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ABSTRACT

This environmental education teaching guide was designed for primary teachers who may want to develop their own environmental education units or who may wish to integrate the units contained in the guide into their own curriculum. The units in the guide were developed by primary teachers and reflect the experiences of the Fairmont Avenue School students and teachers at a nearby park. The guide is divided into five small interest units which provide primary children an opportunity to choose an area of learning and study this area in a group situation. The interest groups within the guide include the aquarium interest group, insect interest group, dried flowers interest group, leaves and trees interest group and the terrarium interest group. Each interest unit contains objectives, procedures, field trip, follow up, evaluation, and reference materials. Further information including wildflower illustrations; insect facts; instructions for making an insect cage; illustration of insects, animals, and plants; safety rules; and a sample permission letter are included. (TK)

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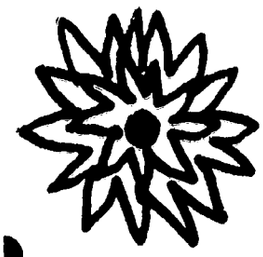

WALNUT SPRINGS INTEREST UNIT

Fairmount Avenue School

Primary Unit---Team I

October, 1971

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INTRODUCTION

The following unit was jointly developed by the Primary Staff of Fairmount Elementary School and the staff of the State College Environmental Education Program. It is our hope that the concepts, procedures, and activities presented within this unit will be of help to you in developing your own environmental education units. It is not necessary that you follow the materials presented, nor that you use Walnut Springs as the site for a fieldtrip. We do feel that the unit is a good example of how an environmental education unit might be set-up. Please feel free to borrow, alter, or add to any or all of the materials from this unit to fulfill your own needs.

Gary Owen
Environmental Education Coordinator
State College Area School District

Walnut Springs Interest Unit:

I. Purpose of unit:

To give each child from kindergarten throught third grade an opportunity to chose an area of learning which was pursued throught meetings of nature study interest groups for a period of about twelve school days. More than ninety children were involved in this learning experience.

Walnut Springs was chosen as our field trip site because it has a natural setting which lends itself to this type of learning and the site is located close to the homes of many of the children.

II. Procedures:

Children were given a pre-view of interest groups through presentations by the teachers and slides of the Walnut Springs site were shown to acquaint the children with the area.

Interest groups were formed to learn:

(1) what does or does not grow in streams....Aquarium group

(2) what insect life can be found....Insect group

(3) what can we do with dried materials....Dried flower group

(4) what leaf changes occur....Leaf group

(5) what can be used in terrariums....Terrarium group

The groups were composed of children from each grade according to their expressed interests. The interest groups met each day for six days prior to going to Walnut Springs and for six days following the field trip.

Supervision of the groups while exploring Walnut Springs was coordinated by Grace McDermott. Group leaders were university students who had planned the trip in conjunction with the professional staff of Team I.

During the week following the field trip, children used information and skills gained throught first hand experiences to prepare displays, exhibits, models, and booklets for use of Team I students:

(1) a fresh water aquarium was set up

(2) terrariums were made for each classroom

(3) exhibits of collages and arrangements of dried materials were prepared

(4) insects were housed in cages built by the children

(5) leaf collections were made

III. What next?

We hope to continue this study idea because the children have indicated a strong interest in it and we feel that knowledge of the changes which take place in nature can best be gained through actually observing them first hand.

I. Objectives for the children:

1. To be exposed to the stimulation of older and younger children.
2. To be able to select their individual interest group which include leaves, insects, aquariums, terrariums, and dried flowers.
3. To continue to develop an awareness of their social responsibility to others through helping, sharing, and working together.
4. To be free to explore the natural environment.
5. To develop a more realistic concept of an undeveloped nature area within their neighborhood.
6. To become involved in sensory experiences which include kinesthetic activity throughout the unit.
7. To become aware of the necessity of conservation so that people may enjoy the beauty of nature.
8. To develop an awareness of the delicate balance of nature and of man's responsibility to maintain it.
9. To prepare, within their interest groups, examples of their work to be displayed in each of the four classrooms.

II. Objectives for teachers:

(1) To continue cross grade groupings

(2) To work with groups of children who have specific interests

(3) To have the experience and knowledge of planning a unit designed to help children understand more about their immediate environment

III. Objectives for Walnut Springs Field Trip:

(1) To identify and gather materials suitable for terrariums

(2) To gather water specimens for fresh water aquarium

(3) To identify weeds, flowers, and grasses and collect those which would be suitable for making bouquets and collages

(4) To collect and identify specimens of insect life found in the area

(5) To identify deciduous trees in the study area and collect and identify leaf and bark samples

(6) To become acquainted with an undeveloped nature area

(7) To begin to develop the concept of conservation as it relates to such an area

I. Materials needed for this unit:

A. To be provided by the school:

(1) gallon glass jars

(2) plaster of paris

(3) plastic buckets

(4) small fish net strainers

(5) tweezers, scissors, glue, crayons, paper, etc. for collages

(6) ingredients for drying flowers

(7) screening

(8) first aid kits for field trip

B. To be furnished by students:

(1) plastic containers...ice-cream, milk, etc.

(2) coffee can plastic lids

(3) dry cleaning plastic bags

(4) digging tools...sand shovels

C. Filmstrips:

(1) In the Autumn

(2) Four Seasons...Fall

(3) The Calendar Tells When

(4) Nature in Four Seasons

(5) Meaning of Conservation

(6) Conservation

D. Film:

(1) Walk Along a Nature Trail

E. Study Guide prepared by Grace McDermott

Evaluation of this unit:

1. The pre-planning done by the staff and with Grace McDermott was most helpful
2. Being able to tour the area several times prior to taking the children, gave teachers the opportunity to incorporate information both prior to and after the field trip.
3. Color coding the groups helped to identify groups quickly.
4. Having adequate adult supervision who knew what the children were to do, made for a smoother operation.
5. The flexibility within the team contributed to the total success of this unit.
6. The lenght of time devoted to this unit was good for this age child...they did not become bored by having an overdose.
7. On an another trip we would not carry as many things as we did this time...i.e. taking of too many containers for collecting.
8. The carry over we have been able to observe has been fine.

Aquarium Interest Group

I. Objectives:

(1) To explore the water area and observe the wildlife in it

(2) To capture and bring back water samples

(3) To set up a functioning and living fresh water aquarium

(4) To set up and use a microscope to observe miscropscopic creatures

(5) To discover that by muddying the water you cannot observe life in it

II. Procedures:

(1) Collected water samples from a stream and brought in for children to observe the life

crayfish catfish algae microscopic life

(2) Looked, observed, and discussed the collection

(3) Children recorded their observations

(4) Discussed possibility that we might not see these things at Walnut Springs due to pollution

III. Field trip:

(1) Group went to bus according to color coding

(2) Group was sub-grouped at Walnut Springs with each group having a student leader

(3) Groups went to different areas using the stream bed as the collecting area after freedom to explore

(4) Specimens collected were put into an aquarium upon return to school

IV. Follow up:

(1) Observed and discussed the tank and the animal life.

