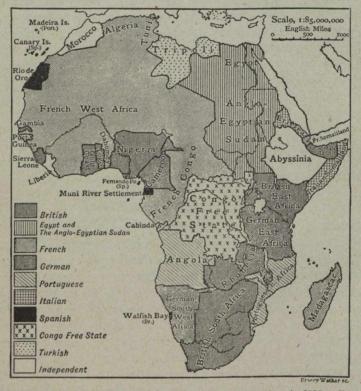
In the Army Service Corps there is endless opportunity to place men at tasks where their civilian training may be turned to account. The butchers, bakers, clerks, blacksmiths, bookkeepers, railroad operators, chauffeurs, etc., all find congenial employment. The officers in a great many cases are men who were formerly leading figures in the business and industrial world; their employment undoubtedly saves the Government vast sums every day. Every single step in the progress of supplies from the buying point to the front line trenches is checked and counterchecked. The British Government is determined that after this war there shall be no unsavoury scandals unearthed regarding the purchase and distribution of supplies such as have marked the close of every previous war of any magnitude fought by Great Britain.

The War in German East Africa

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

N the issues of THE SCHOOL for February and March, 1917, the story of the war in East Africa was carried up to the beginning of Januaryof last year. The British forces in their drive southward parallel to the sea coast had just crossed the Rufigi river and established themselves on the southern bank. By a reference to these issues it will be seen that the plan of the British commander-in-chief. General Smuts, was to drive the enemy from the north and west of the colony towards the south-east and there force him to surrender or to cross into Portuguese territory where he could be rounded up. For this purpose General Smuts despatched Van Deventer, his old companion in German South West Africa, through the centre of the colony from Mount Kilimaniaro to the Central Railway which he cleared up from Kilimatinde to Kilossa between July 3rd and August 22nd, 1916. Van Deventer then continued his march southward through Iringa and onward towards Mahenge. Meanwhile two other lines of attack were developing farther west, one from the north-west by the Belgians under General Tombeur who was supported in the drive by the British general, Crewe. advancing southward from Muanza on Lake Victoria; and the other from the southwest through Rhodesia under General Northey. The expedition from the north-west, supported also by a British force from Ujiji along the railway, captured Tabora early in September, 1916, and cleared the surrounding district. This was an important stroke, as Tabora had been the capita

of the natives long before the European nations reached Africa and was the chief recruiting centre amongst the natives for the German army. While Generals Van Deventer, Tombeur and Northey had thus been driving the enemy from the north and west. General Smuts himself was clearing the northern railway line to the coast and then in conjunction with the fleet advanced southward, crossing the Central Railway on August 26th, only four days after Van Deventer reached Kilossa; and when Dar-es-Salaam was taken by the fleet on September 4th, the whole



Map of Africa, showing possessions of the different European nations in 1910. Tripoli now belongs to Italy, Morocco is a French protectorate, Cameroon now extends much further south.

From Encyclopedia Britannica.

railway was cleared of the enemy from Ujiji on Lake Tanganyika to the sea. Between the railway and the Rufigi river there was stubborn resistance to the British advance through the region of the Uluguru hills, but this was overcome during the autumn of 1916, and the British forces crossed the Rufigi early in January, 1917. The enemy was now practically surrounded in a malarial district around Mahenge and Mponda, but was still putting up a vigorous though futile resistance. General Von Lettow-Vorbeck, the German commander, has been admired for his determined efforts long after his cause was lost.

THE WAR IN GERMAN EAST AFRICA

Toward the close of the year, 1916, General Smuts, owing to the malarial nature of the district in which the fighting was now taking place sent back to South Africa about 12,000 white troops, relying on natives, chiefly the King's African Rifles, under British commanders, to complete the campaign. In January, 1917, the situation south and east of the Rufigi had sufficiently cleared for General Smuts to hand over the command to Major General Hoskins and leave for Europe to represent the Union of South Africa at the Imperial conference.

Deprived of their railways, their ports, and all of their principal settlements and penned in an unhealthy and valueless corner of their land, the enemy's sole aim was to delay as long as possible their final and formal surrender. In this they were notably successful.

In May the command was handed over to General Van Deventer and in June another British force landed at Lindi, the most southern port of the colony, and joined the ring around the enemy. Already part of the enemy's force had crossed the Portuguese border, and had been driven back by Portuguese and British troops in co-operation. It remained for Van Deventer to clear up this last corner of the colony, and late in November of last year he reported that reconnaissances had established the fact that German East Africa was completely cleared of the enemy. Only a small German force now remained in being, and this had taken refuge in Portuguese territory where measures were being taken to deal with it.

With the loss of German East Africa the German Empire is deprived of the last, the largest and the most valuable of its overseas possessions. Its 384,000 square miles of territory made up more than one-third of the total extent of the German foreign possessions. It contained threefifths of the white and one-half the black population of the German colonies. Its potential wealth is estimated in billions.

The sinews of war had been furnished in the majn by the Union of South Africa, which maintained a steady flow of reinforcements for its two divisions in the field, besides providing a vast amount of coloured labour and thousands of horses, motors, and ox and mule waggons. But it is well to note also that in his last despatch General Smuts expressed his indebtedness to the Government of India for keeping up a flow of reinforcements, remounts, tentage, clothing and miscellaneous articles, besides the entire food supply for the Indian troops and of flour and canteen stores for the British. These facts lend force to the right of Britain's overseas dominions to a part in the peace negotiations and especially in regard to the disposal of Germany's colonies. General Smuts speaking in January of this year before the Royal Geographical Society is reported as follows: "I do not want to speak of the disposal of German East Africa after the war, but the law of self-preservation

must apply to that country where Prussian militarism must never be allowed to take hold. The East African campaign may be found to be a most important factor in developing the future and permanent peace of the world."

A summary of Germany's lost colonies, with their areas and dates of capture.—From the London Tablet.

August 25th, 1914-Togoland, 33,700 square miles.

August 29th, 1914-Samoa, 1,000 square miles.

Sept. 11th, 1914-Bismark Islands, 22,640 square miles.

Sept. 24th, 1914-New Guinea, 70,000 square miles.

Nov. 9th, 1914-Kiaochow (China), 200 square miles.

July 9th. 1915-S. W. Africa, 322,450 square miles.

Feb. 18th, 1916-Kamerun, 191,130 square miles.

Dec. 1st, 1917—East Africa, 384,180 square miles.

Nature Study for Third Book Grades

PROFESSOR G. A. CORNISH, B.A. Faculty of Education, University of Toronto

This outline in Nature Study for third forms completes the course for the Public Schools. It follows the same lines as the preceding outlines.

September

(1) 2nd week: Sunflower (Comstock 631-635).

(2) 3rd week: Milkweed (Comstock 540-544).

(3) 4th week: Thistle (Comstock 563-565).

October

(4) 1st week: Dandelion (Comstock 572-575; SCHOOL, Sept./14).

(5) 2nd week: Burdock (Comstock 566-569).

(6) 3rd week: Bumble-bee (Comstock 442-444; SCHOOL, Sept./14).

(7) 4th week: Chipmunk (Comstock 240-242).

November

(8) 1st week: Dew (SCHOOL, Oct./17).

(9) 2nd week: Rain.

(10) 3rd week: How weeds spread (Comstock 594-595).

(11) 4th week: How weeds are eradicated (Comstock 594-595).

December

(12) 1st week: Injury done by weeds (Comstock 594-595).

- (13) 2nd week: Geese and ducks (Comstock 136-142).
- (14) 3rd week: Chick-a-dee (Comstock 66-68).

NATURE STUDY FOR THIRD BOOK GRADES

January

(15) 2nd week: Muskrat (Comstock 218-223).

(16) 3rd week: Winds.

(17) 4th week: Snow and ice.

February

- (18) 1st week: Properties of solids.
- (19) 2nd week: Properties of liquids (G. and S. 27-32, 37-40).
- (21) 4th week:

March

Properties of gases (G. and S. 41-54).

(22) 1st week:

- (23) 2nd week: Study of granite as the basis of soil (Comstock 829-834).
- (24) 3rd week: Making of soil (SCHOOL, Oct. & Nov. 1915).
- (25) 4th week: Constituents of soil (SCHOOL, Oct. & Nov. 1915).

