



Autumn Studies:
Primary Lessons In Nature, Literature & Art
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AUTHOR'S PREFACE

In the preparation of this book it has been the aim to illustrate by concrete examples type lessons in Nature Study, Literature, Language and Picture Study.

The aim of Nature Study is twofold: First, to cultivate the higher nature of the child and lead him toward his Creator; and, secondly, to develop his intellectual powers and lead him to acquire a knowledge of his physical environment.

A careful consideration of this twofold purpose suggests the desirability of correlating Nature Study with literature and art.

In considering the tree, the flower, the bird, or whatever it may be, poems and stories are included in the plan of study, not for the purpose of giving instruction, but to supplement the subject with literature, which will illumine and crystallize the nature lesson and impress correct ideals of truth and beauty.

The educational value of the classic story or poem and the beautiful picture in which true art principles are exemplified, in elevating taste and creating a high standard of the beautiful, can scarcely be estimated.

Early familiarity with some of the masterpieces in art and literature will enable the child "to translate forms of beauty into thought and thought into words," and thus prove a never-failing source of happiness. No more potent agents can be found than the poets and the painters in revealing spiritual beauty, vitalizing the commonplace and moulding the child's thought and expression. The guiding principle in language is, first, impression; then, expression. Some one has said, "The lovely things men build in the days of their strength are but the reproduction of the lovely thoughts that were whispered in their hearts in the days of tender youth."

CHAPTER II

FALL NATURE STUDY

PURPOSE OF THE WORK

To inspire and develop an inquiring, reverent spirit by leading the child to discover some of the secrets of the types studied.

To cultivate a sympathetic interest and a love for nature.

Outdoor lessons are necessary in order to enlist the child's sympathy and permit nature to speak to his soul as well as to his senses. Relation to environment, life, habits, function, beauty, protection, unity, and dependence should be emphasized in the lower grades.

The child's own experience should form the basis of what he acquires, and the more spontaneity and enjoyment there is in the nature study the more it will add to the resources of his life. Emerson's inspiring poem reveals the beauty of the perfect whole in nature and serves as a broad foundation for the study of types in their true home.

EACH AND ALL

* * *

All are needed by each one;
Nothing is fair or good alone.
I thought the sparrow's note from heaven,
Singing at dawn on the alder bough ;
I brought him home, in his nest, at even ;
He sings the song, but it cheers not now,
For I did not bring home the river or sky ;—
He sang to my ear,—they sang to my eye,
The delicate shells lay on the shore ;
The bubbles of the latest wave
Fresh pearls to their enamel gave,
And the bellowing of the savage sea
Greeted their safe escape to me,
I wiped away the weeds and foam
I fetched my seaborne treasure home ;
But the poor unsightly, noisome things
Had left their beauty on the shore
With the sun and the sand and the wild uproar
* * *

—RALPH WALDO EMERSON.

LESSONS ON PLANTS

From the first, children should be led to think of each plant as a working organism, closely related to its environment, and it should under no circumstances be studied as an isolated thing.

It is related to, and dependent upon soil, air, sunlight and rain. It supplies insects, birds and other animals with food. It furnishes clothing, food and shelter for man, and is a constant reminder of the Creator's power and goodness.

Bryant says:

"Thou hast not left
Thyself without a witness, in these shades,
Of thy perfection. Grandeur, strength and grace
Are here to speak of Thee."

"Not a flower
But shows some touch, in freckles,
Streak or stain,
Of His unrivaled pencil."

—COWPER.

"The Primrose of the Rock" read to the older children will help them to see unity and interdependence in nature.

Wordsworth calls the Primrose—

A lasting link in Nature's chain
From highest heaven let down.
The flowers, still faithful to the stems
Their fellowship renew;
The stems are faithful to the root,
That worketh out of view;
And to the rock the root adheres
In every fibre true.
Close clings to earth the living rock,
Though threatening still to fall;
The earth is constant to her sphere;
And God upholds them all. * * *

—WORDSWORTH.

FLOWERS

"Flowers are the thoughts of the spirit of God
 Their love is love of his grace,
 Their fragrance is breath of divinity,
 Their beauty the light of his face."

Nature Study and Life.—HODGE.

Flowers are among the purest, loveliest things in nature and the teacher who develops a genuine abiding love of flowers in the heart of a child is instrumental in enriching his whole life by enabling him to treasure up a wealth of happiness for future years.

A teacher may begin this work by asking children: What flowers do you know? Tell about flowers you have seen growing in the woods, the garden, the park, the greenhouse. What flowers do you like best? Why? What flowers have you cared for? What flowers close on the approach of rain? Close at night? Where do water-lilies grow? Ferns? Cat's-tail? Wild roses? What plants sprout quickly in water? What plants grow from slips? Why does putting the ends of flower stems in water keep the leaves and blossoms fresh? What fruits are ripening this month? Name fruits cultivated near our homes. What fruits can be obtained at the grocery store? Find ten seed cradles. Name five important food plants. How many seeds in a cone? What yellow flowers may be seen now? What blue flowers? What seeds can you find on your way to school? What nuts? How many colors can you find in leaves? What trees do you know? What stories or poems do you know about flowers and trees?

Questions answered by individual observation, will help children to read some of the messages which the wayside flowers and trees have for them.

MEMORIZE:—

Hast thou named all the birds without a gun?
 Loved the wood-rose and left it on its stalk?

O be my friend and teach me to be thine.

—EMERSON, *Forbearance*.

Outdoor observation with the class as a whole, and individ-

ual work out of school hours is absolutely necessary in order to secure the best results in this subject.

Choice poems and legends will strengthen the child's love for plant life and give him a deeper, fuller sense of their loveliness and symbolism.

THE FORGET-ME-NOT

When to the flowers so beautiful
The Father gave a name
Back came a little blue-eyed one,
All timidly it came,
And standing at its Father's feet,
And gazing in His face,
It said, in low and trembling tones,
And with a modest grace,
"Dear God, the name thou gavest me,
Alas! I have forgot."
The Father kindly looked him down
And said, "Forget-me-not."

THE MOSS ROSE

The angel of the flowers one day,
Beneath a rose-tree sleeping lay,—
That spirit to whose charge 'tis given
To bathe young buds in dew's of heaven.
Awakening from his light repose,
The angel whispered to the rose:
"O fondest object of my care,
Still fairest found, where all are fair;
For the sweet shade thou giv'st to me
Ask what thou wilt, 'tis granted thee."
"Then," said the rose with deepened glow,
"On me another grace bestow."
The spirit paused, in silent thought,
What grace was there that flower had not?
'Twas but a moment,—o'er the rose
A veil of moss the angel throws,
And, robed in nature's simplest weed,
Could there a flower that rose exceed?

—From the German *Krummacher*.

THE PANSY

Once upon a time a flower of exquisite beauty and fragrance grew under a tall leaf in a lonely dell. One day an angel flying down to earth on a mission of love happened with her wing to brush aside the leaf and discover the flower.

"Ah!" cried the angel as she bent down to inhale its sweet fragrance; "You are far too lovely to live here in this forsaken spot. I will breathe upon you and give you an angel's face. You shall go forth and bloom in every land and carry with you sweet thoughts of love and heaven. From year to year you shall grow in beauty; and the richness and the splendor of your dress shall be a marvel and a joy to all who behold you." Then the angel kissed the flower and left the imprint of her beauty upon it. That is why the pansy has such a lovely face and has been called the flower that means loving thoughts.—*Adapted.*

 FOR READING AND DISCUSSION

 THE USE OF FLOWERS

God might have made the earth bring forth
 Enough for great and small,
 The oak tree, and the cedar tree,
 Without a flower at all.
 We might have had enough, enough,
 For every want of ours,
 For luxury, medicine and toil,
 And yet have had no flowers.

Then wherefore, wherefore were they made
 All dyed with rainbow light,
 All fashioned with supremest grace,
 Upspringing day and night—
 Springing in valleys green and low,
 And on the mountains high,
 And in the silent wilderness,
 Where no man passeth by?

Our outward life requires them not,
 Then wherefore had they birth?
 To minister delight to man,
 To beautify the earth;
 To whisper hope—to comfort man
 Whene'er his faith is dim;
 For who so careth for the flowers
 Will care much more for Him!

—MARY HOWITT.

Secretary James Wilson says: "Flowers should abound in the school grounds. They are among the best educators, for they develop taste and a love for

the beautiful, and make men sensitive to the attractive and lovely, in town or country, in field or forest."

"Flower in the crannied wall
 I pluck you out of the crannies;
 Hold you here, root and all, in my hand,
 Little flower—but if I could understand
 What you are, root and all, and all in all,
 I should know what God and man is."
 TENNYSON.

READ AND DISCUSS THIS POEM :

BRING FLOWERS

Bring flowers, pale flowers, o'er the bier to shed,
 A crown for the brow of the early dead!
 For this through its leaves hath the white rose burst,
 For this in the woods was the violet nursed!
 Though they smile in vain for what once was ours,
 They are love's last gift. Bring ye flowers, pale flowers!
 Bring flowers to the shrine where we kneel in prayer,—
 They are nature's offering, their place is there!
 They speak of hope to the fainting heart,
 With a voice of promise they come and part,
 They sleep in dust through the wintry hours,
 They break forth in glory. Bring flowers, bright flowers!

—MRS. HEMANS.

If the teacher has awakened a deep interest in plant life by means of informal talks and outdoor lessons, some common flower may be chosen for special study.

The Life History of a Plant.—Tell children they may help to awaken the wonderful life hidden in the seeds they find in the garden. Let children plant seeds, morning-glory, poppy, and others, daily for a couple of weeks so that specimens in different stages of development will be ready when needed.

Spring is, of course, the best time of the year to plant seeds and study germination, but the needs of growing plants and the value of a seed should be emphasized at this time.

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 rain-drops bright.
The little plant heard and rose to see
What the wonderful outside world might be.
—SELECTED.

THE MORNING-GLORY

Aims.—1. To lead children to think of the unity of plant life.

2. To direct attention to the beauty and the perfection to be found in common plants.

3. To call special attention to the importance and the formation of seeds.

Preparatory Work.—Review "The Use of Flowers" and "The Water Bloom."

Give questions, to be answered by studying the plants out of doors. Why called morning-glory? How many colors do you find in the open flowers? When do they go to sleep and when wake up? Does the same flower open day after day? What insects visit the morning-glory? Review observations made on morning-glory in the window-box and lead children to recall the needs of growing plants—soil, heat, light, and moisture. Talk about the habits of this flower.

Material.—Put several long sprays of morning-glories containing all the different parts of the plant in jars of water.

Plan of Work.—Compare the plant to a household. The Flower Household includes Flower mistress or queen, the stem servants, the leaf servants, and the root servants. Examine the morning-glory and see how the different members in this interesting household are dressed for their work. The mistress or queen in rainbow colors, the leaf and stem servants in green and the root servants in brown. Teacher, hang prism in a sunny window and let children match morning-glory and spectrum colors.

Incidentally name the parts of the flower—calyx, corolla, stamens, and pistil, while directing attention to its beauty. Note position and appearance of the buds. Decorate black-board by sketching sprays of morning-glories.

The pupils have been watching the growth of the morning-glory in the window-box and are now ready to study the plant from the standpoint of function. Tell children they are to find out about the work of the plant and of each of its parts. Read selections that will bring the children into sympathy with the subject.

The flowers still faithful to the stems,
 Their fellowship renew ;
 The stems are faithful to the root,
 That worketh out of view.

—WORDSWORTH.

Work of the Root.—Lead children to see that the roots hold the other members of the family in place and aid in supporting the stem. Examine seedlings grown on cotton or moist blotting paper, to see the root-hairs. Oats and corn will show root-hairs without a microscope better than most plants.

Dig up carefully five or six growing plants, destroy the root-hairs on two or three and immerse roots of all the plants in a jar of water. Try several similar experiments and lead children to see that the plants will not live without the root-hairs.

Let children get the thought from the *plants*.

Cut off the stem of a vigorously growing plant and observe the drop of water forming on the cut end of stem. The water

came from the root, was absorbed from the soil through the root-hairs.

Work of the Stem.—By questioning, help children to see and tell that the stem holds up the leaves, buds and flowers to the sun and takes food from the roots to the leaves and the flowers.

Let a corner of a sheet of blotting paper touch the surface of colored water and watch the liquid creeping upward. Lamp-wick, twine, or a block of sugar will show this also.

Put stems of a plant with white flowers, as begonia, in a red liquid and notice the color of the petals a few hours later. Experiment with leaf of bleached celery also.

Measure the growth of the morning-glory in the window-box daily. Observe the stem twining around a support. Turn back and fasten a morning-glory stem and see what happens.

Work of the Leaves.—Remove leaves from a morning-glory vine to show that the stem with leaves is much prettier than the one without. Call attention to the fresh leaves; veins firm and strong, color bright green and outlines perfect.

Leaves Give Out Moisture.—Place a handful of fresh leaves on a table and cover with a glass dish. Place another jar without leaves near the first. Children discover that the glass over the fresh leaves contains moisture and the other glass does not. Try several similar experiments until children are convinced, that the leaves give out moisture. The moisture came from the leaves, the leaves obtained it from the stem, the stem from the root, and the root from the soil.