(2) Compared this tank and one we had set up previously.

(3) Why did everything in the first tank die?

(4) Why didn't everything in the second tank die? aeration was the key

(5) Drew pictures of our field trip

(6) Composed chart story about experiences

(7) Wrote thank you notes to student leaders

V. Evaluation:

(1) Felt better prepared for this experience than ones we have

(2) Student leaders were prepared to help

(3) Pupil groups were small enough to give children opportunity to explore

Filmstrips:

(1) Life in an Aquarium

(2) Life in a Pond

(3) A Visit to the Pond

(4) Living and Non-Living Things

Aquarium Interest Group

We looked at a gunk jar.

A gunk is an insect, worm, fish, and green algae collection.

Ours did not smell good.

We studied the plant and animal life in a jar.

We used our eyes and a micro-projector to study the jar.

We drew pictures of what we saw.

We went to Walnut Springs.

We explored the creek.

One group caught a fish, another caught a crayfish.

We also caught diving beetles, water beetles, snails, and eggs on rocks.

We brought these things back to school to study.

We put an air pump in the tank and this kept everything alive and it did not smell bad.

We talked about the things we found.

Our chub died and the crayfish ate it.

We learned a lot about life in a stream.

Insect Interest Group

I. Objectives:

(1) should be able to verbally describe an insect

(2) should be able to name 5 insects

(3) should be able to tell how insects help or harm mankind

II. Procedures:

(1) study of insects generally

a. stress insects span on earth in comparison to ours

b. 3000 or more varieties-name those most familar to us

(2) study of insects specifically

a. characteristics common to all insects:

all have 6 legs...hexapodal

all have 3 parts...head, thorax, abdomen

all are invertebrates...body hardness given by chitin

b. differences in size, shape, color, number of wings, number of antennae, leg structure, mouth structure

(3) making of individual insect cages out of screening, coffee can lids and plaster of paris

(4) looking at teacher prepared booklet based on, "The Tall Grass Zoo"

(5) Viewing filmstrips and films: browsing through insect books

(6) Setting up field trip manners; what to look for and where to look: conservation of insects, (1 per student)

III. Field trip:

(1) large group broken into smaller groups with adult leader

(2) groups sent to different areas of park

(3) each child given free rein to observe and collect

IV. Follow up:

(1) reviewed trip using prepared booklet

what insects seen?
where seen?
difference in areas of park?

(2) writing of thank you notes and drawing of appropriate pictures

(3) building of cricket farm and review of crickets

(4) building of home for praying mantis and review about this insect

(5) building of own insect using art foam

(6) viewing of film, "Insect Zoo"

(7) presentation of ideas to total team groups

V. Evaluation:

This was a field in which I had very little experience and little knowledge. I found that several of the older children were enthusiastic collectors and were well-versed in insect data. I wasn't at all hesitant about using them as "sourse material" or general indicators as to how our interest should go. These children were also good "teacher aides."

VI. Bibliography

Carle, Olive: Crickets
Carle, Olive; Praying Mantis
Headstrom, Ralph: Adventures with Insects
Hogner, Dorothy; Grasshoppers and Crickets
Lubell, Winifred; Tall Grass Zoo
McClung, Robert; Luna, Story of a Moth
Swain, Ralph: Insect Guide
Swain, Suzan; Insects in their World
Teale, E. W.: Junior Book of Insects

VII. Films and filmstrips:

Caterpillar to Butterfly...filmstrip
Insect Zoo...film

Some facts about Insects:

Insects have been on earth longer than man.

There are over 5000 different kinds of insects.

Some insects are friends to man.

They help spread pollen from one flower to another.

Some insects are pests.

They are harmful to man.

They destroy crops and spread disease.

All insects have a head, a thorax, an abdomen, and 6 legs.

How to make an insect cage

You need 2 - 1 pound coffee can plastic lids

1 piece screen 4" x 12"

plaster of paris

Make a 4" circle of screening. Fasten with string, wire, or staples. Take 1 lid and fill with thick mixture of plaster of paris. Set the screen sleeve in lid and plaster. Let harden. Fasten another lid to to top of cage with a wire or string hinge.

Dried Flower Interest Group

BEHAVIORAL OBJECTIVES FOR DRIED FLOWER GROUP

At the completion of this unit the children of the dried flower group will have experience drying flowers by 4 methods:

1. by hanging flowers upside down
2. covering flowers in Silica Gel
3. picking flowers dried naturally in the field
4. pressing flowers in a book

The children will be able to name at least one flower that reponds best to each method of drying.

The children will be able to identify six common types of wild flowers found on our trip to Walnut Springs Park.

Each child in the group to have the experience of making:

1. one dried weed arrangement
2. one dried flower arrangement
3. one dried collage
4. one small design made with pressed flowers

October 1971

FLOWER DRYING

E. M. Herzog (Fairmount Avenue School)

I. Behavioral Objectives

See other sheet

II. Preparation Procedures

A. Group discussion of kinds of plants and nature products we will find on our field trip, listing them on the board:

1. Weeds
2. Wild flowers
3. Berries
4. Seed pods
5. Pine cones
6. Grasses

B. Discussion of what we can do with the materials we collect to make pretty arrangements. We decided to make three floral arrangements per child.

1. a collage on paper
2. a dried weed arrangement
3. a dried flower arrangement

C. Discuss some of the flowers and weeds we will see. The teachers went out to Walnut Springs area beforehand to "preview" and plan procedures for the trip. I brought back some dried material for identification purposes for the Flowers Group.

D. Discuss the safety rules for the trip. (see General Safety Rules)

E. Discuss what things will we want to take on the trip.

F. Discuss how to dry flowers. Mrs. Roseberry came to our class and demonstrated methods of drying flowers; identified a few flowers that best respond to each method; demonstrated how to make an arrangement.

G. Discuss how we can each help to take care of our wildlife (Film strip).

H. Culmination of preparation for field trip - we put together a booklet with the collected information we had worked on all week.

III. Field Trip

Children were grouped by color code arm bands and the buses were loaded by color code groups. Each interest group was divided into 3 sub-groups. The children were unloaded from the buses at Walnut Springs and placed with a student leader. Each group proceeded independently to explore the area, concentrating on his area of interest. Each child collected dried material for arrangements in a shopping bag. About 1/2 hr. was planned for each child to make a collage with some of the weeds, seeds etc. collected. They used glue and rubber cement to attach the natural material to the paper. Some of the things used were too heavy to hold (ex: pine cones). The children were thrilled with their success in collecting and using what they collected right away. We brought back the rest of what was collected to the room, to be used later.

