# - Nature Study <br> Preparation for Winter 

## Conducted by Mr. John Dearness, M.A., Vice-Principal Normal School, London.

This is the time of year when the signs of the approach of winter may be observed on every hand. Let us note some of them.

Dwelling-houses. How are our dwellinghouses prepared for winter.

What is done with stoves and furnaces at this time of year ?

What preparation for winter do some families make in regard to fuel ?

What are "storm-windows" ? When are they put on ? How do they keep the house warmer ?

In what other ways have you observed dwelling-houses prepared for winter ?

Clothing. In what ways do people prepare for winter in regard to clothing ?

What kinds of clothing that were laid away in the summer will be brought out to wear in winter ?

Why are woollen garments warmer than cotton ones ; and furs warmer than either ?

Food. Do people prepare their food supply for winter ?

What kinds of food are stored in cellars and pits for use in the winter ?

Why are potatoes not left in the garden to be dug as they are needed ?

What kinds of food may be left all winter in the ground where they grew ?

Are there any kinds of food better suited for eating in winter than in summer ?

Work and Play. What differences do you observe in the work of farmers in winter as compared with their work in summer ?

Does winter make any difference in the kinds of work done indoors ?

As winter comes on how do children suit their games to the season ?

Do grown-up people spend their holidays in the same way in winter that they do in summer ?

Domestic Animals. How do farmers prepare for the wintering of their farm stock ?

Does any change take place in the natural covering of sheep or cows or horses as the winter comes on ?

Are there any kinds of food which farm animals eat in winter that they would refuse in summer ?

Do cats or dogs change their coats or food or habits in any way to suit the season ?

If you have the chance to study rabbits or a pet fox or raccoon in the late full or early winter find out how such animals as these prepare for cold weather.

Birds. Are there any robins to be seen now ?

Why do robins go south for the winter ?
What kinds of birds have you observed flying south in flocks ?

Report to the teacher the kinds of birds that you notice at this time of the year in the orchards and woods and by the roadsides. If you do not know their names describe them to somebody who can tell you what kind they are.

Try to find out what the birds that you see in the late fall and winter feed upon.

Wild Animals. Can you find out why we do not see toads hopping about in the winter or snakes gliding over the snow ?

Animals that do not sleep all winter need food when they are awake. Have you ever seen squirrels running about in the winter ? Do you know anything about their winter food?

Insects and Worms. Do bees sleep all winter as bears are said to do ?

If you know someone who keeps bees perhaps he will help you to find cui what they do in winter and how they prepare for it.

After the leaves fall search in the branches of the orchard trees for cylindrical rings of tent-caterpillars' eggs and for cocoons of the cecropia and other large moths.

If you find any of these investigate how they are protected against winter storms of sleet and snow.

Just before it freezes hard dig in the garden where you might expect to find plenty of earth-worms to learn how they prepare for winter. Dig deep if you do not find them near the surface.

Most of the children who take school and home can read and perhaps some of them have books that contain answers to the questions on this page. But let it not be forgotten that it does a child far more good to find out the answers to such questions as these for himself than to learn them from a book or from hearing what some person says about them.

To learn well to use your own eyes and to think rightly about what you see will greatiy add to your usefulness and happiness throughout your whole life.

## Constructive Work

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

Tools.-Pencil, rule, scissors.
Material.-Stout Manilla or tinted cover paper 9 in. square. Paste.


Method of construction-
I. Construct a square of 8 in . side.
2. Set off 2 in., 4 in. and 2 in . on base and opposite side.
3. Join these points by dotted lines.
4. Set off distances of 2 in . on other side and join.
5. Draw the doors.
6. Cut along all thick lines and fold on dotted lines.
7. Paste A over B and C over D to form roof.
8. Paste sides into position as shown in sketch.
9. Windows may be rither drawn or cut; hinges may also be drawn on doors. If you wish, instead of using paste you may use paper fasteners.


