Unit 2: Habitats and the Tree

Lesson #1: Living/Non Living Things: What am I?

Making a Tree House

Book(s):

Time Frame: 1 session of 30 minutes

Learning Standards:

Skills of Inquiry
- Ask questions about objects, organisms, and events in the environment.
- Tell about *why* and *what would happen if?*
- Record observations and data with pictures, numbers, or written statements.
- Discuss observations with others.

Earth and Space Science

1) Recognize that water, rocks, soil, and living organisms are found on the earth's surface.
2) Understand that air is a mixture of gases that is all around us and that wind is moving air.

Life Science

1) Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air, and water.
Differentiate between living and nonliving things. Group both living and nonliving things according to the characteristics that they share.
8) Identify the ways in which an organism's habitat provides for its basic needs (plants require air, water, nutrients, and light; animals require food, water, air, and shelter).

Physical Sciences

1) Sort objects by observable properties such as size, shape, color, weight, and texture.

Technology/Engineering

3) Identify and describe the safe and proper use of tools and materials (e.g., glue, scissors, tape, ruler, paper, toothpicks, straws, spools) to construct simple structures.

Student will be able to:

1) Explain a habitat.

Background Information: In the living world, all living things have a habitat that provides its needs. Those things, water, food, air, shelter, can be living or non-living. The children should be able to see that they too are part of the living world.

Anticipatory Set: Have the children tell you about their home. Discuss what makes a home.

Activity:

1) Collect pictures of objects in our environment for a few of the children to act out. Have a sample of living things (tree, baby animal, child, insect) and non- living things (rain, rock, sun, wind, river, clouds).
2) A child picks an object and acts out what the object is.
3) The other children then ask the following questions that are written on the board:

   Do you need air?
   Do you grow?
   Do you eat?
   Do you need water?
   Do you need a place to live?
   Do you have babies?

4) Guess what the student is.
5) Determine if the student is living or non-living. Sort charade children into living and non-living groups.
6) What does the living group have in common? Non-living?
7) Introduce the tree as a living thing. What does that tree need to grow? (air, water, food, a place to live) A place that provides all these things is called a habitat.
8) Is your home your habitat? Do you need air, water, food, and shelter?

Closure: Create a tree by printing parts of it.

Assessment: Children will be able to tell you that every living thing has a habitat that it provides all its needs.

Resources and Materials: a cardboard cutout tree; potatoes for printing leaves, green and brown paint pads for printing, thick cardboard for printing bark, large cloud shaped pieces of paper for printing.

Unit 2; Habitats and the Tree

Lesson #2; Do you know what we call many habitats?

Book(s): One Small Place in a Tree; Barbara Brenner

Time Frame: 1 session of 30 minutes

Learning Standards:

Skills of Inquiry

- Ask questions about objects, organisms, and events in the environment.
- Tell about *why* and *what would happen if?*
- Record observations and data with pictures, numbers, or written statements.

Earth and Space Science

1) Recognize that water, rocks, soil, and living organisms are found on the earth's surface.

Life Science

1) Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air, and water.
8)Identify the ways in which an organism's habitat provides for its basic needs (plants require air, water, nutrients, and light; animals require food, water, air, and shelter).

Technology/Engineering

3) Identify and describe the safe and proper use of tools and materials (e.g., glue, scissors, tape, ruler, paper, toothpicks, straws, spools) to construct simple structures.

Student will be able to:

1) Tell you what their table's animal eats, and where it lives.
2) Name the parts of a tree.

Background Information: The different parts of the tree are different habitats for the animals that live in the tree. The woodpecker lives in a cavity in a dead part of the tree. It eats insects in the tree. The Timber Beetle bores tunnels in the wood. They grow mold along the walls of the tunnel to eat. There are also special cells for the eggs and larva to develop. The squirrel has a summer home made out of leaves and sticks and a winter house in a cavity of the tree. One of their favorite foods is acorns. They often plant them and forget where they put them

and the acorn germinates into a tree. Squirrels are great seed dispersers. Tree frogs have special cups on their feet to help them climb the tree. They live in cavities in the tree with a little bit of water. They spawn in ponds near the tree. They eat insects.

