

THE EDUCATIONAL REVIEW.

FOR THE ATLANTIC PROVINCES OF CANADA.

VOL. XV. No. 12.

ST. JOHN, N. B., MAY 1902.

WHOLE NUMBER, 180.

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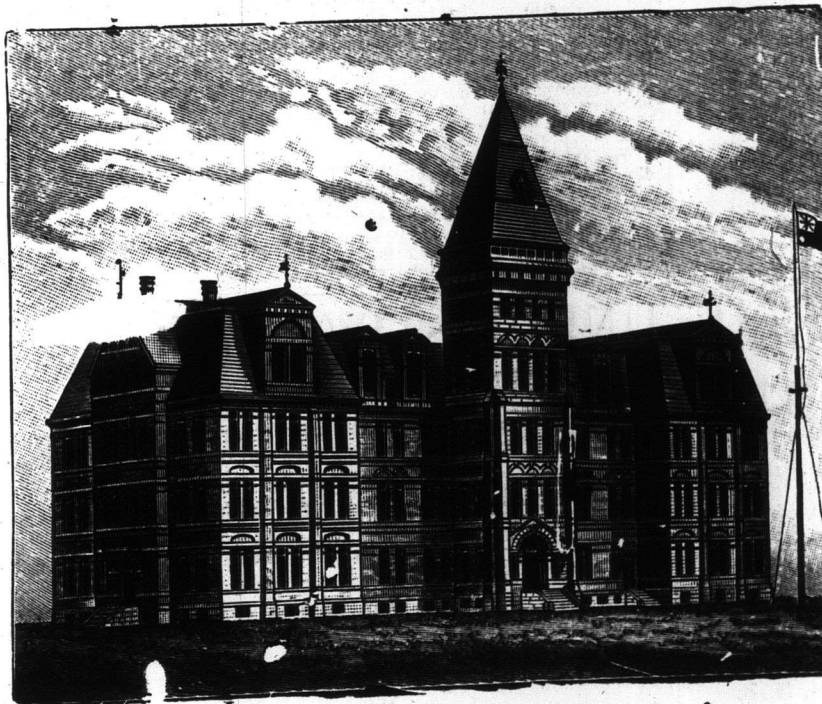
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ST. JOHN, N. B., MAY, 1902.

\$1.00 PER YEAR.

G. U. HAY,
Editor for New Brunswick.

A. McKAY,
Editor for Nova Scotia

THE EDUCATIONAL REVIEW.

Office, 32 Wellington Row, St. John, N. B. (Telephone No. 1209.)

PRINTED BY BARNES & Co., St. John, N. B.

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Always Read this Notice.

THE EDUCATIONAL REVIEW is published about the 10th of every month. If not received within a week after that date, write to the office.

THE REVIEW is sent regularly to subscribers until notification is received to discontinue and all arrearages paid.

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EDUCATIONAL REVIEW,
St. John, N. B.

EMPIRE DAY—the 23rd of May.

THIS number completes the fifteenth volume of the REVIEW. An index is enclosed.

THE REVIEW tenders its hearty congratulations to Robert Murray, Editor Halifax *Presbyterian Witness*, on the degree of LL.D., conferred on him by Dalhousie University.

PROF. STOCKLEY, of the University of New Brunswick, has resigned to accept a chair at the Ottawa University.

A FRIEND in Ontario questions the wisdom of holding a teachers' convention on Empire Day. So do we, most decidedly. That would leave the schools vacant, and deprive the children of one of the greatest privileges of the year. A day which is set apart for the school children of Canada for special instruction on the Empire and for cultivating their loyalty and attachment to it should not be interfered with. Such days are too few with us.

ATTENTION is called to the circular to botanists on another page. It would be a great advance in this science if the students of plants in the three Atlantic Provinces should work in concert to provide separate lists of the flora of each province during this and the next season.

HERE is a morsel from an examiner in one of our colleges; it will be appreciated by many others just now: "We are in the depths of the annual spring misery—intellectual house-cleaning. *There is a great accumulation of dust.*"

WE are indebted to Dr. J. George Hodgins, M. A. LL. D., for a copy of the sixth volume of the "Documentary History of Education in Upper Canada," which he is issuing as librarian and historiographer to the Education Department. In compiling and publishing these documents, Dr. Hodgins is doing great service to education in that province, and is carrying on a work which no one else is so well qualified as himself to do. Future historians of education will be enabled to trace, by the aid of these reliable documents, the development of the school system of Ontario.

TEACHERS and school officers are victimized every year by agents for charts, atlases, books of universal knowledge, and all sorts of trashy productions, often accompanied by glittering schemes for easy and cheap purchase of their requirements a long distance from home. The present year will probably be no exception to previous ones, and let us warn teachers to be very wary in being victimized to repent afterwards, as has been the usual experience. All schemes devised to deflect trade from legitimate channels should be regarded with suspicion. Support those who are supporting you.

A GREAT deal of interest has been aroused in the past few years by the delivery of series of lectures to teachers in many of the principal cities and towns of Canada. The subjects of these lectures embrace various phases of education, art, literature and natural science, including the geography and natural products and scenery of Canada. Arrangements can be made by which these lectures, many of them illustrated, may be delivered free or at a nominal cost to any audience

in any part of the Dominion. It is difficult to estimate the advantages that must result from these lectures, not only to teachers and schools, but to whole communities, in giving clearer conceptions of the geographical features, natural products, art, literature, education, especially of Canada. The lectures were designed in the first place to give our people clearer ideas of their own country and its vast possibilities, in order to stimulate a greater spirit of loyalty and create a taste for wider reading and instruction along special lines. Such a movement ought to widen until it embraces the whole dominion. The executive committee having control of the course is located in Montreal, with Professor D. P. Penhallow as chairman.

TEACHERS will be interested to know that the Canadian Pacific Railway management will issue low rate round trip second class excursion tickets to points in the Canadian Northwest on June 4th, 25th, and July 16th. The rates from St. John and Canadian Pacific stations in New Brunswick will be as follows: To Winnipeg, \$28.00; Regina, \$30.00; McLeod and Calgary, \$35.00; Edmonton, \$40.00; this for round trip tickets good for return about sixty days from date of issue, and good for stop over at Winnipeg or any point west of it. Very comfortable and commodious tourist sleeping cars from Montreal are provided, by which passengers can make the trip with the greatest comfort. No better opportunity for seeing the great Canadian Northwest could be afforded, and this low rate of travel brings it within the reach of many who could not otherwise think of such a grand vacation trip. Copies of descriptive pamphlets and other particulars may be obtained by addressing C. B. Foster, General Passenger Agent, C. P. R., St. John.

Teachers' Salaries.

Some discussion has recently taken place regarding teachers' salaries, which are admittedly much too small. The REVIEW would gladly see them increased from any legitimate source. One of the measures advocated to bring this about is additional government aid. We are convinced that this method, paradoxical as it may seem, would not avail to effect the purpose under present conditions, as in nearly every case an increase in state aid has been met by a corresponding diminution of local contribution, and a downward, rather than an upward, tendency has resulted. If a school has been ranked as superior, the additional grant received on this account from government has been deducted from the amount previously contributed by the district. If a district has been placed upon the poor list, the amount

of additional aid has been taken into account to reduce the local aid.

Giving is a matter of education, and should rather be encouraged than discouraged. In the United States, where no state aid at all is directly received by the teachers, the public has been educated to give much more generously to the support of schools than in Canada. In one province of Canada, at least, where formerly the whole of the teachers' salaries was paid by the state, and where recently part of that aid has been withdrawn, the salaries are now among the lowest paid anywhere, simply because the people have not had any education toward contributing. In the state of New York, the most populous and wealthy in the union, and where salaries have seemed princely in comparison with our own, it has been found necessary to enact that teachers shall not be paid less than fixed sums, with progressive increases. It is easier to suggest than to devise a workable scheme of this kind, but small beginnings have been made in this direction in New Brunswick, and it seems certain that if the school service is not to deteriorate, that some such plan must be adopted throughout Canada.

Circular to Students of Plants.

It has been decided by the Committee on Botany of the Natural History Society of New Brunswick to prepare a list of plants of the province on a new and comprehensive scale. It will embrace a full bibliography of New Brunswick botany; a brief history of botanical investigation within the limits of the province, illustrated, if possible, by maps; a discussion of geographic origin, grouping of vegetation, including plant formations, associations, etc.; exact descriptions of the habits and surroundings of plants; latest and most approved scientific names of plants, with local names, local uses, their connection with local history, folklore, etc. The list will not be confined to flowering plants and ferns, but will include all species of lower plants—mosses, lichens, fungi, algæ—known to exist in the province.

The preparation of such a list calls for a great number of careful and energetic workers in every part of the province, including teachers, students, lighthouse keepers, tourists, and all who are interested in any way in our native plants. These can assist the committee in making observations and collecting information on the plants that they find in their vicinity, making full and accurate notes at the time. Specimens of all plants, except the commonest and most unmistakable forms, should be collected. They may be sent to any of the *three* first named in the committee below, who will identify them and use them for the purpose of making the list more complete and accurate.

G. U. HAY, St. John.

J. VROOM, St. Stephen.

J. BRITAIN, Fredericton.

W. F. GANONG, Northampton, Mass.

Committee on Botany of the Natural History Society of N. B.

For the EDUCATIONAL REVIEW.]

NATURE-STUDY AND SCIENCE.

BY JOHN BRITAIN, NORMAL SCHOOL, FREDERICTON.

Lessons on the Gases in the Air.

LESSON III.

Hold the flame of a spirit-lamp close under the mouth of a wide-mouth bottle inverted over the flame. Notice the clear liquid which collects on the inside of the bottle; feel it and taste it.

Hold the bottle over the flame again as before for a minute or two. Cover its mouth tightly with the palm of your hand; turn the bottle up and quickly pour some lime water in. Still keeping the bottle tightly closed, shake the lime water vigorously through the gases in the bottle.

Fasten a loose ball of woollen cloth or yarn, as large as a small marble, in the end of a wire, and bend the wire into a shape resembling a capital U with one arm bent in the middle at a right angle, for a handle.

Soak the woollen ball in alcohol, and hold the wire with the base of the U resting on the bottom of a dish 2 or 3 inches deep, and nearly filled with lime-water. Ignite the alcohol, and quickly lower a wide-mouth bottle, mouth down, over the flame until its mouth rests on the bottom of the dish.

When the burning has ceased, pour in more lime-water around the mouth of the bottle and take the wire out without raising the mouth of the bottle above the surface of the lime-water. Push your hand in under the mouth of the bottle, raise the bottle out of the water, and shake the lime-water which rose into the bottle repeatedly through the gases still there, being careful not to admit any air from outside into the bottle. Now let an assistant plunge a lighted stick into the remaining gas. The stick should at once cease to burn.

Prepare again, in the same manner, some of the gas which extinguished the burning stick, and empty it upward under water into a bottle (full of water) so small that the gas will fill it. Shake lime-water through the gas; if the experiment has been properly performed, the lime-water will remain clear.

Discussion.—The course and the extent of the discussion on these experiments are indicated by the following questions:

What two substances are produced by burning alcohol in the air?

How are they produced?

What two simple substances, then, must alcohol contain?

(Chemists have found that alcohol also contains a proportion of a third element—oxygen).

When alcohol is burning in the air, what is the flame giving to the air?—and what is the flame taking from the air?