IV. Follow up procedures to field trip

A. We hung bunches of weeds and flowers upside down on a wire that we strung across the room.

B. We put some flowers in Silica Gel to dry - including

Queen Ann's Lace
Marigolds - (brought in)
Thistles
Chrysanthemums (brought in)
Small dahlias

C. We pressed flowers in a book

V. Culminating Activity

We made one flower and one weed arrangement per child. Children who brought in fabric made a fabric design collage. One group of children did a small design with pressed flowers.

VI. Culminating Activity for Whole Group

Sharing of experiences and activities of the whole group.

Bibliography

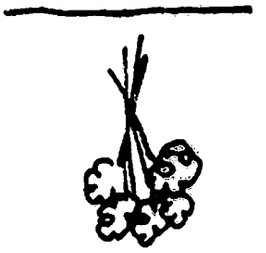
1. Keeping the plants you pick — Louise Foster
Thomas Y. Crowell Com. N. Y. 1970

2. From Petals to Pinecones — Katherine Cutler
Lothrop, Lee & Shepard Co. N. Y. 1969

3. The First Book of Wild Flowers — Betty Cavanna
Franklin Watts Inc. N. Y. 1961

WAYS OF DRYING FLOWERS

Our interest group experimented with several methods of drying flowers. Some kinds of flowers respond to one method and other flowers work better using a different method.

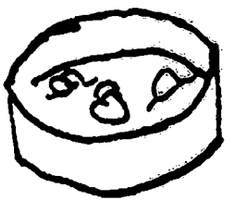


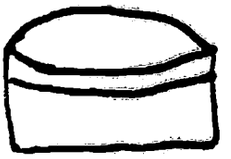
1. HANGING FLOWERS UPSIDE DOWN

   Straw flowers and many wild flowers will dry well by this method. If they are picked early in the season, they will hold the color better. Some weeds will also dry a pretty color if picked green.

2. SILICA GEL

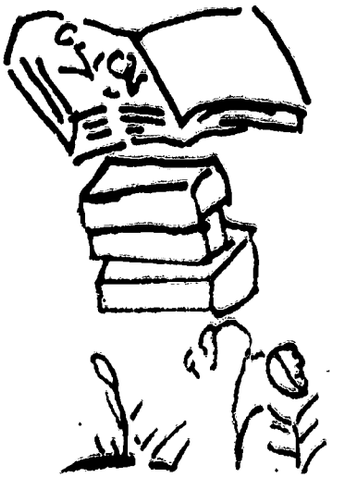
   This is a sandy misture used in drying flowers. You may also use very dry sand mixed with Borax (1 cup sand to 1 tablespoon Borax). You may experiment with many garden flowers. Some wild flowers such as Queen Anne's Lace also dry well in Silica Gel. The time varies from 3 days to 2 weeks. The light and more delicate flowers take less time to dry.
   DIRECTIONS: Put about 2 inches of Silica Gel in the bottom of a flat container that will tightly seal. Place flowers face up or down with stems cut off to two inches long. Gently pour Gel over flower until covered. Seal container and keep in warm dry place. Flowers will keep their deep colors.





3. PRESSING IN A BOOK

   Place flowers to be pressed between two pieces of paper. Place in the pages of a heavy book. Place other books on top. Flowers dried this way will keep their color, but, of course, will be flat. They can be used to make a pretty design on a piece of paper.



4. DRYING IN THE FIELDS

   Wild flowers and weeds and grasses dry naturally in the fall and can be picked and used as they are in flower arrangements.

BULL THISTLE


MILK WEED
MILK WEED POD

GOLDENROD

NEW ENGLAND ASTER

QUEEN ANNE'S LACE

Leaves and Trees Interest Group

I. Objectives:

(1) To have children learn the names of common deciduous trees in the study area

(2) To have children develop and employ a vocabulary centered around our area of interest

(3) To have children be able to identify the leaf and bark samples collected

(4) To have children be able to properly label and describe the functions of the parts of a deciduous tree

II. Procedures:

(1) The class should prepare a list of questions to be answered after our trip. Have the list for each child to refer to later.

(2) Teach a lesson on the meaning of deciduous and how these trees differ from season to season

(3) Teach a lesson on the parts of a tree

(4) Teach a lesson on the parts of a leaf as well as how their shapes, textures differ

(5) Prepare the class for the field trip-sent home a list of necessary items and a schedule of activities

III. Field Trip:

(1) Go in small groups-color codes to save mixups

(2) Arrange for group leaders to assist in collecting and exploring the area and resources

IV. Follow up:

(1) Organize samples for study and identification

(2) Mount leaf samples--1 leaf per sheet

(3) Assemble ditto sheets, drawings, and mounted samples into a book for each child

(4) identify samples (children use materials gathered by the teacher for reference)

(5) dip brightly colored leaves into melted parafin and assemble into a collage or mobil

(6) make leaf prints with spatter paint, chald, charcoal, smoke

(7) make a dried leaf or branch arrangement

Filmstrips:

1. Trees and Flowers in the Four Seasons

Film:

1. Leaf

Leaf Interest Group

Why do leaves change color in the fall?

In the summer trees make and use cholorophyll.

It gives them the green color.

When cool weather comes in the fall, the trees do not make as much chlorophyll.

The green color disappears.

Some colors that have been hidden all summer in the leaves now show up.

We can see the yellow, orange, and red colors.

How to press a leaf

Place a leaf between to sheets of waxed paper.

Place the paper with the leaf in it on a piece of newspaper.

Use a warm iron to press the waxed paper together.

Terrarium Interest Group

I. Objectives:

(1) To learn how terrariums are made and to be able to identify three basic types...bog, woodland, and desert

(2) To learn what materials are used and where to locate the materials needed for the setting up of terrariums

(3) To set up at least four terrariums to be used in the primary classrooms

II. Procedures:

(1) Through discussion learn ideas children have about terrariums

(2) Using appropriate information from the book, "Terrariums and Aquariums" by Leavitt, expand concepts

(3) View filmstrip, "Life in a Terrarium"

(4) Reinforce ideas by having children recall information and show through drawings the steps followed in making a terrarium. Note the use of the following materials:

gravel sand charcoal soil plants animals

(5) Prepare glass containers

a. select appropriate containers
b. set container in plaster of paris stands

(6) Make preparations for field trip:

a. Collection of materials
b. Assignment of tasks
c. Rules and procedures to follow

III. Field trip:

(1) Children were colored coded

(2) Group was subdivided into smaller groups and each led an adult leader

(3) Children were sent to different areas of park

(4) Children collected specimens under guidance of adult leader

(5) Terrariums were set up with help of adult leader

IV. Follow-up:

(1) Set up additional terrariums for the individual classrooms

(2) Individuals who wanted to set up terrariums to take home did so

(3) Recall of pertinent facts were incorporated in thank you notes and pictures for the student leaders who came from the University

(4) Composition of facts to be included in a team booklet were written

(5) Compilation of information necessary for other interest groups

(6) Presentation of information to other interest groups and presenting of terrariums to individual classrooms.