April

(26) 2nd week: Kinds of soil (SCHOOL, Oct. & Nov. 1915).

- (27) 3rd week: Draining of soil (SCHOOL, Oct. & Nov. 1915).
- (28) 4th week: Use of a flower (Comstock 493-494).

May

- (29) 1st week: Flicker (SCHOOL, Jan. 1914; Comstock 77-79).
- (30) 2nd week: Goldfinch (Comstock 49-53).
- (31) 3rd week: Currant bush.
- (32) 4th week: Raspberry plant.

June

(33) 1st week: Bat (Comstock 243-246).

(34) 2nd week: Plant louse or Aphid (Comstock 392-394).

(35) 3rd week: Ant (Comstock 419-424).

Topics in the Course of Study and lessons dealing with each topic.

1. Birds and insects, especially in their relation to agriculture: Lessons 6, 14, 15, 29, 30, 34, 35.

2. The farm and wild animals of the locality: Lessons 7, 13, 33.

3. Garden work and studies in experimental plots in relation to home and farm work.

4. The study of common plants, trees, and fruits: Lessons 1, 28, 31, 32.

5. The study of weeds and their eradication: Lessons 2, 3, 4, 5, 10, 11, 12.

6. Observation of natural phenomena: simple experiments to show the nature of solids, liquids and gases: Lessons 8, 9, 16, 17, 18, 19, 20, 21, 22.

7. Soil studies and experiments: Lessons 23, 24, 25, 26, 27.

Gazetteer of the War

HUGH B. KILGOUR, B.A. University of Toronto Schools

Lens.—About 100 miles north of Paris; 9 miles northeast of Arras. Has been one of the northern battle line points in France. In the fall of 1917 the Canadians had some very heavy fighting on the various hills around Lens. Population, 25,000. Strongly fortified. In a locality of rich coal fields. Famous for its sugar refineries. Historic interest hangs about the city; Marlborough's army moved through the district on a forced march that is famous in military history—1711.

Lille.—155 miles northeast of Paris, 26 miles north, northeast of Arras. Another of the battle line points. A fortress of the first class. One of the strategic points of the German drive in 1914 and a pivotal point on which the northern battle line has swung almost continuously. Population 250,000. A city of great beauty. A famous public square has long been one of the tourists' points of interest. A university enrolling about the same number as the University of Toronto, a Palais des Beaux Arts, a Pasteur Institute, a library of 100,000 volumes, a museum, make it a city of distinction. The city is noted for its textile industry.

Passchendaele Ridge.—In Belgium, 6 miles northeast of Ypres, between Roulers and Courtrai. The Canadians captured the ridge early in 1918 and in February held about 8 miles of the crest. Its great strategic importance lies in the fact that it commands a wide plain in Flanders. If the Germans held this position during the winter they could so strongly entrench themselves that great delay and loss of life would be sustained before they could be forced out when the spring drive opens. Long range howitzers placed on this ridge can sweep the country with telling accuracy.

Cambrai.—About 80 miles northeast of Paris, 52 miles south of Lille on the Scheldt river. Famed for its "cambrics"—fine linen fabrics. Population 25,000. Boasts a great antiquity: on the ancient Roman line of march, stormed and taken by Wellington in 1815. Valuable as a 'point' for locating the western front line.

St. Quentin.—On the Somme river 30 miles northwest of Laon, about 75 miles northeast of Paris. Population 4,000. Manufactures woollen and cotton stuffsl Famous for its "Hotel de Ville" in mediaeval architecture and a 12th century church famous for its richly decorated interior. Known in military terms as a pivotal point because its position commands the control of important roads and water ways.

(To be continued).

The February Competition in Art

THE committee regrets that it has been impossible to reproduce this month more than one of the prize-winning drawings. The beauty of this illustration would have been enhanced if the colour scheme could also have been reproduced. This consisted of a contrasted harmony of blue and white, the white being used for the ornament.

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THE FEBRUARY COMPETITION IN ART

The judges have expressed great satisfaction with the high average attained in all of the divisions of this competition. In the Public and Separate School competitions the increase in the number of competitors and the high standard of the work they submitted are gratifying indications of the interest taken in the new requirement uniting *constructive* with decorative design.

In a few of the drawings submitted in competition A, there were some indications which pointed to a disregard of the condition "to be done without the teacher's direction". The perspective shown in the drawings seemed to indicate a greater knowledge of the subject than could be expected of pupils of this age. The conditions of the competition should be strictly carried out.

On the drawings of candidates in the Lower School division the judges offer the following criticisms:

(1) On some otherwise very good drawings the student's name was by far the most prominent feature in size and tone and decorative line.

(2) Other drawings were marred by a heavy, black, ruled table line—often too high.

(3) In some there was a lack of perspective agreement between the top and bottom curves of the flower pot.

(4) In others the drawings lacked in life and perspective through an absence of good contrasts in light and shade.

(5) A number of drawings had cast shadows inconsistently developed to the right when the light was undoubtedly falling upon the front of the object. In this connection a careful study of Mr. Bicknell's article on *Shadows* in the February number of THE SCHOOL is recommended.

Some of the drawings submitted in the Middle School competition exhibited the following defects:

(1) If the design and decoration of the object (teapot) is developed in the *flat*, every part should be kept flat. This was not always done.

(2) If an art rendering of the object (teapot) is attempted, the decoration on it should also be in perspective. Some drawings omitted the foreshortening of receding decorative borders.

(3) The term "contrasted harmony" was not understood. Teachers and students are referred to Cross on *Colour*, page 32.

A. Forms I and II.

First Prize-Maida Griffith, Dufferin Public School, Owen Sound. Teacher, Miss Dobie.

Second Prize-Freda Henderson, King George School, Moose Jaw, Sask. Teacher, Miss E. M. Colling.

Third Prize—Archie Gardner, Ryerson Public School, Owen Sound. Teacher, Miss Helen M. Shaw.

Honourable Mention for Merit-Jack Ferguson, Virgin McLogan, Hubert Carroll, Joe Morin, Pauline Graham, Ione O'Connor, E. Hackney, Alfred Cox, Anna Von Senten, James Pape, Loretto Academy, Toronto. Irene Wettlaufer, Katherine Kernahan, Helena Ferris, Mary Kernahan, Catherine Desroches, Rose Hayes, Cecile Sourcy, Margaret Gillies, Anna Simpson, St. Joseph's Academy, Toronto. Lillian Guy, Ruth Cooper, Marie Allward, Dorothy Cooper, Evelyn Cross, King George School, Moose Jaw. Mildred Stephens, Constance Price, Alec Kinwiski, Janet Ironside, James Forrest, King Edward School, Moose Jaw. Ralph Law, Mollie McAlister, Lilian Presswood, Prince Arthur School, Moose Jaw. Ortley Swenson, Edith Romans, Gerald Van Kolken, Fred Reid, Minnie Moore, Jean Munro, Alexandra School, Moose Jaw. Mabel Roleston, Blanche Warner, Myron Martin, Norah Warner, Leslie Pragnell, Alex Dedyluk, Victoria School, Moose Jaw. Etta Porteous, Jennie Parks, Katie Robertson, Ethyl Bowerman, Aileen Brownie, Lucille Green, George Cooke, Constance Sivil, Harvey McCallum, Helen Horning, Jack Thomson, Gladys Fraser, George Finickham, Helen McPhee, Helen Merritt, Ryerson Public School, Owen Sound. Muriel Wanoo, Mary Dicaire, Public School, Martintown. D. McNabb, F. Moore, A. Gardiner, H. Owens, H. Middlebro, L. Cooper, Melfort Anderson, Hazel Welsh, Donalda Graham, Morrison Reid, Arthur Davidson, Percy Underwood, Cecil Biggar, Adda Morrow, Alice Jame, Doris Whitton, Laura Ravin, George Thomson, Evelyn Lee, Nelson Pickell, Robert Miller, Evelyn Young, Douglas Urquhart, Pearl Smith, Bob Miller, Carlyle Brown, Orval Van Wyck, Rosemary Pratt, Murray Wilkinson, Ilene McGlenning, Dufferin Public School, Owen Sound.