Why didn't the lime-water rise till it *filled* the bottle inverted in the dish?

What did the lime-water take from the gases in which it was shaken?

Show whether the gas in which the stick would not burn is carbonic acid gas. (Call it nitrogen).

Why is nitrogen liable to be mistaken for carbonic acid gas?

How may the two gases be readily distinguished?

Argue from these experiments that the atmosphere contains nitrogen. (Chemists have found that about four-fifths of the atmosphere is nitrogen).

If the two preceding questions have been carefully taught, the pupils will not have much difficulty in answering these questions orally, and in giving good reasons for their conclusions.

They should then be asked to write out the arguments in support of their answers to two or three of the questions.

Questions for May and June.

(Answers to some or all of these questions should be sent to the editor of this department not later than June 20th).

1. Write an account of what you have found out by observation during May and the first part of June about our native birds. Give places and dates when you can; and describe the *ways* of the birds as well as their plumage.

2. Make a drawing from the object, natural size, of the leaf of the elm, sugar maple, red maple, ash, fir and willow.

3. Draw from the object, natural size, a single fruit of the elm, red maple, buttercup and adder's tongue (dog-tooth violet).

4. What plants of the rose family have you noticed in bloom this year, up to date.

5. Explain why alcohol was burned in the air in the preceding lessons; and why the lime-water was shaken through the gas before the burning stick was held in it.

I find your REVIEW a great help for my work in school. I am particularly interested in the cardboard work page, and have this kind of work in my school every Friday afternoon. My pupils are interested in it.

F. E. H.

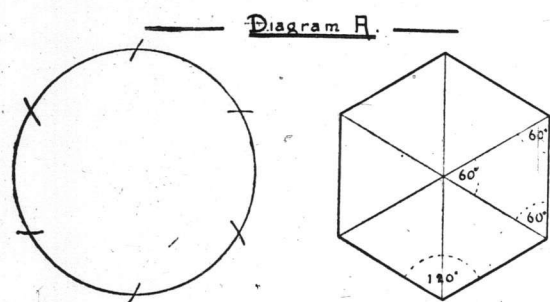
Cardboard Work — No. 5.

By T. B. KIDNER.

(All Rights Reserved).

EXERCISE 19.—A hexagonal table mat. This exercise will introduce the drawing of the hexagon, a more difficult plane figure than any of the preceding ones. There are several methods which may be used for the construction of the figure, the simplest, perhaps, being that of the circumscribing circle. Compasses are an advantage in this, but, as in the case of the circle and exercises based upon it, the slip of card (Ex. 14) will serve the purpose.

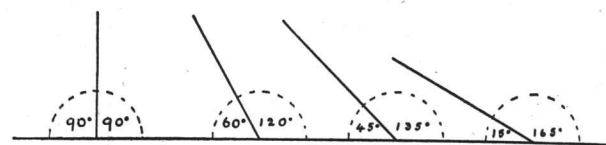
Commence, then, by reviewing the lesson on the circle and then point out that the radius will step round the circle exactly six times. After drawing the circle, place the pin in the circumference and with the pencil in the same hole used to draw the circle, mark off a small arc cutting the circumference. Transfer the pin to this new point and repeat the operation and so on round the circle. By joining the points thus obtained, the hexagon is constructed. The number of degrees in the angle of a hexagon can next be discovered by drawing the three diagonals. This will cut up the figure into six equilateral triangles, and by reviewing the early lessons, the angles of these are shown to be sixty degrees. As two of these are contained in the angle of



the hexagon, the children will readily see that it will be 120° . The diagram A will make this clear.

A purely mechanical method is to use the 60° set square, and to this there is no objection, provided that the children understand why the hexagon can be obtained by its aid. In either case the diagram suggested for the circle method should be drawn by the teacher on the blackboard, and the properties of the hexagon worked out. The method in this case depends on the size of the exterior angle of the hexagon. By producing one side of the figure, a little judicious questioning and demonstrating will enable the children to calculate the number of degrees in the exterior angle. For instance, by drawing a straight line and a perpendicular to it, two right angles, or $90^\circ + 90^\circ$ are obtained.

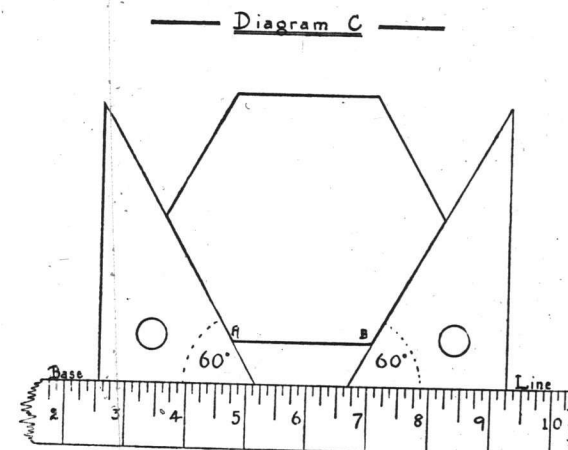
If the line be not perpendicular, the sum of the angles is still 180° . The interior angle of the hexagon being 120° , the exterior must be the supplement = 60° . (Of course, such terms as complement, and supplement should not be used with children at this stage). A few illus-



— Diagram B —

trations, such as are shown in the diagram B, will make this clear, and afford another opportunity for some mental arithmetic.

To construct the figure with the set square, commence by drawing a base line across the paper. Then, parallel to that, draw one side of the hexagon (AB in the diagram C). Further explanation than that afforded by



the diagram is scarcely necessary; the second and third sides are drawn by the aid of the set square as shown, and made equal in length to the first. By sliding the square along, the fourth and fifth sides can be drawn, and the sixth, parallel to AB, will complete the figure.

Either of the foregoing methods will suffice, but a variant of the first is to give one side of the hexagon and construct on it an equilateral triangle. The apex of this gives the centre of the circumscribing circle and the other points are obtained as before.

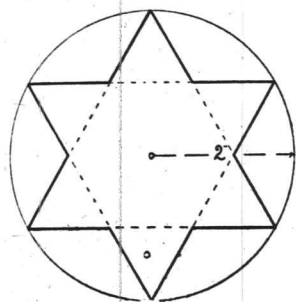
The cutting out is simple, but a bright color is advisable for this exercise, as it can be used for a vase stand against a dark cloth or table.

EXERCISE 20.—A silk winder. This is based on the hexagon, the six pointed star being obtained by joining alternate points round the circumscribing circle. The children should note that by joining the inner angles a small hexagon is obtained. The cutting requires care,

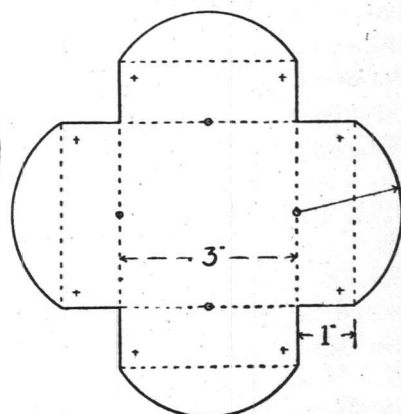
both at the delicate points and in the angles, but nothing absolutely new is involved.

EXERCISE 21.—A square tray with rounded edges. The top edges of this tray are folded over at right angles to the sides; This adds to the appearance of the tray and also stiffens the sides. The drawing should be the development, as shown, and may be commenced by drawing the square for the bottom. Then the oblongs

Ex 20 A Silk Winder.



Ex 21. A Square Tray, with rounded edges.

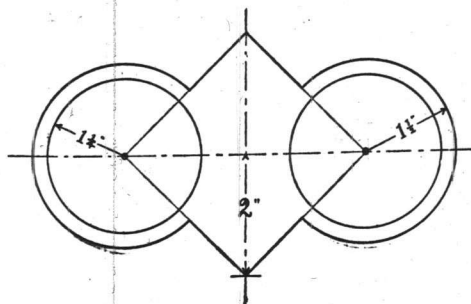


for the sides are added and the curved portions drawn on these. The centres, from which the curves are drawn, are indicated in the diagram and are found by bi-secting the sides of the square. The radius is measured from the points thus obtained to the angles of the oblong.

In the practical work, very accurate drawing and cutting are necessary. The creasing is in opposite directions, so that the sharp pencil lines for bending must be on the opposite side of the card, although of necessity they are shown (dotted lines) on the same side in the diagram. After cutting, punch holes as indicated by the crosses and tie with cord or ribbon.

EXERCISE 22.—A table mat for cruets or "shakers."

Ex 22: A Table Mat for Cruets or Shakers.

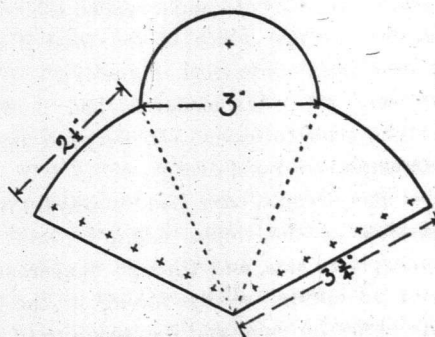


a square when the length of its diagonal, instead of the side, is given. The centre lines should be drawn first, at right angles to each other. The semi-diagonal of the square can then be measured on them and the square comple-

ted. From two opposite corners of the square as centres, the circles forming the ends, are drawn next. The cutting of the portions of the circles near their intersection with the square will need some care or a "crippled" curve will result. The inner circle is cut from a piece of white paper and pasted on the cardboard base. This requires very careful and neat manipulation, and thus affords good training; it also improves the appearance of the finished exercise.

EXERCISE 23.—A wall pocket. The back of this exercise is formed of an isosceles triangle, with a semi-circle on its base.

Ex 23 A Wall Pocket



The drawing should be the development, as shown, and is quite simple. The isosceles triangle can be defined and drawn first, the curved top being added. With the apex of the triangle as centre and the length of its side as radius, describe an arc on either side of the back. Measure off the distance given on these arcs and complete the two triangles to form the front of the pocket.

After cutting out and creasing carefully along the lines as shown, the holes may be punched and the fronts laced together with white or colored cord. A hole is also required for hanging the pocket up, and is indicated by a cross. In this exercise care must be taken to get the construction lines on the back of the model, so that they will not show when the pocket is hung up.

Drawing is no more a fad than geography, and those who so characterize it advertise gross ignorance of educational conditions and principles.—*Journal of Education.*

David Starr Jordan: I like a trotting horse that puts all other horses on a gallop; so a teacher that puts all other teachers on a gallop. Take your latitude and longitude frequently and see if someone hasn't passed you; if so, gallop.

For the EDUCATIONAL REVIEW.]

A Forerunner of the Empire.

"We sailed wherever ships could sail,
We founded many a mighty state."

—Tennyson.

As we look back on the year that has passed since last Empire Day, one event stands out clearly as most interesting to the whole empire. That is the visit of the Duke and Duchess of Cornwall and York to all the British dominions beyond the seas. Their journey lasted about eight months; they travelled over 45,000 miles, of which 33,000 were by sea, and, with the exception of Port Said, they set foot on no land where the Union Jack did not fly. One of the orators who spoke at the reception given to the Royal travellers on their return, by the City of London, called their journey "that majestic voyage which is the most illustrious that has ever been chronicled in history." "In old days," he went on, "our monarchs had neither the means nor the wish to travel. In very old days they had not an empire to travel over."

