


# - Nature Study 

Adaptation to the Season

By John Dearness, M.A., Vice-Principal Normal School,
Travellers tell us that the most progressive peoples are native neither of tropical regions where the weather is warm all the year round nor of arctics where there is a constant struggle to get food and clothing but of the temperate latitudes where there are well marked summer and winter seasons.

In what ways are people benefited by having to prepare for winter ?

Do dwellers in town have to make as much preparation for winter as those who live on the farm ? Give reasons for your answer.

Farmers, gardeners, lumbermen and some other classes of people have as a rule different kinds of work in summer from what they have in winter. Describe these differences.

Evenings and holidays in winter are not usually spent in the same way as in summer.

What differences have you observed ?
What preparations have you known people to make for the pleasant or useful occupation of winter evenings ?

Inquire among your grown-up frionds in which season-summer or winter-their health is better or their weight greater. What reasons, if any, are given for the differences ? 1

Some birds reside with us during the summer months only; others are winter sojourners ; but some remain with us all the year. From your own observation make lists of these three classes.

What birds have you observed migrating, that is going south, in the fall ? What relation has the kind of food they use to their need to migrate ?

Closely watch the winter residents to discover what they feed upon. Try this fall and winter to recognize and study chickadees, nuthatches, kinglets, downy woodpeckers, bluejays, grosbeaks, waxwings and snow-birds.

Farmers' children and those who can visit the country may have opportunities to learn something of hor the little wood-folk prepare for winter.

Have you ever seen the winter home of a squirrel or field-mouse ? If so, describe it.

What kinds of food do these animals store ? How do they carry it to their store-houses ? Why do they need less food in a month in winter than in the same time in summer? Why do large animals such as the horse need more food in winter than in summer ?

Have you noticed any wild animals in the woods which change the color or thickness of their fur as winter comes on ? What advantage is it to a weasel to be white in winter ?

Why are woodchucks and raccoons so rarely seen in winter? Are skunks seen when snow is on the ground ?

Record any observations you have had the opportunity to make on preparation for winter by muskrats, martens, wild or tame rabbits, bats, or any other kind of wild mammal.

The cold-blooded animals-frogs, toads, salamanders, snakes-are seldom if ever seen when the snow is on the ground. Can you discover how they prepare for winter ? Have you observed fish swimming in the streams in the winter ?

Very interesting investigations of the ways in which insects adapt themselves to the seasons may be made. Honey-bees, wasps, mosquitoes, house flies, grasshoppers, moths, butterflies, beetles, in great varicty, have each and all their own way of escaping destruction by frost-some in the egg, some as larvae, some in the pupal stage and some as perfect adult. One or other of these stages may be sought in tree-tops, or in the earth, in woody tunnels or the heart of seeds, in dry crevices or immersed in water. When there is so great abundance and variety of insect species you ought to be able to find out, if you try, how one or more insects prepare to pass the winter.

I do not expect you to make all these observations this fall. Some of the animals mentioned you may not even see. Very likely there are other animals not named on this page which you will have a chance to study and which will exercise your observing and descriptive powers just as well.

Perhaps there are books which tell the ways in which all these animals prepare for winter but I should like you to think of the answer to this question :-Why will it probably be more useful to you and add more to your enjoyment to discover by your own efforts how even a few animals adapt themselves to the changes of season than to learn such facts about many of them from books ?

## Constructive Work

By Albert H. Leake, Inspector of Technical Education for Ontario, by whom all questions will be answered.

## 10. HANDKERCHIEF BOX.



Tools.-Thin bristol board or cover paper of pleasing tint; 9 in . $\mathrm{X}_{14} \mathrm{in}$. Tie stuffs.


Method of construction-
I. Construct rectangle $8 \mathrm{in} . \mathrm{x}_{13} \mathrm{in}$.
2. Divide as shown in drawing.
3. Mark punch holes and shade waste.
4. Cut to shape and punch holes.
5. Score and fold.
6. Tie to shape.


## ir. BASKET.

Tools.-Pencil, rule, scissors, punch or pricker.
Material.-Same as ro but 9 in. square. Tie stuffs.


Method of Construction-
I. Construct a 9 in. square.
2. Draw diagonals.
3. From centre describe circle of 4 in . radius with circle maker.
4. Construct inner square.
5. Measure $1 \frac{1}{4} \mathrm{in}$. each way round the circumference of the circle from the diagonals of the square.
6. Join these points with angles of inner square.
7. Mark holes and shade waste.
8. Cut to shape, punch holes, fold and tie,


## Current Events

## ENGLAND AND THE YELLOW PERIL.

In this cartoon Mr. N. McConnell, of The News, Toronto, shows us how John Bull


John Bull: What about the "Yellow Peril"?-From The News, Toronto,
regards the danger from the Mongolian races. The late Anglo-Japanese alliance, which was fully treated in our last issue has fully cemented the two powers. As John winks his left eye he seems to say. "Haven't I made a great hit in my choice of a new friend?"

COMPARATIVE STRENGTH OF THE WORLD'S NAVIES.