B. Forms III and IV.

First Prize-Neil Campbell, Ryerson Public School, Owen Sound. Teacher, W. Douglas.

Second Prize—Etta Flanagan, Dufferin Public School, Owen Sound. Teacher, J. Shaw.

Third Prize—Lilian Marchant, Perth Ave. Public School, Toronto. Teacher, Edward H. Thomas.

Honourable Mention for Merit-Marie Rellinger, Helen Manley, Emelda Fraser, Dick Baigent, Loretto Academy, Toronto. Curtis Cross, Inez Siddall, Ivy Failes, Fred Finch. H. Glen, Vern Hanham, Public School, Port Colborne. F. Thomson, A. Goldsmith, K. Nelson, H. Horton, Harold King, Donald Patterson, Myrtle Anderson, M. Cooke, Eileen Carson, Fred Batten, Ottolee Rolston, Olive English, Wilkie Newton, Marion Peel, Loretta Crecine, May Herbert, Marie Christie, N. McKay, U. Ramsay, Pearl Carson, Ivy Hunt, A. Cooke, Ryerson Public School, Owen Sound. Robert Sutherland, King George School; Eva House, Victoria School; Mae Davies, Geo. Wendels, Dorothy Antritter, Alexandra School; Jack Gibbons, Jean Motta, Warren Williams, Empire School, Moose Jaw, Sask. Cecilia Beechy, Bertha Goetz, Separate School, Mildmay. May Wright, Fred Hamlin, Wesley Balmer, Cyril Sollitt, James Wilson, Charles Copeland, Herbert Taylor, Perth Ave. School, Toronto. Rae Cuthbertson, Nellie Grayson, Wildred Reid, Kathleen Quigley, Mary Hawes, Laura Sewell, Sam Ciglen, Public School, Meaford. Jack Tizzard, Alan Garvie, Lilly Barton, George Robertson, Vera Miller, Wilfred Ogg, Islay Brown, Margaret Brown, Mina McCuaig, Harry Barnard, Ronald Smith, Mary Innes, Beatrice Trotter, Reta Hayward, E. Hawke, Melville Frost, Annie Beattie, Frances Brown, Gladys Best, Barrett Wilcox, Jean McMillan, Beth Scott, Donald Robertson, Georgina Gray, Annie Pickell, Edward Brough, Eleanor Paterson, Madeline McMeekin, Elmer Green, Frances McEachern, Rhoda McFarlane, Reggie Hart, Bert Little, H. Manning, Dufferin Public School, Owen Sound. Constance

THE FEBRUARY COMPETITION IN ART

Clinton, Annie McDermot, Vera Hayes, Vera Goodwin, Marjorie Bigley, Agnes Nelligan, Enid Anderson, Winifred Nolan, Ursula Cross, Matilda Brace, Vera Hinchey, Edith Melody, Edna Havers, Grace Languay, Lillian O'Reilly, Helen Greene, Clara Besser, Kathleen Hares, Cathedral School, Hamilton.

C. Lower School.

First Prize-Sam Kamin, Jarvis Collegiate Institute, Toronto. Teacher, A. E. Allin, M.A.

Second Prize-Marguerite Kane, Collegiate Institute, St. Catharines. Teacher, Miss Eva F. MacKenzie.

Third Prize-Jean Thomson, Collegiate Institute, Moose Jaw, Sask. Teacher, Miss W. Hayward.



D. Middle School-WILLIAM MILNE

Honourable Mention for Merit—Ernest Anderson, Austin Grandy, Omemee High School. Wilma Wilson, High School, Coldwater. Edna Honsberger, Ivan R. Lee, Collegiate Institute, St. Catharines. B. Coffey, Clara Moore, Margery English, St. Joseph's College, Toronto. Annie McDougall, Helen Best, Jeanett Taylor, Ruth Brett; Collegiate Institute, Strathroy. Pauline Brown, Fred Hall, Oliver Austin, Robert Rowe, Jarvis Collegiate Institute, Toronto. Molly Brannen, High School, Streetsville. Emma Camps, Continuation School, Winona. Hilda Chapman, Anna Woods, Gertrude Flanagan, Hanna Dwyer, Louise Mulhall, Helen Quirk, Lillian O'Brien, Marie Keating, Margaret Flanagan, Loretto Convent, Stratford. H. Ross, Margaret Sutherland, M. Hall, Guida Burton, E. Watson, R. S. Walker, E. Carruthers, Collegiate Institute, Barrie. Florence Lawrence, Melvin Moyer, High School, Durham. Marie West, Irene, Spence, High School, Port Perry. T. A. Sweet, M. Puttick, G. Inglis, J. Stewart, M. Strachan, R. Trebilock, F. B. Davis, G. Webber, N. Woodruff, K. Trebilock, Ina Guyatt, Collegiate Institute, Hamilton. May Kearns, Teresa Howell, Helen O'Leary, Evelyn Fitzgerald, Reta Regan, Kathleen Burns, Alexandra Gilmore, Eileen Dunnigan, Elsa Kastner, Irene Robson, Loretto Day School, Toronto. Helen Osbaldeston, Kathleen Byrne, Ella Campbell, Kathleen Callaghan, Viola Broad, Beatrice Brick, Cathedral School, Hamilton.

D. Middle School.

Special Prize—William Milne, High School, Durham. Teacher, Miss Julia M. Weir, B.A.

First Prize-Blossom Patton, Collegiate Institute, Hamilton. Teacher, Geo. L. Johnston, B.A.

Second Prize-Muriel Nelson, Collegiate Institute, Barrie. Teacher, Miss I. K. Cowan, B.A.

Third Prize-Mary O'Leary, Loretto Convent, Stratford. Teacher, Sister Theodosia.

Honourable Mention for Merit—Helen Gayman, Collegiate Institute, St. Catharines. Katharine Kemp, Bertha Carbert, Anna Halpin, Eugenia Ducharme, Mary Gaunt, Nellie De Courcey, Mary Walsh, Loretto Convent, Stratford. Blanche Carruthers, Margaret McCuaig, Byne Ball, Myrtle Dunnett, Gladys Hickling, Collegiate Institute, Barrie. R. Ballentine, Myrtle Anderson, K. Lawson, Queen Meinke, Collegiate Institute, Hamilton. Euena Taylor, Loretto Day School, Toronto.

Because of war conditions, in so far as they have affected business and transportation in the United States, the prizes for the High School competitions have not yet arrived from Chicago. As soon as they are received, they will be forwarded; but prize winners are asked to have patience for a little while longer, perhaps for some weeks. This delay is regrettable but unavoidable. Everything possible will be done to hurry the prizes along. Those for the Public School competitions were sent out to the teachers concerned on February 15th.

Is Money-making the Purpose of Education for Farmers?

ANDREW STEVENSON, B.A. Normal School, London

A CONFERENCE was held in London Normal School recently with the laudable purpose of showing young teachers how rural education can be made more effective. The speakers were an editor of a farm journal, three officials of the Department of Agriculture, and the Normal School Masters and students. In general the discussion was of a

PURPOSE OF EDUCATION FOR FARMERS

high tone. But a lower note was struck when the causes of the depopulation of the rural districts came under consideration. One prominent speaker was understood to assert that the only way to induce young men and young women to remain on the farm is to show them how to make as much money there as they could make in the city.

Statements of this nature are not exceptional. They are too often made in rural conferences and in the columns of agricultural journals. Nevertheless, they convey a false and most pernicious doctrine. Unintentionally, but none the less really, the doctrine teaches that farmers as a class are among the lowest and meanest of mankind, actuated by only the basest and most selfish motives. It is true that selfishness does manifest itself in some farmers, as, for instance, those who take advantage of the present scarcity of fuel to demand from twenty-five to forty dollars for a cord of wood. But, as a class, farmers are quite as unselfish as any other class, and it is strange to have them represented otherwise, even unintentionally, by persons who speak and write as their counsellors and friends.