V. Evaluation:

(1) Preparations for the total time the interest groups met were well done

(2) Exploring the area of Walnut Springs with Grace McDermott and her students gave teachers the opportunity not only to see the area, but also to incorporate additional learning activities in the unit both prior and after the field trip

Terrariums

A terrarium can be made in a glass container so you can catch how plants and animals live in the soil.

To make a terrarium you need:

1. a glass container that you can put your hand into
2. cover the bottom with gravel
3. put in a layer of sand
4. lay in some pieces of charcoal
5. put in some soil or peat moss
6. place small plants in the soil
7. some small rotted twigs can be placed around the plants: moss is good to use also
8. put in a small dish of water
9. put a small animal in if you wish
10. put a saran cover on the terrarium

Bibliography:

1. Aquariums and Terrariums; J. Leavitt
2. Green if For Growing; Lubell

Filmstrip:

1. Life in a Terrarium

SOME FACTS ABOUT INSECTS

Insects have been on earth longer than man. There are over 5000 different kinds of insects.

Some insects are friends to man. They help spread pollen from one flower to another. Bees give us honey. Silk worms give us silk for clothing. Other insects eat large numbers of insect pests.

Insect pests are harmful to man. They destroy crops, spread disease, eat clothing and furniture.

WHAT WE HAVE LEARNED ABOUT INSECTS!

SIMILARITIES:

All insects are invertebrates. (has no backbone.)

All insects are hexapodal. (have 6 legs.)

Insect body has 3 parts, head, thorax, abdomen.

Insect body is covered with chitin - a hard water proof covering.

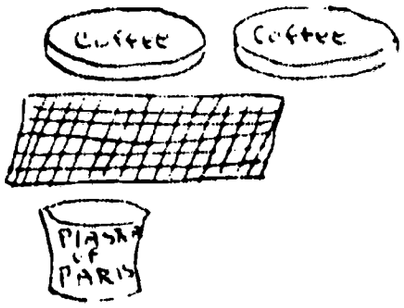
DIFFERENCES:

Insects have different types mouths - for chewing, sucking, and and different type legs - for grasping, climbing, swimming.

The number of wings and antennae may vary. Some insects have none. Others have 1 pair or 2 pair.

HOW TO MAKE -

AN INSECT CAGE:

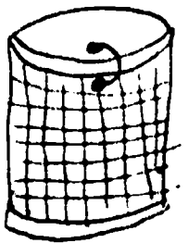


You need 2 - 1 lb. coffee can lids

1 piece screen 4" x 12"

plastic of paris

Make a 4" circle of screening. Fasten with string, wire or staples. Take 1 lid and fill with thick mixture of plaster of paris. Set the screen sleeve in lid and plaster of paris. Let harden. Fasten another lid to top of cage with a wire or string hinge.



A CRICKET FARM:

1. Use a glass bowl (a small aquarium), a wooden or screen cage.
2. Put in soil - about 2 inches.
3. Put in plants for crickets to sit on and a rock or piece of wood for decoration.
4. Water plants - crickets will drink water drops on plants.
5. Add crickets.
6. Cover.

Crickets like to eat!

How about feeding your pet --

bits of apple,

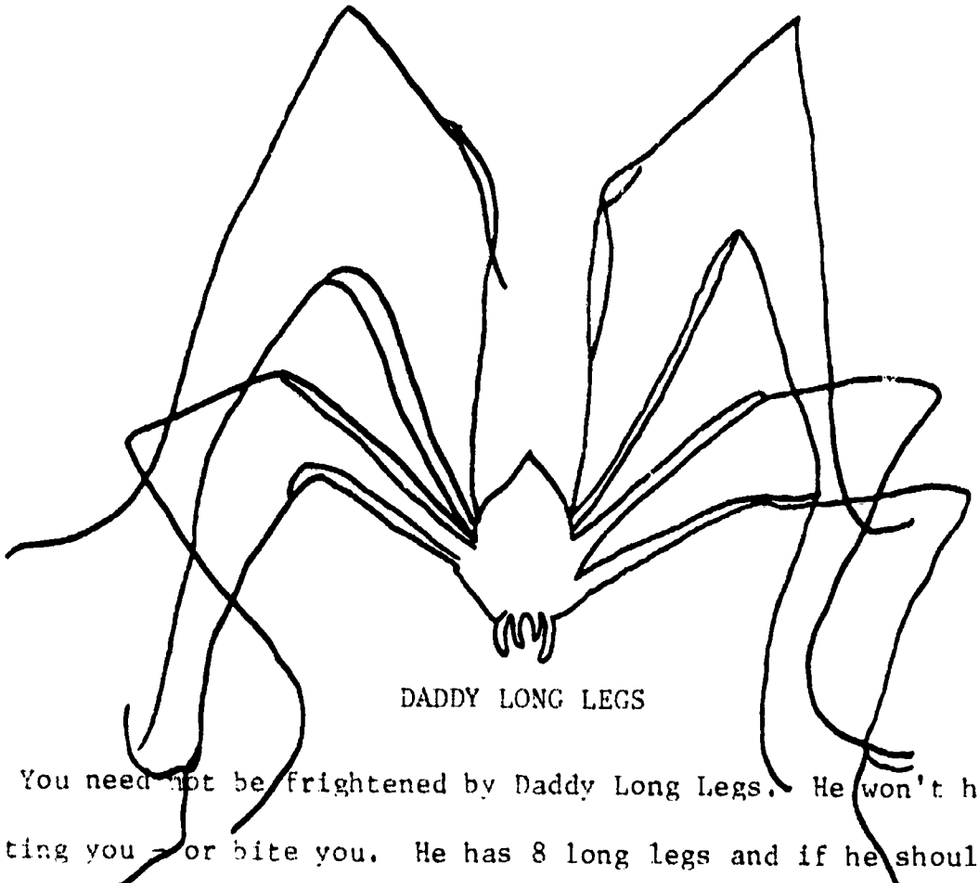
cookie. dogfood or meal,

cucumber, corn, ground beef.