## in. CUBICAL BOX.

Tools.-Pencil, rule, scissors, punch or pricker.

Material.-Same as No. ro, but of different color and $8 \frac{1}{2} \mathrm{in}$. $\times 6 \frac{1}{2} \mathrm{in}$. Tie stuff.


Method of construction-
r. Construct rectangle 8 in. $\times 6$ in.
2. Set off 2 in. spaces on each side.
3. Join opposite points.
4. Cut along heavy lines.
5. Fold along dotted lines.
6. Punch or prick holes.
7. Fix and tie to shape.


History

## SAUL.

THE CHOOSING OF A KING. (Continued from last issue.)
Then the Lord told the people that Saul was hiding ; and he bade them go and search for him in that place which God should name.

The people obeyed, and Saul was found and brought before the people.
"Is this the man ?" the people asked. And the Lord said, "This is the man."

Then the people shouted, and Saul was made king over the Israelites.

Then Samuel said to the people, "Behold, I am an old man. My hair is white with age. All my life I have been with you, from the time when I was a little child until now. Tell me, have I ever oppressed you, or have I ever taken anything from you ?"
And all the people shouted, "No! No ! Never! Never have you oppressed us or wronged us in any way !" For the people all loved Samuel, from the oldest to the youngest.
"Wait, then," said Samuel, "and hear what I would say to you. Many years ago God brought your fathers out of Israel and gave this land to them for a possession.
"Often your fathers rebelled against God; and as often he sent punishment upon them that they might turn back to him. Sisera and the Philistines and the Moabites God sent to fight against the Israelites; but whenever they repented and turned back, then He forgave them. Many good captains He sent them,-Gideon, Jepthah and Samson.
"And now you have asked for a king, and God has given you one. And so long as the king and his people are true to the one God, so long shall His blessing be upon you."

And so ended that time in the history of the children of Israel when they were content to be ruled over by Judges chosen by God ; and of these Judges, Samuel was the last.

## DAVID.

Saul was a brave soldier, and the Israelites were very pleased when he led them to battle with different people. But one day Saul disobeyed God. That night God spoke to Samuel, and ordered him to go and tell Saul that he would be punished for his sin. God had given him the kingdom, and God would take it away again.
Samue! delivered his message faithfully, but his heart was sad ; and when he had left Saul, he went home and was very, very sorry. Then God spoke to him again, and told him to leave off mourning for Saul ; for He wanted him to go and anoint someone else to be king instead.

Now let us follow the old prophet, for he is old now and his work on earth is almost done. Watch him walking up the path which leads to the gateway of the little city of Bethlehem. How dear that place is to us all now, for was it not the birthplace of the Lord Jesus?

As Samuel walks along, he looks very sad. He is grieving over the wickedness of King Saul ; perhaps too he is wondering whom he is to choose as king ; for although God has told him what family to go to, He has not yet told him the name of the new king. God does not always make our way quite clear for us. He sends us one step at a time ; but if we are sure that He is leading us, let us try to be content.

A feast was being held at Bethlehem, and Jesse, one of the chief men of the city, was present, with the elders of the town. Suddenly the prophet Samuel appears; before him goes the heifer or young cow which he has brought for sacrifice. In his hand the old man carries a horn of oil, with which he will anoint the future king. He tells Jesse that after the solemn sacrifice he will join the feast at his own house.
(To be continued.)

## Language

## Lesson xvir. dictation.

1. "Come here a moment," said Arthur.
2. "Wait just a second," shouted Paul.
3. "Let's hurry home to help mamma," said Dorothy.
4. "I hope she's much better to-night," said Frank.
5. "We'll do all we can to help her, won't we, Frank ?" said Dorothy.
6. "Of course we will," replied Frank.
7. So Dorothy and Frank hurried home as fast as they could to help their mamma, because they loved her.

## Lesson XVIII.

Copy the following sentences:

1. Edith has a beautiful doll.
2. Arthur has a black dog.
3. Mary has a playful kitten.
4. John has a new sled.

What word tells what kind of doll Edith has?