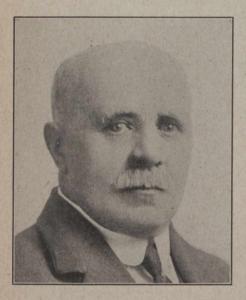
Now, in spite of many assertions to the contrary, money-making is not the chief end of living to farmers or to any other class in a civilized country. To say that it is is a slander on mankind. Is it a desire to make money that has taken our men and women of all classes to the fighting lines, whether serving in the trenches or as supply men, doctors and nurses? A much better way to make money is to stay at home and play the part of a profiteer on the farm or in the city.

And take the commoner occupations under common conditions. Wouldn't it be ridiculous to say that the only way to induce young men and young women to enter the professions of teaching or preaching or nursing or doctoring would be to show them how they could make as much money there as in any other occupation? Bankers and brokers, lawyers and promoters, merchants and manufacturers, politicians and pill makers, lumbermen and miners—all these may expect to become millionaires, even multi-millionaires, and perhaps lose their immortal souls in the process! But who ever heard of a man becoming a millionaire by teaching or preaching! Teachers and preachers and doctors and nurses have something better to do than to make money. They don't march with the procession of money-makers because they hear a different drum—a drum that plays some other tune than merely that of moneymaking.

No; there are other and better ways of making farm life attractive than merely by showing it to be a means of making money in abundance. If nature study and poetry, elementary science, hygiene and geography, history and civics—if these subjects are not presented by rural teachers in such a way as to add immeasurably to the interest and attractiveness

of farm life for these pupils and for their parents, without specially appealing to material gain, then the full potentialities of these subjects are certainly not being developed as they should be. The way to remedy this evil is to awaken the rural teacher to an active sense of the duties and responsibilities of her position, not to set up a golden calf for the children and their parents to worship.

Leading Western Educationists I.



T has been a fortunate thing for Western Canada that such a large number of her teachers have come in contact with Dr. McIntyre. For thirty years he has been Principal of the Provincial Normal School at Winnipeg where thousands of teachers have been under his care. Each year large classes go out carrying the inspiration, the ideals of the man, and through these teachers his influence has been imparted to many thousands of boys and girls. Truly, he has had a large part to play and one of grave responsibility. In all his work Dr. McIntvre has always stood for -

the highest ideals of the teaching profession, looking at it in its truer and wider phase of public service.

Dr. McIntyre was born at Balderson, about 6 miles from Perth, County of Lanark, Ontario, in 1861. Early in life the lure of the West attracted him and he came to Manitoba in 1880. Joining the staff of the High School in Winnipeg, he soon made evident his ability, earnestness and general power to manage and influence young people. So when Dr. Goggin left the Normal School in 1888, it seemed quite natural that Dr. (then Mr.) McIntyre should succeed him. He has held this office ever since.

His activities, however, have not been confined to the Provincial Normal School. For about thirty years he has been a member of the Manitoba University Council and of the Board of Studies. In these

PUNISHMENT

capacities he has been a powerful factor in the development of that institution, standing for expansion and the wider usefulness of the University.

Of course, he has always been a prominent figure at Teachers' Conventions, local, Provincial and Dominion. His wide experience, his sanity, and, above all, the contagious enthusiasm of the man, made him a central figure. Some of the more conservative may at times have criticized him and thought he had "fads", but his "fads", like those of Professor Dewey of Columbia, became their own ideas later on.

Dr. McIntyre is an excellent platform speaker, with a magnetic personality, a clear voice and a quiet, decisive manner that always gives assurance to what he says. Whilst he may not have a "Niagara of words", he is never at a loss in elucidating in clearest language the more complex problems of modern education in their wider phases as well as in their special pedagogical bearing. He is, therefore, in great demand at public functions generally, and is one of the best known public men of the West.

Dr. McIntyre obtained his B.A. and M.A. degree from the University of Manitoba, and McMaster University conferred on him the degree of LL.D. For many years he has been managing editor of the *Western School Journal* to whose columns he contributes constantly. He has also found time to write and to edit many textbooks—all in a thorough and capable manner. Though he accomplishes an astonishing amount of work he seems always to have plenty of leisure, is a very entertaining conversationalist, and a man such as one delights in having as a friend.

E. K. MARSHALL.

Punishment

P. F. MUNRO, M.A., B.PAED. Riverdale Collegiate Institute, Toronto

HAT is punishment? Speaking generally, punishment is an evil or pain, or inconvenience consequent upon a crime or misdemeanour. It is devised and inflicted, so far as human laws are concerned, in consequence of disobedience or misbehaviour on the part of those to regulate whose conduct such laws are made from time to time.

The meanings and applications of terms vary. If an illegal act is committed against the best interests of society we use the term crime or offence; but if against, say, the regulations or rules of the Department

of Education or of a school or a club, we are content to describe such a breach as an offence, a misdemeanor, or a violation. In each such case a penalty or punishment is attached, and is supposed to be inflicted.

On entering the moral world, where a standard set of rules governing social relations and conduct in general is in vogue, we term a breach of the laws anything from impropriety to sin, running through such a series as offence, violation, transgression, error, moral blunder, moral ineptitude. Here let it be noted that many moral offences are not recognized by law as crimes, and hence no punishment attaches. This is a weakness in our legal system and explains the oft-heard rebuke of a judge to a culprit: "The law has no hold on you; but morally you are guilty". However, this is an age-old problem. Where and when should the State take control of moral issues and by statute help men and women to walk the straight path of rectitude? The case of prohibition is a case in point. What should the law be? What should the punishment be for violation of the law? How far does such interference by the state conflict with. or curtail the rights of, the individual? To-day modern psychology (which indeed was scouted in 1895, say, by some outstanding philosophers of the "speculative idealism" school) maintains that a man's moral "will" is a result of his training, not his training the result of his "will". The sum or summation of his tendencies constitutes his "will." Now. in his training, environment counts for much. Hence anything that betters his environment will obviously mould and determine his "will" for good or for ill. Prohibition of the liquor traffic is considered one of such agencies, as it surely improves the environmental factors of a man's conditions of living. Collective public sentiment, assuming the truth of such reasoning, has expressed itself practically by abolition of the bar. Provincial and Dominion-wide prohibition. Some people, it is true, still claim (and declaim, too) that prohibition is an interference with individual liberty. Such restrictions are a hardship, they say. Indeed, to those who wish still to have access to the 'still' or vats of Bacchus. whether as makers or takers, probibition is, perhaps, a real punishment.

Furthermore, in a colloquial sense we speak of punishment as mere bodily pain without reference to violation of law. For instance, in a pugilistic encounter or in a rugby, hockey or lacrosse game, we call the pain inflicted by one man on another punishment. "He took his *punishment* and came back smiling for more" is a common statement found in the sporting page.

Why do we punish? The answer to this involves the question of "theories of punishment". Historically, we have three theories: 1. The reformatory (or educative). 2. The retributive. 3. The preventive (or deterrent).

PUNISHMENT

According to the first view, the aim of punishment is to educate or reform the offender himself. This is the present-day view as seen in prison reform carried on by the Ontario Government, and the Juvenile Court experiments. "Better to have a fence at the top of the cliff than a hospital at the bottom". This idea might have been applied to the present world-war; but things are otherwise.

By the retributive we aim at allowing a man's deed to return upon his own head, i.e., to make it appear that the evil consequences of his act are not merely evils to other members of society, but evils in which he himself, as a member of that society, is involved. There is danger here of permitting or at least encouraging the unchristian passion of revenge, of which Milton says:

> "Revenge, though sweet at first, Bitter ere long Back on itself recoils".

However, retribution inflicted by an impartial (if human nature may be impartial) court of justice need not involve this feeling.

According to the preventive theory, we endeavour to deter others from committing similar offences. Whether it wholly achieves this object is still debatable, as witness the arguments *pro* and *con* on capital punishment. "You are not punished for stealing sheep, but to prevent sheep from being stolen" was wont to be the dictum of the judge, and this expresses the essence of this kind of punishment.

It is apparent to anyone who gives the matter some thought that in every infliction of punishment there is a part played by each of the three kinds. An act is a crime when it offends against the strong and definite collective sentiments of society. It is a crime because it offends; it does not offend because it is a crime. On such a basis it is arrant nonsense to make hair-splitting, subtle distinctions between the reformatory, the retributive, and the preventive views of the reaction which is termed punishment. If a robber attacks me at night in the street and I knock him down in self-defence, what's the use of asking whether my action is meant to cure him of his insolence, to punish him for attempted robbery, or to prevent him from attacking me again. All three aspects are involved. This view gives unity to those aspects. Punishment equals the recoil of guilt upon the offender.