When the war between Russia and Japan opened, Russia was the fourth naval power


FrancB
603,721 tons.
Germany
411,249 tons.

in the world, while Japan was in the sixth place. The naval powers were then arranged in this order :-Great Britain, France, Germany, Russia, United States, Japan, and Italy.
naval strength of russia before the war: (Not counting the Black Sea Fleet of 10 battle-ships and 2 cruisers, which is not available.)
Battle-ships, 19 ; cruisers, 41. russian losses.
Battle-ships, sunk, $\mathrm{I}_{3}$; captured, 2 ; interned, I; total, 16 .
Cruisers, sunk, 25 ; captured, 1 ; interned, 7 ; total, 33 .

PRESENT NAVAL STRENGTH :
Battle-ships, 3 (coast defense ironclads); cruisers, 8.
The London Times reckons that in killed, wounded, and captured, the Russians have lost 388,480 men, and the Japanese, 167,400 . naval strength of japan before the war: Battle-ships, 6 ; cruisers, 48.

## japanese losses to date :

Battle-ships, sunk, 2 ; cruisers, sunk, 8.

## present naval strength :

Battle-ships, 4 ; cruisers, 40.
The Japanese navy will soon be strengthened by the addition of the two Russian battleships and one cruiser captured at Tshushima, and by four battle-ships and two cruisers sunk in the harbor of Port Arthur and raised by the Japanese, and by the cruiser Variag, sunk at Chemulpo and raised by the Japanese. Their naval strength will then be : Battle-ships, 10 ; cruisers, 44.

## NEW CANON ON DIVORCE.

The Church of England synod in session at Quebec has just taken the important action of declaring that hereafter no clergyman of that faith shall solemnize the marriage of any divorced person so long as the other party to the divorce is alive. The lay element of the church was inclined not to be so strict on the divorce question and came near defeating the new canon.

SCHOOL AND HOME.

## NORWAY'S PROPOSED KING.

In our issue of September 15 th we told you how the Storthing, or Norwegian parliament had dissolved the union of Norway and Sweden under one king. King Oscar of


Sweden has issued his farewell proclamation to the Norwegian people, and the Storthing has unanimously chosen Prince Charles of Denmark as king of Norway. On Sunday, Nov. 12th the people of Norway will vote on the question, and it is expected the result will place Prince Charles on the throne. He is a fine, frank, democratic young gentleman, whose urbanity and desire to do good are proverbial in England, where he has been practically resident since 1896, when he married the third daughter of King Edward, Princess Maud of Wales, whose portrait is given above, with that of her husband. Her name is Maud Charlotte Mary Victoria, and, although her elder sister is generally known as the Princess Victoria, it would be no surprise were her Majesty of Norway to elect to be crowned in the style of her grandmother, our own Victoria. It is interesting at such a moment to notice that a nephew of King Edward sits on the throne of Russia the Czar's mother being a sister of Queen Alexandra; that another nephew, the son of the King's elder sister sits on the throne of Germany, and his father-in-law on the throne of Denmark. If his son-in-law becomes King of Norway, the monarchy business will begin to look like a well organized trust.

## A BRIEF REVIEW OF THE WAR BETWEEN JAPAN AND RUSSIA.

War began. ..................February 6,1904
Lasted (days)............................ $577^{\circ}$
Men sent by Russia to the front (estimated). 840,000
Men sent by Japan to the front.... 700,000
Total Russian dead and wounded . 192,000 Total Japanese dead and wounded .. 154,000
Russians taken prisoners. ..........67,700
Japanese taken prisoners................. 646

Russian ships lost
Japanese ships los ${ }^{+}$
Cost of war to Russia. ........ $\$_{1,042,500,000}$
Cost of war to Japan........... $\$ 613,050,000$
Togo attacked Port Arthur. . February 8,1904
Petropavlovsh sunk in sortie. .April 13, 1904
Battle of the Yalu, Russians de-
feated...................May 1, 1904
Battle of Nanshan Hill, Russians defeated.................May 22-26, 1904 Battle of Wofanghao, Russians defeated..........................ne 14, 1904
Battle of Haicheng, Russians abandoned position ........ July 30-August 2, 1904 Kamimura defeated Vladivostok Squadron. ...................August 14, 1904
General assault on Port Arthur...... .August 19, 1904
Battle of Liaoyang, Russians defeated

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\text { .August 26-September 4, } 1904
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Battle of Sha River, Russians defeated

## .................... October 11-12, 1904

Battle of 203 -metre Hill, Russians defeated.............November 29-30, 1904
Port Arthur surrendered ...January 2, 1905 Battle of the Hun River, Russians routed............. January 25-29, 1905 Battle of Mukden, Russians defeated February 25 -March 29, 1905 Battle of the Sea of Japan, Russians defeated................May 27-28, 1905
President proposes peace in note to beligerents...............June 8, 1905 Japanese accepted proposal. .. June 10, 1905 Russians accepted proposal.... June 12, 1905 Peace envoys met at Portsmouth
.August ro, 1905
Envoys agreed to terms of treaty of peace. . .August 29, 1905

## EARTHQUAKES IN ITALY.

A terrific earthquake shock on September the 8th did extended damage in southern Italy, a number of towns and villages being partially destroyed. The shock came in the night and the people rushed from their homes panic stricken and calling on their patron saints for protection. Several hundred lives were lost. The government has voted aid to the devastated country; the king is untiring in his efforts to relieve his people, and the pope has wired all the bishops in Calabria and Sicily, urging them to give assistance in every possible way.