But how many people have had to travel first, that the foundations of the empire might be laid? Over strange, unexplored seas, and through dangerous ways, the love of adventure—always strong in the British people, the desire for gain, and the necessity of finding new homes have led them, until it has come about that the Prince of Wales had to travel nearly 50,000 miles to visit all his father's dominions.

The very beginning of this sailing and exploring was in the reign of Queen Elizabeth,

"When Drake went down to the Horn,
And England was crowned thereby."

In the year 1577 there set sail from Plymouth the first English ship, and the first English sailors that ever went round the world. The leader of this expedition, Francis Drake, was born in Devonshire about the year 1545. He served his apprenticeship on a coasting vessel, and, when about twenty, made a voyage to Guinea. After that he served under Captain John Hawkins, one of the famous sailors of the time, and made several voyages to the West Indies. He earned a great reputation for skill and bravery in fighting the Spaniards. On one of his voyages he landed on the Isthmus of Panama, and, penetrating the forest, he climbed a tall tree on the top of a very high hill. From the tree-top he could see the Pacific ocean, and with great solemnity he prayed God "to give him life and leave once to sail an English ship in those seas."

After he returned to England from this voyage, he was presented to Queen Elizabeth, who received him kindly, and showed him such favor as encouraged him

to carry out his great enterprise. The world had been circumnavigated once by Spaniards, who were led by the famous Portuguese sailor, Magellan. But Magellan was killed in the Philippines when the voyage was only half over. The account of Drake's voyage was published by his nephew, under the title of "The World Encompassed," and it begins by saying: "That valiant enterprise, accompanied with happy success, which that right rare and thrice worthy captain, Francis Drake, achieved, in first turning up a furrow about the world, doth not only overmatch the ancient Argonauts, but also outreacheth in many respects that noble mariner, Magelhaens, and by fame surpasseth his crowned victory. But hereof let posterity judge."

On the 13th of December, 1577, Drake set sail from Plymouth with five little ships and 164 men. His own ship was called "The Pelican," but her name was afterwards changed to "The Golden Hind." The first place they touched at was Mogador, on the Barbary coast. Here the Moors seized one of Drake's sailors and carried him off, but, when they found he was an Englishman, they gave him presents and sent him home to England. From Mogador the ships sailed down the coast of Africa, stopping for four days at Cape Blanco, taking in water and provisions. Then they went to the Cape Verde Islands. They landed and took provisions on board at the Island of Mayo, and soon afterwards they fell in with and captured a Portuguese vessel. On the Island of Fuego a volcano was throwing up flames, but the next island, Brava, is described as a sweet and pleasant abode, with trees abundant and always green, figs always ripe, and silver streams of sweet and wholesome water. On the 17th of February, 1578, they crossed the equator, and here the ships were becalmed for nearly three weeks. They had heavy thunder storms, and it was fifty-five days before they saw land again; then they reached the coast of Brazil, and sailed down the coast of South America. At the mouth of the La Plata they found many seals, and killed some for food. Keeping on to the south they anchored in a bay in 47° south latitude. Two of the ships were missing, and after Drake had taken his little fleet to a better harbour still farther south, he sent Captain Winter in the "Elizabeth" to find and bring them in, which was done.

The natives of these parts wore no covering but skins of animals, but painted themselves all over white and black. They traded with the Englishmen, and there is a story that one of them ran off with the admiral's scarlet and gold hat. On the 20th of June the ships anchored in Port St. Julian; here two of the best men were shot with arrows by the natives and died. Here, also, Drake found that one of his officers was guilty of

trying to raise a mutiny in the fleet; this man's case was heard, and he was condemned to death and beheaded.

Only three ships went on from Port St. Julian. On the 20th of August they came to the mouth of the Strait of Magellan. "With a sermon and prayers of thanksgiving they entered the narrow Strait with much wind, frequent turnings and many dangers." It was indeed a dangerous place, crooked and rocky, with rapid and irregular tides, a volcano blazing on one hand, snow-covered peaks all round them, and the cold very great. They landed on an island near the west end, and named it Elizabetha in honour of the Queen. Here they found many evergreen trees and strange animals and birds. On the 6th of September they entered the Pacific and found it very rough and stormy. A great tempest separated the ships and blew them far to the west. Drake was anxious to get into warmer latitudes, but another tempest drove them to the south of Cape Horn; one ship, the "Marigold," was lost, and now only the "Golden Hind" and the "Elizabeth" remained. In October a third heavy storm drove the admiral's ship out to sea from the harbour where the two were anchored, and after waiting for weeks, and despairing of getting a fair wind for Peru, Captain Winter "gave over the voyage, full sore against the mariner's minds," and returned to England. Meanwhile Drake had many misfortunes: baffling winds and storms and loss of men and attacks from the natives. But at the end of November the "Golden Hind" was going on northward, and her crew seized a richly laden Spanish ship. At Tarapaca they carried off some Spanish treasure, and at Arica they took two treasure ships. At Callao, and again further north, they captured more Spanish ships, until, when they came to Panama, they were fairly laden with gold and silver and precious stones. At Aquapulca Drake put in to refit his ship. His plan was now to try to find a northeast passage out of the Pacific. He therefore went up the coast of North America, which he called New Albion, in honour of his own country, and put in at a harbour which is thought to be San Francisco. There he stayed for a month. The weather was so cold and unfavorable that he gave up his plan of sailing further north, and on the 23rd of July directed his course to the Philippines. On his way he touched at some islands which he called the "Islands of Thieves" from the ways of the natives. In October the "Golden Hind" coasted the Philippines, and in November they reached Ternate, one of the Moluccas. The King received Drake in a very friendly and respectful manner, and made offers of a trade alliance with England. Fifty years after, the King's son wrote a letter to King James, saying that he and

his father before him had daily expected and hoped for the return of the great Captain Francis Drake. From Ternate the ship sailed to the Celebes, and in January, 1580, the last misfortune of the voyage happened her, for she ran ashore, and was only got off by throwing overboard eight guns and some of the cargo. Part of March was spent in Java, where they were feasted by the natives, and from Java they sailed for the Cape of Good Hope. They did not stop there, but went up the coast until they came to Sierra Leone, where they took in water and fruit. On the 26th of September, 1580, "which," says the narrative, "was Monday in the first ordinary reckoning of those that had stayed at home in one place or country (but in our computation was the Lord's day, or Sunday), we safely, with joyful minds and thankful hearts to God, arrived at Plimouth, the place of our first setting forth, after we had spent two years, ten months and some odd days beside in seeing the wonders of the Lord in the deep, in discerning so many admirable things, in going through with so many strange adventures, in escaping out of so many dangers, and overcoming so many difficulties, in this our compassing of this nether globe, and passing round about the world, which we have related."

Drake was received with general joy by all his friends and townspeople, who had feared he was lost. For several days he was feasted and honoured by the Devonshire people, and then he sailed the "Golden Hind" round to Deptford. But if he expected to be welcomed by the Queen and her courtiers, he was disappointed. The trouble was that he had taken a great deal of treasure from the Spaniards, and fought Spanish ships, when England and Spain were supposed to be at peace. So the Queen did not like to praise Drake for fear of offending the Spaniards, and perhaps causing them to make war. However, all the people were very proud of Drake's deeds, and they crowded in the streets to see him, and wrote books and songs in his praise. And at last, after several months, the Queen went on board the "Golden Hind" and knighted the captain, so that he was now Sir Francis Drake. He lived until 1595, and fought against the Spanish Armada, and distinguished himself in other deeds. He died on board his own ship in the West Indies and was buried at sea. A modern poet has written these lines about him:

"Drake, he's in his hammock till the great Armadas come,
(Capten, art tha' sleepin' there below?)
Slung atween the round shot, listenin' for the drum,
And dreamin' arl the time o' Plymouth Hoe.
Call him on the deep sea, call him up the sound,
Call him where ye sail to meet the foe;
When the old trade's plyin' and the old flag's flyin',
They shall find him ware'n,
Wakin', as they found him long ago."

As for the little ship that carried him round the world, the Queen gave orders for it to be preserved, and so it was for many years; and when it could not be repaired any longer, the best of the wood was made into a chair and given to the University of Oxford. It stands in the picture gallery of the Bodleian Library, and over it are some verses written by the poet Cowley, ending thus:

“Drake and his ship could not have wished from Fate
A happier station, or more blest estate,
For lo! a seat of endless rest is given
To her in Oxford, and to him in heaven.”

But finer words than these are said of Drake in the summing up of his character by one of the old chroniclers: “This our captain was a religious man towards God and His houses, generally sparing churches where he came; chaste in his life; just in his dealings; true to his word; and merciful to those who were under him; hating nothing so much as idleness.”

Dominions of the Edwards.

In the days of Edward the Elder, son of Alfred the Great, Mercia was annexed to the West-Saxon crown, and Edward, king of the West-Saxons, became Edward, king of the English. All England south of the Humber came under his personal rule. The Danes of Northumbria, the Welsh, the Scots, and the Britons of Strathclyde submitted to his power, and voluntarily acknowledged him as overlord; and, claiming not only independence of the emperors in continental Europe, but equality of rank, he held imperial sway. Great as a warrior, and great also as a legislator, Edward the Unconquered was a worthy successor of Alfred; and his name worthily heads the list of the royal Edwards who have ruled our mother land.

Edward the Martyr was the next of the name. Son of Edgar the Peaceful, and grandson of Edmund the Magnificent, he held the sceptre of a still more glorious kingdom than that over which his great grandfather had ruled. The story of Edgar's barge rowed by eight vassal kings may be but partly true; yet it gives us some indication of the grandeur of that island empire which Edgar left to his youthful successor. England was united and strong when the boy king began his short reign. It can hardly be said that he ruled. At the head of affairs was Dunstan, the first great English statesman who was not a king; and under his wise rule the land enjoyed prosperity and peace.

The next King Edward, a nephew of Edward the Martyr, is known in history as Edward the Confessor. The glories of the early English monarchy had passed

away before he ascended the throne. The Danes had come again and conquered; and the great Cnut, son of the conqueror, reigning as a duly elected king of England, had from his English throne ruled also the lands of his own people beyond the sea. But of this northern empire England alone was left when Edward reluctantly accepted his election as successor of the last of the Danish kings. Though of the English royal line, he, too, was a foreigner in training and in sympathy; so his name may well be left to stand, as it occurs in point of time, amongst those of England's foreign rulers. He, however, made good laws; and, by the help of his powerful earls, held his kingdom intact, and reduced the Welsh again to submission for the time.

More than two centuries had passed before another Edward ruled in England. The Norman conquest, like the Danish, had practically for the time attached the conqueror's hereditary dominions to the English crown, (for England, though under foreign rulers, was never under foreign rule,) conquered afterwards by Henry II., it had been lost by King John, though the Channel Islands remained and still remain; the great Angevin dominion, too, had all been lost, with the exception of Guienne; Scotland had been relinquished, Ireland in part subdued, and Wales still remained a vassal state. The banner of St. George had more than once been borne in the Crusades. Edward I. was in Sicily when he was proclaimed King of England, and his coronation took place two years later. An English king in heart as in name, his object was the welfare of England. To his memorable reign we trace our present form of parliamentary government. To secure his English dominions, he conquered Wales and Scotland, though the latter country was again in revolt before the close of his reign.