We shall next consider punishment as applied to the family and the school.

"Ma," said a discouraged little urchin, "I ain't going to school any more."

"Why, dear?" tenderly inquired his mother.

[&]quot;'Cause 'taint' no use. I can never learn to spell. The teacher keeps changing words on me all the time."—Occident.

Recent Educational Books

(The books listed here have been received from the publishers during the past

month. Reviews of most of them will appear in forthcoming issues.) History of The Pilgrims, by May E. Francis. 30 pages. Price 10 cents. Correll-Francis Company, Waverly Iowa. This is a charming little story of the struggles and the hardships of the Puritans who came to America in the Mayflower. Though intended

the hardships of the Puritans who came to America in the Mayhouer. I hough intended primarily for children of the United States, it will, if placed in the school library, be of considerable interest to Canadian pupils of Third and Fourth Book Classes. *Contest Arithmetic*, by Floe E. Correll and May E. Francis. Correll-Francis Com-pany, Waverly, Iowa. 71 pages. Price 25 cents. Based on children's love for com-petitions, this book is prepared to furnish drills, exercises, and problems for supplementary work, for reviews, for tests, for examinations. The answers are given. The work covered is from the four simple rules to percentage and square root. The problems are all practical and the appeal throughout is to preparation for life and to the spirit of contest.

Numerical Trigonometry, by N. J. Chignell. 126 pages. Price 60 cents, postpaid. Oxford University Press, Toronto.

Commercial Geography of the British Empire, by McDougall. 64 pages. Price 20 cents, postpaid. Oxford University Press, Toronto. Text-book of Botany, by Allen & Giebert. 459 pages. D. C. Heath & Co., New York. Science for Beginners, by Delos Fall. 382 pages. World Book Co., Yonkers-on-Hudson, N.Y.

Exercise and Review Book in Biology, by Blaisdell. 152 pages. World Book Co., Yonkers-on-Hudson, N.Y.

Primary Language Stories, by A. G. Deming. 49 cards. 30-page manual for teachers. Price 36 cents. Beckley-Cardy Co., Chicago.

The Brown Mouse, by Herbert Quick. 310 pages. Price \$1.50 net. Geo. J. McLeod. Ltd., Toronto.

The Continents and their People, Asia, 198 pages. Price 60 cents. South America, 189 pages. Price 55 cents. North America, 299 pages. Price 64 cents. Africa, 210 pages. Price 55 cents. By J. F. Chamberlain and A. R. Chamberlain. The Macmillan Co., Toronto. Co.,

Co., Ioronto. Burns—How to Know Him, by W. A. Neilson. 332 pages. Price \$1.50 net. The Bobbs-Merrill Co., Indianapolis, U.S.A.; Geo. J. McLeod, Ltd., Toronto, Tennyson—How to Know Him, by R. M. Alden. 376 pages. Price \$1.50 net. Bobbs-Merrill Co., Indianapolis, U.S.A.; Geo. J. McLeod, Ltd., Toronto. Wild Animal Ways, by Ernest Thompson Seton. 140 pages. Price 60 cents net. The Houghton Mifflin Co., Boston, Mass. Plane Trigonometry, by Eugene Henry Barker. 172 pages. Price \$1.00. P. Blakis-ton's Son & Co. Philadelphia Pa.

ton's Son & Co., Philadelphia, Pa. Ancient Rome, by Rev. James Baikie. 88 pages. Messrs. A. & C. Black, London, Eng.; The Macmillan Co., Toronto. This is a most beautifully illustrated book and is so written as to appeal to children of from 12 to 16 years of age. The old legends are told in a charming fashion.

Some Nursery Rhymes of Belgium, France and Russia, by L. Edna Walter and Lucy Broadwood. A. & C. Black, London, Eng.; The Macmillan Co., Toronto. A book of nursery rhymes set to music and beautifully illustrated in colour. Very suitable for kindergarten and primary grades.

Effective Public Speaking, by Jos. A. Mosher. 188 pages. Price \$1.50. The Mac-millan Co., Toronto. Who would not wish to have the power to speak effectively in

Multic? This book seems to be a very complete guide. Amateur and Educational Dramatics, by Evelyne Hilliard, Theodora McCormick, and Kate Oglębay. 169 pages. Price \$1.00. The Macmillan Co., Toronto. "The fact that things done are greater than things heard would seem to argue that teaching reading to beginners can be done more quickly, and with greater accuracy, through dramatic form than in other ways". So begins chapter III in this book. Children's plays, the teaching of reading by means of dramatics, the dramatising of well-known classics, the body as an

instrument in dramatics, are among the main topics presented. Our Sea Power, by H. W. Household. 179 pages. Price 60 cents. The Macmillan Co., Toronto. A book which every boy and every girl will throughly appreciate. It shows the meaning of naval supremacy and its importance. It treats in a most interesting manner the story of the development of Britain's sea power: There are numerous illustrations.

English Essays, by D. T. Pottinger. 331 pages. Price 25 cents. Another of Mac-millan's Pocket Classics. This is an anthology of English essays which every teacher of English will appreciate. It includes the work of authors from Bacon to Lucas. The Call of the Wild, by Jack London. 132 pages. Price 25 cents. The Macmillan Co., Toronto. This addition to Macmillan's Pocket Classics gives London's famous story in excellent form for children, also an introduction, life of the author, and copious notes. notes.

Introductory Geography, by H. C. Barnard. 154 pages. Price 1s. 8d. A. & C. Black, London, Eng.; The Macmillan Co., Toronto. Teachers of geography will find this an excellent book for junior classes. It is beautifully illustrated.

The Story of Rosalind and Orlando, The Story of the Merchant of Venice, The Story of a Midsummer Night's Dream, The Story of Macbeth, by Walter Higgins. 32 pages each. Price 3d. each. Blackie & Son, London. A synopsis of each play has been made by using Lamb's Tales and Shakespeare's text. These should be very suitable for Public School classes.

Stories and Poems from Famous Russian Authors, by P. M. Smirnoff. 187 pages. 2/6 net. Blackie & Son, London, Eng. Students of the Russian language should find this interesting and useful. There is a very complete vocabulary. The Army Tutor's Précis Book, by A. Grant. 240 pages. Price 3/6 net. Blackie & Son, London. An excellent book for reproduction work in High School classes. Hernani, by Victor Hugo. 116 pages. Blackie & Son, London. Price 10d. Edited, with notes and questionnaire, by F. W. Odgers.

Hint for the Library

Our Government, by Mabel McLuhan Stevenson. 178 pages. Price 60 cents net. Geo. J. McLeod, Ltd., Toronto. This is an admirable volume and is the only book of its kind that the present reviewer has seen which deals with the subject of government in a manner that is intelligible to every reader, be he child or adult. The topics discussed are those with which every citizen who prides himself in his citizenship should be familiar. It makes clear the machinery of government, from that of the elementary school to that of the Dominion of Canada. It describes fully the intricacies of marking ballots, comof the Dominion of Canada. It describes fully the intractices of marking ballots, com-piling voters' lists, conducting elections, and enumerates the various courts charged with the administration of justice. A chapter is devoted to the importance of a higher standard of public health and the means of securing this. Among several useful appen-dices is one giving the rules of procedure in public meetings—a necessary and useful piece of information. The simplicity of the style, the clearness and brevity of the descriptions, make the book very suitable for use in elementary and secondary schools, very appropriate as a reference book in private libraries and extremely useful to citizens generally. S. J. K.

Older Boys and Increased Food Production

C. M. WRIGHT

National High School Boys' Work Secretary, Y.M.C.A.

NDER the direction of the Dominion Board of Food Control, the Boys' Department of the National Council of the Young Men's Christian Association has been asked to co-operate in the enlistment and supervision of at least 25,000 older boys in Canada during the coming summer.