## THE CRETAN INSURRECTION.

The insurrection in the island of Crete which has been in progress for several months is gaining so much ground that additional British troops have been ordered there from Egypt. There are already 6,000 foreign soldiers there. Crete, it will be recalled, was taken by the powers virtually out of the hands of Turkey and placed under the rule of Prince George of Greece.

Drawing
By Jessie P. Semple, Supervisor of Drawing in the Toronto Public Schools.


During the winter months, when growing things are hard to procure, and landscape can only be done from memory, we will devote a great deal of attention to the drawing of manufactured objects.

We have tried to select beautiful things from nature and to arrange and compose them artistically, we must be just as particular in the selection and grouping of manufactured objects.

We will begin with the study of jugs and jars. If a good many members of a class could bring objects of this kind from home a profitable time could be spent in discussing their beauty or lack of it. Do not bring fancy or decorated objects. The plain earthenware things are best. Ask the following questions. Is the object of the best form for the use to which it is to be put? Could you make it more useful by changing its form ? Could it be easily tipped over? Is the handle strong enough and of a comfortable shape to carry ? Can it be easily cleaned etc., etc. All these questions have to do with its beauty, because our first law with regard to beauty in these things says, they must be well fitted for their purpose. Why were no such questions asked in our nature study ? After these questions have been satisfactorily answered we are ready to study space divisions. There should be variety in space divisions here also. Figures 1 to 8 are intended as suggestions. You will observe that in Fig, r. the curve is balananced just in the middle, and that each half has its widest part just in the middle too.


Fig. 11
Fig. 2 is balanced in the middle also, but the parts of the curves show more variety in the placing of their greatest widths, Fig. 5 has still greater variety because it is not balanced in the middle. Examine all the other curves. Which do you think has most beauty because of variety? What do you think of the other illustrations? Now criticise the jars you have brought, and for home work design a jug or jar well suited for its purpose and beautiful in curvature and proportion. These designs are called constructive and should not be drawn in perspective like Fig. 1o, but with straight lines for top and bottom like Fig. 9 .
A very good exercise consists in cutting these designs instead of drawing them (Fig. II.)


## Every Day Science

I. What is the theory of corn-popping ?
2. Why does sprinkling a floor with water cool the air ?
3. Why is light-colored clothing cooler in summer and warmer in winter than darkcolored ?
4. Why do fowls shake out their feathers erect before they perch for the night ?
5. Boys often through foolishness, thrust a pin into the flesh just above the knee. Why is it not painful?

## What Every One Ought to Know

1. What is the latest change in the Dominion Cabinet ?
2. What great English actor died during the past month ? Where was he buried ?
3. What is the name and size of the largest vessel afloat ?
4. What Royal tour has the Prince and Princess of Wales entered upon ?
5. Where, and in what way, has the great story of Hiawatha been lately brought forcibly to the notice of Canadians?
6. What is the present political trouble in Austria-Hungary ? Who is supposed to be upholding the Austrian king? What connection is this supposed to have with the Morocco crisis ?
7. What does Russia propose to do with her great army in Manchuria, now that peace is declared?
8. In what way are Canadians invading Persia ?
9. How is England about to profit from the late war between Russia and Japan ?
10. What European nations are now trying to form alliances with each other, and for what purposes are these alliances intended?
II. What does Russia propose to do for her disbanded soldiers ? Why ? What connection has this to the Doukhobors of Canada-
11. Does the moon have any influence on the weather ? Is there such a thing as a "wet moon" and a "dry moon" ?

## Writing

By J. B. McKay, Supervisor Commercial Work and Penmanrhip, Public Schools, Toronto.
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Review as many of the exercises in the previous lessons as possible.
Read instructions about position at frequent intervals, because the correct position is exceedingly important.

Good writing cannot be secured without good paper, ink and pens; see that you 'rave them.

Be sure that your arm works freely in and out of the sleeve; and that the hand slides smoothly on the nail of the little finger. With the eyes fixed on the first copy No. 32, force arm and hand through the movement; at the same time use the nail of the little finger as though it were the pen. Take this practice with each exercise. Try to see forms with the eyes closed.

Count for Exercises Nos. 32, 33, 34 and 35.
Study the Word Exercises carefully ; and make three or four pages of each.
Learning to see is as important as learning to do. You should be careful that your conception of the copy is correct. Perceive closely ; and test your conception of copy often.

Work with as rapid movement as possible, after you are sure of your copy.
Be sure that both points of your pen touch the paper evenly, so that you will produce smooth, light, clean-cut lines.

If you have any difficulties, send a postal card stating them ; and I will try and help you in the succeeding lessons.

## Composition

## THE BOY AND THE WOLF. I.

A boy who was tending sheep ran to his neighbors and told them that a wolf was carrying off his lambs. The men left their work and went to help him, but found that no wolf had been there. The boy deceived them in this way several times.

At last, a wolf really came. The boy went again to the men, and begged them, with many tears, to come to the rescue of his flock. But they thought he was in sport as before, and paid no attention to his cries and tears. So he lost his lambs.

> ORAL EXERCISE.

What is this story about ? What was the boy doing ? How did he amuse himself ? What did his neighbors find when they came to help him ?