S O M E F I E L D

and

S T R E A M F R I E N D S



DADDY LONG LEGS

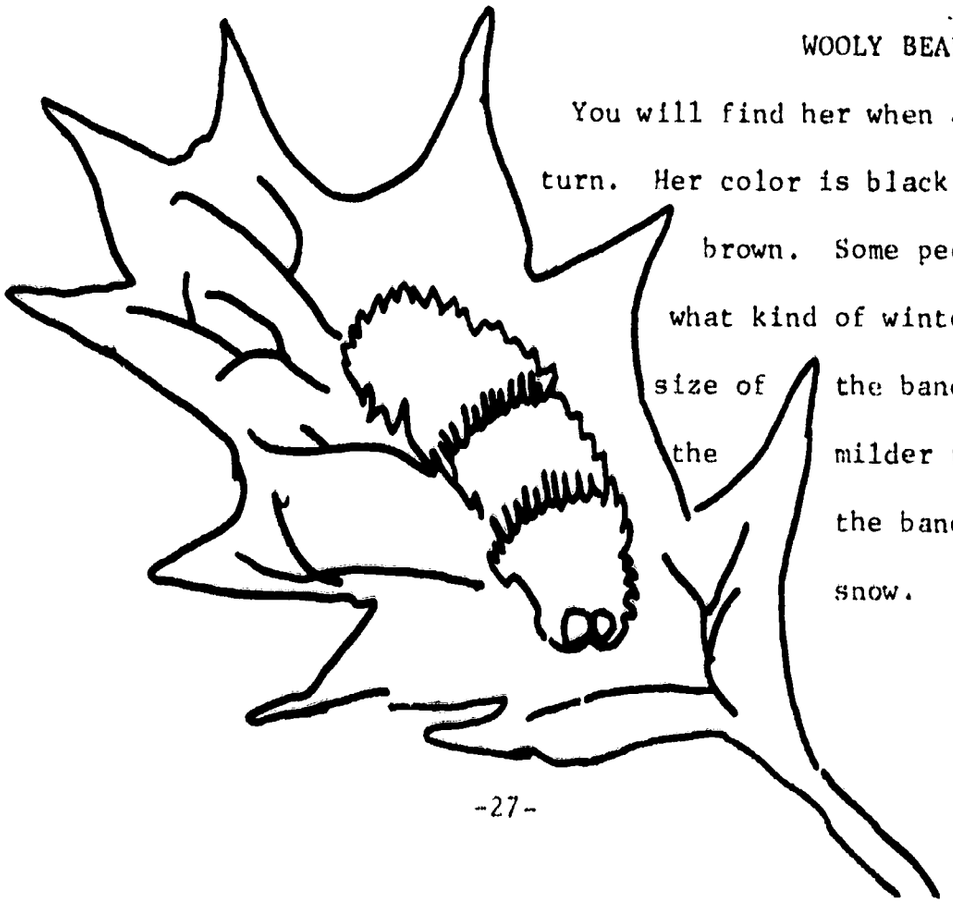
You need not be frightened by Daddy Long Legs. He won't hurt you - or sting you - or bite you. He has 8 long legs and if he should lose one, he will grow a new one in a short while.

THE BUTTERFLY

Did you know that the Butterfly has a tongue that looks like a coil of a watch spring? She shoots this tongue into the cups of flowers - way to the bottom where the nectar is. She couldn't reach it without her tongue like a soda straw.

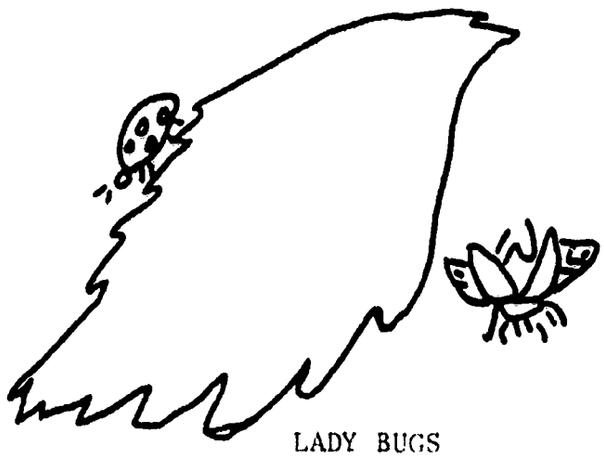
ANTS

Did you know the first "apartment house" was built by ants? If you lift a stone or piece of rotting wood, you may see them running helter skelter - carrying their little white nests of eggs to safety. The stone you lifted is the roof of their house. Down in the earth - connected by many tunnels - are many rooms. There are many kinds of ants that live together - all going their jobs. There are workers, soldiers, builders, farmers, nurses, and -of course the Queen.



WOOLY BEAR CATERPILLAR

You will find her when autumn leaves begin to turn. Her color is black with a stripe of red-brown. Some people say you can tell what kind of winter is coming by the size of the band. The wider the band, the milder the winter; the thinner the band the more cold and snow.



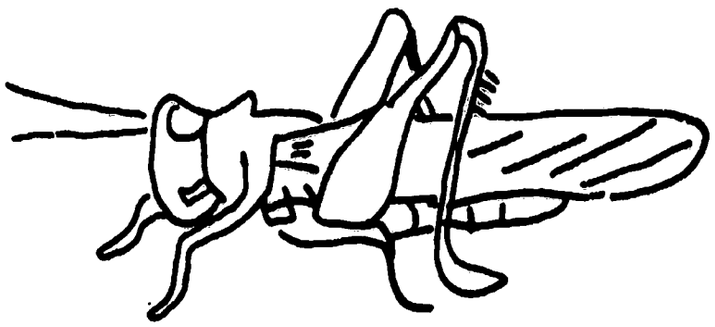
LADY BUGS

LADY BUG, LADY BUG,
FLY AWAY HOME.----

She's a great help to the farmers and gardeners. She eats those pests that eat the fruit and the leaves of plants.

THE CLICK BEETLE

We call him this because of the funny sound he makes when he jumps. He bends himself forward, the straightens up fast with a snap and click. He leaps into the air, turns head over heels and lands on his feet.



GRASSHOPPER

He's called the "insect musician" because of the sound he makes when he rubs and scrapes his legs against his wings. He has long strong legs so he is a powerful jumper.