The need of increasing the world's supply of food is very acute. Experts declare that the surplus is all but exhausted and the heavy sub-

marine losses make the problem still more serious. There is less labour available in Canada than ever before. Therefore, we must look to the older boys to step into this breach and do their part that Canada may contribute her utmost in this time of the world's extremity.

Last year's experiment in Ontario and in a few parts of other Provinces was highly successful. Both farmers and boys were, in the majority of cases, well satisfied and many of them were enthusiastic. The boys did the work. They were apt learners. Having enlisted with the service motive uppermost, they did noble work. The facts that the demands for boy helpers this year are much more numerous and that the wages offered are considerably higher in the case of the farmers who had boys last year, witness to the good work done by them. The boys themselves had the satisfaction of knowing that their work had counted. They gained a great deal of experience and a little extra cash. Most of them came back from the farms stronger and more robust than they had ever been. They made less money than factory work would have provided but they gained what money could not buy.

This year enlistment will be Dominion-wide, in all probability during the third week in March. Boys fifteen to nineteen years of age in our High Schools are to be specially urged to enlist for farm service in "The Empire's Second Line of Defence" and to be ready on seven days' notice to take up work on the farm as soon as the requirements of the Provincial Departments of Education permit. Boys thirteen to fourteen will also be given an opportunity but they will be urged to do their work on farms of their parents or relatives and not among strangers.

Test examinations will undoubtedly be required, for the educational standards must not be lowered any more than is absolutely necessary. But the world's crisis must be recognized and even if it might mean the loss of certain examinations in special cases, necessity would seem to justify that.

When special instruction has been given to the boys and they have been placed on farms, Y.M.C.A. workers will endeavour to keep in close touch with them, that conditions may be made as favourable as possible for them and that they may be related to the churches in the locality where they are labouring.

The Dominion Government is prepared to present badges to those who qualify by definite periods of service and it is probable that at the end of the season when the harvest has been gathered, the National Thanksgiving Day will be used for the recognition of the labours of the older boys.

The co-operation of the teachers, parents, and all especially interested in the welfare of the boy is invited that the experience may be as valuable as possible to all.

Notes and News

The results of the December examinations in pedagogy conducted by the Faculties of Education of Queen's University and the University of Toronto are as follows:

OUEEN'S UNIVERSITY. Doctor of Pedagogy. Science of Education-A. D. Colquhoun, B.A., B.Paed., Ottawa; W. J. Saunders, M.A., M.S., Kingston; Geo. M. Weir, B.A., Saskatoon, Sask. (with honours). History of Education-Jas. Bingay, M.A., Glace Bay, N.S. (with honours); A. D. Colguhoun, B.A., B.Paed., Ottawa (with honours); J. S. Huff, B.A., Regina, Sask. (with honours); C. A. Latour, B.A., Ottawa; G. A. Miller, M.A., Ottawa (with honours); J. R. Tuck, B.A., Camrose, Alberta: Geo. M. Weir, B.A., Saskatoon, Sask. (with honours). Educational Psychology -G. B. Stillwell, B.A., Moose Jaw, Sask. Educational Administration-Jas. Bingav, M.A., Glace Bay, N.S. (with honours); J. S. Huff, B.A., Regina, Sask. Bachelor of Pedagogy-Science of Education-I. G. Niddrie, B.A., Edmonton, Alberta. Educational Psychology-D. K. Finlayson, B.A., Grand River, N.S.; W. M. Shurtleff, B.A., Kingston, Ont. Educational Administration-Jas. Froats, M.A., Finch, Ont.; Wm. E. Shales, M.A., Ingersoll, Ont. J. M. Hutchinson, B.A., J. M. McCutcheon, B.A., and George M. Weir, B.A., have completed the course for the degree of Doctor of Pedagogy, including the required thesis. D. K. Finlayson, B.A., James Froats, M.A., and William E. Shales, M.A., have completed the course for the degree of Bachelor of Pedagogy.

UNIVERSITY OF TORONTO. Bachelor of Pedagogy—History of Education—Walter E. Shales, Pembroke. Educational Administration— Walter E. Shales, Pembroke. Doctor of Pedagogy—Science of Education—J. G. Althouse, Galt; J. T. M. Anderson, Yorkton, Sask.; Brother Austin (Austin Dee), Aurora; W. C. Froats, Carleton Place; C. E. Mark, Ottawa; J. S. Mills, Richmond, Que. Educational Psychology—G. H. Armstrong, Toronto; D. E. Hamilton, Toronto. History of Education— D. E. Hamilton, Toronto; C. E. Mark, Ottawa; J. H. McKechnie, Regina, Sask. Educational Administration—D. E. Hamilton, Toronto; George Hindle, Trail, B.C.; J. H. McKechnie, Regina, Sask. J. T. M. Anderson, Yorkton, Sask., and W. N. Bell, Paris, have completed the academic requirements for the degree of Doctor of Pedagogy.

Owing to changes in the Normal School curriculum, the Normal School masters were not able to write on the examination in pedagogy held in December and another examination is announced for the successive Saturdays in April. Summer courses in pedagogy subjects were given at Queen's University in 1917; in 1918 they will be given at the University of Toronto as outlined elsewhere in this issue.

To fill the vacancies on the inspectoral board caused by the recent deaths of Inspectors W. F. Chapman and E. W. Bruce, the Toronto Board of Education has appointed Neil S. MacDonald, B.A., Principal of Ryerson Public School, and Walter Bryce, B.A., Principal of Williamson Road Public School.

John B. Brennan, B.A., Principal of Queen Victoria Public School, has been appointed Principal of Ryerson Public School, one of the practice schools for the Faculty of Education, University of Toronto.

Donald D. MacDonald, B.A., Principal of McMurrich Public School, has been appointed Principal of Orde Street Public School, the new practice school for Toronto Normal School. This appointment is to take effect next September.

Lieut. J. A. Dewart, who was Principal of Stamford Public School, Niagara Falls, before enlistment, has been awarded the Military Medal for bravery in battle.

In order to improve his pupils' work in composition and geography, an Alberta teacher would like to arrange for correspondence between them and the pupils in some school in Eastern Canada or in Ontario. Any teacher who would like to make use of this method might send name and address to this office.

J. de B. Saunderson, B.A., formerly of Tilston, Man., is now Principal of the Intermediate School at Stony Mountain.

J. R. McLellan of Ritchie, Sask., has enlisted for overseas service with the 249th battalion, C.E.F.

John J. Bell, B.A., has been appointed Principal of Gananoque High School.

Ernest W. Dalton of the class of 1915-16 in the Faculty of Education, Toronto, has enlisted with the 63rd battery, C.F.A.

Mrs. Hazel Evans Hull has returned from Cleveland, Ohio, and accepted a position on the teaching staff of the Hagersville Public School.

W. L. Miller has removed from Tisdale, Sask., and is now on the staff of the High School at Glenboro, Man.

Of last year's class in Stratford Normal School, John A. Macdonald is teaching in S.S. No. 9 Kincardine and Miss Rosella Cronin is at R.R. No. 5, Picton.

Additional news of the class of 1916-17 in the Faculty of Education, Toronto, is as follows: Harold O. Rumble is on the staff of Blenheim Public School; Miss Edna F. Duffey, B.A., is a member of the High School staff at Granville, Ohio; Miss Mary E. Scott is teaching a Senior First Class in the King Edward Public School, Brantford; Miss Myrtle Magee is at Glen Meyer; Miss Mary G. Bayne is at R.R. No. 1, Embro; Miss Erie R. Going, B.A., is teaching history and household science in the Collegiate Institute at Virden, Man.

NOTES AND NEWS

For particulars of Toronto Faculty of Education Reunion see page XI of this issue.

Alberta

A. J. Watson, B.A., of the High School staff, Edmonton, and G. S. Lord, B.A., of the staff of the Central Collegiate Institute, Calgary, have recently been appointed Inspectors of Schools.

J. A. Smith, B.A., Inspector of Schools, Calgary, has been appointed Registrar and Inspector of High Schools for the Province. The vacancy made in Calgary by this appointment will be filled by Inspector G. W. Gorman, while Inspector J. E. Hodgson, Macleod, will succeed Mr. Gorman in Medicine Hat.