What happened when a wolf really came ?
What does this story teach ?
WRITTEN EXERCISE.
Write in your oun words the story of "The Boy and the Wolf."

## THE VIOLET.

II.

Down in a green and shady bed, A modest violet grew ;
Its staik was bent, it hung its head, As if to hide from view.

And yet it was a lovely flower, Its color bright and fair ;
It might have graced a rosy bower, Instead of hiding there.

Yet there it was content to bloom, In modest tints arrayed;
And there it shed its sweet perfume, Within the, silent shade.

Then let me to the valley go, This pretty flower to see ;
That I may also learn to grow In sweet humility.

Write in your own words ths story of "The Violet," using the following heads:

1. Personages. What is spoken of in this selection ?
Time and Place. Where did the violet grow ?
(1. What did the violet do ?
2. Words and Actions.
3. Result.

Moral

LEAD. KINDLX'LIGHT


## History

## WILLIAM THE CONQUEROR.

The Normans were not French people, but were really descendants of the Danes and Northmen, the famous sea-rovers, who lived on the shores of the North Sea. About one hundred and fifty years before the battle of Hastings, Rollo, or Rolf the Ganger, the most formidable of the Norwegian leaders landed in the north-west of France at the head of a band of pirates. Taking advantage of the feeble rule of the French king, Charles the Simple, he seized upon a piece of land for himself and his followers.

The name given to the land acquired by Rollo was Normandy, or the land of the Northmen. The French king was glad to make terms with the Northmen, or Normans, and after a time he gave his daughter in marriage to Rollo, who was then made Duke of Normandy.
The Normans gradually changed their ways of living, and adopted the language manners, and customs of the French among whom they resided. They became Christians and built many beautiful churches, the ruins of which may be seen at the present day.

Although the Normans learned to speak French, and improved in manners, the bold fierce spirit of their forefathers never died out, and many of them were noted for their brave deeds.

William, afterwards known as William the Conqueror, was the most famous Duke of Normandy. He was the son of Robert the Magnificent, sixth Duke of Normandy, and his mother was the daughter of is tanner.

In order to trace the ties which bound the people of England and the people of Normandy more closely together, we must go back to the time of Ethelred, king of England. He married Emma, the daughter of one of the Dukes of Normandy, and when he was forced for a time to leave England, he took refuge in the house of his father-in-law.

Ethelred's son, Edward the Confessor, lived in Normandy from the time he was
a boy, and was brought up as a Norman. He spoke the language of the Normans, and adopted their manners and customs. He had a strong regard for the people among whom he had lived, and when he came to England to be king, many of the Normans followed him. To them he gave high offices, and, according to some writers, promised to leave the crown to William, Duke of Normandy.

Harold, the son of Earl Godwin, was very popular with all the English people. A circumstance occurred which gave William a great advantage over him. Harold was wrecked on the coast of France, and fell into the hands of the Duke of Normandy, who treated him with great kindness.

Before Harold was allowed to return to England, William obtained from him a promise that he would support him in his claims to the English throne. Harold did not intend to keep this promise, as he was forced to make it against his will, and did not consider it binding.
A short time before Edward died, he said he wished Harold to be his successor. On the saine day that the Confessor died, Harold was elected king. William was very angry when he learned this, and sent a messenger to remind Harold of the promise he had given to help him to be king of England. Harold, in reply, stated that he had been chosen by the English to be their king, and that he would not give up the crown.

Duke William then began at once to make ready for war, and he sent everywhere for soldiers to help him. He soon gathered together a large army, and prepared a fleet of a thousand vessels to effect the conquest of England.

William and his army landed at Pevensey, on the coast of Sussex, and Harold advanced to meet him. The English took up a strong position on the hill of Senlac. On the morning of October 14, 1066, the famous battle of Hastings was fought. The English were completely defeated, and their king was slain.

William was then made king of $\mathrm{Er}_{\text {d- }}$ land, and after his succession Norman-French became the language of the court and people of fashion.

## Grammar

## PRONOUNS.

1. William stopped when he heard his name called.
2. Marion looked at the plant, but she could not tell its name.
3. The soldiers are marching. What short steps they take!

## ORAL EXERCISE.

About whom is the first statement made ? For what word is he used ? For what is his used ?

How many things are said about Marion ? Who is meant by she? To what does its refer ?

How many sentences are there in the last example ? Tell what each sentence does. Who are meant by they?

Tell which words in the sentences above are used for nouns.

A word used for a noun is called a pronoun. EXERCISE I.
Copy these sentences, and underline the pronouns :
r. They are building a new house.
2. You knocked at the wrong door.
3. He wrote a letter to his brother.
4. We took our friends to see the painting.
5. He is older than your son.
6. The fishermen are mending their nets.
7. She laughed merrily.
8. Do you enjoy your work?
9. I looked for the book, but could not find it.

10 . She invited us to ride with her.

## EXERCISE II.

Write sentences containing the following pronouns used as the subjects of sentences:

I, whe we, they you, it. he, she,
they,
it.