Observe petiole, shape of leaf, and the uses of the veins in spreading out the leaf blade.

Direct attention to the arrangement of the leaves on the stem, turning and spreading out to catch the sunlight.

The flower is the most beautiful part of the plant and should be approached most thoughtfully.

THE MORNING-GLORY

Up it sprang from the soft, dark earth
The morning-glory vine;
Higher and higher, brave and green,
With many a twist and twine,
Bird and butterfly wheeled to see,
And children stopped a-row,
To point with rosy fingers sweet,
And watch the blossoms grow.
Purple and crimson, white and blue,
Out from the lightsome green,
They swing and rustle, the dainty bells,
Their sheltering leaves between,
Low by the grass and high by the roof,
And beautiful all the way;
"And the prettiest flowers grow highest up,"
The children wisely say.

—SELECTED.

Flower.—The Mistress or Queen of the Household.

The corolla is the attractive part of this plant. Notice differences in color; corolla in one piece. Children, find dividing lines and compare with the number of parts in calyx. The corolla protects the most important part of the flower. Count the notches on the border and notice the lines that extend from each notch down to the end of the tube. Urge children to handle specimens carefully as something very precious. Teacher, open a flower and paste on card so that the inside of the flower may be examined.

Here we find five stamens fastened to the lower part of the blossom. One stamen attached to each part of the corolla. Take a good look at the stamens because they have very important work to do for the flower, they bear something that makes the seeds grow. Children, touch stamens and see the white pollen grains on their fingers.

Find the favorite number in this flower. Five stamens, five nectar tubes, five notches on the corolla, and five sepals.

Observe the morning-glory out of doors. Children, notice bees at work getting pollen from the stamens and nectar from the openings at the base of the flower. Call attention to the pistil in the center of the flower with the stigma at the top and the seed vessel at the bottom.

Examine the morning-glory vine and find a calyx without a blossom. Find pistil and calyx without corolla. Find seed-pods protected by calyx.

Children, examine a seed-pod containing soft, delicate ovules. How does the pollen reach the ovules? It falls on the little knob (stigma) at the top of the pistil. The bees are constantly flying from flower to flower, getting honey from one part of the flower and pollen from another part, and in doing this, they leave pollen grains on the stigma of the ripe pistil, the pollen passes down the tube to the seed-pod and the ovules begin to grow. The flowers soon fade so that the plant's energy may be devoted to the manufacture of seeds.

Open a ripe seed-pod and find three rooms in this little house and two seeds (three-sided seeds) in each room. If the vine is shaken, the seeds fall, when they are ripe. Children, find germinating seeds near the vines. Mark the growth by tying colored twine on the support each morning. Children, save seeds to plant next year.

Teacher, sketch morning-glory vine as directed by children, in order to lead them to observe carefully. Erase and let pupils sketch plant as a whole. Agassiz says, "A pencil is a good eye."

SUMMARY OF PLANT HOUSEHOLD

Includes how many members? Appearance of each? Interesting habits? Work of the delicate root-hairs? stems? leaves? flowers?

Flower.—Emphasize beauty of color, beauty of form and beauty of use. Describe and picture calyx, corolla, stamen, and pistil. Work of each? How do the flowers help the bees? How do the bees help the flowers? Picture a morning-glory vine from memory. What is the mission of this flower? To beautify the earth and to make seeds. Tell the story we have been reading since we planted our morning-glory seeds. Lead children to think of the beauty wrapped up in the seed.

Compare the morning-glory with its relative, the bind weed (wild morning-glory) that is found twining over fences in the country. Our morning-glory is a member of a very distinguished family (*Convolvulus*) and has a number of beautiful and useful cousins, moonflower, cypress vine, sweet potato, and many others.

A LITTLE MORNING-GLORY SEED

One sunny day in May a little girl planted a morning-glory seed. It was a tiny seed with a hard brown coat.

This little girl put the seed in the ground and covered it with earth. Then she said: "Now, little seed, grow, grow, grow! Grow until you are a tall green vine. I want to see your pretty green leaves. I want to see your lovely trumpet flowers."

Little Mary went into the country to visit her grandma. John forgot the little seed, and it was left to take care of itself.

The ground where it lay was very dry. There had been no rain for a long time, so the wee seed could not grow at all.

It lay in the dry earth many days. It was very tired, and said to the ground: "O ground, please give me a few drops of water. Please

soften my coat. It is so hard and tight I cannot get my arms out. I shall never be a vine."

The ground answered, "I have not a drop of water to give you, little seed. You must ask the rain."

The little seed called to the rain: "O rain, I am a little morning-glory seed, deep down in the ground. I want to get out into the bright world, but I cannot. Won't you come down and wet the ground? My coat will then become soft. I shall be able to burst it open, and push out my two seed-leaves. Then I shall soon be a vine."

"I would like to help you," said the rain, "but I cannot, unless the clouds hang lower."

"O clouds," said the little seed, "please hang lower. Please let the rain come down. I need a few drops of water to soften my coat. I want to be a beautiful green vine. Won't you please help me?"

"The sun must hide first," said the clouds.

The little seed called to the sun, "O sun, please hide your bright face for a little while. Then the clouds can hang lower and the rain can come to me. My coat will be soft and I can push up into the world."

The sun loved the beautiful flowers. He loved the little seed, and he wanted to make it happy. He said, "Yes, I will hide."

Soon the clouds began to hang lower and lower. The warm rain-drops began to fall faster and faster. The ground grew wetter and wetter. The little seed felt its coat grow softer and softer. Soon open it burst.

Out came some little rootlets and two bright green seed-leaves. Upward they pushed their way through the soft ground. At last, out they came into the warm air and bright sunshine.

How beautiful the world looked! How sweetly the birds sang! How happy the little flower was! It grew very fast. The warm rain and sun helped it. It became a tall, green vine, and sent out some little flower buds.

One morning the little buds opened, and out came the lovely trumpet flowers, to help make the world bright and happy.

When the little girl came back from her visit at grandma's, she ran to see if the morning-glory seed had begun to grow. How pleased and surprised she was when she saw the tall green vine and the pretty flowers.

"Can this be the little seed that I planted?" she said. "How fast it has grown!"

Just then she thought she heard a low, soft voice. It said: "Yes, little girl, I have grown. But I would still be the same tiny brown seed but for some kind friends. The soil, the sun, and the rain helped me to grow into this vine."—SELECTED.

TERMS USED IN DESCRIBING FLOWERS

Peduncle or flower stem.

Calyx: Outer whorl of green flower-leaves, (sometimes colored).

Corolla: Inner whorl of colored flower-leaves.

Perianth. The calyx and corolla taken together.

Sepals: Part of calyx. Petals: Part of corolla.

Stamens: Thread-like parts inside the corolla.

Pistil: The central part of the flower.

Filament: The stem of stamen.

Anther: The head of stamen. Pollen: Dust in anther.

Style: Stem of pistil. Stigma: Head of pistil.

Ovary: The base of pistil, holding seed.

Fruit: The ripened ovary with its adhesions.

THE BUTTERFLY

Aim.—To cultivate a sympathetic interest in living things. To give children an opportunity to observe the development of one of the most interesting types of animal life.

The graceful forms and beautiful colors of the many different kinds of butterflies are remarkably attractive and their life history is as fascinating as a fairy tale.

Preparation.—Informal talk with children about flowers and their insect friends.

Send pupils to the garden to get acquainted with their most attractive friends—the butterflies.

What flowers do they visit?

Compare their flight with the flight of birds and dragon-flies.

In what position does the butterfly hold its wings when at rest? Observe one for several minutes some day and report observation. What do they get from the flowers?

Lead children to see the butterfly with the poet's eye. This is what one great poet says:

Oh! pleasant, pleasant, were the days,
The times when in our childish plays
My sister Emmeline and I
Together chased the Butterfly!
A very hunter did I rush
Upon the prey; with leaps and springs
I followed on from brake and bush;
But she, God love her! feared to brush
The dust from off its wings.—WORDSWORTH.

Emphasize beauty of color and form and make children desire to imitate Emmeline's example. Tell them, that the story this beautiful creature has to tell is very, very wonderful, and not too difficult for them to understand. Center the study of scale-winged insects about some particular kind that can be easily observed.

Cabbage Butterfly.—They are white with a few black lines or spots upon upper surface of wings and yellowish upon the under surface. They may be seen from early spring until late autumn. The different stages—eggs, larva, pupa and adult can be found in early fall and the entire transformation watched by children. To obtain the eggs, place an empty box with top and bottom removed, over a box containing a growing food plant (cabbage, nasturtium, or radish). Cover with mosquito netting. Teacher, capture a number of butterflies and put them in the box with cabbage, or other plant, where they will be likely to deposit eggs. If eggs are not secured let children find caterpillars and observe their habits for two or three days before formal study is begun.

Care of Caterpillars.—Keep some in a glass jar and some in a box, with sides removed, covered with netting. Supply the plants on which they were found feeding.

Habits.—Observe the caterpillar crawling on glass, also on

netting. Watch the movement of the jaws from side to side when eating. The little creature eats nearly all the time. He grows so rapidly that his skin becomes too tight for him and he is obliged to cast it off (moult). Watch and see how often he changes his skin covering before he is full grown.

Structure.—Direct attention to shape of body (cylindrical), size, number of segments, number of legs and eyes. To which segments are the legs attached? What is the difference between the first three pairs of legs and the other five pairs? Children will delight in watching the change into pupa or chrysalis,—a resting stage.

Spinning.—When full grown, observe restlessness and change of color. Watch it spinning a tuft of silk and fastening it to a support. Children will soon have an opportunity to read the most interesting chapter in the life of a butterfly. The beauty of the chrysalis cannot compare with the beauty of the white winged creature that makes its appearance when the chrysalis opens. The chrysalis formed in August or September may become a butterfly in a few weeks. Children, watch the change in form and size of wings and body.

Review the life history; egg, larva, chrysalis, butterfly, and develop the following facts with as few questions as possible.

BUTTERFLY

Study the living butterfly.

Body divided into three parts; head, thorax, and abdomen.

The tongue is long and slender and when not in use is coiled like the spring of a watch. Provide a few drops of sugar and water and let children see the tongue uncoil. It is fine enough to thrust into the narrowest and longest flowers for nectar.

Feelers, or antennae, long and slender with little knobs at the end.

Six slender, weak legs. It uses its legs only when eating or resting.

Wings, four in number, are covered with scales, which overlap like the scales of a fish. Scales are attached to the wings by tiny stems. Let children examine the scales with a magnifying glass, if possible. They are very beautiful and give the wings their color. The fore wings are triangular and the hind ones rounded.

The legs and wings are attached to the thorax. Let children sketch and paint the butterfly in different positions on flowers. Compare caterpillar and butterfly as to habits, structure, form, and color.

The life of a butterfly is very brief. Give the little creatures their freedom and watch them on the flowers in the sunshine.

READ:

I've watched you now a full half hour,
Self-poised upon that yellow flower;
And little butterfly, indeed,
I know not if you sleep or feed.
How motionless!—not frozen seas
More motionless—and then
What joys await you when the breeze
Hath found you out among the trees,
And calls you forth again.
This plot of orchard ground is ours,
My trees they are, my sister's flowers;
Here rest your wings when they are weary,
Here lodge as in a sanctuary.
Come to us often, fear no wrong,
Sit near us on the bough.
We'll talk of sunshine and of song,
And summer days when we were young;
Sweet childish days, that were as long
As twenty days are now.

—WORDSWORTH.

Try to lead the children to see, in imagination, the scenes pictured in the poem.

Compare with moth and milkweed butterfly.—Development, structure, habits, etc.

Compare with the dragon fly which has four beautiful gauze-like net-veined wings, long slender body, large head with gem-like eyes. Home near the water; lives on insects; always on the wing; flight direct.

“The Butterfly,” by Mrs. Sigourney, contains a beautiful thought:

A butterfly basked on a baby's grave,
 Where a lily had chanced to grow:
 “Why art thou here, with thy gaudy dye,
 When she of the blue and sparkling eye,
 Must sleep in the church yard low?”
 Then it lightly soar'd through the sunny air,
 And spoke from its shining track:
 “I was a worm till I won my wings,
 And she whom thou mourn'st like a seraph sings:
 Wouldst thou call the bless'd one back?”

Hamilton Gibson says:

It was a day in early June, and nature was bursting with exuberance. The very earth was teeming with awakened germs—here an acorn, with its bifurcated hungry germ—parody on the dual mission of mortal life—one seeking earth, the other heaven; here an odd little elf of maple, with his winged cap still clinging as he danced upon his slender stem; while numerous nameless green things clove the sod, and matted leaves and slender coils of ferns unrolled in eager grasp from their woolly winter nest.

But dear to my heart as were these familiar tokens, how quickly were they all forgotten in my contemplation simply of a little stone that lay upon a patch of mould directly at my elbow, and my wondering eyes were riveted upon it, for it seemed as though in the universal quickening even this also had taken life.