On Sunday evening, December 16th, a memorial service was held in the Camrose Methodist Church in honour of the late Lieut. E. K. Van Patten who was killed in action at Passchendaele Ridge. Lieut. Van Patten was formerly a member of the teaching staff of the Camrose schools.

The students of the Crescent Heights Collegiate, Calgary, are preparing to present two of Shakespeare's plays in April, viz., *The Taming of the Shrew* and *Midsummer Night's Dream*. The students of Grade XII are also writing an original play of their own which will be put on as a matinee, that is to say, if it is suitable for presentation.

R. A. Barron, B.A., formerly Registrar of the Department of Education has been appointed provincial organizer and supervisor of consolidated schools.

The first moving picture machine to be used in a Public School in Alberta was installed by H. P. Brown of the University extension department at Ryley a short time ago. The machine is of the Pathescope film type representing an outlay of about \$175.00. More recently a machine of similar type has been installed in the Calgary Normal and Practice schools.

Hon. J. R. Boyle, Minister of Education, announces that the Government contemplates the establishing of a general system of medical inspection for the school children of the Province. In the cities and towns this is likely to be made compulsory at an early date, the work to be done probably by officers employed by the trustee boards. The larger cities, of course, have had such a system of medical inspection in operation for a number of years. For villages and rural schools the medical inspectors will probably be employed directly by the Government. It is proposed to appoint two such rural inspectors and two nurses right away and later to expand the work along lines suggested by the experience of these officials.

D. H. Kenney and Miss Winnifred Cashman have recently joined the staffs of the Separate Schools in Edmonton.

Marshall Mallett, a recent graduate of the Camrose Normal School, has enlisted in the C.A.M.C. and is now in Calgary.

Saskatchewan

Hon. W. M. Martin, Premier and Minister of Education, has given some interesting facts and figures with reference to the operation of the new School Attendance Act. Last year, before the Act was in operation, the percentage of attendance in 1,450 schools in the older settled parts of the Province was, on a certain day, 68 per cent. This year, on the same day, the attendance in the same schools was 76 per cent. Under the new Act the enforcement of attendance rests with the Department of Education rather than with the local authorities. It was found that there were 60,723 pupils of school age in rural and village districts; of these 14,043 were irregular in attendance or were not attending school at all. Courteous letters were sent from the Department to the parents of these 14,043 children and the teachers were asked to make a report. The result was very gratifying. Out of that total only 5,510 parents had to be sent the 'five-day warning'. On this final notice all reported to the schools except 930 and these delinquents have been dealt with by the provincial police.

In referring to the question of inspectors, Mr. Martin pointed out that in the past it has been found impossible for the inspectors to visit all the schools in the inspectorate in the year. At the close of the present year, however, he felt sure that he would be able to state that every school has been inspected. There are a number of schools in the Province, officially known as "weak schools", which should receive more than one inspection a year, and Mr. Martin stated that he has no doubt that public confidence in the schools of the Province would be greatly restored by the fact that provision was being made whereby it would be possible for every school to be properly inspected.—*Public Service Monthly*.

Mr. James Duff, Inspector of Public Schools, was appointed on December 27th Chief Inspector of Public Schools and assistant Inspector of High Schools and Collegiate Institutes. Mr. Duff has had a long experience as teacher in Public Schools both in Ontario and in the West. In 1911, while acting as Principal of the High School at Weyburn, he was appointed Inspector of Public Schools, which position he has since filled with marked success. For a number of years he has acted as chairman of the board of examiners at the annual Departmental examinations. He was thus brought into close touch with the Public and High School teachers of the Province. For the past two years Mr. Duff has assisted in the

Continued on page 548

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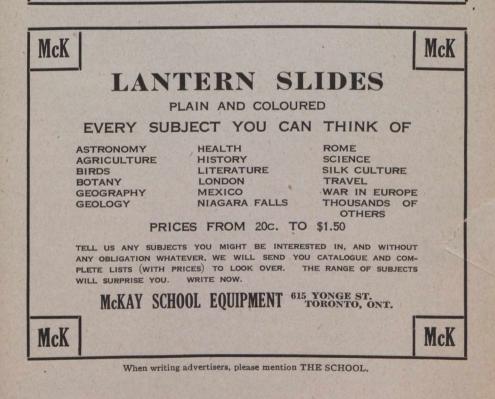


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inspection of High Schools and Collegiate Institutes and in the future this will form part of his work.—*Public Service Monthly*.

The maximum salary of Saskatchewan Inspectors has been increased to \$2,400 per annum and the salary for Normal School masters has been increased \$200. During 1918 ten additional Inspectors will be appointed, making the total number for the Province forty-five.

A. Kennedy, M.A., Inspector of Schools in the Weyburn district, has been named as state director for Saskatchewan on the executive of the National Education Association, being the first individual outside of the United States to be placed on the executive of this association. He expects to attend its convention in Atlantic City from February 25th to March 2nd, at which probably 6,000 delegates will attend. At the same time Mr. Kennedy will attend the annual meeting of the School Garden Association of America, of which he has been a director for some years, and will give an address on the subject of the child's share in food production.—*Public Service Monthly*.

Manitoba

The Annual Convention of the Manitoba School Trustees' Association is to be held in Winnipeg on February 26th, 27th and 28th.

Dr. W. A. McIntyre has just completed thirty years of service as Principal of the Winnipeg Normal School. Elsewhere in this number more detailed reference to his life and work will be found.

The annual School Fair of the Holland Boys' and Girls' Club was held in November. Very fine exhibits of vegetables, grain, poultry, iron-andwood work, sewing, raffia, knitting, and cooking were displayed.

On December 19th, at Beauséjour, the trustees of the municipality of Brokenhead organized an association. The principal officers are: President—J. Hough, Beauséjour; Vice-Pres.—J. Bush, St. Owens; Sec.-Treas.—A. Willows, Winnipeg.

A prize of \$10 dollars, donated by C. A. Hamilton, for the best kept school in Argyle was won by the Hamlin School. The next two schools in order of merit were Glenora and Connaught.

The extension lectures of the University of Manitoba have begun throughout the larger towns and cities of the Province. The idea is to bring the University to the people, and the lecturers are speaking on subjects of interest to people generally.

The Canadian Credit Men's Association of Winnipeg are offering three prizes (gold, silver and bronze medals) for the best essays written by Winnipeg school children on "Fire Prevention". Several members of the association made a round of the schools and spoke on the various phases of the fire question.

Continued on page 550



On Thursday, December 20th, the trustees of the municipality of St. Clements met in the new schoolhouse at East Selkirk and organized the St. Clements Trustees' Association. W. H. Bewell and Inspector Willows gave addresses. The principal officers are: Pres., A. B. Rowley, Selkirk; Vice-Pres., H. Flett, Walkleyburg; Sec.-Treas., G. G. Green, Lockport.

The inaugural meeting of the Winnipeg Playgrounds Commission was held recently when organization for the coming year was effected. For the eighth term, R. Fletcher, B.A., Deputy Minister of Education, was elected chairman. This movement has been eminently successful in past years and a fine programme is being prepared for this year.

The sixth annual meeting of the British Public School Club was held on January 26th at headquarters in the Boyd Building, Winnipeg, when the annual report was presented and the officers for the ensuing year were elected. It is interesting to note that out of a membership of 130 there are 70 away on active service and 8 have already given their lives for their country. The officers for the year are: Hon.-Pres., W. R. Allan; President, Very Rev. Dean Coombes; Vice-Presidents, C. H. Newton and Major Lane; Sec., E. O. Chaplin.

The twelfth annual series of popular lectures under the auspices of the Faculty of the University of Manitoba will be given during February. They are as follows: Professor R. O. Jolliffe of the classics department on "The Strength and Weakness of Ancient Democracy"; Professor Chester Martin of the department of history on "Party Government"; President MacLean on "The Provincial University"; and Professor M. A. Parker of the department of chemistry on "Winnipeg's Fuel Problem".