## analysis.

A nalyze the following sentences so as to show the bare subject, the modifiers of the bare subject, the bare predicate, and the modifiers of the bare predicate:
I. He spoke eloquently.
2. She chattered incessantly.
3. They searched everywhere.
4. I shall know presently.
5. The bobolink sings joyously.
6. The crowd cheered heartily.
7. A great victory was finally won.
8. Threatening clouds are moving slowly.
9. The deafening waves dash angrily.
10. These questions may be settled peaceably.
iI. The wounded soldier fought bravely.
12. The ranks were quickly broken.
$1_{3}$. The south wind blows softly.
14. Times will surely change.
15. An hour stole on.

## ADJECTIVES.

Select the adjectives from the following sentences and state what words they modify:
r. The dashing waves beat on the rockbound coast.
2. A large garden is not always a profitable garden.
3. A handsome flower is not always a sweetsmelling flower.
4. Some men murmur when their sky is clear.
5. There is a special province in the fall of a sparrow.
6. In the 16th century the Spanish nation was one of the leading European powers.
7. All horned animals are ruminant.
8. The cutting of the Dutch dikes let in the waters and drove out the Spanish invaders.
capital letters.
Write the followi:ig, using the proper capital letters:

1. The dominion of canada.
2. The united states of america.
3. lovell's general geography.
4. Smith's elementary arithmetic.
5. Bryants' new Common school bookkeeping.
6. Protestant public schools of manitoba.
7. Ivison, taylor, blakeman \& Co., new york.
8. prof. mayhew, detroit, Michigan.
9. Carhart's class-book of Commercial law.
ro. The penman's art Journal, 205 broadway.
II. The kingdom of great britain and ireland.
10. The central mercantile College, stratford.
11. Bryant's chicago business College.
12. James A. garfield, President of united states.
13. The St. paul, minneapolis and manitoba railway.

NOUNS..
(a) In the following sentences, what words are used as names, and of what are they names.
(b) Which are in the plural ?

1. General Washington commanded the army in the revolution.
2. Some of the mountains in Asia are very high.
3. The teacher who was ill is now in school.
4. John may shut the door, and put some wood on the fire.
5. Robert Burns, the poet, was a Scotchman.
6. The sheep of Saxony furnish valuable wool and mutton.
7. The children ran races in High Park.
8. Give a rogue an inch and he will take an ell.
9. A party of Danes made a settlement on the river.

## FALSE SYNTAX.

## Errors-Miscellaneous.

1. Uncle William has two son-in-laws.
2. He has gone to preach to the heathens.
3. The goods is being sold by auction.
4. Is the scissors in your drawer ?
5. My father's wages is not high enough.
6. The small-pox have spread with great rapidity.
7. The returns was brought in by the clerk to-day.
8. The errata was placed at the end of the book.
9. No, no, says I.
10. There were a crowd of boys in the room.
11. I bought this at Mr. Smith \& Brown's.
12. Has the children come home yet?
13. We agree, says they.
14. Where was you?
15. One of you are mistaken.

Errors-Miscellaneous.
I. They was here.
2. The oxen goes too fast.
3. The men on the boat sees the land.
4. What does the horses eat ?
5. The books, he lost, is on the table.
6. Where was you last night ?
7. The bells of the city does not ring at midnight.
8. The building of so many bridges were very expensive.
9. They was very happy.
10. The children comes home from school early.
II. Godliness, with contentment, are great gain.
12. Slow and sure out-travel haste.
13. Nothing but wailings were heard.
14. Twelve months' interest are due.
15. Aggression and injury never justifies retaliation.

## Geography

LESSON XI.
THE COMPASS.
"Is that a new watch, father, hanging from your chain ?" asked Dick.
"Isn't it a little one ?" said Harry. "Does it tell the time, father ?"
"It is not a watch, and it does not tell the time, boys," he replied. "It is a little compass."
" But what is a compass?" they asked.
" I will show you," he replied, as he took it off his chain, and placed it on the table.
"Look at it, as it lies there."
"See how the hand is moving about from side to side," said Dick. "There, now it has stopped."
"So it has," said his father. ." We must find out what all this means," and he took it up, looked at it, and then laid it on the table again.

They watched the hand (as Dick called it) move about again as before, till at last it stood quite still once more.
"Why, it has stopped in the very same place, father," said Harry.
"Yes, my lad, it has," replied his father; "and if we tried it all day long, it would always stop in the same place.'

The next minute Dick said, "Ah, now I know what you mean, father. This hand is not a hand at all. It is a magnet, It swings to and fro, till it finds the north, and there it stops. That must be the north side of the room."
" It stops there because the earth itself is a great magnet, and its strength is at its north and south ends. They draw the two ends of that little magnet."

That is exactly what
 I wanted you to find out," said their father.
"These letters N. E. S. W. are the four cardinal points," said Dick; "but what do the other letters mean, father ?"
Their father showed them the point marked N. E., just half-way between north and east.
"This means North-East," he said.
Then he

showed them that N. W. is half-way between north and west; S . E. half - way between south and east; and S.W. half-way between south and west.
" You can see now," he added, "why the first four are called cardinal points. Cardinal means chief. They are the chief points. I have shown you four others, but a real compass has thirty-two points altogether."
"The magnet which swings round is called
the needle. It always points to the north. We have only to turn the letter N . on the compass card to the spot where the needle points, and we can find out all we want to know."
"Your compass is a very clever thing after all," said Dick. "Isn't it, father ?"
"It is indeed a won-, derful thing," he replied. "Do you know that a ship never goes to sea without a compass ?
"In clear weather the sailors have the sun and the stars to
 guide them. But in foggy, cloudy, weather they would lose their way, and perhaps be dashed to pieces on the rocks and sand-banks.
"But their compass always shows them the way to go, when there is nothing else to guide them.
"The compass which the sailors use is a large one of course. It is fixed in a big brass box on the deck of the ship. It is called the ship's compass, or the mariners' compass. Mariner, you know, is only another name for sailor.