What word tells the color of Arthur's dog ?
What word describes Mary's kitten ?
What word describes John's sled ?
Tell what kind of rabbit Frank has ?
Tell what kind of book Rose has.

Tell what kind of squirrel Thomas has.
Tell what kind of apple Dora has.
Use a sentence to explain each of the things mentioned.

Write the four sentences carefully.
Compare them with the sentences at the beginning of this lesson.

## Lesson xix.

Copy the following sentences:

1. The old horse drew a heavy load.
2. Young lambs love tender grass.
3. Good children make happy mothers.
4. Light hearts make glad faces.

What kind of horse drew the load ?
What kind of load did he draw ? What kind of lambs love grass ? What kind of grass do they love ? What kind of children make happy mothers ? What kind of hearts make glad faces ? What kind of faces do light hearts make ?

You make a sentence telling about a different kind of horse, and a different kind of load. Make a sentence about lambs and grass, not like number 2. Make a sentence about children and mothers, and use other words for good and happy. Make a new sentence out of number 4 , by changing the words light and glad.

Write your new sentences.

## Writing

By J. B. McKay, Supervisor Commercial Work and Penmanship, Public Schools, Toronto.


Read the first lesson carefully a number of times, and use the plan there explained for making mental pictures of exercises. See that your hand does not rest on its side.

Make a number of pages of No. 36 , ten revolutions to each oval, counting for each down line in oval, and for straight line.

Study Exercises Nos. $37,38,39$ and 40 carefully, so that you have an exact mental picture of them. Close your eyes while looking at the exercises, and satisiy yourself that the picture you have in your mind is the same as the exercise. Use the same plan with the Word Copies ; and make several pages of each.

The Picture Lesson


LESSON I.
Write answers to the following questions, using complete sentences :

What is the girl's name? What is she doing ? What is the big boy's name ? What is the little boy's name? What relation are the three children? Where is the big boy's cap ? Where is the little boy's cap ? Where have these children been ? What do you see on the pond ? What time of the year is it ? Why?

LESSON II.
Write eighteen sentences, using the following words :

1. Jane French 7. wood 13. row-boat
${ }_{2}$ Joe French
2. birds
3. Harry French
. birds
4. Harry French 9. songs
5. play-day
6. nests
7. fun
8. row
9. school
10. pond
11. walk
12. field
13. sail-boat 18. rest LESSON III.
(a) Write three sentences which tell something about the girl. Write three sentence
which tell something about the big boy. Write three sentences which tell something about the little boy. What punctuation mark must follow each ?
(b) Write three questions about the girl. Write three questions about the big boy. Write three questions about the little boy. What punctuation mark must follow each ?
(c) Write three sentences which bid the girl do something. Write three sentences whict bid the big boy do something. Write three sentences which bid the little boy do something. What punctuation mark should follow each ?
(d) Write three sentences which express the delight of the girl. Write three sentences which express the delight of the big boy. Write three sentences which express the delight of the little boy. What punctuation mark must follow each ?

Lesson IV.
Write six sentences, using these phrases :

| 1. on the pond | 4. with her finger |
| :--- | :--- |
| 2. in the boat | 5. in his hand |
| 3. on his head | 6. with the oar |

Lesson $v$.
Write a story about these children, using the following heads :

## THE HOLIDAY.

1. The Holiday.-Jane, Joe and Harry French - who they were - their school Queen's birthday - to the woods - birds songs.
2. The Pond.-Long walk-reach pond-sail-boat-row-boat-wind-boat goes fastthey have a sail-then go for a row-which they like best-the walk home.