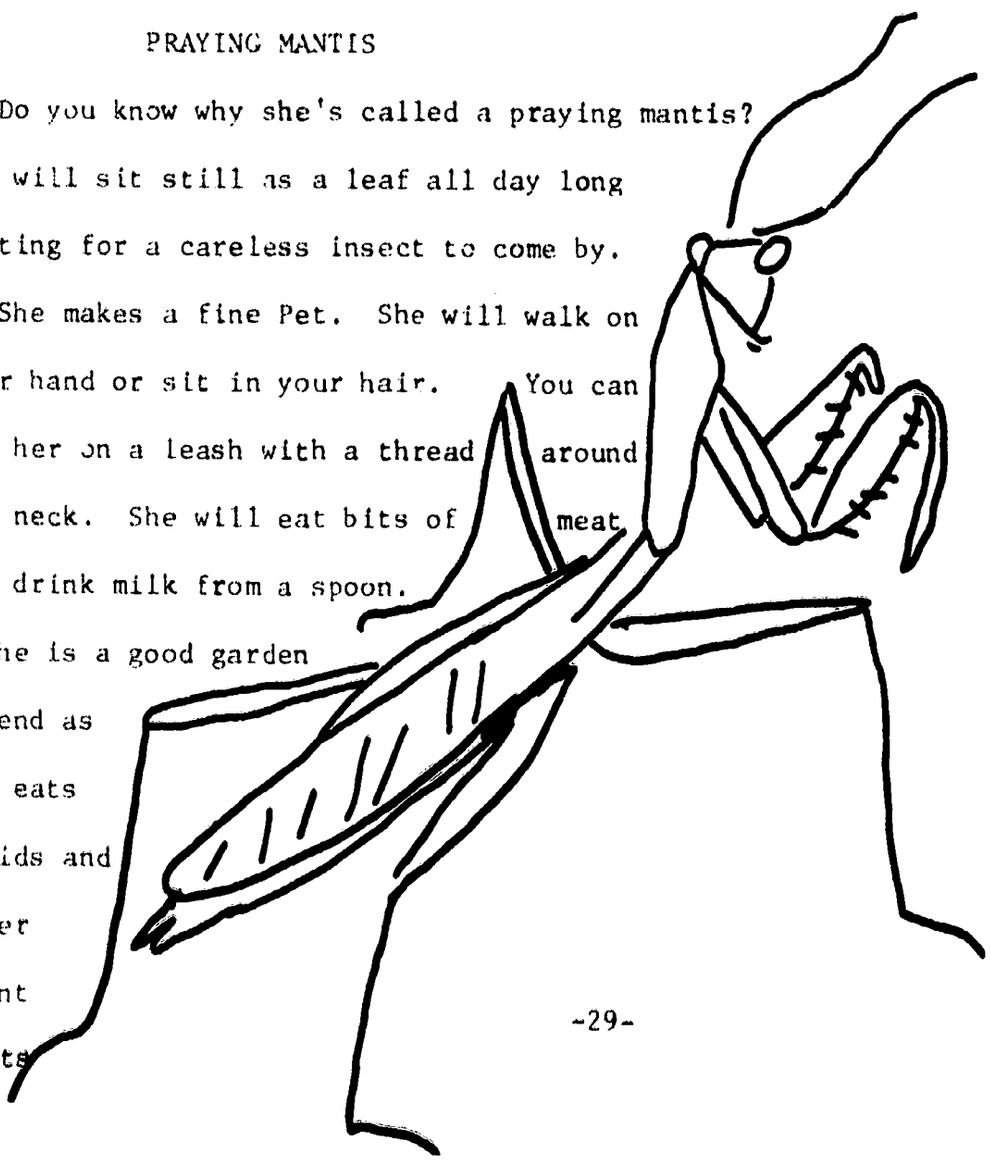
ZING -
AWAY HE GOES!

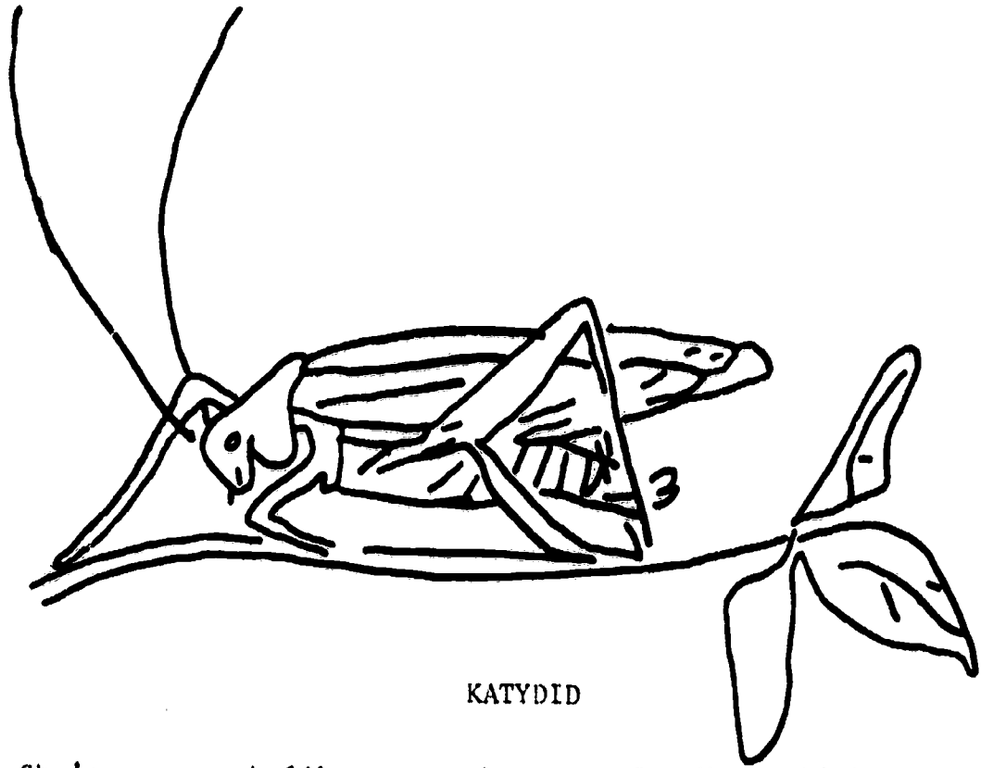
PRAYING MANTIS

Do you know why she's called a praying mantis? She will sit still as a leaf all day long waiting for a careless insect to come by.

She makes a fine Pet. She will walk on your hand or sit in your hair. You can put her on a leash with a thread around her neck. She will eat bits of meat and drink milk from a spoon.

She is a good garden friend as she eats aphids and other plant pests.