"Some day you may see a real ship's compass, and you will miss the needle, for there is no needle to be seen. The card, with the points of the compass marked on it, is fixed to the upper side of the needle. So as the needle moves round, it carries the card round with it."

## SUMMARY OF THE LESSON.

I. The magnetic needle is the best of all guides, because it always points to the north, and then it is easy to find the other directions.
2. A compass is a round box, in the centre
of which is a short spike, with a magnetic needle balanced on it.
3. The circle of the compass is divided into thiry-two equal parts. This gives us thirty-two points of direction. We call them the points of the compass.
4. The four chief points are north, south, east, west. We call these the four cardinal points.
5. In a land compass the card, with the compass-points marked on it, is fixed to the bottom of the box.
6. In a mariner's compass the card is fixed to the needle. We cannot see the needle itself. When the needle moves round, it carries the card round with it.
7. The compass is always fixed to the ship, so that no part of it can move except the needle and the card which rests on it.

## Busy Work

## WORDS TO BE DISTINGUISHED.

flee, ply, and flow.
"To flee" means to run away.
"To fly" means to move as on wings.
"To flow" means to flow as water.
The forms of these verbs are flee, flees, fleeing, fled; fly, flies, flying, flow, flown; flow, flows, flowing, flowed.

Use forms of the words above in these blanks:
I. A bird-, a rabbit-, water-.
2. The timid fawn-to me for protection.
3. A river-past the town.
4. The thief - when he heard the noise.
5. See ! The lark-out of sight !
6. The wicked-when no man pursueth.
${ }_{7}$. The sluice-gate being open, the water was-through.
8. Something-against his face, and he --in terror.
9. Do you think wings will ever be invented which will enable us to - ?
10. The hawk - down, but the chickens -to the coop.
II. Does the water-rapidly from that fountain ?

## WORDS PRONOUNCED ALIKE.

## DUN AND DONE.

(a) Copy the following sentences, filling each blank with one of the above words.
(b) Use each of the words in five sentences of your own composition.
(c) Define the words.
i. Henry, do not - the man for the money that he owes you.
2. The cow that was killed by the train was of a-color.
3. The work was-long before schooltime.
4. The carpenter has-all that he agreed to do in repairing the house.
5. To whom did you sell your-cow, Samuel ?
6. Performed, executed, and finished, are synonyms for-.
7. The bread was-before eleven o'clock.
8. The man sent his debtor a-through the mails.
9. Postal cards should never be used for mailing
10. The meat was before the boy had finished milking the-cow.

## SENTENCE BUILDING.

Combine each of the following groups into a simple sentence, bcing careful about the use of the comma, the form of the verb, the use of and, and the arrangement of the prononus:

1. A dog was lost.

It was of a black color.
It had a brass collar round its neck.
2. I found a box.

The box was made of wood.
It was a small box.
It had a broken lid.
3. May wrote a letter.

It was a long letter.
It was a newsy letter.
It was a cheerful letter.
The letter was written to her mother.
4. A bird sang.

It was a small bird.
It sang at sunset.
It had red wings.
It sang in a tree.
It had a black body.
It sang sweetly.
5. A flower grew.

It was a pretty flower.
It grew by a spring.
It had five petals.
The spring was in the bush.

## WORDS PRONOUNCED ALIKE.

## ALL AND AWL.

(a) Copy the following sentences, filling each blank with one of the above words.
(b) Use each of the words in five sentences of your own composition.
(c) Define the words.

1. The shoemaker uses an -.
2.     - the pupils were at their seats when the bell ceased ringing.
3. The teacher uses an -_ in binding the papers.
4. We solved - the problems in the lesson of to-day.
5. James borrowed an - from the saddler.
6. Can you spell - the words of the lesson, Nellie?
7. -the pupils of the class hunted for the 8. - men must die.
8. William used an - in sewing a leather covering on the ball.
io. Take the two - to the cobbler and tell him that they are - we have.

## PAST FORMS OF IRREGULAR VERBS.

Write affirmative answers, in complete statements, to the following questions. Be careful of the form of the verb and the closing mark.
r. Did the cruel boy hold the little bird in his hands?
2. Did Nellie know her lesson when her class was called to recite.
3. Did the sick boy lie on the sofa ?
4. Did lightning rend that large oak ?
5. Did Alice ride to school last Friday ?
6. Did the teacher ring the bell at one o'clock ?
7. Did the children rise when the bell rang ?
8. Did Isaac run home from school ?

## IRREGULAR VERBS.

Do not say did for done, nor done for did ; saw for seen, nor seen for saw; gone for went, nor went for gone.

Be careful not to use the second form of the verb for the third, nor the third for the second. Errors of this character are very common among ignorant people, and should be carefully guarded aganst.