The final independence of Scotland was the chief event of the reign of Edward II., though it was not formally acknowledged by the English until after his deposition.

Edward III. claimed, through his French mother, the title of King of France. Failing to make good his claim, he, nevertheless, conquered Aquitaine, Ponthieu and Calais, which he ruled as a French Prince, while England and Wales and the part of Ireland within the English pale acknowledged his authority as an English king. The glories of his French wars were followed by defeat. Of all his conquests and his ancient possessions in France, there was at his death little left but Calais.

The Hundred Years' War was over when Edward IV. was crowned; and there was left still less of the French dominions of the King of England. Calais and the Channel Islands only remained. He recovered Berwick

from the Scots, to remain, like Calais, the sole remnant of the English conquests.

The domains of Edward V., if he can be said to have reigned as king, were those of his father at the time of his death.

Edward VI. succeeded his father, Henry VIII., as king and emperor of the realm of England and of the land of Ireland, for Ireland was thenceforth to be called a kingdom. Wales had become a part of England. Boulogne, taken in the preceding reign, was restored to France. Edward might be said to have had some claim to sovereignty over Newfoundland and the great unknown regions of the Western World; but no one in England then knew or thought of their value.

A mere list of the names of the kingdoms and provinces that form the vast dominions of King Edward VII. would be hard to give, for the number of separate governments under his rule, even in the British Isles, must be arbitrarily determined, and new colonies, protectorates or dependencies recently established in some distant region might so easily escape notice. Over 350,000,000 people acknowledge him as king and emperor; and 50,000,000 more live under his protection. His subjects, of many nations and tongues, look to him as the fountain of authority, and to his constitutional sovereignty as their security. His flag means freedom, on every sea and shore. God save the King.

Mental Arithmetic.

MISS A. LAURA PECK.

By 'mental' arithmetic we understand operations in arithmetic to be performed mentally by the pupil, without the aid of pencil and slate.

We shall endeavor to consider briefly: (1) of what value the subject is as an educative factor; (2) whether the child derives more benefit when given mental exercises than when his attention, as far as arithmetic is concerned, is directed wholly to written work; (3) some ways in which the subject can be usefully employed in the different grades; and (4) its place on the time-table.

1. The name mental arithmetic invites us to consider the subject as a mind-trainer. What mental faculties are exercised and developed by its use? When a mental problem is presented to a class each pupil must be listening carefully in order to make the question his own—for the question should not be repeated—also, each must depend entirely on his own mental exertions for a correct solution to the problem; hence habits of attention and self-reliance are cultivated. Further, in working out the problem a mental picture of the operations performed will necessarily be formed in the mind, and

in the case of practical problems the child must take the given facts and from them reason out the one asked for. Imagination and the reasoning power are thus brought into play. Then there will naturally be a friendly rivalry as to which can get the correct answer first. This will lead the pupil to have a care that his mental operations are accurate while at the same time he will strive to perform them quickly—thus his mind will become accustomed to thinking rapidly as well as carefully. Lastly, when the correct answer has been given some pupil may be required to state clearly the process by which such answer was found, and thus his power of giving accurate expression to his ideas is increased.

2. In the second place we must not think of mental arithmetic as opposed to the general subject of arithmetic, but as supplemental to it; hence we do not say, 'Is mental arithmetic more profitable than written work?' but 'does the child get more benefit from arithmetic when given mental exercises in addition to his written work than he would from the written work alone?' And here I think comes in the practical value of mental arithmetic. Children are often sent to do errands at a store. If their minds have been exercised by practical mental questions they will be careful to find out the prices of the articles purchased and will know for themselves what amount is to be paid or what change they should get back before the storekeeper has finished writing out the bill. Otherwise they will be likely to pocket the change without knowing whether they have the correct amount or not. The following instance came under my observation: A girl was sent to a store with a \$4 bill. The articles purchased amounted to \$2.51. The clerk who had probably carelessly taken the bill for a \$5 handed back \$2.49. The girl put the money in her purse and not until after she reached home did she discover that she had a dollar too much. And she was not a dull girl; she could sit down and work out on her slate the most difficult problems, but her mind had not been quickened by practical mental work. I heard a man remark that on examination day he had seen his children work out on the board and explain book questions which he himself could not have done; but when he asked them what 78 pounds of old iron would come to at \$1.50 a hundred, they could not tell. Take two boys who have completed the common school course. Both have been carefully instructed in arithmetic, but one has done all his work on his slate, while the other in addition to slate work has had a few minutes of mental exercise each day. Give them a written examination and probably they will come out nearly equal. But given orally some such question as, find the amount of

\$240 for $2\frac{1}{2}$ yards at 5 %; or what is the worth of a stick of timber 15 feet long, $2\frac{1}{2}$ feet wide and 10 inches thick at \$1.60 per 100 feet; or, a pile of wood 28 feet long, 4 feet wide and 6 feet high is worth how much at \$4 a cord, the mentally trained boy will have the correct solution in a few seconds, while the other one will wear a puzzled look and be wishing for his slate to set the question down.

3. Exercises in mental arithmetic should be given in all the grades as complementary to the written work. In the primary grades when a child has learned a number and the operations that can be performed on it by separations and combinations of its parts, through the medium of objects, simple practical questions involving other objects than those through which the number was learned, and similar operations, will help to fix the number and operations in his mind and at the same time lead him to do some independent thinking for himself. By the time he has mastered the multiplication and addition tables and the four fundamental operations, he should be able to do mentally simple questions in addition, subtraction, multiplication and division quickly and correctly. Besides the power of abstract thinking which is developed, the pupil will be able to perform his slate exercises more readily than he otherwise would. He should also be able to apply his knowledge in working out practical problems. In the intermediate and advanced grades when a new rule is to be learned, by the use of oral questions the pupil is led to formulate the rule for himself. When the principle is mastered he can apply it mentally to more difficult problems than those used while developing it.

4. The subject under consideration should be taught regularly and systematically the same as any other subject on the course of instruction and to this end should have a definite place on the time-table. Classes may often be profitably grouped for exercises in mental arithmetic. Each class or group of classes should have a few minutes of purely mental work each day, and we will find that our pupils will thereby become brighter and more intelligent and they will carry their habits of accurate thinking thus gained into their other work.

"We commit our educational machinery to the unfit and inexperienced. We need able men and women of mature ability, but we do not pay the price that attracts such service."—*Prof. John Davidson.*

This is an excellent method to use with young children: After the reading lesson, write on the board a series of questions about the lessons, the answers to which will form a connected story. Let the children write the answers and supply a title themselves.

PRIMARY GRADES.

Talks About Gardens and Seeds.

Arbor Day, with its thought of trees and shrubs, has passed, leaving beauty behind it in various places; but there are yet in our country many barren school-yards—yards they are, verily, and deserving of no better name,—where no attempt has been made to develop good taste and a love of nature in the minds of the children by beautifying the grounds. Teachers are busy; work is pressing; parents are indifferent; so it goes on, year after year, the rough element leaving its impress silently but surely on the personality of the scholars. For we are influenced in childhood by our surroundings even more than in later years. "I am a part of all that I have met," is a truth of our whole life from the earliest influence of environment.

Therefore a strong plea should be made for beauty in our schoolrooms, and on the grounds, by teachers and others who feel its importance. It is surprising that parents take so little interest in the matter, even those from refined and beautiful homes seldom entering the school or enquiring about its needs. If they came oftener to visit, they could easily be awakened up to help. But taking the case as it stands, the teacher must at least begin the good work, if anything is to be done. And it is a work that pays, not only in its outward effects, but in its influence on the workers.

Attempt small beginnings. Just a little flower-bed with a few pansy seeds, if nothing more. Make a border along the fence, where it will not interfere with free play, and where those children—and they are not few—who have no gardens of their very own at home may sow a few seeds and enjoy watching the development of plant life. It is not wise to try to have much variety; sweet peas, nasturtiums, pansies and asters are perhaps the best to start with, as they give much satisfaction for very little labor.

In the heart of a seed
Buried deep, so deep,
A dear little plant
Lay fast asleep.
"Wake," said the sunshine,
"And creep to the light;"
"Wake," said the voice
Of the raindrops bright.
The little plant heard,
And it rose to see
What the wonderful
Outside world might be.

—*Selected.*

Seeds.

How many different kinds of seeds have the children seen? Let individuals name the ones they know, including all sorts, those of vegetables, flowers, weeds, or trees. Have a variety of seeds at hand to be named

and classified, and of some the children may make drawings on the blackboard or in note-books.

In some seeds, such as peas or beans, it is easy to discern the plant germ. Soak some peas, and then give one or two to each child for observation. Have the outer covering carefully removed so that the germ may be more distinctly seen. Let the children plant some of the soaked peas in a pot or box of earth, or, better still, bury them in wet moss or cotton-wool. Then from day to day watch the development of the tiny plants. Call attention to the large amount of food stored up in the seed for the use of the plant in its early growth, before the roots are ready to bring in nourishment for it.

Are seeds good for anything besides producing new plants? Lead the children to see that the plant-food laid by in the seed is good food also, in many cases, for boys and girls. How is pea-soup, or bean-soup, made? How many have ever eaten boiled rice? Are the squirrels the only creatures who like nuts? What is our bread made of? How many kinds of porridge have you seen? What is it made of?

Notice some of the fruits we enjoy so much, and note their relation to the seed. Where do you find the seeds of the strawberry plant? Which way do apple-seeds point, to the stem or the blossom end of the fruit? What kind of a seed has the cherry?

Tell the children of other uses to which seeds are put. What is flax-seed good for? Has any one of the children ever needed a flax-seed poultice, or seen it used at home? Ground up into meal it may be very helpful to us when we are sick. Who has ever seen mustard used in a similar way? Explain the manufacture and value of linseed oil. How could the painter get on with his work without flax-seed for this purpose? Sow some of this valuable seed in order to have a quantity of flax for study in the autumn.

The Little Plant.

Selected from Miss Poulsson's "Finger Plays."

In my little garden bed¹
Raked² so nicely over,
First the tiny seeds I sow³
Then with soft earth cover.

Shining⁴ down, the great round sun
Smiles upon it often;
Little⁵ raindrops, pattering down,
Help the seed to soften.

1. Arms enclosing imaginary garden bed on desk.
2. Left hand used as a rake, the fingers representing teeth.
3. With right hand imitate the sowing of seed and covering with fine earth.
4. Arms raised and curved inward until fingers touch.
5. Tapping lightly with finger tips on desk.

Then the little plant awakes!
Down⁶ the roots go creeping.
Up it lifts its little head
Through the brown earth peeping.

High and higher still it grows
Through the summer hours,
Till some happy day the buds
Open into flowers.

Pansies.

Selected from "Merry Songs and Games."

Key D—

{ | m : m : f | s : — : s | s : l : m | s : — : — | m : m : f }

1. Open your eyes, my pansies sweet, Open your
2. Open your eyes, my pansies sweet, Open your
3. Open your eyes, my pansies sweet, Open your

{ | s : — : — | s : l : m | s : — : — | m : m : f | m : — : r }

eyes, open for me; Where did you get that
eyes, open for me; Did a little
eyes, open for me; Driving away with

{ | f : t : l | s : — : — | d : d : s | t : — : l | s : f : r }

purple hue, Did a cloud smile as you came
sunbeam bold Kisses on your lips that tint of
face so true The chilly winds and wint'ry

{ | d : — : ||

through.
gold.
hue.