LEAD,KINDEX'LLGHT


## Spelling

|  | SECOND |  |
| :--- | :--- | :--- |
| READER-PAGES $6 r-70$. |  |  |
| grist | breathe | constantly |
| merrily | stream | although |
| miller | sailors | heartless |
| farmer | harpoons | friend |
| waggon | difficult | snugly |
| heavy | capture | licked |
| noisily | pieces. | wallet |
| scream | swallow | scant |
| empty | laughed | refused |
| dusty | wounded | pitiful |
| wheat | catches | lament |
| bakers | starve | forsaken |
| frosty | weight | guide |
| weather | blubber | village |
| freezes | George | return |
| wheel | Frank | coffee |
| heartily | thousands | evergreen |
| bravely | careful | height |
| lazy | ripen | allowed |
| whale | Scatter | hoist |
| inquired | heedlessly | delightful |
| replied | grievous | cherry |
| ocean | fruitage | rubbed |
| lying | harvest | wooden |
| quietly | whatso'er | rollers |
| surface | reaping | spread |
| broed | harper | together |
| sixty | Shannon | seaport |
| seventy | Sheelah | travel |
| crash | Irish | roasted |

thunder people wrong

## cheerily <br> sorrow remember <br> powder <br> become

DICTATION EXERCISE.
EXERCISE VI.
When the members of a compound sentence are subdivided by the comma, they should be separated by the semi-colon.

1. We visited the city ; but could find neither horse, saddle, nor bridle.
2. We found the house ; but the doors were locked, and the family was gone.

Note.-The semi-colon is used when examples are given to illustrate rules, etc., and is generally followed by the words as, or thus. When the clauses of a compound sentence are long they are usually separated by the semi-colon.
I. A noun that may denote either a male or female is said to be of the common gender ; es cousin, parent, friend.
2. A noun that names a thing neither male nor female is said to be of the neuter gender ; as pen, house, river.
3. Verbs used with singular subjects in the third person sometimes add $s$ or es to form the singular ; as walk, walks ; go, goes ; love loves.
4. Any pupil who shall have been present five days during any term, shall be enrolled as a member of the school; and whenever present five days during any one month, shall be considered an errolled pupil for that month.

## Drawing

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


Do you notice that the pictures in the illustrations are in rows ? Did you ever see rows of pictures before? Where did you see them ? Look at borders on wall papers, carpets, handkerchiefs, dresses and aprons. You will find that the patterns are soretimes all alike, this is called repetition, and sometimes different patterns are used turn about, chis is called alternation. Which of the borders in the illustrations is in alternation? In placing patterns side by side for a border we should be carcful not to have our spaces just the same width as our patterns. They should be either wider or narrower our good taste will decide which.
r. Make a border of pretty leaves all alike.
2. Make a border of squares and circles alternating. Do not let the spaces be the same as those in the illustration.
3. Make a border by repeating some animal or bird pattern.

## Reproduction Story <br> THE FRIENDLY BOOT-BLACK.

A man needing a boot-black called hurriedly to one across the way. The little fellow came slowly towards him as if he were tired out. Suddenly a larger boy ran up, saying, "Let me do it." The man objected to having the larger boy take the work from one younger than himself. But the larger boy replied, "It's all right, sir, Jimmy has been sick, so we help him out when we are not busy ourselves." "How much of the money do you keep ?" asked the man. The boot-black drew himself up to his full height and replied, "Do you think I'd be mean enough to take money for helping a sick fellow ?"" "Well, here's a quarter," said the man. "Keep half yourself and give the rest to your friend." Instantly the boy tossed the quarter to his comrade with the simple remark, "It's your customer, Jim."
oral exercise.
Do you like this story ? Why ? What do you think of the larger boy? Would you like him for a playmate? Why ? What do you think of the man? Why? Use a sentence to answer each question.

WRITTEN EXERCISE.
You may tell this story in your own words.