I can see it this moment. It moves again, and yet again, until now, with a final effort, it is lifted from its setting and rolled away, while in its place there protrudes from the ground a chrysalis risen

from its sepulchre. Filled with wonder, I sit and watch as though in a dream, awaiting the revelation from this mysterious earthly messenger, when suddenly the encasement swells and breaks, the cerements are burst, and the strange shape gives birth to the form of a beautiful moth—a tender, trembling thing, which emerges from the empty shell and creeps quivering upon an overhanging spray.

Now followed that beautiful and wondrous unfolding of the winged life—the softly-falling crumpled folds, the quivering pulsations of the new born wings eager for their flight, until at length their glory shone in purity and perfection—a trial flutter, and the perfect being took wings and flew away. * * * *

From Highways and Byways. Copyrighted in 1882 by Harper and Brothers.

A LITTLE POET

Out in the garden, wee Elsie
 Was gathering flowers for me;
 "O, mamma," she cried, "hurry, hurry,
 Here's something I want you to see."
 I went to the window. Before her
 A velvet winged butterfly flew,
 And the pansies themselves were not brighter
 Than the beautiful creature in hue.
 "O, isn't it pretty?" cried Elsie,
 With eager and wondering eyes,
 As she watched it soar lazily upward
 Against the soft blue of the skies.
 "I know what it is, don't you, mamma?"
 Oh, the wisdom of these little things
 When the soul of a poet is in them,
 "It's a Pansy—a Pansy with wings."

—Eben E. Rexford, in *Pri. Education*.

THE MILKWEED

Purpose of the Work.—To call attention to the way seeds are protected.

To emphasize the necessity for seed distribution.

Center study of seed dispersal about the Milkweed and the Dandelion.

Preparation.—Talk with pupils about animals moving from place to place at will. How do the birds manage to see so many different places and people? The spiders have no wings, how do they change their homes? Some of the children will know that the spiders spin a long, silken web, accept the services of the wind and start on their journey. Let them suggest names of different animals that have power to flee from danger or go in search of food when occasion demands. Children, name other things around us besides animals that are useful and beautiful. Flowers, trees, grasses and grains will, no doubt, be suggested.

Field Lesson.—Take pupils out doors to see the milkweed. Give children something definite to look for. Find a milkweed in blossom. One with green or brown pods. Why called milkweed? What kind of soil does it like? Name the flowers and trees growing near. Call children together, talk over their discoveries, and correct mistakes in the presence of the growing plants. Pull up a large plant and account for the spongy appearance of the roots with ripe seeds. The milky appearance of the roots and stems in plants with unripe seeds. Call attention to the shape, number, and arrangement of leaves on the stem. Examine flowers.

Children open a seed cradle and notice how beautifully the seeds are arranged. Examine the lining and the outside covering. They will discover the delicate, smooth lining next to the seeds, and the tough, firm outside coat.

Place special stress upon protection at this stage of the work. Direct attention to the position of the pods near the top of the stems, the firm ridge along the middle of the pod, and the

THE MILKWEED CASE

Cover and case locked close together,
 Filled with a curious kind of feather,
 Open the box, you'll need no key,
 Oh! pretty green case did you grow for me?
 'Twas only the other day I said,
 I must make my dolly a feather bed,
 And here is the softest fluffiest stuff,
 Silky and white and plenty enough.

spring that enables the little brown cradle to rock in the breeze.

Lead children to think of the baby milkweed plant wrapped up in each seed. Watch the seeds flying in all directions in search of a home. Some may travel on the "wings of the wind" to the end of their journey, some may be carried far away by beautiful birds, others may find a place to grow near their own brown cradle. Dig up two or three milkweeds in different stages of development and plant near the school so that children may have a chance to see the flowers withering, pods forming, green pods turning brown, and the seed cradles opening.

Again direct attention to the work of the growing milkweeds. Lead children to think of the dependence and interdependence of the different parts of the plants,—root, stem, leaves, flowers; discuss the work of each; all parts working to produce seeds. Seeds must be very precious.

Let a pupil open a ripe pod and crowd the seeds into a glass jar, so that the class may see how many seeds were packed in this little house. Estimate the number of seeds growing on a single milkweed. Suppose the seeds fell from the cradles and settled down near the plant on which they grew. Recall experiments with morning-glory and other flowers, in which children discovered that growing plants must have food, heat, moisture, and light, and they will readily see that the crowded seedlings would have too great a struggle for food and sunshine,—for life. Think of the thousands of little rootlets searching for food in one direction for a time and then in another, only to meet hosts of hungry, little workers like themselves. Children will understand that when the seeds are alike the struggle is greater than when they are different. When they are alike all need the same kind of nourishment and sometimes the parent plant takes so much food from the

soil in which it grows that it is impossible for the seedlings to get a foothold.

Hang a number of pods where children can watch them opening and the seeds flying away. How eager they seem to get out of the old home! Why are the seeds provided with sails? In order to fly away to a spot that is not occupied by some other plant. The wind is a good friend to the seeds with sails or wings. Why?

It was only a little plant,
But on it did shine the sun,
The wind did caress, the birds did sing,
And it lived till its work was done.
It was only a little plant;
But it took a gladsome part
In the great earth's life; and at last
Earth clasped it to her heart.

—M. J. SAVAGE.

Lead children to compare the milkweed with the dandelion. Home; characteristics; work of root, stem, leaves, and flowers; structure; how seeds are protected; number of seeds; how scattered; uses; draw plants.

Let children make a collection of seeds and fruits.

How are seeds protected? (Burr, shells, flesh, etc.)

Some of nature's devices for the dispersal of seeds and fruits.

Sails—dandelion, milkweed, cat's-tail, thistle. Springs—touch-me-not.

Hooks—burdocks, stick-tights. Wings—maple, linden.

How Scattered.—Wind, water, and animals; man scatters more seeds than all other agencies combined; he is constantly buying and selling plants and seeds.

Make a collection of edible seeds. Wheat, oats, corn, peas, nuts, etc.

Children, tell how the blue-jays and squirrels distribute seeds.

Let pupils group seeds that have pods. Catalpa, beans, pepper, etc. Which has the prettiest color and shape? Which grow on trees? Which contains the greatest number of seeds? What becomes of all the seeds that ripen every year? Do you think all the seeds not used for food will be likely to fall upon

good soil? The earth would be overrun with plants if even a small per cent of all the seeds that ripen grew.

Children, collect seeds to plant next spring.

MILKWEED BABIES

Dainty milkweed babies, wrapped in cradles green,
Rocked by Mother Nature, fed by hands unseen.
Brown coats have the darlings, slips of milky white,
And wings—but that's a secret,—they're folded out of sight.

The cradles grow so narrow, what will the babies do?
They'll only grow the faster, and look up toward the blue.
And now they've found the secret, they're flying through the air,
They've left the cradles empty,—do milkweed babies care?

—ELEANOR SMITH'S *Songs for Little Children*, No. 2.

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THE WIND PRINCESS

Little Ben Lee had a pretty flower bed in his mother's garden. All the long summer he had cared for it, never once seeing the fairy Wind Princess, who often stood by his side, she too helping the plants to grow and blossom.

One day in the late fall this fairy whispered to the flowers, "It has grown so cold I will ask the North Wind to bring you a fluffy blanket of white to keep you warm through the cold winter," and away she went in her magic car to the North Wind's home.

He lived high up among the snow mountains with his father, Ice King, in a wonderful crystal palace. It was hung with dainty curtains of frost work made by the roguish Jack Frost himself, and the walls and towers were painted in beautiful rainbows whenever the sunshine came to visit it.

Soon the flowers heard the great North Wind coming, and sure enough he brought with him the soft snow blanket that helped them to sleep safe and warm until spring time.

After many months the sleepy blossoms heard the Wind Princess whisper to them, "I will ask the South Wind to come with its warm breath, and help the sun to take away your winter covering so you may see the garden and the sky." Then off she drove in her magic car to the South Wind's Home. This wind lived with the lovely Flora in an arbor of flowers and vines in the midst of a wonderful garden. The air was laden with perfume, and the birds sang there all the day long.

Soon the flowers felt the breath of the gentle South Wind and knew the snow mantle had gone from their bed, and they opened their sweet eyes.

After a few days the Fairy Princess came again, this time to tell them she was going to bring the East Wind to visit them, for she saw how the velvet blossoms needed some warm rain drops.

So early next morning, the kind Princess flew to the eastern home where Aurora lives, to ask the East Wind's help to send rain to the garden bed. Oh! how beautiful the palace of the dawn looked! With its walls and domes and columns all of shining silver, and its entrance hung with rosy cloud curtains, pinned back by a silver star.

As the East Wind hurried the rain drops down to the waiting plants, they bowed their heads as if in thanksgiving for the refreshing shower.

Just at night, one rainy day, the flowers saw the Princess of the Winds driving her car as fast as she could to the golden palace of the West Wind, and they said among themselves: "The dear Princess has gone to ask West Wind to blow away the clouds that we may have a fair day to-morrow."

The rain ceased soon after the Princess reached the sunset palace on her errand of love. The queen of this gorgeous home drew aside the curtain of crimson and gold and stood at the entrance of the palace to receive her royal guest.

"Oh! what a grand sunset," cried little Ben Lee, as he looked toward the west that evening, but he never guessed who stood in the cloud palace asking the kind West Wind to come next day and help his plants to grow; he only knew that God loved flowers and birds and little children, and in His own wise way helped them to live and make the world more beautiful.

—SOPHIA S. BIXBY.

CHILDREN MEMORIZE:

SEVEN TIMES ONE

There's no dew left on the daisies and clover,
 There's no rain left in heaven;
 I've said my "seven times" over and over,
 Seven times one are seven.

I am old, so old, I can write a letter,
 My birthday lessons are done;
 The lambs play always, they know no better;
 They are only one times one.

O Moon! in the night I have seen you sailing
 And shining so round and low;
 You were bright! ah, bright! but your light is failing—
 You are nothing now but a bow.

You Moon, have you done something wrong in heaven
 That God has hidden your face?
 I hope if you have, you will soon be forgiven,
 And shine again in your place.

O velvet Bee, you're a dusty fellow,
 You've powdered your legs with gold!
 O brave Marsh-Marybuds, rich and yellow,
 Give me your money to hold!

O Columbine, open your folded wrapper
 Where two twin turtle-doves dwell!
 O Cuckoo-pint, toll me the purple clapper
 That hangs in your clear green bell!

And show me your nest with the young ones in it;
 I will not steal them away;
 I am old! you may trust me, linnet, linnet—
 I am seven times one to-day.

—JEAN INGELow.

THE POPPY

Direct attention to the poppy. Give questions to be answered by studying the plants in the garden. Bring a whole plant to the school-room and compare it with one or two flowers previously studied—nasturtium, pansy, etc.

Celia Thaxter's exquisite poem will help to impress the beauty and the mystery of a seed.

In "An Island Garden" she says: Of all the wonderful things in the wonderful universe of God, nothing seems to me more surprising than the planting of a seed in the black earth and the result thereof. Take a poppy seed, for instance: It lies in your palm, the merest atom of matter, hardly visible, a speck, a pin's point in bulk, but within it is imprisoned a spirit of beauty ineffable, which will break its bonds and emerge from the dark ground in a splendor so dazzling as to baffle all powers of description.

POEM FOR READING AND DISCUSSION

A POPPY SEED

A poppy seed in your hand I lay!
You hardly see it! "Does anything hide
In that wee atom of dust?" you say.
Yes, wonderful glory is folded inside!

Robes; my dear, that are fit for kings;
Scarlet splendor that dazzles the eyes;
Buds, flowers, leaves, stalks,—so many things!
You look in my face with doubting surprise.

You ask, "Is it really, truly true?"
No fairy story at all this time!
Don't you remember the poppy that grew
At the foot of the trellis, where sweet peas climb?

Last summer, close to the doorstep, where
 You and I loved to sit in the sun
 And see the butterflies float in the air
 When the long bright day was almost done?

Don't you remember what joy we had,
 Watching the poppy grow high and higher,
 In its lovely gray-green garments clad,
 Till the buds one evening showed streaks of red?

Then the flowers, like banners of silken flame
 Unfurled, stood each on its slender stem,
 While the soft breeze over them went and came
 Lightly and tenderly rocking them.

You haven't forgotten! I was sure of it! Well,
 All that perfection of shape and hue,
 That wreath of beauty no tongue can tell,
 Lies hid in this seed I have given to you.

Just such a speck in the friendly ground
 I planted last May by the doorstep wide;
 The self-same marvel that then we found,
 This atom of dust holds shut inside.

You can't believe it? But all are there,—
 Leaves, roots, flowers, stalks, color, and glow,
 Tell me a story that can compare
 With this for a wonder, if any you know.

—CELIA THAXTER.

Children, save poppy seeds to plant next spring so that they
 may see what the writer has pictured.

GENTIANAS

Flowers large and handsome.

Fringed Gentian.—Corolla a rich blue, with beautifully
 fringed lobes. Flowers single, on a naked stalk.

Closed Gentian.—Flowers in clusters. Corolla blue; five fringe-toothed plaits.