Empire Day.

Begin laying a foundation for patriotism by developing interest and pride in the home town or village, in the school-grounds, and in the school-room. Mud on the school-room floor, hats and coats thrown round the halls, waste paper about the streets,—open the children's eyes to see that these things are not as they should be.

Encourage the children to tell what they know of the war in South Africa, of the Canadian soldiers who went there, and of those who are now preparing to go. Tell them, if they do not already know, of the teachers now on their way from our own country to teach the Boer children.

Contrast our coins with those of some other country or countries. Show pictures or describe the flags of other countries. Take an interest in collections of stamps possessed by any of the pupils. If the school does not own a flag, use every available means to get one. For special talks on our own flag, see the hints for primary grades in the EDUCATIONAL REVIEW for May, 1901.

6. Let the right hand represent the plant, the fingers at first pointing and moving downward as roots, then the thumb turning upward as head, the whole hand being now raised gradually and turning slowly until at the end of the last verse the fingers are upright and slightly curved in to represent the blossom.

Straws that Indicate.

The salary was twelve hundred dollars. The candidate was almost sure of an election. She failed.

"What was the reason you did not choose Miss Marks for that position?" asked a brother superintendent. "She seemed especially fitted for it."

"Yes, she did seem to be in every way and in twenty-four hours more would have been elected, but I heard something that made it impossible for me to recommend her."

"What did you hear?"

"That she had paid no attention for three years to the bill that had been sent her from the publishers of her educational journal. When they insisted that the bill should be settled she sent an angry letter and requested that her paper be discontinued—and she hasn't paid it yet!"

"Are you sure of that?"

"Yes, I saw her letter."

"Well, I think you are right. I did not suppose there were any such teachers, till some amazing revelations on this particular matter of paying for educational papers came to my notice a few years ago. Since then I have personally looked after the matter among my own teachers. I bring it up in teachers' meetings. What a disgrace to the profession! I can't understand how teachers who seem honorable in other ways, can be guilty of such want of honor in this special matter. I believe that whenever they are, they are derelict somewhere in their duty to the children, whether we ever find it out or not. I don't believe anybody can lack a sense of honor in one thing and be perfectly square in everything else."

"That's just why I 'turned down' Miss Marks and took the quiet Miss Johns, who, if she comes to us with no blaze of glory, has no taint of dishonesty in her record."

"Did Miss Marks know why she was not elected?"

"Yes."

"What did she say?"

"What's that to do with teaching?" she replied.

"Exactly. That answer shows the escape you've made. Will teachers never understand that they teach by what they *are*, and not by what they seem? Well, I congratulate you."—*Primary Education.*

At a teachers' institute a lecturer offered a prize to any one who could correctly pronounce twenty words: address, bicycle, cocaine, adult, bona fide, caffeine, cerebrum, cerebral, cicatrix, cicatrices, clematis, data, eczema, exemplary, gladiolus, paresis, programme, pyramidal and squalor.

Value of Morning Exercises.

Many teachers appreciate the inestimable value of morning exercises in school. Some do not. Some that appreciate the value, do not always make judicious use of the time. It is safe to say that, as a rule, there is a great lack of system and skill in conducting these exercises. What valuable lessons in right doing, pure thinking, patriotism, courtesy, truthfulness, courage, kindness, honesty, industry, perseverance, patience and the like, may be inculcated! What noble ideals may be stimulated, what foundations laid for noble and beautiful character!

In properly conducted opening exercises many of our youth may be taught cleanliness of person, neatness in dress, good morals, and gentle manners. Does anyone claim that these should not be a part of the school course? Where can they be taught better than in opening exercises?

Where better, than in exercises, can be laid the foundation for solving the labor problem? Here can be enforced the principles of the golden rule, dignity of labor, co-operation, temperance and thrift. How? By properly selected anecdotes, stories, poems, memory gems, Bible quotations, songs, biographical sketches, current events, and continued readings of excellent books, like "Bird's Christmas Carol," "Patsy," "Widow O'Callaghan's Boys," "Two Little Knights of Kentucky," "Black Beauty," "Beautiful Joe," "Winning Out," "Little Lord Fauntleroy," "King of the Golden River," etc., etc. These can be read in five-minute readings, just before the opening hour. This helps most emphatically to solve the tardy problem as well.—*Moderator.*

Better Service and Better Pay.

The selection of the right teacher for each school is no easy matter. It imposes upon school boards a question of great weight. Many things should be taken into consideration. Everyone who holds a certificate cannot make a success in the schoolroom and before a teacher is employed, searching inquiry should be made as to his past success in the schools in which he has taught. We have sympathy for the teacher with meagre compensation, insufficient perhaps, to warrant the expense that is necessary to fit and keep himself fitted to teach, but we have much more sympathy for the pupils who are compelled to attend school where the teacher is not prepared. An untrained is like an unskilled workman who attempts to manage an engine, build a bridge, make a watch, or paint a picture.

Teachers should first of all understand that it will always be to their advantage in dollars and cents to do their best work no matter what their present salary may be. It is only as the value of the service rendered is increased that a just demand for higher salary may be made in any line of employment. Teachers who do their work conscientiously and efficiently may confidently believe that the future contains some proper recognition of their worth.—*Supt. J. K. Lowry, Wisconsin.*

Studies for Empire Day.

RULERS OF ENGLAND.

Two Williams, two Henrys, with Stephen between,
A Richard, a John, a Third Henry are seen.
Three Edwards next Second Richard precede,
Then three more Henrys in order succeed.
Fourth Edward and Fifth, and Richard number three
To Seventh and Eighth Henrys give way speedily;
Then Edward the Sixth, and Mary and Bess
Give place to the Stuarts' long line of distress;
Of whom James the First, Scotland's king, leads these names—
Charles the First, the two Cromwells, Second Charles and
Second James,

Queen Anne follows here, and William and Mary,
And four Hanoverians, whose names do not vary.
Then William the Fourth, and Victoria good and great,
Whose son is now ruling over Britain's proud state.

—John G. Wight.

KING EDWARD'S PRACTICAL TURN.

It is said that in King Edward Great Britain has an eminently practical monarch. Illustrating this the following is among the anecdotes told: A discussion had arisen among a circle of his immediate friends as to how they would each meet a sudden reverse of fortune. One of them turned to the Prince—it was before his accession—and said:

"If the monarchy were overthrown here, sir, what would you do?"

The Prince of Wales thought for a moment and then replied:

"Well, I think I might support my family by lecturing in the United States upon how it feels to be Prince of Wales."

As a matter of fact it is not generally known that the King is an excellent shoemaker, the trade which he was taught by the wish of the Prince Consort, who had all his children taught some trade. Prince Albert, King Edward's father, was himself a shoemaker, having learned the art in compliance with the German requirements that every boy should be taught some useful occupation.—*Little Chronicle*.

There are five great landings in English history, each of vast importance,—the landing of Julius Cæsar, which first revealed us to the civilized world, and the civilized world to us; the landing of Hengist and Horsa, which gave us our English forefathers, and our English characters; the landing of Augustine, which gave us our Latin Christianity; the landing of William, the Conqueror, which gave us our Norman aristocracy; the landing of William III., which gave us our free constitution.—*Dean Stanley*.

"If I were asked to specify any particular impressions derived from our journey, I should unhesitatingly place before all others, that of loyalty to the crown, and of attachment to the old country. And with this loyalty were unmistakable evidences of the consciousness of strength; of a true and living membership in the empire; and of power and readiness to share the burden and responsibility of that membership."—*The Prince of Wales, at the Guildhall reception, Dec. 5th, 1901.*

"The British empire is said to be loosely compacted. Yes, but the invisible nerves of sympathy which run throughout the great organism now beat in unison. The same spirit animates us all. A common patriotism binds us together, and I believe we may look forward with confidence to the future, in the belief that our union, now cemented by dangers incurred in common, will lead to the peace of the world, and will certainly secure the prosperity and happiness of the British empire.—*From Mr. Chamberlain's speech at the reception given to the Prince and Princess of Wales at the Guildhall, Dec. 5th, 1901.*

For the EDUCATIONAL REVIEW.]

"Victoria."

O'er the azure waters, on a mild September day,
Sweeps a flashing, gliding serpent from the south;
Just above its head an eagle follows all the way,
While the feath'ry spray seems boiling from its mouth.
But anon, as it draws nearer,
One might mark the outline clearer;
— Soon its movements show
'Tis a mighty fleet of galleys,
So the chief his army rallies
From the hills and fertile valleys,
Forth to meet the foe.

On the beach the Britons muster, as the fleet draws nigh,
Standing to defend their happy, fertile land;
Then a noise of hurling missiles, followed by a cry,
And the Britons raise their wounded from the sand.
Now the eagle hovers nigher,
And the Britons in their ire
Rush to stop its flight;
'Tis by many blades defended,—
With the sea their blood is blended,
Many a valliant life is ended
In the deadly fight.

Soon upon the shore the eagle unmolested flies,
O'er a scene that would have sickened hearts less stout;
But the dauntless Julius Cæsar stands, with flashing eyes,
Well pleased to hear "Victoria" the shout.
Ne'er before that word had sounded
O'er that island, ocean-bounded,
Strange, prophetic cry.
Groaning, dying Britons brighten;
As it did their suffering lighten,
E'en their lowered pulses heighten,
Though they know not why.

Near two thousand years have since been numbered with the
But the Roman call of triumph yet remains, [past,
With a dearer, holier import that must ever last,
While an English heart is found in her domains.
You may never hear it shouted,
When our enemies are routed;
That is not our mien;
Dearest names are seldom spoken;
Strongest ties are hardest broken;
Cæsar's cry will aye betoken
England's greatest Queen.

N. Y. CROSS.

THE CLASS-ROOM.

Here are some of the ways by which one country teacher made use of the long recess period and kept her children in the open air at the same time. Other teachers may find some ideas in this page from her note-book.

Trips to study cardinal points and gain clear ideas of position, distance and direction.

Trip to the top of a hill near by to obtain clear ideas of the meaning of "zenith" and "horizon," and to learn the facts that the higher one goes the wider the horizon grows.

Trip to mark the fall of shadows and to note the position of the sun in the sky at the hour (near noon).

Trip to the woods for the simple purpose of observing the beauties of an autumn day and to lead the children to observe and to admire a beautiful landscape.

Trip to study the coloring and falling of the leaves.

Trip to study a few common plants in their natural environment.

Trip to study the dissemination of seeds.

Trip to study the work of the frost.

Trip to study the work of the rain.

Trip to study a brook.

Trip to study a brook basin.

Trip to study the forms of water.

Trip to study the forms of land.

Trip to study the first spring flowers.

Trip to find what trees and shrubs first open out their buds into leaves.

Trip to find what birds are in the neighborhood, and study them.

In the country school I try to encourage mutual labor, rather more than individual effort. I find a good plan for that is this: Write upon the board "Honor Classes," let each class try one week to appear in the list. At the end of the week write the names of such classes as have shown most interest in general class work under the title "Honor Class." In this way not one wants to be the drone of his class.

For neatness, I tie a blue ribbon to the seat of the pupil making the neatest and most careful work, also the one keeping his desk cleanest. I do this at the end of the month.