KATYDID

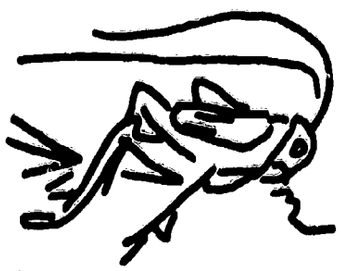
She's very much like a grasshopper. Our Katy Did is green with long, long feelers. She says her name - KA - TY - DID

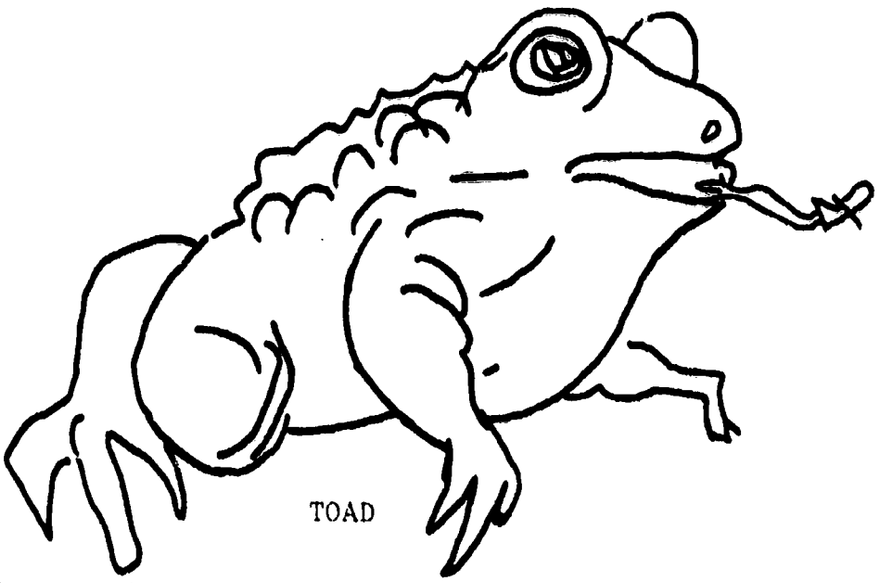
Have you heard her?

CRICKET

Here's our cricket who's dark brown in color. He sometimes comes to visit in our homes during the winter. Have you ever heard him making his friendly chirruping whistle ----

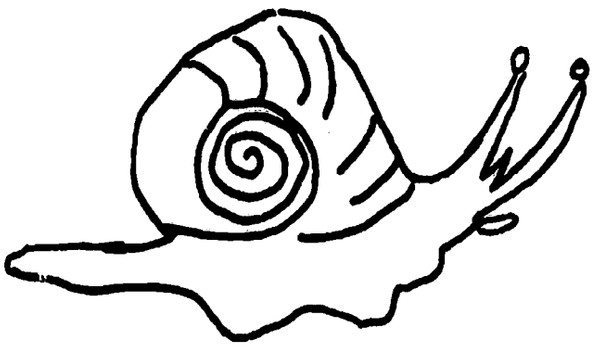
chirr---p
chirr---p
chirr---p





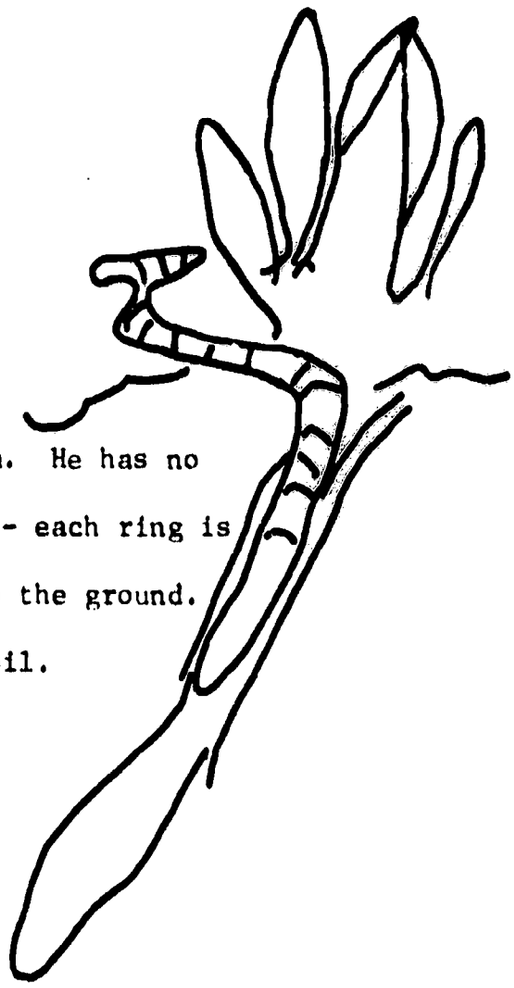
TOAD

He has a bug-catching tongue. He likes a rainy day. Know why? He drinks his water not throught his mouth - but through his skin.



SNAIL

Guess who takes her house with her! She has only one foot and she uses it to glide about on. When she is frightened, she just goes into her shell and closes the door.

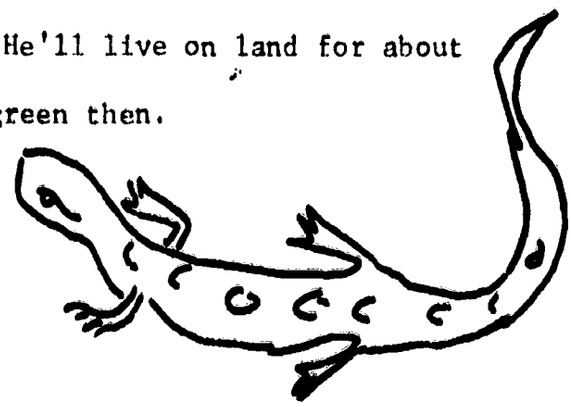


THE EARTHWORM

He better watch out before the early bird gets him. He has no eyes or ears, only a mouth. His body is made of rings - each ring is spiked with tiny bristles. These help him move through the ground. He's good to have in a garden as he helps loosen the soil.

THE SALAMANDER

This friend we all know at Whipple's Dam. He is also known as a newt. How cold he is to touch. He likes the damp. He was born from an egg laid in water. He breathed with gills and was bright red until he grew up. We called him an eft then. He'll live on land for about 3 years. His color will be a soft moss green then.



WHAT HAVE YOU SEEN?

Daddy Long Legs?

Butterflies?

Moths?

Grasshoppers?

Crickets?

Praying Mantis?

Ants?

Beetles?

Cucoons?