Anticipatory Set:

Look at a tree with your binoculars (make circles with your hands and put them together in front of your eyes). You can be inside or outside. Say the following rhyme covering all the parts of a tree:

"Use your binoculars.

What do you see?

I can see a part of a tree.

It is..... brown, green, under the earth, holding the leaves.

A tree is a living thing so it has a habitat. This tree has a habitat in our school yard. What does it need to grow? Do you remember from last week? With plants we have to add the sun as part of their habitat.

This tree has a habitat and it is a habitat. We call places that have many habitats an ecosystem. Eco is the Greek word for homes. Ecosystem means "a system of homes".

Activity:

1) Read, <u>One Small Place in a Tree</u>; Barbara Brenne

2) Introduce the four animals for which we will create habitats. Each table is responsible for an animal. We cannot let the animals live there until we have all of the parts of the habitat in place. Introduce the homes, or shelters, of the animals and create the homes and food to go on the tree.

Closure: Finish making tree habitats. Each table has an animal that they are responsible for.

1) Squirrel-Print another cloud with brown leaves and sticks for the summer home. Print acorns in the hole with a carrot half for the cap and a small round potato for the bottom.
2) Tree Frog-Print a pond for near the tree. Print some water in the hole of a tree with a sponge and blue paint. Make insects on the end of a pipe cleaner with putty and added wings.
3) Woodpecker-paste wood chips to the bottom of the cavity in the tree. Print little holes on the tree with pencil eraser ends for food.
4) Timber Beetle-print white paint with the eraser end of the pencil along the edges of the tunnel to represent the mold the beetles grow to eat.

Assessment:

1) Children will be able to tell the shelter, food, and water source of their table's animal.
2) The children will be able to name some parts of a tree.

Resources and Materials: One Small Place in a Tree; Barbara Brenner; printing material, potatoes and halved carrots, sponges, card; print pads, white, green, brown, blue; paper for printing the pond; putty; premade wings; and pipe cleaners; wood chips; glue; self-stick Velcro to stick habitats onto tree; cut out habitats; pencil eraser ends for printing

Unit 2; Habitats and the Tree

Lesson #3; Why don't you live in a tree?

Book(s):

Time Frame: 1 session of 30 minutes

Learning Standards:

Skills of Inquiry
- Ask questions about objects, organisms, and events in the environment.
- Tell about *why* and *what would happen if?*
- Make predictions based on observed patterns.
- Record observations and data with pictures, numbers, or written statements.
- Discuss observations with others.

Earth and Space Science

1) Recognize that water, rocks, soil, and living organisms are found on the earth's surface.

Life Science

1) Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air, and water.
8) Identify the ways in which an organism's habitat provides for its basic needs (plants require air, water, nutrients, and light; animals require food, water, air, and shelter).

Physical Sciences

3) Describe the various ways that objects can move, such as in a straight line, zigzag, back-and-forth, round-and-round, fast, and slow.

Technology/Engineering

5) Describe how human beings use parts of the body as tools (e.g., teeth for cutting, hands for grasping and catching), and compare their use with the ways in which animals use those parts of their bodies.

Student will be able to:

1) Name the parts of a habitat.

2) Children will be able to identify an adaptation for living in trees.

Background Information: A tree habitat is a safer place to live and raise young than a habitat on the ground. Animals have adapted to the tree habitat for a safer place to live. Animals have adaptations to live in their habitats. Animals that live in trees need to be able to get to the habitat with wings, sharp claws for climbing or other special adaptations to the feet to climb up the tree.

Anticipatory Set:

Review the needs of a living thing. Are the habitats complete for each animal? What needs to be done?