For a Friday afternoon exercise, the question box is excellent. Place a box, with a rectangular slit in the top, in some convenient place. The pupils may write questions on slips of paper, and on the other side of the slip write the name of the pupil who is to answer—of course giving the harder questions to the more advanced pupils. The questions may be written and placed in

the box at any time during the week, or a period may be given for that purpose Friday. The last half hour of the session, give to answering the questions. The teacher opens the box, calls the pupil's name, and reads the question. If he can not answer, another pupil or the teacher may. Who was "Old Man Eloquent?" "What is the largest city in the world?" and "Who invented the sewing machine?" are typical questions.

I sometimes draw on the board, where all primary pupils can see plainly, a flight of stairs or a ladder. On each step or round I print or write a word which the pupil may be familiar with, if used as a means of review, or a new word as the condition may require. I then call the pupils' attention to it, telling them that tomorrow we shall see how many can climb the ladder, it being understood that every time a word is missed or the pupil can not pronounce it, he falls to the bottom of the ladder and the next pupil tries. I found this device, used occasionally, stimulated interest on the part of the little ones, and varied the monotony of mere word-pronouncing, every child being eager to mount to the top of the ladder.—*Popular Educator*.

THE FLOWERS IN OUR DISTRICT.—A great many flowers grow in our woods and on our prairies. The first flowers I see in the spring are the —, —, — and —. (Describe each). The flowers I know the names of are the —, —, —, —, —, —, —, —, —, —, —, —, —, —, —. Some flowers — in the house. We have in our windows the —, —, —, and —; and in our garden the —, —, —, —, and —. Flowers add joy to life. (Show how they add to the beauty of homes, grounds, etc.) Add as much as you can think of about the beauty, uses, growth and life of flowers.

THE BIRDS IN OUR NEIGHBORHOOD.—The — makes its nest of — and — (name materials), and lays — eggs of a — color. The — is a — bird (describe male and female appearance, size, plumage, etc.) It is a — singer. (Give syllables representing the sounds). In — the — leaves for the south, and about the month of — it returns. The — feeds on —, and —. The enemies of the — are —, —, and —. I often see the — down in our woods, meadow or field. Add any other particulars you may have observed.—*Western School Journal*.

If you can, be sure to have some place in your school-room where the children may go to read, and thus break the monotony of the day and add to the attractiveness of the room. The prettiest pictures may be hung in this corner; a table with books and magazines should be placed here, collections of pictures, scrap-books, etc. A rocking chair and one or two rugs will make this a most wonderful spot in the eyes of the children, and the privilege of sitting there and reading will be eagerly sought after.

MEMORY GEMS.

The country ever has a lagging spring,
Waiting for May to call its violets forth.

—BRYANT.

Sweet May hath come to love us,
Flowers, trees, their blossoms don ;
And through the blue heavens above us
The very clouds move on.

—HEINE.

When April steps aside for May,
Like diamonds all the rain-drops glisten ;
Fresh violets open every day ;
To some new bird each hour we listen.

—SELECTED.

If the wren can cling
To a spray a-swing
In the mad May wind, and sing and sing
As if she'd burst for joy ;—

Why cannot I
Contented lie
In his quiet arms, beneath his sky,
Unmoved by life's annoy ?

—*The Independent.*

Love thyself last ; cherish those hearts that hate thee ;
Corruption wins not more than honesty.
Still in thy right hand carry gentle peace,
To silence envious tongues ; be just and fear not ;
Let all the ends thou aim'st at be thy country's,
Thy God's and Truth's.

—SHAKESPEARE—*Henry VIII.*

The first great work (a task performed by few)
Is that yourself may to yourself be true.

—WENTWORTH DILLON.

Happy is he who has learned this one thing—to do the plain
duty of the moment quickly and cheerfully, whatever it
may be.

—SELECTED.

Be noble ! and the noblest that lies
In other men, sleeping, but never dead,
Will rise in majesty to meet thine own ;
Then wilt thou see it gleam in many eyes,
Then will light around thy path be shed,
And thou wilt never more be sad and lone.

—JAMES RUSSELL LOWELL.

Our country is that spot to which our heart is bound.

—VOLTAIRE.

A power which has dotted over the surface of the whole
globe with her possessions and her military posts, whose morn-
ing drum-beat following the sun, and keeping company with
the hours, circles the earth with one continuous and unbroken
strain of the martial airs of England.

—DANIEL WEBSTER.

Oh Caledonia ! stern and wild,
Meet nurse for a poetic child !
Land of brown heath and shaggy wood,
Land of the mountain and the flood,
Land of my sires ! What mortal hand
Can e'er untie the filial band,
That knits me to thy rugged strand !

—WALTER SCOTT.

Arm of Erin, prove strong, but be gentle as brave,
And, uplifted to strike, still ready to save ;
Nor one feeling of vengeance presume to defile
The cause or the men of the Emerald Isle.

—DRENNAN.

We love those far-off ocean isles,
Where Britain's monarch reigns ;
We'll ne'er forget the good old blood
That courses through our veins ;
Proud Scotia's fame, old Erin's name ;
And haughty Albion's powers,
Reflect their matchless lustre on
This Canada of ours.

SIR JAMES EDGAR.

Here in Canadian hearth, and home, and name,—
This name which yet shall grow
Till all the nations know

Us for a patriot people, heart and hand
Loyal to our native earth, our own Canadian land !

—CHAS. G. D. ROBERTS.

Thou can'st not to thy place by accident ;
It is the very place God meant for thee.

—TRENCH.

Each morning sees some task begun,
Each evening sees its close.

—LONGFELLOW.

He who loves the best his fellow-man
Is loving God the holiest way he can.

The special verse for the National Anthem to be used
at the coronation, and to which the royal sanction has
been given, is as follows :

With England's crown to-day
We hail our King, and pray
God save the King.
Guide him in happiness,
Guard him in storm and stress,
Then in thy kingdom bless,
And crown our King.

We all know that history and geography go hand in
hand. History must always be studied in connection
with geography, and *vice versa*. The following is a
method in teaching these studies, which, as far as my
school is concerned, always proved successful. When
the history class is called on to recite, each member of
the class comes prepared with pencil and note-book.
A large map is placed before the class. The recitation
is carried on in the usual way, but whenever a city,
river, or the like, is mentioned, it is located on the map
and then jotted down in the note-book. Now, when
the class in geography recites, after their regular lesson
in that study, the note-books are again referred to.
The places which had been located on the map during
the history class are now located from memory. This
serves as a review in geography, and by requiring the
class to state an historical event connected with each
point that they locate, it will be found to be an excel-
lent review in history as well.—*Selected.*

CURRENT EVENTS.

Having built the great Siberian railway, Russia is planning other great works for the development of her vast territory. In addition to the project of running a canal across European Russia, from the Baltic to the Black Sea, which has been for some time in contemplation, it is now proposed to join the Black and Caspian Seas by means of a canal. Still a greater project is the creation in Central Asia of a great inland sea which would increase the area of the Sea of Aral some six or seven times, and double the area of the Caspian, while joining the two seas by a navigable channel.

The situation in Venezuela is again critical. Gen. Castillo, leader of the government forces, has been killed in battle with the revolutionists.

There is a measure before the French parliament to cut a ship canal across the southwestern part of France, from the Atlantic seaboard to the Mediterranean.

Shame and indignation find expression throughout the United States because of the horrible cruelties inflicted by their armies upon the natives of the Philippines. The government has ordered an investigation.

The amount of the loan asked for by the British government to meet war expenses was subscribed for ten times over.

Thousands of French Canadians working in the silk and cotton mills of the New England states are desirous of returning to their own land, and a party of them has already gone to settle in the Northwest, where other settlers from across the lines are going in increasing numbers. Mistaken ideas of the severity of the climate keep many English immigrants from going there; but it will soon be more generally known that the most desirable unoccupied land in America is in the Canadian Northwest, and that the climate is one of its attractions. An arch of Canadian cereals and grasses, to be erected in London at the time of the King's coronation, will have the effect of disabusing the minds of many who think of the Dominion of Canada as a frozen wilderness.

The King's birthday, which occurs on November 9th, is to be celebrated in England this year on the 30th of May. Probably it will be decided to celebrate it in Canada on the 24th of May, which is already a holiday.

In the new courts of justice now being established in the Transvaal, the English language only is to be used.

Wireless telegraph communication is to be established between the north of Scotland and Suderoe (South Island), in the Faroes.

On the 20th of May the new government of Cuba will be established, and Cuba will become, to a large extent, an independent nation. Will the story of South Africa be repeated, and the Cubans, taking advantage of the withdrawal of United States control, proceed to arm themselves against their benefactors? Probably their independence will not be allowed to go that far.

The Boer leaders met last month at Clerksdorp, in the southwest of the Transvaal, to consider terms of peace. There were present Mr. Steyn, as president of

Orange Free State; Mr. Schalkburger, as acting president of the Transvaal; Gen. Meyer, commander-in-chief of the Orange Free State forces; Gen. Botha, the Transvaal commander-in-chief; Gens. DeWet and Delarey, and others. It is believed that an agreement has been reached which will put an end to the war. The conference adjourned to allow the military leaders to consult with their men in the field, for this is required by Boer law. It is to meet again on the 15th, when the result will be known. In the meantime, the government is sending to South Africa men and materials to carry on the war another year or two, if required. A part of the fourth contingent of Canadian troops has already left Halifax for the seat of war.

While still sending men to the front, to help in carrying on the war, Canada is also sending women, for a far different purpose. Forty Canadian teachers are now on their way thither, to join with others in the work of elevating the people who must now become British subjects. Already, in the refuge camps of the Orange River Colony, there are more children at school than there ever were at any one time under the Free State government.

The will of Cecil Rhodes provides scholarships at an English university for two students from each state and territory of the United States of America. He had at heart not only the welfare of the British empire, but also the re-union of the English-speaking race, which, he believed, would eventually lead to universal peace.

British troops are held in readiness at Cairo to proceed to the Soudan, where trouble is again threatened.

The recent death of the grandfather of the young King of Spain will not affect the accession festivities, which are to be held the middle of this month.

To Boer settlers who may wish to come to Canada after the war is over, the Dominion government will give a free homestead in the Northwest, the usual assistance in money, and admission to the same terms of civil liberty as other settlers; and it is expected that some of the Boer prisoners will accept this offer.

The Hong Kong contingent for the coronation ceremony will go to England by way of Canada.

A party of prospectors in Sonora, the most western state of the United States of Mexico, report the discovery of a wonderful group of ancient silver mines. Indications are said to point to the working of these mines by thousands of workmen perhaps for centuries.

More than a million forest trees will be planted this spring in the state of New York, chiefly under the direction of the State College of Forestry.

The uprising in Santo Domingo is spreading, and the Dominican government is in a critical position.

Surveys have been made for a great railway in Australia, which will extend through all the southern states of the new commonwealth, and north along the eastern coast to Rockhampton, in Queensland. It will cross the great desert lying north of the Australian Bight, one of the most barren deserts in the world.

The plague is again making terrible ravages in some parts of British India,

That much dreaded insect, the San Jose scale, has made its appearance in a new place in New Jersey. It is believed by those who have followed its course that it is spread to some extent by birds. The Canadian government is taking stringent measures to keep it out of this country; and for that purpose subjects all imported nursery stock to a special treatment when it passes the custom house.