The "Fringed Gentian" is a great favorite with poets and artists. Compare the gentian with the aster and the golden-rod.

COMMIT:

THE BLUE GENTIAN

"Oh! gentian I have found you out
And you must tell me true;
See, I'll put my ear close down,
Where did you get your blue!"

"I found it, little one, here and there,
It was ready made for me;
Some in your eyes, and some in the skies
And some in the dark blue sea."

"And where did you get that love fringe,
Gentian, that you wear?"

"I caught a hint from your dark eyelash
And one from your curling hair."

"And why do you stand so straight and tall
When they say that you are wild?"

"Oh! that I learned in a different way
And not from any child."

—SELECTED.

Study Bryant's poem, "The Gentian"

LEGEND OF THE GENTIAN

The closed Gentian never opens. The Fringed Gentian closes before dark. This is the story that accounts for the difference in the flowers.

Once upon a time the Queen of the Fairies was out very late. Indeed, it was midnight and the silvery moon had disappeared. The fairy hurried to a Gentian and asked for shelter. The sleepy Gentian said, "How dare you disturb me at this late hour. Find shelter wherever you can." "I am the Queen of the Fairies," said the poor frightened

little one. "I do not care for queens or kings," said the Gentian, "I cannot help you." The Fairy Queen hurried away to another Gentian and begged for a resting place. "Dear little friend," she said, "I shall be happy to shelter you until the sun appears." The Queen slept soundly until nearly dawn and then disappeared. Before going she said, "Dear Gentian, in future you and all your children shall have power to open and receive the light."

—ADAPTED.

MAKE A SPECIAL STUDY OF THIS POEM :

FLOWERS

Spake full well, in language quaint and olden,
 One who dwelleth by the castled Rhine,
 When he called the flowers, so blue and golden,
 Stars, that in earth's firmament do shine.

Stars they are, wherein we read our history,
 As astrologers and seers of old;
 Yet not wrapped about with awful mystery,
 Like the burning stars, which they beheld.

Wondrous truths, and manifold as wondrous,
 God hath written in those stars above;
 But not less in the bright flowrets under us
 Stands the revelation of His love.

Bright and glorious is that revelation,
 Written all over this great world of ours;
 Making evident our own creation,
 In these stars of earth, these golden flowers.

Everywhere about us are they glowing,
 Some like stars, to tell us Spring is born;
 Others, their blue eyes with tears o'erflowing,
 Stand like Ruth amid the golden corn;

Not alone in Spring's armorial bearing,
 And in summer's green-emblazoned field,
 But in arms of brave old Autumn's wearing,
 In the center of his brazen shield;

Not alone in meadows and green alleys,
 On the mountain top, and by the brink
 Of sequestered pools in woodland valleys,
 Where the slaves of nature stoop to drink;

Not alone in her vast dome of glory,
 Not on graves of bird and beast alone,
 But in old cathedrals, high and hoary,
 On the tombs of heroes, carved in stone;

In the cottage of the rudest peasant,
 In ancestral homes, whose crumbling towers,
 Speaking of the Past unto the Present,
 Tell us of the ancient Games of Flowers.

—LONGFELLOW.

TREES

Aim.—To lead children to appreciate and love the trees.

Trees are of universal importance and interest; they exert a refining influence of untold value and are generally available for study in every locality. We are indebted to them in numberless ways for many of the comforts and luxuries of life. The varied forms and colors have a great attraction for children and they should be taught to know and to love the trees.

Froebel declares that no more perfect representation of organic life and the mutual relation of its parts can be found in nature than a tree.

Irving says, "There is something nobly simple and pure in a taste for the cultivation of forest trees. It argues, I think,

"How beautiful you are, green trees! * * *
 How nobly beautiful! Here ye stand,
 Your moss-grown roots by hidden moisture fed,
 And on your towering heads the dews that fall
 From God's right hand. Methinks an angel's
 wing
 Floats o'er your arch of verdure, glorious trees!
 Luring the soul above."

—MRS. SIGOURNEY.

a sweet and generous nature to have this strong relish for the beauties of vegetation and this friendship for the hardy and glorious sons of the forest. He who plants a tree looks forward to future ages, and plants for posterity. Nothing could be less selfish than this."

The very best gifts of God are so common, we do not half appreciate their worth. The poet Holmes speaks of the "trees holding their green sunshades over our heads, talking to us with their hundred thousand whispering tongues." Take the children "forth amid the breeze-swept trees and learn their language."

All honor to the forest !
 Each breeze a message brings,—
 "Be brave," from Oaks and Cedars,
 "Look up," the Pine tree sings,
 "Oh, earth is fair," the Elm calls,
 "And Heaven is just above !"
 "Do good," the Maples whisper,
 All chorus, "God is love."

—ALICE ALLEN.

Impress the fact that the trees are living things and have important work to do. What? Why? Let children find a good tree for a swing. A tree that has food for the squirrels and birds. What is its name? How many of its neighbors are we acquainted with? Which one begins to branch lowest down? Which one has the smoothest bark? Find a tree with a bird's nest. Find seedlings growing.

Teacher, picture the life of one of the tall trees. It was once a small seed; the parent tree sent it down to the earth to begin its life work; the warm sun visited the spot where it lay hidden and it began to increase in size and strength, and year by year it became more deeply rooted and its leafy boughs stretched farther and farther from the trunk. The birds and the flowers sent sweet messages of good will and the

FOREST SONG

A song for the beautiful trees,
 A song for the forest grand,
 The pride of His centuries,
 The garden of God's own hand,
 Hurrah for the kingly oak,
 The Maple, the forest queen,
 The lords of the emerald cloak,
 The ladies in living green.

—W. H. VENABLES.

grand old trees whispered, "Grow, grow."

At this time the great aim is to arouse interest and lead children to go to the trees for answers to the questions asked from day to day. Inspiration and information should go hand-in-hand. Let children tell what they know about the uses of trees,—fruit, fuel, lumber, medicine, etc. In addition to the endless number of uses, their beauty alone would warrant us in cultivating, protecting and loving them. Addison says: "There is something unspeakably cheerful in a spot of ground which is covered with trees, that smiles amid all the rigors of winter, and gives us a view of the most gay season in the midst of that which is the most dead and melancholy."

THE AMERICAN ELM

Children, select a typical Elm for continuous study throughout the year and contrast it with the maple.

Field Lesson.—Visit the tree with pupils and lead them to discover some of its characteristics,—height, shape of head, appearance of trunk, etc. Lead children to talk about its life, its work, and its helpers,—sun, rain, and soil. Emphasize dependence and interdependence.

Imagine some of its probable experiences during its life time. The birds that have built and sung in its branches; the squirrels, insects and other visitors it has sheltered; the many seeds it has sent into the world to grow tall and majestic like itself. Tell children we came to the tree to discover the reasons why the elm is so well liked, by people in the cities as well as in the country.

By studying the head of the tree they will discover why it is a great favorite as a shade tree. The arching character of the branches and the drooping, lace-like twigs give the tree a very graceful appearance and has won for it universal admira-

tion as a shade tree. Teacher, read for children "The Wonderful One Horse Shay." The toughness of the wood is immortalized by this poem. The branches bend but rarely break in a wind-storm. The wood is valuable for wheel-hubs, yokes and cabinet work. Orioles' nests are often found in its branches.

Historic Elms.—The Treaty of Wm. Penn was made beneath the shade of an elm in Philadelphia. Washington took command of the American Army at Cambridge, Mass., under an elm. The Burgoyne Elm at Albany, N. Y., was planted the day Burgoyne was brought to Albany a prisoner. The Liberty Elm stood on Boston Common until within a few years ago.

To know a tree is not merely to know its name, but rather to know its distinguishing features, its needs, its work, its rank, its mission.

Enemies.—The canker-worm and the black caterpillar are among its worst enemies.

Call attention to the difference in shape of elms growing in open places and those growing where they are crowded.

Children should visit the favorite tree very often; watch its leaves change color and disappear in autumn; observe and sketch the tree after the leaves have fallen; examine it when it is in blossom, also when the fruit is maturing; watch the development of buds and leaves and the changes in color of foliage from month to month; in a word, study its life history all through the year.

Develop the following facts by questioning as far as possible. Elm—dome, umbrella or vase-shaped; the bark, dark gray and rough, and the wood reddish brown, strong, and tough.

The elm branches are arching, drooping, and graceful, with fine, delicate spray and small shiny buds.

The leaves are simple, medium sized, rough, alternate arrangement, with short petioles, and deep green in color.

The flowers are tiny, brownish yellow or reddish clusters, which develop into samaras, winged fruit.

It is highly prized as a city shade tree except where soft coal is constantly used. The soot sticks to the rough leaves and after a time injures the tree.

SPRING HAS COME

The elms have robed their slender spray
With full-blown flower and embryo leaf.
Wide o'er the clasping arch of day
Soars like a cloud their hoary chief.

—HOLMES.

Consider the space required for the branching of the elm and decide how far apart the trees should be planted.

THE OAK

Aim.—To discover the character and the uses of the tree.

The majestic beauty and strength of the oak make it the glory of the forest; and in all ages, among all people, it has been looked upon with reverence. It is famous alike in poetry and prose. This is Bryant's tribute,—

"This mighty oak
By whose immovable stem I stand and seem
Almost annihilated—not a prince
In all the grand old world beyond the deep,
E'er wore his crown as loftily as he
Wears the green coronal of leaves with which
Thy hand has graced him."

This monarch may be visited at any time without the least ceremony, and if approached with a teachable spirit, his individuality must leave its impress upon the character. Everything about the oak suggests benevolence, power, and concentration,—the gnarled root, the rugged bark of the trunk, the hard, durable wood, and the firm, tough leaves.

If there is an oak growing near your school by all means induce pupils to make friends with it and learn to admire its noble qualities. Tell children that the oak with its broad base and curving trunk suggested to a thoughtful man across the ocean the best model for the Eddystone Light-house, which

has battled with the storms and tempests for nearly one hundred and fifty years, and to-day stands firm as a rock.

Direct attention to the sturdy appearance of the tree,—short, broad trunk; low, gnarled, outstretched branches, each one resembling a tree. The oak sends a strong tap root deep into the ground, while its wide-spreading, horizontal roots remain nearer the surface. When you visit him in the spring and see nearly all his neighbors decked in green, you may think that

"Children, have you seen the budding
Of the trees in valleys low?
Have you watched it creeping, creeping
Up the mountain, soft and slow?
Weaving there a plush-like mantle,
Brownish, grayish, reddish, green,
Changing, changing, daily, hourly,
Till it smiles in emerald sheen?"

—MOTHER TRUTH'S MELODIES.

he has been forgotten. Watch daily and you will see that Mother Nature has a very beautiful crown for her forest king.

The oak has hundreds of years to live and can afford to wait longer for his "green coronal of leaves" than his short lived neighbors.

Let children tie a string around an acorn, hang it in a bottle of water and watch the beginning of an oak.

Plant in window-box and find out how the growing end is protected from injury while pushing up through the soil.

Try to find an acorn with two kernels; find two or three young oaks coming up together and see if they belong to one acorn.

Compare germination of oak and maple.

Visit in imagination a tan-yard; a forest of cork oaks in Spain.

Study the beginnings of galls on the trees in May. It is estimated, that about fifteen hundred insects make their homes in the oak.

Compare the oak with the pine.

The oak bears two kinds of flowers on the same tree. The staminate flowers grow in catkins. The pistillate flowers re-

semble tiny pink balls. The pistil becomes the nut of the acorn. Some oaks drop their acorns at the end of about six months (annual fruited); others wait for a year and a half (biennial fruited).

There are perhaps three hundred kinds of oak in the world.

Much of the beautiful carving, which is seen in the great cathedrals in Europe, is on oak wood.

The Greeks believed it was the first tree that grew upon earth.

A chaplet of oak leaves was the highest honor that could be given to a Roman soldier.

There are oaks in England that are known to be over a thousand years old.

The Round Table of King Arthur at Winchester is a cross section of an old oak eighteen feet in diameter.

The Charter Oak is the most famous American oak. Why?

The monarch oak, the patriarch of trees,
Shoots rising up, and spreads by slow degrees;
Three centuries he grows, and three he stays
Supreme in state, and in three more decays."

Sum up uses of the oak.

Acorn, important article of food in parts of Asia.

Bark used for tanning and dyeing.

Wood unsurpassed for durability and strength.

THE LAST DREAM OF THE OLD OAK

In the forest, high up on the steep shore, and not far from the open sea-coast, stood a very old oak tree. It was just three hundred and sixty-five years old, but that long time was to the tree as the same number of days might be to us; we wake by day and sleep by night, and then we have our dreams. It is different with the tree; it is obliged to keep awake through three seasons of the year and does not get any sleep till winter comes. Winter is its time for rest; its night after the long day of spring, summer and autumn.