Activity:

1) How does each animal get to their homes? Being able to fly, have claws to scramble up trees, have suction cups on their feet are the way the animals can live there. These are adaptations for living in a tree habitat. What is an adaptation?
2) Why don't you live in a tree? You would need to adapt to a new habitat if you wanted to live in a tree. What would you need? What would you need to adapt to a pond habitat? What would you need if you were to live in an underground habitat? What wouldn't you need? Pictures of other animals and their habitats would be useful.
3) Why would an animal want to live in a tree? (Safety)
4) Complete any part of the habitats that are not finished.

Closure: Each table will present their animal and share with the others their animal's habitat.

Assessment:

1) Children can explain why they do not live in trees.
2) Children will be able to discuss their animal's habitat.

Resources and Materials: printing material, potatoes and halved carrots, sponges, card; print pads, white, green, brown, blue; paper for printing the pond; putty; premade wings; and pipe cleaners; wood chips; glue; self-stick Velcro to stick habitats onto tree; cut out habitats; pencil eraser ends for printing; pictures of the animals; <u>One Small Place in a Tree</u>; Barbara Brenner; pictures of animals and habitats

Unit #2; Habitat and the Tree

Lesson #4; Are our tree habitats ready for our animals?

Book(s): One Small Place in a Tree; Barbara Brenner

Time Frame: 1 session of 30 minutes

Learning Standards:

Skills of Inquiry
- Ask questions about objects, organisms, and events in the environment.
- Tell about *why* and *what would happen if?*
- Record observations and data with pictures, numbers, or written statements.
- Discuss observations with others.

Earth and Space Science

1) Recognize that water, rocks, soil, and living organisms are found on the earth's surface.

Life Science

1) Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air, and water.

2) Differentiate between living and nonliving things. Group both living and nonliving things according to the characteristics that they share.

8) Identify the ways in which an organism's habitat provides for its basic needs (plants require air, water, nutrients, and light; animals require food, water, air, and shelter).

Student will be able to:

1) Name the key elements of a habitat

2) Give an example of a living thing and a non-living thing.

Background Information: The children have created a habitat for their animals. Using the templates, the children can do the following to create their animals. A simpler way to create the animals is to have each child color in an animal. Use the supplied pictures as guides.

1) Squirrel: Cut out the number of squirrels from the template that you want to make. Have children use their fingerprints to color in the shape. Use brown and black ink pads for the colors. The nut can be printed with green fingerprints. The more fingerprints the darker the color.

2) The Downey woodpecker: In the book they misnamed the woodpecker. The red splotch is a Downey woodpecker. Cut out the number of woodpeckers you want in the tree. Use the picture of the woodpecker to get the colors in the right spots. With a marker color the red top notch of the bird. With fingerprints in black, color in the appropriate parts of the woodpecker.
3) Tree Frog: With a green ink pad, color the back of the frog. With an orange pad color the feet. The belly can be printed with back fingerprints. Use the picture from the book as a guide.
4) Timber Beetle: With their pointer finger, the children print a line of beetle bodies on a paper the shape of the tunnels. The children add a found head with antenna with a black marker and six feet jointed legs. Use the picture from the book as a guide.

Anticipatory Set: Tell the children the story of the three bears included in the lesson. The children fill in the blanks with the four words written on the board at the top of the paper provided that represent the elements of a habitat.

Activity:

1) What did the Three Bears need to survive?
2) What part of the habitat in a tree is living? What part is non-living?
3) Do our animals have what they need, both living and non-living, to survive?
4) Now that the animals have a complete habitat, we can create them and put them in the habitat.

Closure: Create the animals for the habitat and put them in it.

Assessment:

1) The children will be able to discuss the habitat of their animal.
2) Children will be able to name something living on earth and non-living.

Resources and Materials: templates; ink pads; black and red markers; <u>One Small Place in a Tree</u>; Barbara Brenner; pictures of animals.