Complete each of the following sentences by inserting the proper form of the verb found in parentheses on the same line:

1. Lucy has - her apron. (tear)
2. The bird has - off. (fly)
3. The monkey has -all the bread. (steal)
4. I have - the cattle out of the garden. (drive)
5. The parrot has not - for several days. (speak)
6. The book has from the table. (fall)
7. He has - the apples from the tree. (shake)
8. His shoes are -out. (wear)
9. $\mathrm{He}-$ my hat into the river. (throw)
10. My slate was -out of my desk. (take)
ii. There my cane and umbrella. (stand)
11. The messenger has - ten miles. (ride)
12. He had before I came. (go)
13. I - last night that you had gone. (hear)
${ }_{15} . \mathrm{He}$ - very well for one who had never - that work before. (do)
14. Many bright threads have been -in, (weave)
15. Ice has -on the pond. (freeze)
16. We - this study a year ago. (begin)

## Reproduction Story

1. Let the pupils read the lesson silently.
2. Let the pupils tell the story orally.
3. Use any part of it as a dictation lesson.
4. Use the lesson as supplementary work in oral reading.
5. Let the pupils write the story in their own words.

## THE HAUGHTY WEATHERVANE.

In a pretty village on the seacoast, where all the men were fishermen, a church stood on a high hill. It was a beautiful church with a tall spire, and at the topmost point of the spire was a golden weathervane to tell the fishermen in the village from what direction the wind blew. Every morning the men would look up at the glittering vane, and if it pointed to the east or to the north they would stay at home to repair their boats and nets; but if it pointed to the south or west they would push out their boats and row away to catch the fish. Now the beautiful weathervane saw that the people of the village paid great attention to him, and he said, "I am the most powerful thing in the village. I am foolish to allow every little breeze to turn me." So when the north wind came, and said "Turn, turn !" the weathervane would not stir. Then the north wind blew with such force that it tore the weathervane from the top of the spire and threw it down on the ground. When the men found that the weathervane was blown down they merely looked at the branches of the trees, and every branch told them from which quarter the wind blew. So the vane learned that it was of no more power in the village than a humble twig upon a little tree. If it had done its duty it would have been honored still, but because it had grown proud and refused to do its work, it had been thrown down and bruised and lay unnoticed among the weeds of the fields.
By-and-by, when it had grown very sorry for its obstinacy, the old sexton of the church came and picked it up. He had it repaired and gilded and put in place again. It was more beautiful than ever and it was no longer proud. It was so glad to be again in its place that it said, "Dear winds, turn me as you will, I am only a servant to help the fishermen, and I never again will be disobedient and obstinate."

## Spelling

| THIRD | READER-PAGES | $82-95$. |
| :--- | :--- | :--- |
| Psalm | pieces | emotions |
| shepherd | baying | whine |
| pastures | devoured | survey |
| restoreth | shrieks | unvexed |
| righteousness | progress | conscience |
| preparest | remaining | resembles |


| presence | erected | conformation |
| :--- | :--- | :--- |
| enemies | inscription | aquatic |
| anointest | cannon-balls | assist |
| surely | weapors | tropical |
| heroic | supersede | islands |
| especially | acknowledged | weasel |
| approach | iniquity | cunning |
| nobleman | quarrel | ludicrous |
| travelling | slaughter | quadrupeds |
| sleigh | rivalries | morsels |
| guest | martyrs | leisure |
| estate | religion | plentiful |
| polished | flourish | necessity |
| sighing | charity | fiercely |
| listened | impulse | burrow |
| distinct | guinea | entrance |
| whispering | sycamore | ventilation |
| pistols | drain | chimney |
| mournful | false | seized |
| howling | pretence | species |
| pursuit | sense | twineth |
| scent | arrogance | cradled |
| anxious | fawning | silence |
| devour | deceit | foaming |
| measured | briar | porpoise |
| serf |  |  |
| immediately | knave | borrow |
| dolphins |  |  |
|  | sought |  |

DICTATION EXERCISE.
The exercises here given will impress upon the minds of the children the importance of right punctuation. The omission of a single comma changes the meaning of the whole sentence. (i) Tell the pupils to add commas to No. r, making it mean that but two girls have come, viz.: Mary, Helen and Julia have come-that is, comeone is telling Mary that Helen and Julia have come. Next change so as to mean all three have come, viz.: Mary, Helen, and Julia have come. (2) Tell them to punctuate No. 2 to show that three girls are here, viz.: Mary Ann, Emma May, and Margaret are here. Next punctuate to show that five are here. Next that four are here. (3) In No. 3, show that two men have opened a bakery. Next show that all three have opened it. (4) Show that five boats have come in; then show that but four have. (5) Show that cats and dogs play together. Then show that boys, cats, and dogs play.

1. Mary Helen and Julia have come.
2. Mary Ann Emma May and Margaret are here.
3. Smith Jones and Brown have opened a bakery.
4. The following boats have arrived : Florence Mary and Agnes Swan Star and Crescent.
5. Boys cats and dogs play together.
6. At last he climbed into his mother's lap, and said, "Please tell me a story, mother."
7. Dic.. is a little dog, with long, white hair. Sport is also a little dog, but his hair is black and short. These dogs are great friends, and they often play together all day. Everybody is glad to see them, because they are friendly and playful.