The oak remained awake through the morning of spring, the noon

of summer, and the evening of autumn; its time of rest, its night, drew nigh—winter was coming. Already the storms were singing, "Good-night, good night." Here fell a leaf and there fell a leaf. "We will rock you and lull you. Go to sleep, go to sleep. We will sing you to sleep, and shake you to sleep, and it will do your old twigs good; they will even crackle with pleasure. Sleep sweetly, sleep sweetly, it is your three-hundred-and-sixty-fifth night. Correctly speaking, you are but a youngster in the world. Sleep sweetly; the clouds will drop snow upon you, which will be quite a coverlid, warm and sheltering to your feet. Sweet sleep to you and pleasant dreams."

And there stood the oak, stripped of all its leaves, left to rest during the whole of a long winter, and to dream many dreams of events that happened in its life, as in the dreams of men.

The great tree had once been small; indeed, in its cradle it had been an acorn. According to human computation, it was now in the fourth century of its existence. It was the largest and best tree in the forest. Its summit towered above all the other trees, and could be seen far out at sea, so that it served as a landmark to the sailors. It had no idea how many eyes looked eagerly for it. In the topmost branches the wood-pigeon built her nest, and the cuckoo carried out his usual vocal performance, and his well-known notes echoed amid the boughs; and in autumn, when the leaves looked like beaten copper plates, the birds of passage would come and rest upon the branches before taking their flight across the sea.

But now it was winter, the tree stood leafless, so that every one could see how crooked and bent were the branches that sprang forth from the trunk. Crows and rooks came by turns and sat on them, and talked of the hard times which were beginning, and how difficult it was in winter to obtain food.

THE DREAM

It was just about holy Christmas time that the tree dreamed a dream. The tree had, doubtless, a kind of feeling that the festive time had arrived, and in his dream fancied he heard the bells ringing from all the churches round, and yet it seemed to him to be a beautiful summer's day, mild and warm. His mighty summit was crowned with spreading fresh green foliage; the sunbeams played among the leaves and branches, and the air was full of fragrance from herb and blossom; painted butterflies chased each other; the summer flies danced

around him, as if the world had been created merely for them to dance and be merry in. All that had happened to the tree during every year of his life seemed to pass before him as if in a festive procession.

The wood-pigeons cooed as if to explain the feelings of the tree, and the cuckoo called out to tell him how many summer days he had yet to live. Then it seemed as if new life was thrilling through every fibre of root and stem and leaf, rising even to the highest branches. The tree felt itself stretching and spreading out, while through the root beneath the earth ran the warm vigor of life. As he grew higher and still higher, with increased strength, his topmost boughs became broader and fuller; and in proportion to this growth so was his self-satisfaction increased, and with it arose a joyous longing to grow higher and higher, to reach even to the warm, bright sun itself.

Already had his topmost branches pierced the clouds, which floated beneath them like troops of birds of passage, or large white swans; every leaf seemed gifted with sight, as if it possessed eyes to see. The stars became visible in broad daylight, large and sparkling, like clear and gentle eyes.

These were wonderful and happy moments for the old tree, full of peace and joy; and yet amidst all this happiness, the tree felt a yearning, longing desire that all the other trees, bushes, herbs, and flowers beneath him, might be able also to rise higher, as he had done, and to see all this splendor, and experience the same happiness. The grand, majestic oak could not be quite happy in the midst of his enjoyment, while all the rest, both great and small, were not with him. And this feeling of yearning trembled through every branch, through every leaf, as warmly and fervently as if they had been the fibres of a human heart.

The summit of the tree waved to and fro, and bent downwards as if in his silent longing he sought for something. Then there came to him the fragrance of thyme, followed by the more powerful scent of honeysuckle and violets; then he fancied he heard the note of the cuckoo.

CAUSE OF HAPPINESS

At length his longing was satisfied. Up through the clouds came the green summits of the forest trees, and beneath him, the oak saw them rising, and growing higher and higher. Every native of the wood, even to the brown and feathery rushes, grew with the rest, while the birds ascended with the melody of song. May beetles hummed,

bees murmured, birds sang, each in its own way; the air was filled with the sounds of song and gladness.

"But where is the little blue flower that grows by the water?" asked the oak, "and the purple bell-flower, and the daisy? I want them all."

"Here we are, here we are," sounded in voice and song.

"But the beautiful thyme of last summer, where is that? and the lilies-of-the-valley, which last year covered the earth with their bloom? and the wild apple tree with its lovely blossoms, and all the glory of the wood, which has flourished year after year?"

"We are here, we are here," sounded voices higher in the air, as if they had flown there beforehand.

"Why, this is beautiful, too beautiful to be believed," cried the oak in a joyful tone. "I have them all here, both great and small; not one has been forgotten. Can such happiness be imagined?" It seemed almost impossible.

"In heaven with the Eternal God, it can be imagined, for all things are possible," sounded the reply through the air.

And the old tree, as it still grew upwards and onwards, felt that his roots were loosening themselves from the earth.

"It is right so, it is best," said the tree, "no fetters hold me now. I can fly up to the very highest point in light and glory. And all I love are with me, both small and great. All—all are here."

Such was the dream of the old oak: and while he dreamed, a mighty storm came rushing over land and sea, at the holy Christmas time. The sea rolled in great billows towards the shore.

There was a cracking and crushing heard in the tree. The root torn from the ground just at the moment when in his dream he fancied it was being loosened from the earth. He fell—his three-hundred and sixty-five years were passed.

On the morning of Christmas day, when the sun rose, the storm had ceased. From all the churches sounded the festive bells, and from every hearth, even of the smallest hut, rose the smoke into the blue sky. The sea gradually became calm, and on board a great ship that had withstood the tempest during the night, all the flags were displayed, as a token of joy and festivity.

"The tree is down! The old oak—our landmark on the coast!" exclaimed the sailors. "It must have fallen in the storm of last night. Who can replace it? Alas! no one!" This was a funeral oration over the old tree; short but well meant.

There it lay stretched on the snow-covered shore, and over it sounded the notes of a song from the ship—a song of Christmas joy, and every one on board the ship felt his thoughts elevated, through the song and prayer, even as the old tree had felt lifted up in its last, its beautiful dream on that Christmas morn.

—HANS ANDERSON.

THE GRAVE IN THE FOREST

“A great tree fell in the forest,
 With a crashing, thunderous sound,
 Slowly and terribly stretching
 His ponderous length on the ground,
 And lay at the feet of his brothers
 Mangled and dead,
 Just as a mighty giant
 Would pillow his head.

—SELECTED.

THE OAK

“Sing for the oak tree, the monarch of the wood.
 Sing for the oak tree, that groweth green and good!
 That groweth broad and branching within the forest shade;
 That groweth now, and still shall grow when we are lowly laid.
 The oak tree was an acorn once, and fell upon the earth;
 And sun and shower nourished it, and gave the oak tree birth;
 For centuries grows the oak tree, nor does its verdure fail;
 Its heart is like the iron wood, its bark like plaited mail.

—SELECTED.

TREE LEGENDS

There are stories enough, beautiful little stories, too, about the trees to fill a whole book, and to enable you to entertain your friends in the woods for days and days.

The Ash tree, as well as certain other trees, was believed to be weather-wise. You people say now, “See the leaves of the Poplar

turning their silver side up. It must be going to rain." The Bay tree was supposed to be a protection from lightning. The Willow was an emblem of sadness. * * * But what about the Aspen tree? A German legend tells us that when Joseph and Mary were fleeing with the infant Jesus, they entered a very dense forest.

As soon as they were beneath the shelter of the forest, the trees all bowed their heads in reverence to the Divine Child. All except the Aspen, that lifted its head only a little higher, refusing to pay homage to anything on earth.

Then Christ cast one sad reproachful look upon this tree, so full of sorrow and reproof, that it pierced straight to its very heart. And lo! it began to tremble and has never for one moment ceased in all these centuries.

—*Fairyland of Flowers.*

Do you know how oddly the boughs of the Lombardy Poplar grow? Straight up in the air; making the tree look, as some one has said, for all the world, like an umbrella turned inside out by a gale. Of course, in the Legend world there must be a reason for this. Here it is. Some one had stolen the pot of gold which is said to be at the end of the rainbow.

The Wind messengers were sent to search for it. The Elm, the Oak, the Pine, all the trees had been asked if they knew the thief. All pointed their leaves toward the Poplar, saying, "The Poplar knows! the Poplar knows!"

"I know?" said the Poplar, raising its branches in pretended surprise. "Why, how should I know?"

But just then the pot of gold was seen shining through the leaves. The Wind messengers at once seized upon the gold, and as a punishment, the Poplar was doomed to hold its arms in just that position forever, as a warning to all other trees to be honest.

It seems rather a pity to tell such a story of so beautiful a tree. But it doesn't hurt the tree after all; and as nobody believes it, no harm is done, and we are amused for the time by the story.

"All my Master's works are fair, no flaw in them
is seen;
And yet the dear trees best of all I love to see,
I ween."

Stories told of us, if they are not true, do us little harm; for like spatters of mud, they will come off when they're dry.

—*Fairyland of Flowers.*

FALL LEAVES

Beauty of Leaves.—The beauty of color and texture combined with the endless variety of leaf forms cannot fail to prove a constant source of wonder and delight to the children during this season of bright, blue weather. Thoreau says,

“October is the month of painted leaves. Their rich glow now flashes round the world. As fruit and leaves, and the day itself acquire a bright tint just before they fall, so the year near its setting. October is its sunset sky. November the later twilight.”

—“*Excursions.*”

There are stupendous questions even in leaves, questions yet unanswered in opening buds, questions that glisten in the air on plummy seeds, riddles in rainbow colors imprisoned in a petal, and an endless catechism hangs on many a fragile stem.

—*Gibson Highways.*

It is desirable to center observation chiefly upon one or two trees, as the maple and the oak. Visit trees with pupils and impress the fact that the beauty of the leaves is scarcely equalled by their use.

Encourage children to collect and press leaves for the decoration of the school-room. Group trees dressed in red and yellow, crimson, purple and green.

Notice which trees change color first, which send their leaves to the earth first. Some day when the leaves are whirling down read “October’s Party,” or “How the Leaves Came Down.”

Let pupils sketch leaves related to the branches and fruit, as oak branch with leaves and acorns, pine branch with needles and cones.

BEFORE THE LEAVES FALL

I wonder if oak and maple,
Willow and elm and all,
Are stirred at heart by the coming
Of the day their leaves must fall.
Do they think of the yellow whirlwind,
Or know of the crimson spray,
That shall be when chill November
Bears all their leaves away?

Perhaps—beside the water
The willow bends, serene
As when her young leaves glistened
In a mist of golden green;
But the brave old oak is flushing
To a wine-red, dark and deep,
And maple and elm are blushing
The blush of a child asleep.

"If die we must," the leaflets
Seem one by one to say;
"We will wear the colors of gladness
Until we pass away,
No eyes shall see us falter;
And, before we lay it down,
We'll wear, in the sight of all the earth
The year's most kingly crown."

So, trees of the stately forest,
And trees by the trodden way,
You are kindling into glory
This soft autumnal day.
And we who gaze remember
That more than all they lost,
To hearts and trees together,
May come through the ripening frost.

—MARGARET SANGSTER.

POEM TO BE MEMORIZED:

HOW THE LEAVES CAME DOWN

"I'll tell you how the leaves came down,"
 The great tree to his children said;
 "You're getting sleepy, Yellow and Brown,
 Yes, very sleepy, little Red;
 It is quite time to go to bed."

"Ah!" begged each silly, pouting leaf,
 Let us a little longer stay!
 Dear Father Tree, behold our grief;
 'Tis such a very pleasant day
 We do not want to go away."

So, for just one more merry day,
 To the great tree the leaflets clung,
 Flicked and danced, and had their way
 Upon the autumn breezes swung,
 Whispering all their sports among,—

"Perhaps the great tree will forget,
 And let us stay until the spring,
 If we all beg and coax and fret."
 But the great tree did no such thing;
 He smiled to hear their whispering.

"Come, children, all to bed," he cried.
 And ere the leaves could urge their prayer,
 He shook his head, and far and wide,
 Fluttering and rustling everywhere,
 Down sped the leaflets through the air.

I saw them; on the ground they lay,
 Golden and red, a huddled swarm,
 Waiting till one from far away,
 White bedclothes heaped upon her arm,
 Should come and wrap them safe and warm.

The great bare tree looked down and smiled;
 "Good-night, dear little leaves," he said,
 And from below, each sleepy child
 Replied, "Good-night." Said little Red,
 "It is so nice to go to bed!"

By Permission of author.—SUSAN COOLIDGE.

(Little, Brown & Co., Publishers.)

By questioning lead children to see the pictures in this poem and let each one paint the one he likes best. Commit poem.

READ AND DISCUSS:

OCTOBER'S PARTY

October gave a party; the leaves by hundreds came,
 The Chestnuts, Oaks, and Maples, and leaves of every name.
 The Chestnuts came in yellow, the Oaks in crimson dressed,
 The lovely Misses Maple, in scarlet looked their best.

—SELECTED.

Why do the Leaves fall?

Let children examine leaves that are ready to fall, and lead them to discover the layer of tissue which has been built across the end of the petiole; this loosens the leaf so that only a slight breeze is necessary to take it to the ground.