FACULTY OF EDUCATION University of Toronto

ANNUAL REUNION OF GRADUATES

To the graduates of the Faculty of Education, University of Toronto:

The success which attended the first reunion of the graduates of the Faculty of Education last year has encouraged your committee to recommend that an annual reunion be held during Easter week. In accordance with this decision your committee begs to report—

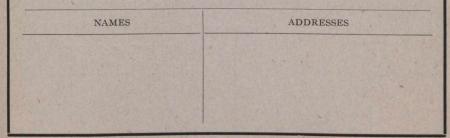
(1) The second annual reunion will take the form of a dinner, to be held in the Central Y.M.C.A., 40 College Street, Toronto, on Tuesday, April 2nd, at 5.30 p.m. sharp. The meeting will adjourn promptly at 7.30 to leave the evening free for other engagements.

- (2) SIR ROBERT FALCONER, President of the University, will be the guest of honour.
- (3) Tickets \$1.00. If convenient, remit with your reply.

The committee is most desirous that you give your cooperation to make the second reunion even more successful than the first. Use part of the space below to tell us you are coming and, in addition, give us the names and present addresses of any other graduates of whom you know. We shall do our best to see that all your friends are present at the reunion.

Do it now! Write "YES" to-day.

F. E. COOMBS, Chairman. J. T. CRAWFORD, Secretary. D. E. HAMILTON, Treasurer.



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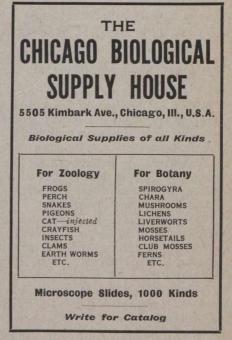
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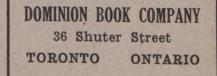
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The Royal Military College of Canada.

THERE are few national institutions of more value and interest to the country than the Royal Military College of Canada. Notwithstanding this, its object and the work it is accomplishing are not sufficiently understood by the general public.

The College is a Government institution, designed primarily for the purpose of giving instruction in all branches of military science to cadets and officers of the Canadian Militia. In fact it corresponds to Woolwich and Sandhurst.

The Commandant and military instructors are all officers on the active list of the Imperial army, lent for the purpose, and there is in addition a complete staff of professors for the civil subjects which form such an important part of the College course. Medical attendance is also provided.

Whilst the College is organized on a strictly military basis the cadets receive a practical and scientific training in subjects essential to a sound modern education.

The course includes a thorough grounding in Mathematics, Civil Engineering, Surveying, Physics, Chemistry, French and English.

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The length of the course is three years, in three terms of 9½ months each.

The total cost of the course, including board, uniform, instructional material, and all extras, is about \$800.

The annual competitive examination for admission to the College takes place in May of each year, at the headquarters of the several military divisional areas and districts.

For full particulars regarding this examination and for any other information, application should be made to the Secretary of the Militia Council, Ottawa, Ont.; or to the Commandant, Royal Military College, Kingston, Ont.

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This offer is open until May 1st, 1918.

The year 1917 was the best in the history of this journal in the number of subscribers, in the new features presented, in the general appreciation of its work, and in every respect. **The School** has never sought profits; it has sought only the advance of education and a clear financial sheet. The wider its circle of readers, the more thoroughly is its work done. To open the new year, 1918, with a rush of new business a special offer is made to new subscribers. But it would not be fair to be more generous to new friends than to present ones; hence the offer is good for renewals as well as for new subscriptions.

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	A Year's Subscription	1.4	-	-	\$1.25	
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Rules for Competitors.

1. The work must be original and must be so certified by the teacher.

2. All work must be on drawing paper of dimensions either 6" x 9" or 9" x 12".

3. Drawings must be sent flat—not rolled. Rolled packages will not be sent on to the committee of judges.

4. Sufficient postage for return must accompany each package. If this rule is not observed, drawings will not be sent on to the committee.

5. Work entered for the February competition is to be done during January and must reach this office not later than February 8th; that for March is to be done during February and must reach this office on or before March 8th and so on.

6. The three best pieces of work, if they are deserving, will be awarded prizes in order of merit—first, second, and third.

For Public and Separate Schools.					
	A. Forms I and II or Grades 1, 2, 3, 4.	B. Forms III and IV or Grades 5, 6, 7, 8.			
FRB.	A coloured crayon drawing of a Christmas toy from memory. To be done in the class- room without the teacher's direction on the day following a lesson in which a drawing was made by the pupils from the object under the teacher's direction.	Construct a letter holder in the form of a wall pocket, as large as can be made from paper 12" x 9". Tint the whole sheet. Any further decoration should be done in water colouts. Leave undecorated mar- gins of good proportions.			
MARCH	A coloured crayon design of an Easter card lettered with simple capitals.	An illustrative drawing, finished in water colours, of any of the numerous lines suitable for illustration from "A Canadian Camping Song", page 65, Third Reader.			
APRIL	A simple design in charcoal or black crayon for a figured muslin or checked ging- ham for girls; prints or suitings suitable for boys.	A black and white surface pattern in line and spot for any printed fabric—curtains, scarfs, dress goods, papers, etc.			
MAY -	An ink silhouette of a pose selected from some sport or game in which boys and girls are interested.	A pencil drawing of a small group of kitchen or garden utensils. All lines used in blocking in the group should be left.			
JUNE	An illustrative drawing in one colour, black and white, of some word picture suitable for illustration, taken from the First or Second Reader.	 A water colour drawing of a spring flower. A simple, conventionalized unit based upon the same flower. Adaptations of this unit to fit a square, an oblong, and a circle. The best arrange- ment of all the above drawings on one sheet 12" x 9" will also be considered. 			

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The Competition in Art

Prizes.—Twelve prizes are awarded each month, three in each of the four competitions. These prizes are donated by the Prang Company of Chicago, New York, and Toronto (23 Scott Street).

Competitions A and B.—*First*—Prang's Water Colour Box, No. 5. Second— Prang's Grayed Crayons, No. 50. Third (A) Prang's Stick Printing Dyes. (B) Art Education Crayons, No. 2.

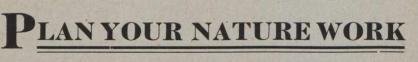
Competitions C and D.—*First*—Prang's Tempera Box, No. 1. Second— Prang's Water Colour Box, No. 8. *Third*—Art Education Crayons, No. 2.

SPECIAL—To the school whose pupils win most prizes in the series a set of Prang's Colour Charts.

Do all work for C. and D. Competitions on paper, 9" x 12".

-	C. Lower School First and Second Years.	D. Middle School Third and Fourth Years.
FEB	Make a <i>pencil</i> drawing of a. primula or a begonia, or other winter-blooming house- plant in the pot. Express light and shade and colour value. Make the drawing at least 8 inches at its greatest dimension.	Design a teapot and decoration for it suggested by Saracenic or by Greek orna- ment. Express the completed design in a contrasted colour harmony. Make the teapot about 7 inches high.
MARCH	Represent in <i>water colours</i> the house- plant chosen for the pencil sketch in the February competition. Make the drawing at least 8 inches at its greatest dimension.	Make a <i>pencil</i> drawing of an interesting detail of some <i>Golhic building</i> you know, such as the entrance to a church or college, or a clock tower, or a mullioned window.
APRIL	From the primula, or from the house- plant chosen for the January and February Competition, design an ornament for a selected piece of pottery. Draw this piece of pottery and apply the ornament in colour to make a dominant harmony.	Make a <i>pencil</i> drawing, 10 inches high, of a library electric lampstand and shade. The stand may be of brass or of wood; the shade may be circular and domed, or square and pyramidal.
MAY	Make a <i>pencil</i> drawing, at least 8 inches in width, of a small table book rack, in which a few books are standing. Draw an open book in front of the rack. Show the top of the table. Composition, lighting, colour values, perspective and pencil technique will be noted.	Make, in <i>pencil</i> , a perspective drawing of the end of a room, showing the end wall and a portion of the ceiling, side walls and floor. Place a window on the left side, a door opening out on the right side and a door opening into the room in the end, facing the spectator. Add other appropriate details.
JUNE	Design a cover, 4 ins. by 9 ins. for a box for neckties. The decoration is to be of some simple floral motive, and the lettering may be either in Roman or in Gothic letters of appropriate size.	Design a menu cover for a <i>Thanksgiving</i> Day Banquet. Use appropriate ornament in form and colour. Letter with Gothic or Roman letters.

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