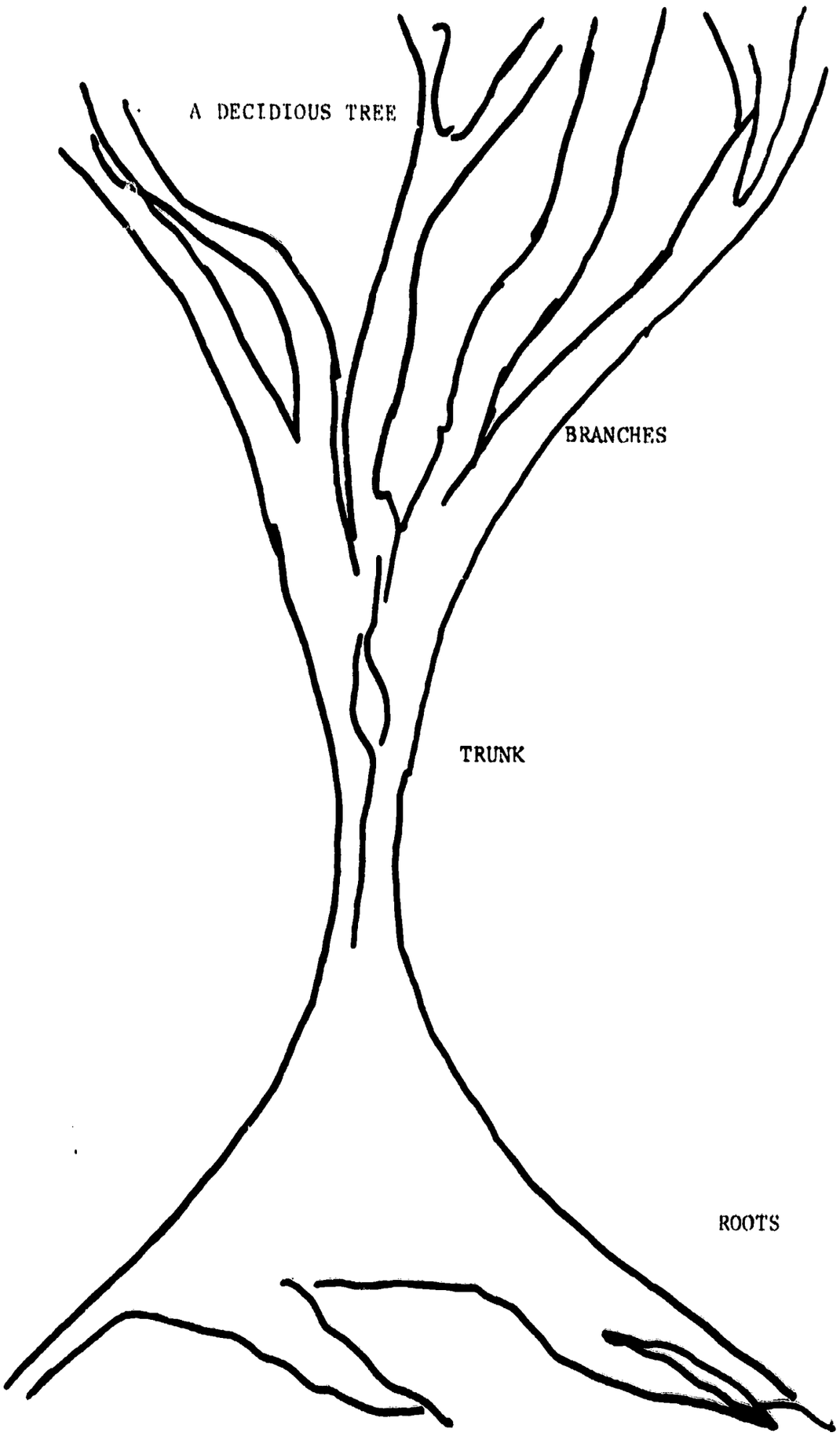
Chrysalis?

Any Other?

QUESTIONS TO BE ANSWERED AFTER

OUR TRIP TO WALNUT SPRINGS

1. What color are leaves?
2. Are all leaves the same color?
3. Do all leaves have the same shape? Why not?
4. What types of trees can you name?
5. What does a tree look like?
6. What are the parts of a tree?
7. What is an Evergreen tree?
8. What is a decidious tree?
9. Why do trees have bark?
10. Why do leaves change colors?
11. What makes leaves green?
12. Why do some trees stay green?
13. Why is the Sassafras tree unusual?
14. What trees have unusual bark?
15. Which trees have unusual leaves? Why are they different?


A DECIDIOUS TREE
BRANCHES
TRUNK
ROOTS

PARTS OF A LEAF

DRAW YOUR OWN LEAF - INCLUDE VEINS AND A STEM

TREES WE COLLECTED

LEAVES FROM --

1.) American Elm

2.) Sycamore

3.) Black Walnut

4.) Northern Red Oak

5.) Pin Oak

6.) Black Oak

7.) White Oak

8.) Catalpa

9.) Honey Locust

10.) Red Maple

11.) Sugar Maple

12.) Silver Maple

13.) Quaking Aspen

14.) Black Willow

DRAW A LINE UNDER THE LEAVES YOU HAVE IN YOUR BOOK.

VOCABULARY WORDS

trunk

bud

twig

root

stump

moss

branch

leaf

blossom

leaf

bark

pitch

needles

decidious

evergreen

chlorophyl

vein

SAFETY RULES FOR FIELD TRIP

1. Stay with your group.

2. Do not run or push.

3. Do not put anything in your mouth. Some plants are poisonous.

4. Do not put your hands on your face after handling the plants. You might be allergic to some of the plants.

5. Wear gloves to protect your hands.

6. Wear long pants and boots to protect your legs and feet.

THINGS TO TAKE

Shopping bag  with handles and your name on it.

Paper

Scissors

Glue

Pad to sit on

Pencil

Fairmount School
State College, Penna.

October 7, 1971

Dear Parents,

Our Primary Unit will be doing a unit in environmental and ecological studies.

The children will be working in interest groups for several weeks as we develop this unit. We will also be going on a field trip to Walnut Springs, which a nature area located near Easterly Parkway and University Drive. This site has been chosen not only for the natural resources available, but because this is an area where the children can take their families to visit.

The professional staff of Team 1 has been working with personnel from Penn State to develop this unit of study and these people will accompany us to Walnut Springs.

We will be going to Walnut Springs on Friday, October 15th at 12:15 P.M., returning to school in time for dismissal. In case of inclement weather, we will go on Monday, October 18th.

We would appreciate your cooperation in furnishing any of the following supplies you may wish to let us have:

sand shovels or large spoons (old because we need them for digging)
plastic milk containers
plastic food containers (ice cream or large whipped topping)
plastic cleaner bags (will will stuff them for "sit-upons")
coffee can lids (for making of insect cages)

Each child will need to wear appropiate clothing for this trip. Jackets, slacks, good walking shoes and boots will be essential because we will be tramping through fields and stream.

We anticipate that this will be a valuable learning experience. If you are willing for your child to go to Walnut Springs, please sign and return the permission slip by Wednesday, October 13th.

Sincerely,

Catherine Lang, Team Leader

.....

_____ has my permission to go to Walnut Springs on Friday, October 15th or Monday, October 18th.

_____
Parent Signature