The falling leaves in autumn,—the beginning of the year as far as the tree's life is concerned—should serve to remind pupils of the promise of life in the new bud.

When the leaves finish their work on the tree, the sap is withdrawn to the branches and trunk and the leaves fall to the earth and cover the seeds and roots of the grasses and flowers during the cold weather.

Ruskin says of the leaf—

"It leads a life of endurance, effort and various success, issuing in various beauty; and it connects itself with the whole previous edifice by one sustaining thread, continuing its appointed piece of work all the way from top to root."

Let children name leaves used as food by animals. Name insects that make their homes in leaves.

Study leaves related to the trees and impress the following facts: The leaves are to plants what lungs are to animals.

Where there are no trees the water from melted snow disappears too rapidly; moisture that is needed in the soil is taken away by floods.

Forests build up a wall and protect the farmers' crops.

We would have greater extremes of heat and cold if it were not for the trees.

The leaves catch the rain and hold it for a time before sending it to the earth. There are few birds where there are no trees.

The old leaves make a deep carpet in the woods and keep the ground from freezing.

Trees prevent dangerous floods. The roots and trunks stop the water that comes pouring down the hillside.

We have severe drouths in places where there are no trees.

It has been estimated that a large plant (sunflower) gives off over a quart of water a day. Estimate the amount given off by a large tree.

Make a general comparison of leaves—

Those which are widest near the base.

Those which are widest at the middle.

Those which are widest near the apex.

TERMS NEEDED IN DESCRIBING LEAVES

Leaf:—

Blade: The flattened part of the leaf.

Petiole: The stem of the leaf.

Stipules: Leaf-like parts at base of the petiole.

Venation: Net-veined, parallel-veined.

Shapes of Leaves:—

Oval, arrow-shaped, heart-shaped, and lance-shaped.

Simple leaves have but one blade.

Compound leaves have more than one blade.

Leaves deeply cut like the oak are called lobed leaves.

The base is near the petiole.

The apex is opposite the base.

Edges or Margins of Leaves:—

Entire, serrate or saw-toothed; crenate or scalloped; and dentate, with sharp teeth pointing outward.

Teach poems and songs that will appeal to the children and influence them to love this month of "painted leaves."

AUTUMN LEAVES

"Come, little leaves," said the wind one day,
"Come over the meadows with me and play;
Put on your dresses of red and gold;
Summer is gone and the days grow cold."

—SELECTED.

POEM TO BE MEMORIZED:**OCTOBER**

O suns and skies and clouds of June
And flowers of June together,
Ye cannot rival for one hour
October's bright blue weather.

When loud the bumble-bee makes haste,
Belated, thriftless vagrant,
And golden-rod is dying fast,
And lanes with grapes are fragrant;

When gentians roll their fringes tight
To save them from the morning,
And chestnuts fall from satin burrs,
Without a sound of warning;

When on the ground red apples lie,
In piles like jewels shining,
And redder still, on old stone walls,
Are leaves of woodbine twining;

When all the lovely wayside things
 Their white-winged seeds are sowing,
 And in the fields, still green and fair,
 Late aftermaths are growing;

When springs run low and on the brooks,
 In idle golden freighting,
 Bright leaves sink noiseless in the hush
 Of woods for winter waiting.

O suns and skies and flowers of June,
 Count all your boasts together,
 Love loveth best of all the year,
 October's bright blue weather.

—HELEN HUNT JACKSON.

Study "October."

Meaning of rival; thriftless; vagrant; etc. What did Lowell say about June? What flowers may be seen in June? in October? Do you agree with the author? Compare bumble-bee with honey-bee. Describe the gentian. Sketch the plant. Describe chestnut burrs, woodbine, etc. Math means mowing. Aftermath is the crop after the first mowing. Why do springs run dry in October? Name the beautiful white-winged things to be seen during this month. Which do you like the better, June or October? Why?

THE PAINTER

A fairy brush he must have used;
 And color he has not abused;
 The tints and tones are blended right—
 The tracery is all in white!

The morning sun comes peeping through.
 With glist'ning gleams of pink and blue,
 To view the picture Jack has made
 With glittering jewels all inlaid.

The Sun and Jack are mortal foes;
 One treads upon the other's toes.
 The hills and valleys melt, and run—
 And poor Jack's work is all undone!

—MARY REDMOND.

BIRDS

Birds, birds! ye are beautiful things,
 With your earth-treading feet and your cloud-cleaving wings,
 Where shall man wander, and where shall he dwell—
 Beautiful birds—that ye come not as well?

—*Birds and All Nature.*

Copyright, 1900, by A. W. MUMFORD.

Teacher's Preparation for Bird Lessons.—The following books will prove invaluable in bird study: *Birds and Poets*, *Wake Robin*, *Citizen Bird*, *Bird Craft*, *A Bird Lover in the West*, and *Birds and all Nature (A Monthly Serial)*.

The teacher should read and re-read the loving tributes and ennobling sentiments of the poets, also: *The Vision of Sir Launfal*, *The Birds of Killingworth*, *To a Water-fowl*, *To a Skylark*, and similar classic poems.

The poet's sympathetic interpretation of bird life will foster a love for birds,—for all

nature, and lead to a fuller appreciation of Wordsworth's thought,—

In the primary grades the children gladly follow where the teacher leads, thus giving her the blessed privilege of establishing a living sympathy with all God's creatures.

"Nature never did betray
 The heart that loved her; 'tis her privilege,
 Through all the years of this our life, to lead
 From joy to joy; for she can so inform
 The mind that is within us, so impress
 With quietness and beauty and so feed
 With lofty thoughts, that neither evil tongues,
 Rash judgments, nor the sneers of selfish men,
 Nor greetings where no kindness is, nor all
 The dreary intercourse of daily life,
 Shall e'er prevail against us, or disturb
 Our cheerful faith, that all that we behold
 Is full of blessings."

Bird life is wonderfully interesting and our feathered friends



SWALLOWS—By Laur

at all times and seasons are challenging young and old to discover their secrets. The children should be encouraged to make friends with the birds, to watch their graceful movements, and listen to their songs.

Picture the life of these beautiful little creatures, the time they spend collecting material for the nest, the ingenuity exhibited in building, care of the little bird family, bravery in defending the nest against enemies, and their joy when the young birds are ready to fly.

If the teacher is interested and enthusiastic, the pupils will catch her spirit and surprise her by their discoveries. In order that children may have the privilege of observing the birds daily, ears of corn, small boxes or sheaves of grain should be fastened to the trees near the school or home, and a dish of fresh water kept in a convenient spot where the birds may drink and bathe.

Tell interesting stories and incidents of bird life. Long, long ago, when Mother Nature gave the birds their plumage, the thrush came last and the attractive colors were all gone; the oriole had selected the orange; the canary, the yellow; the bluebird had chosen the blue; the tanager, the red, and the humming-birds and doves had monopolized the rainbow colors. The thrush looked admiringly at her friends and said, "Never mind, dear Mother, a plain brown dress is good enough for me, but give me a sweet voice, so that I can make the children happy."

Tell them about the polite bird (cedar-wax-wing) with the high head-dress, and the beautiful little points like red sealing-wax on the wings. A flock will often perch on the bare branches, stroke each other's plumage, bow, twitter, and pass choice morsels of food back and forth again and again before any one of the number can be persuaded to eat it.

In the lower grades the living bird should be studied out of

doors, and six or eight birds known and loved as a result of the first year's study may be considered good work. Ask questions that cannot be answered except by observing the birds.

What birds walk? What birds hop? What bird has a red patch on its head? Name birds that are black or nearly so. What time of the day do the birds begin to sing? How many have heard birds singing in the rain? Do they sing at night? What have you seen birds eating? Where do they sleep at night? How many have fed birds in the winter time? What bird was Celia Thaxter thinking of when she wrote "Don't you remember his glowing red breast, and his olive brown coat and his shining black eye?" Robin. What birds tell us their names? Bobwhite, whipporwill, chickadee, bobolink, pee-wee, and others.

Let children try to imagine the wonderful sights witnessed by the birds as they fly over land and sea.

BIRDS IN SUMMER

How pleasant the life of a bird must be,
 Flitting about in each leafy tree;
 In the leafy trees so broad and tall,
 Like a green and beautiful palace hall,
 With its airy chambers light and boon,
 That open to sun and stars and moon;
 That open to the bright blue sky,
 And the frolicsome winds as they wander by.
 To pass through the bowers of the silver cloud;
 To sing in the thunder-halls aloud;
 To spread out the wings for a wild, free flight
 With the upper cloud-winds—oh, what delight!
 Oh, what would I give like a bird, to go
 Right on through the arch of a sunlit bow,
 And see how the water-drops are kissed
 Into green and yellow and amethyst!

—MARY HOWITT.

Children should be requested to report their observations from time to time. They will have many questions to ask about the birds as soon as they become really interested.

Where do the birds go in autumn? They go south where the flowers are in bloom, when we have snow and cold weather.

Why do they go? In search of food. In their new home they find the same kind of food that they had here all summer. Some birds eat vegetable food, some, animal, while others prefer a mixed diet. The locality is determined by the abundance of food suited to their nature.

Will all the birds leave us? The blue jay, English sparrow, brown creeper, and several other birds remain with us all the year round. Some birds, as the chickadees, winter-wrens, tree sparrows, Bohemian wax-wings, come here from colder regions of the north to make us a visit during the winter. Some members of the great bird family are going or coming nearly all the time.

Which birds go first? Those whose food consists mostly of insects. The swifts and swallows go in August or early September. Humming-birds also go early. Robins eat animal and vegetable food and occasionally remain until we have snow.

Do they go singly or in flocks? Many birds congregate in flocks before they start, as the swallows, bobolinks, king birds, robins, and others.

What do the birds eat that remain here all winter? They find grubs hidden under the bark of trees, and seeds on the grasses above the snow.

Do they fly very high? Those that fly at night generally do, unless prevented by fogs.

Can birds fly very fast? Many birds fly a mile a minute and, if the wind is favorable, they are able to continue at that rate hour after hour. Swifts have been known to travel two hun-

dred miles an hour. Wild geese travel from twelve to fifteen hundred miles a day. It is claimed that the tiny flame-breasted humming-bird builds its nest as far north as Alaska and winters in Lower California and Mexico, traveling a distance of over two thousand miles twice a year.

HUMMING-BIRDS IN THE AMAZON REGION

It is enough to make one dumb with awe and wonderment even to contemplate the inexhaustible variety in their freaks of outward form alone, and it will be a day long to be remembered by any one who is fortunate enough to spend an hour or two within the fairy tropics of a conservatory devoted to these blossoms of the air. Here are colors and tones that are not of this world, but rather radiations borrowed from the celestial rainbow and the sunset and the pure blue sky. Here are scintillating textures woven with yellow light, and twilight purples of a hundred hues. * * * *

—GIBSON—*Highways and Byways.*

Why can some birds fly faster than others? The wings of birds that have very long journeys to take are long, pointed, and very strong, while the wings of those that fly only short distances are generally short, rounded and weak. Wild geese, ducks, and swans are first-class flyers as well as swimmers. The migration of a flock of geese is an interesting sight. A leader flies ahead at the point where the two lines of birds meet, and when he decides to change his position, a neighbor takes his place and the flock keeps in perfect order while the leaders are changing. They fly thousands of miles to build their nests in summer in northern regions.

Do the birds lose their way? Sometimes during storms it is supposed that they are not able to recognize the land marks,—rivers, coast lines, and mountains, and they often fly against high buildings, towers, or electric wires and thus meet their death. The eyes of birds magnify objects and enable them to see their land-marks when the weather is clear.

How do the young birds know where to go the first year? Bird lovers tell us that they are guided by the calls of the old birds the first year, and the next year they act as guides for other birds.

"Little bird! little bird! who'll guide thee
Over the hills and over the seas?
Foolish one! Come in the house to stay,
For I'm very sure you'll lose your way."

"Ah, no, little maiden! God guides me
Over the hills and over the sea.
I will be free as the rushing air,
And sing of sunshine every where."

—LYDIA MARIA CHILDS.

"There is a Power whose care
Teaches the way along that pathless coast,
The desert and illimitable air,
Lone wandering but not lost."

—BRYANT.

Do birds wear the same plumage all the year? Their feathers get worn by storms and by brushing against the branches of trees and they drop out one by one and are replaced by new ones. The tips of the smaller feathers give the bird its color; the breast feathers of a bluebird, for instance, are reddish only at the tips and for this reason birds often present a very different appearance during the year. Many birds are provided with more than one new suit a year. What is the color of the bobolink in spring time? in the fall?

Is the bird's body warmer than ours? The temperature of the human body is 98 degrees; that of a bird from 104 to 108 degrees.

NOTE.—Mr. Brewster, a noted ornithologist, made many interesting discoveries on the nocturnal flight of migrants at a New Brunswick light-house a few years ago. On the subject of migrations there still remains a large field for original research, many ornithologists claim.

Why is it warmer? The rapid movements of the birds through the air increases the circulation of the blood, making it warmer than that of any other animal, and the small, downy feathers covering the bird's body, prevent the heat from escaping.