## Arithmetic

EXERCISE I.-ADDITION.

| $(\mathrm{r})$ | $(2)$ | $(3)$ | $(4)$ |
| :---: | :---: | :---: | :---: |
| 48875 | 21435 | 54896 | 64655 |
| 53964 | 53216 | 46899 | 87954 |
| 33668 | 63894 | 91865 | 43965 |
| 88255 | 4732 I | 54322 | 86734 |
| 54375 | 16897 | 46876 | 42155 |
| 67654 | 75544 | 65321 | 54665 |
| 39213 | 45688 | 14686 | 21893 |
| 48247 | 96324 | 65543 | 34422 |
| 79665 | 85448 | 86543 | 21486 |
| 84321 | 96374 | 38965 | 94342 |
| 15468 | 22168 | 72133 | 23486 |
| 21455 | 84325 | 89556 | 74389 |
|  |  |  |  |
| $(5)$ | $(6)$ | $(7)$ | $(8)$ |
| 43472 | 21368 | 89965 | 54365 |
| 63488 | 56883 | 65448 | 23899 |
| 92135 | 74214 | 82167 | 91540 |
| 56764 | 46553 | 54558 | 86534 |
| 44231 | 36895 | 92183 | 75646 |
| 56863 | 58621 | 39765 | 89653 |
| 37425 | 14765 | 41556 | 75594 |
| 55321 | 58854 | 62139 | 41322 |
| 99875 | 94213 | 97506 | 53897 |
| 54322 | 21456 | 21435 | 14214 |
| 26895 | 68943 | 15388 | 28893 |
|  | 37569 | 94675 | 47565 |
|  |  |  |  |


| (9) | (10) | (II) | (12) |
| :---: | :---: | :---: | :---: |
| 6432 I | 14832 | 35695 | 54218 |
| 86907 | 4532 I | 63476 | 14895 |
| 74553 | 56995 | 68654 | 57735 |
| 66542 | 64322 | 42145 | 68910 |
| 21865 | 55668 | 53328 | 63504 |
| 68935 | 82176 | 47835 | 47788 |
| 44462 | 53331 | 56683 | 89163 |
| 74899 | 21886 | 27468 | 32148 |
| 53624 | 65436 | 99865 | 86475 |
| 21438 | 89798 | 45323 | 97364 |
| 88975 | 43826 | 89736 | 48832 |
| 56814 | 75488 | 66821 | 17865 |

EXERCISE II.-SUBTRACTION.

| (1) | (2) | (3) |
| :---: | :---: | :---: |
| 998765430 | 154321067 | 987656789 |
| 44298342 I | 94322435 | 5432:0687 |
| (4) | (5) | (6) |
| 543210680 | 986754683 | 752868506 |
| 426375842 | 590632109 | 436874259 |
| (7) | (8) | (9) |
| 246834567 | 123456789 | 79865432 I |
| 98243681 | 98765432 | 246854632 |
| (10) | (II) | (12) |
| 246576845 | 109876549 | 98765432 I |
| 98765432 | 2436542 I | 123456789 |

EXERCISE III.-MULTIPLICATION.
(a) Multiply each example by 25 .
(1) 367213, (2) 378124, (3) 215684 , (4) 314216.
(b) Multiply each example by 46 .
(1) $21633^{2}$, (2) 713618 , (3) 216132 ,
(4) 376821 .
(c) Multiply each example by 170 .
(1) 22332 I , (2) 532168 , (3) 346197 ,
(4) 921623.

## EXERCISE IV.-DIVISION.

Divide the first four by 36 ; the second four by 45 ; the third four by 125 .
(土) $13^{-6213134}$
(7) 5732169524
(2) 3126173146
(8) 1631561402
(3) 7021315216
(4) 5620631315
(5) 7314513426
7321463175
(Io) 16237 II200
(II) 4213I10000
(6) 7162189732
(I2) 5210310405

## FOR SECOND CLASSES

Drill Arithmetic, 10c.; teachers' edition, 20c.
Junior Language Lessons, 15 c .
Exercises in Arithmetic, 12c.; teachers' edition with answers, 15 c .
Mental Arithmetic Exercises, Part I., 15c.
THE EDUCATIONAL PUBLISEING CO., LIMITED. TORONTO.