## Arithmetic

EXERCISE I.-ADDITION.

| $(\mathbf{1})$ | $(2)$ | $(3)$ | $(4)$ |
| :---: | :---: | :---: | :---: |
| 34628 | 12332 | 26735 | 73568 |
| 53729 | 23456 | 41692 | 19876 |
| 86235 | 21678 | 37216 | 43217 |
| 42316 | 37729 | 98765 | 68523 |
| 98654 | 68137 | 42378 | 42355 |
| 43231 | 46989 | 16723 | 63172 |
| 63128 | 56125 | 72157 | 19863 |
| 98765 | 62346 | 61346 | 69216 |
| 43212 | 43212 | 19857 | 35146 |
| 34567 | 67298 | 62378 | 98765 |
| 89876 | 45237 | 34123 | 21234 |
| 54321 | 62375 | 15678 | 61161 |


| (5) | (6) | (7) | (8) |
| :---: | :---: | :---: | :---: |
| 42357 | 12345 | 42687 | 34692 |
| 68176 | 67768 | 69854 | 16768 |
| 21354 | 23145 | 23156 | 11111 |
| 29843 | 67769 | 98762 | 22334 |
| 65216 | 21342 | 13578 | 98765 |
| 73468 | 66168 | 21647 | 43216 |
| 17685 | 37221 | 29823 | 78901 |
| 29876 | 12234 | 16735 | 23456 |
| 38215 | 68792 | 41234 | 78901 |
| 49364 | 19876 | 68968 | 23456 |
| 62121 | 98462 | 23456 | 78901 |
| 71431 | 37695 | 12345 | 23456 |
|  |  |  |  |
|  |  |  |  |
| $(9)$ | $(10)$ | $(11)$ | $(12)$ |
| 62357 | 43758 | 24675 | 72968 |
| 78231 | 16789 | 16892 | 17395 |
| 29876 | 23456 | 62134 | 42168 |
| 34268 | 73162 | 29876 | 29875 |
| 43716 | 16837 | 16543 | 43167 |
| 98237 | 62121 | 27684 | 29873 |
| 29831 | 23456 | 16213 | 16162 |
| 68216 | 78932 | 45673 | 17354 |
| 31463 | 16728 | 11213 | 26982 |
| 16789 | 34635 | 45678 | 13414 |
| 16323 | 72568 | 16723 | 16789 |
| 52784 | 98765 | 17689 | 26616 |

EXERCISE II.-SUBTRACTION.
(I)
$421673^{8} 7924169$
ェ7681768176817
(3)

59684486376673 17798498495123
(5)

64321689234675 17634698921768
(2)

22123123123123 17672176721767
(4)

34689168921145 19876198761987
(6)

46734680268 III 11567567192192
(7)

72168923456172 17216731746925
(9)

67312426938179 18762178962179
(II)

92345126928637 17216217315928
(8)

39268456192156 1987618751987
(10)

14569216317021 11141567219872
(12)

45321679824637 17851463768379

EXERCISE III.
Multiply
(1) 26220 by $20 \quad$ (7) 49260 by 20
(2) 45760 by $20 \quad$ (8) 36390 by 30
(3) 98640 by $40 \quad$ (9) 57600 by 50
(4) 678420 by 20 (10) 7896870 by 70
(5) 4568970 by 80 (II) 69872840 by 40
(6) 1728 by $36 \quad$ (12) 89376928 by 90

EXERCISE IV.
Divide

| (1) 39767 by 91 | (7) 53136 by 81 |  |
| :--- | ---: | ---: |
| (2) 48351 by 71 | (8) | 48426 by 21 |
| (3) 14916 by 22 | (9) | 46008 by 81 |
| (4) 35448 by 42 | (10) | 14656 by 32 |
| (5) 37392 by 82 | (11) | 72009 by 81 |
| (5) 10994 by 23 | (12) | 420484 by 62 |

EXERCISE $V$.
r. Find the total cost of the following :

3 lb . pork © 15 c . 6 lb . butter (a) 40c. 4 lb . sugar (a) 6c. 8 lb . coffee (a) 30c. 2 bu . potatoes a 60 c . 12 lb . fish (a) 8 c . 3 bu. corn @ 90c. 2 bu. corn @ 9oc. 6 lb. rice (a) 8c. II lb, starch (a) 16c. 9 yds. calico (a) 9c. 2 lb . cheese (a) 14 c . 5 doz. oranges (a) 30c. 18 yds. calico @ 25 c . 50 bu.potatoes (a) 50 c .
2. Copy the following :

12 things $=1$ dozen. $\quad 20$ things $=1$ score
12 dozen $=1$ gross. $\quad 24$ sheets $=1$ quire 12 gross $=1$ great gross. 20 quires $=1$ ream.
3. Write these numbers using Roman numerals: 74, 47, 333, 19, 3497.
4. Write in words : $\$_{221021.41, \$ 900000.90}$ $\$ 40100.60, \$ 100000, \$ 505505.05, \$ 369500.52$.
5. A grocer sold 75 cans of tomatoes for $\$ 31.50$. What was the price per can ?
6. Into how many piles do I put 96 oranges, if I put a dozen in each pile ?
7. A man made a fence across a garden that is 12 yards wide. If he puts in posts 2 yards apart to support the railing, how many posts did he use, provided there was a post at each end ?

# Publisher's Page. 

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