How is the bird's body adapted for flight? The bird's plumage is very light; that of a large owl is said not to weigh two ounces. The shape of the body and the arrangement of the feathers (directed backwards) aid the bird in flying. The hollow bones and quill feathers are filled with air, and the air sacs extending through the body, even through the bones, are connected with the lungs. The light feathers, the expansion of the warm air and the strength of the tail and wing feathers enable the bird to move through the air with a graceful, gliding motion.

Have the birds many enemies? Yes, they have all sorts of enemies. Rats, squirrels, cats, weasels and snakes destroy a great number of eggs and young birds. Hawks, owls, crows, bluejays, shrikes, and several other birds prey upon their neighbors, and man, too, must be regarded as perhaps their worst enemy. It is estimated that the yearly slaughter of birds in America is about five millions—a million killed in one month near Philadelphia; forty thousand birds killed in a single season on Cape Cod; twenty thousand supplied to a New York dealer from one village. Why? To ornament the hats of American women.

May Riley Smith says:

Do all birds build nests?

The chick-a-dees, nut-hatches, brown creepers and others are satisfied

with a second-hand nest. Some birds repair last year's nest, as the owl, wren, and bluebird. The cow-bird lays its eggs

"What does it cost this garniture of death?
It costs the life which God alone can give;
It costs dull silence, where was music's breath;
It costs dead joy, that foolish pride may live;
Ah! life and joy and song, depend upon it,
Are costly trimmings for a woman's bonnet."
—By permission of E. P. Dutton & Co.

in the nest of other birds; when the warblers find a strange egg in their nest they often build a new nest above the old one.

Ye have nests on the mountains, all rugged and stark,
Ye have nests in the forest, all tangled and dark;
Ye build and ye brood 'neath the cottagers' eaves
And ye sleep on the sod 'mid the bonnie green leaves;
Ye hide in the heather, ye lurk in the brake,
Ye dine in the sweet flags that shadow the lake;
Ye skim where the stream parts the orchard decked land,
Ye dance where the foam sweeps the desolate strand."

—*Birds and All Nature*, Copyright 1900, by A. W. Mumford, Chicago.

Make a special study of the domestic pigeon, or the canary, parrot, or hen, in the school-room in order to prepare the children for intelligent observation out of doors. A skeleton wire-covered box will make a nice home for the pretty pigeon until the children become better acquainted with her. Find out what they know about this meek little bird. Let them imitate the plaintive sound it makes. (Coo, coo.) Watch it drinking. It does not raise its head as other birds do. Notice its dainty steps while walking.

CHARACTER OF THE BIRD

It is an innocent, gentle bird and has always been the symbol of tenderness and devotion. Let children tell what they have observed about the nest. Both birds help in building and they take turns in sitting upon the nest. They raise several broods in one season.

Tell stories of pigeons.

FABLE

Long ago one bright day in spring many of our distinguished birds assembled in a beautiful grove to exchange compliments and welcome new arrivals from the sunny south. All at once, an unexpected visitor appeared before them. Her graceful manners, dainty ways and low,

soft voice won the approval and admiration of all the lovely company. The birds gave the pretty stranger a very cordial greeting and bestowed upon her favors unheard of in bird life previous to that day. They not only offered to assist the new comer in the choice of a desirable location, but promised to give her lessons in the art of nest building.

The swallows tried to persuade her that they had invented the most wonderful nest of all the birds, the orioles described the beauty of a swinging cradle in an elm tree, the meadow-lark assured her that for safety and ingenuity no nest could be compared with her's, the woodpecker offered to choose the finest tree in the grove and show her how to make an ideal nest. The little pigeon listened attentively to all her friends, but said with a toss of her pretty head, "I am very thankful to you all, but I understand the art of nest building far better than any of you." Of course, the birds were very much offended and they all flew away and left her there alone. No doubt she was sorry for her independence, because she has every reason to be ashamed of her nest. Her relatives (mourning dove and passenger pigeon) need instruction in the art of nest building as well as our little favorite.

Call attention to the plumage so difficult to describe,—sometimes bluish, slate-colored, white, rainbow colors; the bright round eyes; the grooved bill; nostrils in the upper bill.

Notice the short, slender legs covered with tough skin, the four toes, three in front and one behind, and the strong, sharp claws.

Call attention to the fluttering noise made by striking the long, pointed wings in flight.

Let children learn the names of the parts of a bird,—crown, beak, throat, breast, wings, tail, claws, etc.

The carrier, or messenger pigeon has a very interesting history. It has been trained to carry messages in a short time over long distances. The training is begun when the bird is very young by taking it a short distance from home and setting it free. It soars upward until it determines the right direction and then returns to its cote. Day after day it is taken in the same direction from its home, each time a little

further, until it becomes very familiar with the route it is to travel.

A message is written on the finest paper, placed in a cylinder made of aluminum and is attached to one of the tail feathers. From forty to fifty miles an hour is about the average speed of the messenger.

THE DOVE AND THE WOODPECKER

A FABLE

A dove and a woodpecker had been visiting a peacock. "How did you like our host?" asked the woodpecker, after their visit. "Is he not very disagreeable? His vanity, shapeless feet, and his harsh voice are unbearable. Don't you think so?" "Indeed I had no time," said the gentle dove, "to notice these things; I was so occupied with the beauty of his head, the gorgeoussness of his colors, and the majesty of his train."

Tell children one of the legends connected with the Doves of Venice.

Centuries ago this "City of the Sea" was nearly conquered by enemies. Doves arrived with messages just in time to save the city and ever since the doves have been protected and loved by the people. Strangers enjoy watching them in the beautiful St. Marco Square near the grand cathedral.

High on the top of an old pine tree
Broods a mother-dove with her young ones three.
Warm over them is her soft downy breast,
And they sing so sweetly in their nest.
"Coo," say the little ones, "Coo," says she.
All in their nest on the old pine-tree.

NOTE.—The name "dove" and "pigeon" are not quite synonymous, but because "dove" is so commonly used in literature and it is so nearly correct, "Howe" advocates the use of the term dove in primary grades.

Fast grow the young ones, day and night,
 Till their wings are plumed for a longer flight;
 Till unto them at last draws nigh
 The time when they all must say "Good-bye."
 Then "Coo," say the little ones, "Coo," says she,
 And away they fly from the old pine-tree.



BIRDLING'S GOOD-NIGHT TO THE FLOWERS

Shadows creep along the sky,
 Birdies now must homeward fly;
 Hear the songs they sing to greet
 All their friends—the flowers sweet.
 Good-night darling mignonette,
 Good-night little violet;
 Good-night pinks and four o'clock,
 Good-night, homely holly-hock!
 Good-night lily; good-night rose;
 Good-night every flower that blows;
 Thank you for your lovely bloom,
 Thank you for your sweet perfume.

From *Songs for Little Children* by Eleanor Smith. By permission of Milton Bradley Co. and Thomas Charles, Chicago, Publishers.

Birds are divided into families according to their form, habit, and manner of obtaining food.

Perching Birds, Ex.—Robin, oriole.

Climbing Birds, Ex.—Woodpecker and parrot.

Scratching Birds, Ex.—Hen, pigeon.

Wading Birds, Ex.—Crane, heron. Swimming Birds, Ex.—Goose and duck.

Running Birds, Ex.—Ostrich. Preying Birds, Ex.—Eagle.

Find out the characteristics of each family.

DUCK

A type of water birds compared with the hen, or some other bird previously studied.

Call attention to the boat shaped body of the duck, the legs strong and short and placed far back on the body.

The hen's rounded heavy body. What shape better adapted for swimming? What does the duck eat? How obtain food? What is the advantage of the broad, shovel shaped bill with its rough plate along the sides? Serves as a strainer and enables the duck to retain the food and reject mud, etc. What does the hen eat? How does she get her food? Examine the strong membrane between the toes of the duck, adapted for wading, the strong, sharp claws of the hen, adapted for scratching.

Plumage of duck. Sometimes a dark, glossy green, reddish brown, beautiful soap-bubble colors. Why so glossy? The supply of oil in the oil gland is sufficient to keep the feathers saturated with oil. (Waterproof.) Heavy coat of soft down next to body. Why? Protection against changes of temperature in air and water. Compare with hen.

MAKE A SPECIAL STUDY OF THIS BEAUTIFUL POEM :

ODE TO A WATER-FOWL

Whither 'midst falling dew,
While glow the heavens with the last steps of day,
Far, through their rosy depths, dost thou pursue
Thy solitary way?

Vainly the fowler's eye
Might mark thy distant flight to do thee wrong,
As, darkly painted on the crimson sky,
Thy figure floats along.

Seek'st thou the plashy brink
Of weedy lake, or marge of river wide,
Or where the rocky billows rise and sink
On the chafed ocean side?

There is a Power whose care
Teaches the way along that pathless coast,
The desert and illimitable air,
Lone wandering, but not lost.

All day thy wings have fanned,
At that far height, the cold, thin atmosphere,
Yet stoop not, weary, to the welcome land,
Though the dark night is near.

And soon that toil shall end.
Soon shalt thou find a summer home, and rest,
And scream among thy fellows; reeds shall bend,
Soon o'er thy sheltered nest.

Thou'rt gone; the abyss of heaven
Hath swallowed up thy form; yet, on my heart,
Deeply has sunk the lesson thou hast given,
And shall not soon depart.

He, who, from zone to zone,
Guides through the boundless sky thy certain flight,
In the long way that I must tread alone,
Will lead my steps aright.

—WILLIAM CULLEN BRYANT.

How can we tell when the poet saw the bird? The appearance of the sky? Number of birds? Why useless for the fowler to try to harm the bird? Meaning of plashy brink? Marge? Chafed? Might the bird seek a home in a forest? Why is the first letter in Power a capital? Meaning of path-

less? Illimitable? Abyss of heaven? Boundless? What lines show confidence in God? Paint the pictures suggested by the following lines:

"As darkly painted on the crimson sky
Thy figure floats along."
"Reeds shall bend
Soon o'er thy sheltered nest."

What is the message contained in the poem?

STUDY OF POEM

Children have studied "The Sparrows," "The Poppy Seed," and visited in imagination the White and Appledore Islands.

Review the story of Celia Thaxter's childhood days. Her father was the keeper of an island light-house on the Atlantic coast. Celia loved the stormy ocean, the seagulls, the sandpipers—everything connected with her home. In the following poem she has given us a picture of herself and one of her dear little friends.

POEM TO BE MEMORIZED AFTER THOUGHTFUL DISCUSSION:

THE SANDPIPER

"Across the lonely beach we flit,
One little sandpiper and I,
And fast I gather bit by bit,
The scattered driftwood bleached and dry,
The wild waves reach their hands for it;
The wild wind raves, the tide runs high,
As up and down the beach we flit,
One little sandpiper and I.

"Above our heads the sullen clouds
Scud black and swift across the sky.
Like silent ghosts in misty shrouds
Stand out the light-houses high.
Almost as far as eye can reach
I see the close-reefed vessels fly,
As fast we flit along the beach,
One little sandpiper and I.

"I watch him as he skims along
Uttering his sweet and mournful cry;
He starts not at my fitful song,
Or flash of fluttering drapery,
He has no thought of any wrong;
He scans me with a fearless eye.
Staunch friends are we, well tried and strong,
The little sandpiper and I.

"Comrade, where wilt thou be to-night
When the loosed storm breaks furiously?
My driftwood fire will burn so bright!
To what warm shelter canst thou fly?
I do not fear for thee, though wroth
The tempest rushes through the sky;
For are we not God's children both,
Thou, little sandpiper, and I?"

—CELIA THAXTER.

Teacher, read poem to children. Show pictures of ocean vessels, light-house and sandpiper. Describe bird. Explain close-reefed, beach, staunch, etc. Teacher, read poem again and help children to see the pictures in each stanza. Group expressions that suggest fear and loneliness; expressions that suggest hope and confidence. Sketch a picture you can see in second stanza. Repeat the last stanza of Bryant's poem "The Water-fowl." Do you like this poem as well as "The Sandpiper"? Give reasons for your choice.

THE GRAY SQUIRREL

This handsome, nimble, little fellow is perhaps the most interesting member of the large family of rodents.

In studying an animal, its manner of life in its native haunt should be the first thing observed. Ask questions to guide children in their outdoor study.

When and where did you see the squirrel? Describe his movements. How does he run up a tree? How come down?



PIPER AND NUTCRACKERS—By Landseer

Compare with the cat in this respect. What does he eat? How does he carry his food? Where does he live? Describe his nest. When running, in what position does he carry his tail? Imitate the noise he makes.

If teacher and pupils are so situated that it is impossible to study the squirrels in their own natural environment procure one alive in a revolving cage for study in the school-room. One of the pupils may have a tame squirrel, which he will be glad to bring to school for a week or so.

Children, watch the squirrel in his cage and find out his way of eating, drinking, and bathing. Notice his teeth. In the front of his mouth he has four long, chisel shaped teeth, two in the upper jaw and two in the lower. For grinding he has strong, broad back teeth.