A Russian explorer has discovered in Central Asia a species of deer hitherto unknown to naturalists. It resembles a small roe-buck, with a back of light blue in color, and a completely black head; and its neck is adorned with a magnificent white mane. Squirrels of unknown varieties were also obtained.

The colonies, while possessing one-fifth of the commerce of the British empire, contribute less than one-hundredth of the cost of protecting it.

The ice-breaking steamers on Siberian lakes, intended to keep up connection in winter between the different sections of the Trans-Siberian railway, have failed to accomplish the work.

The people of Hawaii are said to be in a deplorable condition as a result of the annexation of their country to the United States, and even those who were most eager for it are now suffering from its effects. The United States navigation laws are the chief cause of complaint.

SCHOOL AND COLLEGE.

Mr. H. H. Hagerman, teacher of Natural Science in the Fredericton high school, has arranged a self-adjusting machine known as the automatic tide indicator. This machine is to indicate the rise and fall of water in the river each day. It now indicates a rise and fall here of from three to four inches each day.—*Gleaner*.

A very successful concert was recently given by the pupils of the Andover grammar school under the supervision of Principal Veazey, and Miss Bessie E. Scott, the primary teacher. The sum of \$57.70 was realized, which will be expended in the purchase of apparatus and books for the library.

Inspector Mersereau, of Northumberland County, in spite of an unfortunate accident which confined him to the house for the first month of this year, has been over a large part of his inspectorate, including the County of Northumberland and a portion of Kent.

Mr. H. C. Henderson, late of the Fredericton High School, has been teaching psychology and pedagogy in the State Normal School at Milwaukee, Wisconsin, during the winter. This is a large and well-equipped school with a faculty of twenty teachers and an enrolment of about 450 students. It is but one of seven normal schools in that state. The course is two years. Nearly all the students are graduates of a four years' high school course, and very few are under twenty years of age. All students in the senior year are required one period a day for forty weeks either in the practice, or model school,

or in the city schools. The supervision of this work employs nearly the whole time of two men. Mr. Henderson returns in June to the Chicago University to resume his studies for the degree of Ph.D.

Cecilia J. M. Doyle, teacher of Grand Lake, Hants County, N. S., with the help of her many friends, held a pie social on the 14th of April, and raised the sum of \$22.15, which will be used in procuring teacher's desk, paint, blinds and other equipments for the school.

Miss Etta Alexander and her scholars, of Peel, Carleton County, have added to the schoolroom some fine historical, poetical and pastoral scenes in the form of framed pictures which are useful for their educative as well as artistic value.

The Summer School of Manual Training for New Brunswick, under the Macdonald manual training fund, will this year be held at Fredericton, from July 3rd to 31st inclusive. Two courses will be given—wood-working and mechanical drawing, and cardboard construction work. Those electing to take either course will devote their whole time to that course. In woodwork, two classes will be formed, one for beginners and one for advanced work. On Wednesday afternoons, excursions will be made to the woods in the vicinity of Fredericton, and the various kinds of trees studied. Mr. John Brittain, of the Normal School, has kindly consented to conduct this branch of the work. Tuition and materials will be free to teachers from all parts of New Brunswick, but only a limited number can be accommodated. Forty can be admitted to the wood-work classes, and twenty-five to the cardboard course. Those desiring to attend should make application, stating which course is desired, before June 15th. Address all communications to E. E. MacCready, Director, Fredericton, N. B. The last session of this school, which was held in St. John, in the summer of 1900, was greatly appreciated by all who attended, and accommodation could not be provided for all who wished it.

The trustees and ratepayers of School District No. 1, North Head, Grand Manan, deserve credit for the improvements lately made in their school buildings and grounds. Within the last three years they have ceiled all the four rooms, have placed Copp heaters in each, and surrounded the grounds with a handsome wire-net fence. This last improvement gives a handsome appearance to the premises, and will prove a satisfaction to all concerned from its durability. Arrangements have been made for a general observance of Arbor Day on Friday, 9th inst.

The Teachers' Institute for District No. 4 met at Windsor on the 1st and 2nd of May, and that for District 5 at Annapolis on the 8th and 9th of May. We hope to give reports of these meetings in the June REVIEW.

The following Maritime Province students passed for degrees in McGill examination: Civil Engineering—Herbert H. Shaw, Brackley Point, P. E. I. (prize for summer thesis); Henry P. Borden, Kentville, N. S. Electrical Engineering—E. L. Franklin, Wolfville, N. S. (honors in electrical engineering, laboratory work); M. A. Maxwell, St. Stephen, N. B.; Jas. M. Smith, Petitcodiac, N. B. (honors in electrical designing and electrical laboratory work); Wm. E. Murphy, Shelburne, N. S. Mechanical Engineering—F. E. Stearns, Morrell, P. E. I. Mining Engineering—G. S. Burchell, New Campbellton.

'ROUND TABLE TALKS.

D.—1. Please describe a Wren that might be seen near Kennebecasis Bay. We think we may have seen one near the school.

2. About the middle of March, for several days, some small birds shared a clump of spruce trees and a cedar hedge with the English Sparrows that had been there all winter. They came near the school for crumbs thrown them, and sometimes dragged the larger pieces some distance before eating them. The birds were about the length of the English Sparrows, but more slender; black above, with quite a light breast. We would like to have the probable name.

3. (a) What is the cost of copyright? (b) Does it vary with the size of the work? (c) To whom should application be made?

1. Perhaps the Winter Wren, which is lightish brown, with white spots all over, and which may be known by a short tail standing at an acute angle over the back.

2. Your descriptions are not sufficiently full to enable us to tell with any degree of certainty. The bird was probably the Tree or White-bellied Sparrow, upper parts steel-blue, under parts pure white. They sail about in circles, and frequently pause to rest on telegraph wires, where their pure white breasts easily distinguish them from other swallows.

4. (a) \$1.00. (b) No. (c) The Department of Agriculture, Ottawa.

SUBSCRIBER.—Will you kindly publish in your next issue of the REVIEW an explanation of the term Standard Time and oblige.

Standard time is the time established by law, or general usage over a region or country. In England the standard time is Greenwich mean solar time. In the United States and Canada four kinds of standard time have been adopted by the railroads and accepted very generally by the people, viz.: Eastern, Central, Mountain and Pacific, corresponding severally to the mean local times of the 75th, 90th, 105th and 120th meridian west from Greenwich, and being therefore five, six, seven and eight hours, respectively, slower than Greenwich time. To these may be added the time of the 60th meridian, which touches Canada on the eastern part of Cape Breton, four hours slower than Greenwich time. This is Intercolonial Standard (not Intercolonial Railway, which keeps Eastern Standard time), or Maritime, or Atlantic as it is now coming to be called. Both the Intercolonial and Canadian Pacific railways have signified their intention of adopting this time, which will be a great boon to the people of the Atlantic Provinces and travellers who have now to keep pace with three modes of keeping time: Eastern or railway time, New Brunswick and P. E. Island local time, and Halifax and nearly all Nova Scotian time which is that of the 60th meridian, or the proposed Atlantic Standard time.

RECENT BOOKS.

GUIDE TO NATURE STUDY. By Mattie Rose Crawford. Copp, Clark Co., Toronto.

This is a nature-study book by one who understands the needs of teachers, and is intended to be helpful to those teachers whose training in this subject has been comparatively limited. Part I. is devoted to the pedagogics of nature-study, in itself and in its relation to other school studies. Part II. contains model lessons, well worked out, and is followed by a suggestive list of topics. Part III., which equals both the others in bulk, contains illustrated notes as guides to observation, and gives much information about birds, flowers, insects, fishes and minerals. Not the least valuable chapter is the closing one giving a selected list of helpful books for teachers. A young teacher with this book in hand will find difficulties still in plenty, but the task of surmounting will be made more easy and more pleasant.

GRILLPARZER'S *Der Traum ein Leben*. Cloth. Pages 128. Price 60 cents. FULDA'S *Der Talisman*. Cloth. Pages 125. Price 35 cents. Both carefully edited. With introduction and notes. D. C. Heath & Co., Boston.

These texts are recommended to students by the Committee of Twelve of the Modern Language Association for reading in high schools, and should prove popular for college reading. Each text is a model in clearness and beauty of page. *Der Traum* is one of the most popular dramas of Grillparzer, who ranks in German literature next to Goethe and Schiller. He is studied as a classic in every German school, and his plays are in the repertoire of every German theatre. *Der Talisman* is by far the most popular of the plays of the famous modern dramatist, Fulda, and has been one of the greatest theatrical successes of recent years.

NAPOLEON. Par Alexandre Dumas. Adapted and edited by W. W. Vaughan, M. A., Clifton College. Cloth. Pages 156. Price 2s. Macmillan & Co., London.

In this we have extracts from Alexandre Dumas' historical romance of Napoleon. The great subject, handled by a master, presents to us the principal scenes in the life of the military genius who ruled for a time the destinies of Europe. It arouses from the first the interest of the reader, and with the introduction, notes and vocabulary, forms an admirable means of obtaining a grasp of the French language and the inimitable style of the author.

THE TEACHING OF ELEMENTARY MATHEMATICS. By David Eugene Smith, Principal of the State Normal School at Brockport, New York. 12mo. Cloth. 328 pages. Price \$1.00. Geo. N. Morang & Company, Toronto.

This hand-book is intended to help those who care to know something of the great questions in teaching mathematics. Whence came this subject? Why am I teaching it? How has it been taught? What should I read to prepare for my work? The author aims to answer these questions and to present in a simple and succinct form to teachers the results of mathematical scholarship, to be absorbed by them and applied in their classroom teaching.

RIVERSIDE LITERATURE SERIES: Shakespeare's *Twelfth Night*, and Ouida's *A Dog of Flanders* and *The Nurnberg Stove*. Paper. Price 15 cents each. Houghton, Mifflin & Co., Boston.

Messrs. Houghton, Mifflin & Co. have prepared these numbers (149, 150) of the series with special attention to the needs of schools, giving an adequate introduction to both.

THE WIDE WORLD and NORTHERN EUROPE. Cloth. Pages 122, each. Illustrated. Price 25 cents each. Ginn & Co., Boston. 1902.

These volumes are a part of a series of supplementary readers, the material of which has appeared and is now appearing in *The Youth's Companion*. The books are attractive in binding, convenient in size and low in price. The first volume gives a brief comprehensive survey of child life in Japan, Egypt, Holland, France, Switzerland, Sweden, South America, and Alaska. The second is composed of descriptions and stories which portray interesting aspects of the following subjects: The Faroe Islands, Life in Norway, Scenes in Holland and Belgium, Studies of French Life, Life in the Alps, and a journey down the Moselle.

VICTOR HUGO's *Notre Dame de Paris*. International Modern Language Series. Edited, with introduction and notes, by John R. Wightman, Professor of Romance Languages, Oberlin College. Cloth. 445 pages. Price 80 cents. Ginn & Co., Boston. 1902.

This is the first American edition of "Notre Dame." As the original work is too long to be read in college classes, the editor has had to shorten it considerably, but he has endeavored to keep the story intact and to maintain the spirit and characteristics of the author. The introduction aims to set forth a succinct life of Hugo, in the light of most recent scholarship, and the many allusions of the text find in the notes full and lucid explanation.