How does he hold the nut? How does he eat it? He seems to like fruit, grain, buds, and cones as well as nuts. Observe the squirrel when asleep.

Body.—The long slender body is covered with two coats of soft fur. The coat next to the body is very compact and warm; the hair on the outer coat is long and it determines the color. The gray squirrel is variable in color, ranging from very light gray to black. He has bright, round eyes, ears of medium size, and very long whiskers. The hind legs are longer than the front ones. The fore paws are each provided with four toes and a thumb, while the hind paws have five toes each. The long bushy tail is used as a rudder in jumping and it also serves to keep the body warm during the winter.

Children notice that the squirrel often hides food under leaves, bark, or other objects in the cage.

Habits when free.—The squirrel selects a deep hollow in a decayed tree, lines it with moss and leaves, and sleeps there securely the greater part of the time in winter. He stores his

food in autumn; sometimes hiding it in old trees near his home and sometimes burying a portion in the earth; occasionally he wakes up during the winter and runs out and finds something to eat. His teeth continue to grow as long as he lives and he must keep them worn down by gnawing.

THE SQUIRREL

In the joy of his nature he frisks with a bound
 To the topmost twigs, and then to the ground;
 Then up again, like a winged thing,
 And from tree to tree with a vaulting spring;
 Then he sits up aloft, and looks waggish and queer,
 As if he would say, "Ay, follow me here!"
 And then he grows pettish, and stamps his foot;
 And then independently cracks his nut. * *

—MARY HOWITT.

COMPARE THE GRAY, WITH THE RED SQUIRREL.

INDIAN CORN

The children above the first grade have been watching with great interest the growth of the corn they planted in early spring. Before the close of the term their observations should be summed up. Teacher, direct attention to a field of corn, if convenient. Let children tell what they know about the manner of planting corn, its cultivation, and the soil best adapted for its growth.

Study of the Plant as a Whole

What is the average height of the stem? Pupils measure.

How many joints in the stalk?

Are they alike? Examine the roots. How are the leaves arranged on the stem?

Stem.—Tall, straight, smooth, lower nodes prominent; pithy inside the stalk.

Roots.—Numerous, tough, and fibrous; strong roots branching from the lowest nodes give the plant a broader base and

help to support the stalk with its wealth of leaves and golden grain.

Leaves.—Long, narrow, parallel-veined; spread out from the joints in graceful curves.

Flowers.—Two kinds,—the tassel, a tall branched spike at the top of the stem containing only stamens; bunches of silk in the axils of the lower leaves,—the styles of the pistillate flowers.

Have children picture the corn stalk.

Pollen must fall on the silk in order to mature the corn,—it may fall from the tassel above, or it may be carried by the wind from another plant.

Have children examine the silky threads, and find out where they are attached to the kernels.

Has each kernel a thread? Observe arrangement of the kernels on the cob. How many rows do you find?

Uses.

The kernels yield "Oswego," or corn starch.

The kernels ground, form Indian meal.

The stalks are used for fuel and in making baskets.

The husks are used in packing fruits, in stuffing saddles, beds and chairs, and in the manufacture of paper.

History.

Early writers describe the corn of Peru and Chili.

Maize is probably a native of Mexico.

Early explorers of America found it cultivated by the Indians.

It was taken by Columbus to Spain in 1520.

Edward Everett said:

"Drop a grain of California gold into the ground, and there it will lie unchanged to the end of time, the clods on which it falls not more dead and lifeless. Drop a grain of our gold, of our blessed gold, into the ground and lo! a mystery. In a few

days it softens, it swells, it shoots upwards; it is a living thing. It is yellow itself, but it sends up a delicate spire which comes peeping, emerald green, through the soil; it expands to a vigorous stalk; revels in the air and sunshine; arrays itself more glorious than Solomon in its broad fluttering leafy robes, * * still towers aloft, spins its verdant skeins of vegetable floss, displays its dancing tassels, surcharged with fertilizing dust, and at last ripens into two or three magnificent batons, each of which is studded with a hundred grains of gold, every one possessing the same wonderful properties as the parent grain."

Literature.

"Feast of Mondamin"—from Song of Hiawatha, and "Maize, the Nation's Emblem."—*Houghton, Mifflin & Co.*

Not forgotten nor neglected
Was the grave where lay Mondamin
Sleeping in the rain and sunshine * * *

Day by day did Hiawatha
Go to wait and watch beside it;
Till at length a small green feather
From the earth shot slowly upward,
Then another and another,
And before the summer ended
Stood the maize in all its beauty
With its shining robes about it
And its long, soft yellow tresses. * * *

(Mondamin was the Indian name for maize, or Indian corn.)

Teacher, read the description of "This New Gift of the Great Spirit," and children, memorize after discussion.

THE FARMER AND HIS SONS.

The farmer was industrious and wealthy; the sons were lazy and thoughtless. "Father, do tell us where to find your treasure," they said; "My treasure lies in the cornfield," answered the father. The boys went

to work and dug the fields day after day to find the pot of gold. They never found it, but the field yielded a fine crop of corn. This was the father's wealth.

READ AND DISCUSS THE FOLLOWING POEM :

MAIZE FOR THE NATION'S EMBLEM

Upon a hundred thousand plains
Its banners rustle in the breeze,
O'er all the nation's wide domains,
From coast to coast betwixt the seas.

It storms the hills and fills the vales,
It marches like an army grand,
The continent its presence hails,
Its beauty brightens all the land.

Far back through history's shadowy page
It shines a power of boundless good,
The people's prop from age to age,
The one unfailing wealth of food.

God's gift to the New World's great need,
That helps to build the nation's strength,
Up through beginnings rude to lead
A higher race of men at length.

How straight and tall and stately stand
Its serried stalks upright and strong!
How nobly are its outlines planned!
What grace and charm to it belong!

What splendid curves in rustling leaves!
What richness in its close-set gold!
What largeness in its clustered sheaves,
New every year, though ages old!

America, from thy broad breast
It sprang, beneficent and bright,
Of all the gifts from heaven the best,
For the world's succor and delight.

Then do it honor, give it praise!
 A noble emblem should be ours:—
 Upon thy fair shield set thy Maize,
 More glorious than a myriad flowers.
 And let the states their garlands bring,
 Each its own lovely blossom-sign;
 But leading all, let Maize be king,
 Holding its place by right divine.

—CELIA THAXTER.

THANKSGIVING DAY

The autumn nature lessons and literature have enabled the teacher to instill into the hearts of the children true feelings of gratitude for the many blessings they enjoy.

Discuss the following topics: The Pilgrims Leaving England; The Pilgrims in Holland; The Voyage of the Mayflower; The Two Children—Peregrine White and Oceanus Hopkins; The Landing; etc. Show pictures of the life of that time.

Teach—"Montgomery's Hymn," Lucy Larcom's "Thanksgiving," and similar selections.

THANKSGIVING DAY

"Over the river and through the wood
 To grandfather's house we'll go;
 The horse knows the way
 To carry the sleigh
 Through the white and drifted snow.

Over the river and through the wood,
 Trot fast, my dapple gray!
 Spring over the ground
 Like a hunting hound!

For this is Thanksgiving Day. * * *

—SELECTED

THE LANDING OF THE PILGRIMS

The breaking waves dashed high.
 On a stern and rock-bound coast;
 And the wood against a stormy sky
 Their giant branches tossed;
 And the heavy night hung dark
 The hills and waters o'er,
 When a band of exiles moored their bark
 On the wild New England shore.

Not as the conqueror comes,
 They, the true hearted came;
 Not with the roll of the stirring drums
 And the trumpet that speaks of fame;
 Not as the flying come,
 In silence and in fear;
 They shook the depths of the desert gloom
 With their hymns of lofty cheer.

Amidst the storm they sang,
 And the stars heard and the sea;
 And the sounding aisles of the dim woods rang
 With the anthems of the free.
 The ocean eagle soared
 From his nest by the white waves foam;
 And the rocking pines of the forest waved—
 This was their welcome home.

There were men with hoary hair
 Amidst that Pilgrim band;
 Why had they come to wither there,
 Far from their childhood's land?
 There was woman's fearless eye.
 Lit by her deep love's truth;
 There was manhood's brow serenely high
 And the fiery heart of youth.

What sought they thus afar?
 Bright jewels of the mine?
 The wealth of seas, the spoils of war?
 They sought a faith's pure shrine.
 Ay, call it holy ground,
 The soil where first they trod!
 They have left unstained what there they found
 Freedom to worship God!

—FELICIA HEMANS.

By reading, re-reading and questioning help children to catch the spirit of Mrs. Heman's poem.

NATURE STUDY

THANKSGIVING HYMN

(TUNE—"AMERICA.")

The God of harvest praise;
 In loud thanksgiving raise
 Heart, hand and voice,
 The valleys laugh and sing,
 Forests and mountains ring,
 The plains their tribute bring,
 The streams rejoice.

Then God of harvest praise;
 Hands, hearts and voices raise,
 With sweet accord;
 From field to garner throng,
 Bearing your sheaves along,
 And in your harvest song,
 Bless ye the Lord.

—JAS. MONTGOMERY.

A THANKSGIVING

For the wealth of pathless forests,
 Whereon no axe may fall;
 For the winds that haunt the branches;
 The young bird's timid call;
 For the red leaves dropped like rubies
 Upon the dark green sod;
 For the waving of the forests,
 I thank Thee, O my God!

For the sound of waters gushing
 In bubbling beads of light;
 For the fleets of snow-white lilies
 Firm-anchored out of sight;
 For the reeds among the eddies;
 The crystal on the clod;
 For the flowing of the rivers,
 I thank Thee, O my God!

For the rosebud's break of beauty
 Along the toiler's way;
 For the violet's eye that opens
 To bless the new-born day;

For the bare twigs that in summer
Bloom like the prophet's rod;
For the blossoming of flowers,
I thank Thee, O my God!

For the lifting up of mountains,
In brightness and in dread;
For the peaks where snow and sunshine
Alone have dared to tread;
For the dark of silent gorges,
Whence mighty cedars nod;
For the majesty of mountains,
I thank Thee, O my God!

For the splendor of the sunsets,
Vast mirrored on the sea;
For the gold-fringed clouds that curtain
Heaven's inner mystery;
For the molten bars of twilight,
Where thought leans, glad, yet awed;
For the glory of the sunsets,
I thank Thee, O my God!

For the earth, and all its beauty;
The sky, and all its light!
For the dim and soothing shadows
That rest the dazzled sight;
For unfading fields and prairies,
Where sense in vain has trod;
For the world's exhaustless beauty,
I thank Thee, O my God!

For an eye of inward seeing;
A soul to know and love;
For these common aspirations,
That our high heirship prove;
For the hearts that bless each other
Beneath Thy smile, Thy rod;
For the amaranth saved from Eden,
I thank Thee, O my God!

For the hidden scroll, o'erwritten
 With one dear Name adored;
 For the Heavenly in the human;
 The Spirit in the Word;
 For the tokens of Thy presence
 Within, above, abroad;
 For Thine own great gift of Being,
 I thank Thee, O my God!

—LUCY LARCOM.

Teacher, read the entire poem and then read it stanza by stanza. Children describe pictures. Count the blessings named in each stanza. Meaning of eddies? rubies? scroll? mystery? aspirations? Commit sixth, seventh and eighth stanzas.

CHILDREN MEMORIZE POEM AFTER DISCUSSION.

NOVEMBER

The leaves are fading and falling,
 The winds are rough and wild,
 The birds have ceased their calling,
 But let me tell you, my child,
 Though day by day, as it closes,
 Doth darker and colder grow,
 The roots of the bright red roses
 Will keep alive in the snow.
 And when the winter is over,
 The boughs will get new leaves,
 The quail come back to the clover,
 And the swallow back to the caves.
 The robin will wear on his bosom
 A vest that is bright and new,
 And the loveliest way-side blossom
 Will shine with the sun and dew.
 The leaves to-day are whirling,
 The brooks are all dry and dumb,
 But let me tell you, my darling,
 The spring will be sure to come.

There must be rough, cold weather,
 And winds and rains so wild;
 Not all good things together
 Come to us here, my child.

So, when some dear joy loses
 Its beauteous summer glow,
 Think how the roots of the roses
 Are kept alive in the snow.

—ALICE CARY.

Why are the leaves falling? Why have the birds ceased calling? Even though the days grow darker and colder what are we sure of? What will happen when the winter is over? Name way-side blossoms to be seen this month. Find lines that tell what happens in November. Describe pictures you like best.

MEMORIZE "NOVEMBER."

* * *

Each day I find new coverlids
 Tucked in, and more sweet eyes shut tight;
 Sometimes the viewless mother bids
 Her ferns kneel down full in my sight;
 I hear their chorus of "good-night,"
 And half I smile and half I weep,
 Listening while they lie "down to sleep."

—HELEN HUNT JACKSON.

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Meaning of coverlids. Name "eyes" (flowers) that close in November. Meaning of "viewless mother." Why half smile and half weep?

The year has lost its leaves again,
 The world looks old and grim;
 God folds his robe of glory thus,
 That we may see but Him.

—ALICE CARY.



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