RIVERSIDE BIOGRAPHICAL SERIES: *Stephen A. Douglas*. By Wm. Garrott Brown, pages 140; and *Samuel de Champlain*, by Henry Dwight Sedgwick, jr., pages 126. Cloth. Price 50 cents each. Houghton, Mifflin & Company. Boston. 1902.

The biographical sketch of Stephen A. Douglas introduces us to one of the most stirring decades in United States history, that between 1850 and 1860, when the country was on the verge of the civil war, and the central figures were Lincoln and Douglas. The story is replete with stirring incident and is well told. The story of Champlain's discoveries and colonization carries us back three hundred years to the continent of America as it then was. The period is an interesting one, and the strong figure of Champlain appeals to every reader, but the writer of the sketch has done but scant justice to the man or the story. It is too much in the style of a school boy's essay, failing to interpret the genius of Champlain or the significance of his work. It is devoid of enthusiasm, lacking in perspective, and no judgment is displayed in handling details.

SCIENTIFIC SLOYD. A new original system, founded on geometrical principles. By Anna Molander. Cloth. Pages 63. Price 50 cents. C. W. Bardeen, Publisher, Syracuse, New York.

This little book, it is alleged on the title page, is designed for teachers, colleges and for primary, elementary and grammar schools. "Sloyd," the author tells us in the opening chapter, "is the verbal expression for a combined mental and manual training along correct pedagogical lines." Farther on we are told that "Sloyd creates respect and consideration for manual labor and a closer understanding and appreciation of the workingman;" and finally we come to the statement that "manual training has nothing to do with education; it is only a special kind of factory work, by which individuals are transformed into living machinery." Surely this is juggling with words. The writer of the book is apparently ignorant of the fact that the terms "sloyd" and "manual training" are practically

synonymous, and that the leaders of each movement are now in full accord on general pedagogic principles. It was only the narrow-mindedness of some of the early Swedish "Sloyders," who insisted their way was right that brought about any controversy. Any attempt to revive a dead, old-world issue is ridiculous.

NATURE STUDY AND LIFE. By Clifton F. Hodge, Assistant Professor of Physiology and Neurology in Clark University, Worcester, Mass. With an introduction by Dr. G. Stanley Hall. 12mo. Cloth. 514 pages. Illustrated. Price \$1.50. Ginn & Company, Boston.

The work contains the results of five years' special study. In the point of view, in the selection of the subject-matter, and in the presentation of methods of conducting the work, this book marks a definite advance over other publications on the subject. It is a determined reaction against the special and technical, and forms an earnest effort to give fundamental and universal interests in nature their deserved place in our system of public education. After presenting this point of view clearly in the opening chapter, the author takes up concrete lessons on the animals and plants that form the natural environment of the home, and group themselves most closely about the life and interests of the child. Each form is studied alive and at work, as a life story to be read at first-hand in nature and especially in its relations to man. This book is bound attractively in blue and gold, so that the volume is appropriate in appearance not only for the schoolroom, but also for the home reading table or bookshelf. The illustrations are of unusual value and interest.

The University of Chicago Press announces for immediate publication the first of the Decennial Publications of the University, which have been planned in connection with the celebration of the completion of the first ten years of the corporate existence of the institution. In general, the series will set forth and exemplify the material and intellectual growth of the University during its first decade, and will consist of ten volumes, which are now in an advanced stage of preparation.

MAY MAGAZINES.

John Corbin contributes to the *Atlantic Monthly* the first of a series of papers on outdoor life in a delightful article entitled *The Modern Chivalry*, in which he eulogizes the modern passion for field sports, and defends them. Prof. J. Laurence Laughlin offers an analysis of the modern development of Higher Commercial Education, as shown in many American collegiate courses. . . . From its charming cover to its last page the May issue of the *Ladies' Home Journal* excels in all ways. The most important new feature is the beginning of Ernest Thompson Seton's department for boys, which is written and illustrated by the famous naturalist-author-artist. There's no end of good and helpful advice and interesting facts in the various departments, and the illustrations are conspicuous and attractive. . . . There are two illustrated papers of popular science in the *Century*, both of information now first published—*Is the Moon a Dead Planet?* by Professor W. H. Pickering, of Harvard, and *How the Voice Looks*, by Professor Scripture, of Yale—the latter with diagrams of the voices of Joseph Jefferson, Senator Depew, and others. There are articles of personal

interest relating to Whittier, Stoddard, the actor (his recollections), the Queen of Roumania, and the poet Swinburne—a compact biographical criticism, by Edmund Gosse; and Sylvester Baxter writes practically of Civic Improvement: What to do and how to do it.... The long story in the May *St. Nicholas* is an Arthurian romance by Allen French, author of the novel "The Colonials," and another long contribution tells of the wonderful mail-steamer that delivers the mails to passing steamers on the Great Lakes, a service of danger and daring. In the Nature and Science Department the outside world is studied, explained and pictured... The game of basket-ball, combining as it does the exercise of both the mental and physical powers, found instant recognition among the directors of the physical training schools for women, and it may be said to mark the introduction of the true athletic spirit in women's colleges. The May *Delineator*, in the fourth article in its series on athletics for women, fully describes this game, which is so interesting to both participants and spectators, and shows some especially fine pictures.... There are several notable pictorial features of peculiarly timely interest and also others of an artistic flavor in the Magazine Number of the *Outlook* for May. Art and music are respectively represented by an article on the great Spanish painter Sorolla, written by one of his pupils, and illustrated by reproductions of paintings and original sketches, and by a thoughtful, critical and personal article on the work of Grieg by Daniel Gregory Mason. Articles relating to the season are, Mr. John Burroughs' little out-of-door essay and poem called *A Spray of Arbutus*; and Mr. J. H. McFarland's *A Story of Some Maples*, which is illustrated with many exceedingly beautiful photographs of trees and their flowers, taken by the author.... Among the practical papers in the

May *Chautauquan* are *The Utilization of Time-waste, Food for the Farmer's Family and Children Out-of-doors*. The travel article for the month is *Among the Alps*. It is profusely illustrated.... The May number of the *Canadian Magazine*, just to hand, contains some excellent material. John Innes' beautifully illustrated article on the Buffalo Hunting, L. S. Channell's profusely pictured description of the Eastern Townships, and Mr. Colquhoun's masterly delineation of Lord Rosebery, are three worthy contributions. The stories and lighter features are as entertaining as usual. All booksellers.

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THE next Academic year begins September 25th, 1902, when Fourteen County Scholarships will be vacant. These Scholarships (value \$60 each) will be awarded on the results of the Entrance Examination to be held July 3rd, at all the Grammar School centres. To candidates who hold a Provincial School License of the First Class an Asa Dow Scholarship (value \$100) will be offered in competition in September. The Departments of CIVIL AND ELECTRICAL ENGINEERING are now open to properly qualified students.

Copies of Calendar containing full information may be obtained from the undersigned.

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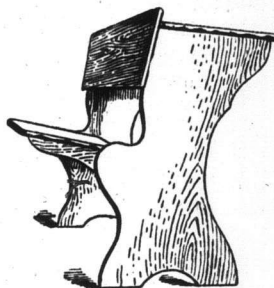
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EDUCATION DEPARTMENT N. B.

Official Notices.

I. NUMBER OF TEACHING DAYS.

For term ending June 30th, 1902, the number of teaching days is 122; in the City of Saint John, 121.

II. DEPARTMENTAL EXAMINATIONS.

a. *Closing Examinations for License.*—The Closing Examinations for License, and for Advance of Class, will be held at the Normal School, Fredericton, and at the Grammar School Buildings, in St. John and Chatham, beginning on Tuesday, the 10th day of June, 1902.

The English Literature required for First Class candidates is Shakespeare's "Merchant of Venice," and selections from Keats, Shelley and Byron as found in Select Poems, used in High Schools.

b. *Normal School Entrance Examinations and Preliminary Examinations for Advance of Class.*—These examinations will be held at the usual stations throughout the Province, beginning on Tuesday, July 1st, 1902, at 9 o'clock a. m.

The requirements for the several classes will be found on pages 115 and 116 of the School Manual.

Candidates are required to give notice to the Inspector within whose inspectorial district they wish to be examined not later than the 24th day of May. A fee of one dollar must be sent to the Inspector with the application.

c. *Leaving Examinations.*—Held at the same time and stations as the Entrance Examinations.

These Examinations are based on the requirements of the Course of Study for Grammar and High Schools as given in the Syllabus for Grades IX, X and XI.

The subjects for the Leaving Examinations shall consist of English Language, English Literature, History and Geography, Arithmetic and Bookkeeping, Algebra, Geometry, Botany and Agriculture, with any two of the following: Physics, Chemistry, Physiology, Latin, Greek, French—(Nine papers in all).

d. *Matriculation Examinations.*—Held at the same time and stations as the Entrance Examinations. The Matriculation Examinations are also based on the requirements of the Course of Study for Grammar and High Schools as given in the Syllabus for Grades IX, X and XI.

All candidates for Matriculation shall take the following subjects: Latin, Arithmetic and Algebra, Geometry, History and Geography, English Language, English Literature, Chemistry; also, either Greek or French and Natural History.

All candidates for the Matriculation and Leaving Examinations must send in their applications to the Inspector within whose inspectorate they propose to be examined, not later than the 24th day of May. A fee of two dollars must accompany each application. Forms of application may be obtained from the Inspectors or from the Education Office.

The English Literature Subjects for the Matriculation and Leaving Examinations will be the same as for the First Class Candidates at the Closing Examinations.

Examinations for Superior School License will be held both at the June and July examinations.

The First Book of Caesar's Gallic War will be required in both cases. The Mathematical Paper will be based on Wentworth's Trigonometry and F. H. Stevens' Mensuration for Beginners.

e. *High School Entrance Examinations.*—These examinations will be held at the several Grammar and other High Schools, beginning on Monday, June 16th, at 9 o'clock, a. m. Under the provisions of Regulation 46, question papers will be provided by the department. The principals of the Grammar and High Schools are requested to notify the Chief Superintendent not later than May 15th, as to the probable number of candidates.

For further details in regard to the Departmental Examinations see School Manual, Regulations 31, 32, 45 and 46.

III. PROVINCIAL EDUCATIONAL INSTITUTE:—

The Educational Institute of New Brunswick will be held in Fredericton, on Thursday, Friday and Saturday, June 26th to 28th. Teachers who attend the Institute will not be required to teach on Monday, June 30th.

J. R. INCH.
Ch. Sup. Ed.

EDUCATION OFFICE, April 8th, 1902.

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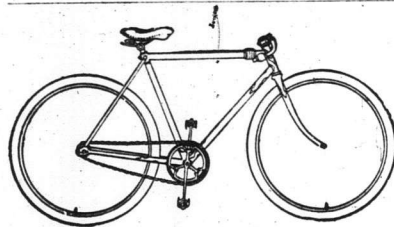
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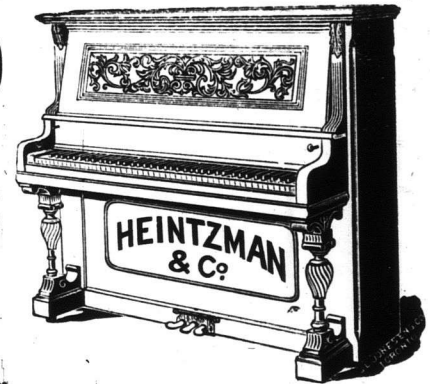
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