Information and adaptations about the animals in the Tree House

Downey Woodpecker:

1. The woodpeckers live in a hole in a dead part of a tree that they have made. The bottom of the nest is woodchips.
2. The woodpeckers peck hole in the trees for insects and use a long, sticky, barbed tongue to get them out of the holes. They also can capture insects on the fly.
3. The drumming of the woodpecker with its beak is also a form of communication.
4. The male has the red patch on the back of the crown.
5. The tail is used to climb the trees by holding on to the tree while moving their foothold.
6. The feet of the woodpeckers are adapted to hold on and keep support of their bodies while on the tree.

Timber Beetle:

1. Timber beetles are wood boring insects.
2. They live in trees.
3. The eggs are laid in the tree. The larva hatch and eat the fungus. The fungus grows on the walls of the tunnels and become the food for the beetle.
4. They leave the tunnel when adults and start new holes.

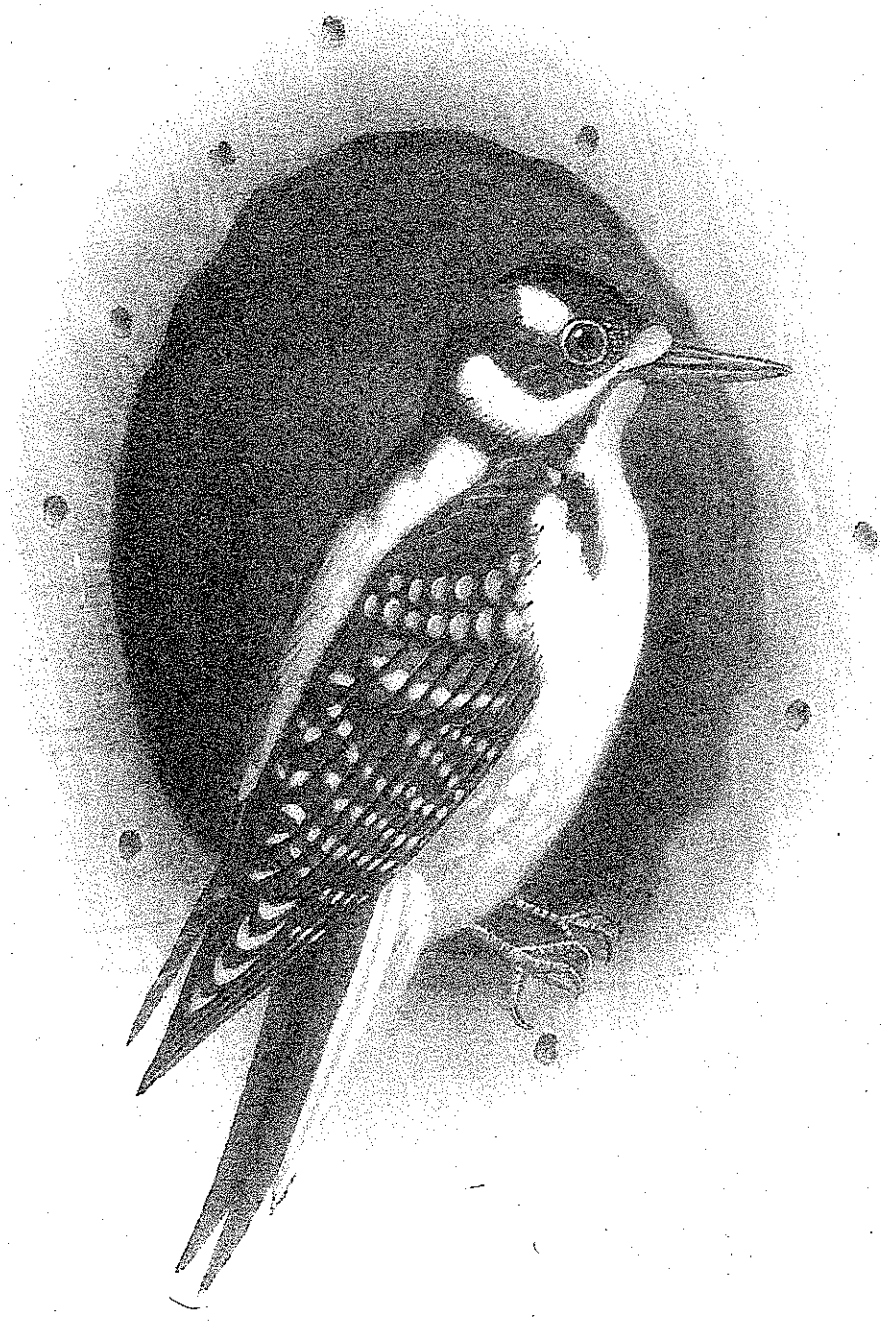
Gray Squirrel

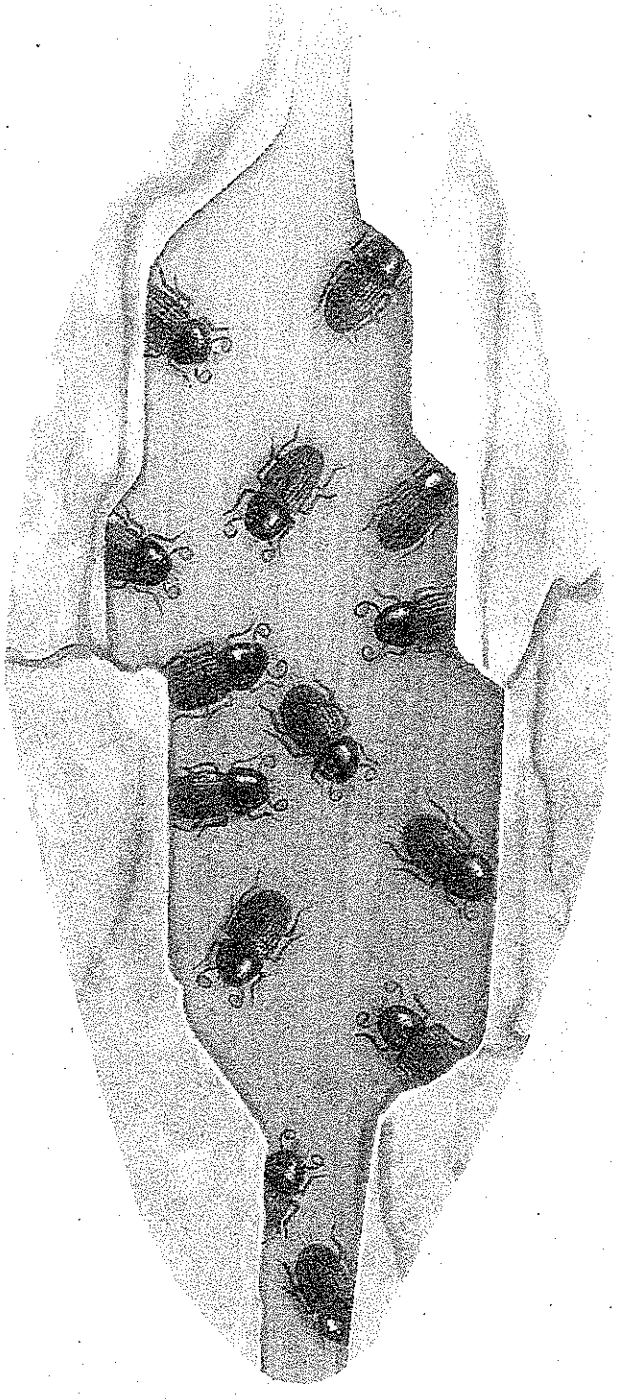
1. The squirrel is a scatter hoarder, hording food in various places for later recovery. They can make over 1000 cashes in a season.
2. They have good special memory for finding their cache and use their sense of smell in the last few centimeters.
3. Squirrels are one of the few mammals that can climb down, head first. They do this by turning their back feet out for a better grip on the tree.
4. They build a nest called a drey out of leaves and twigs.

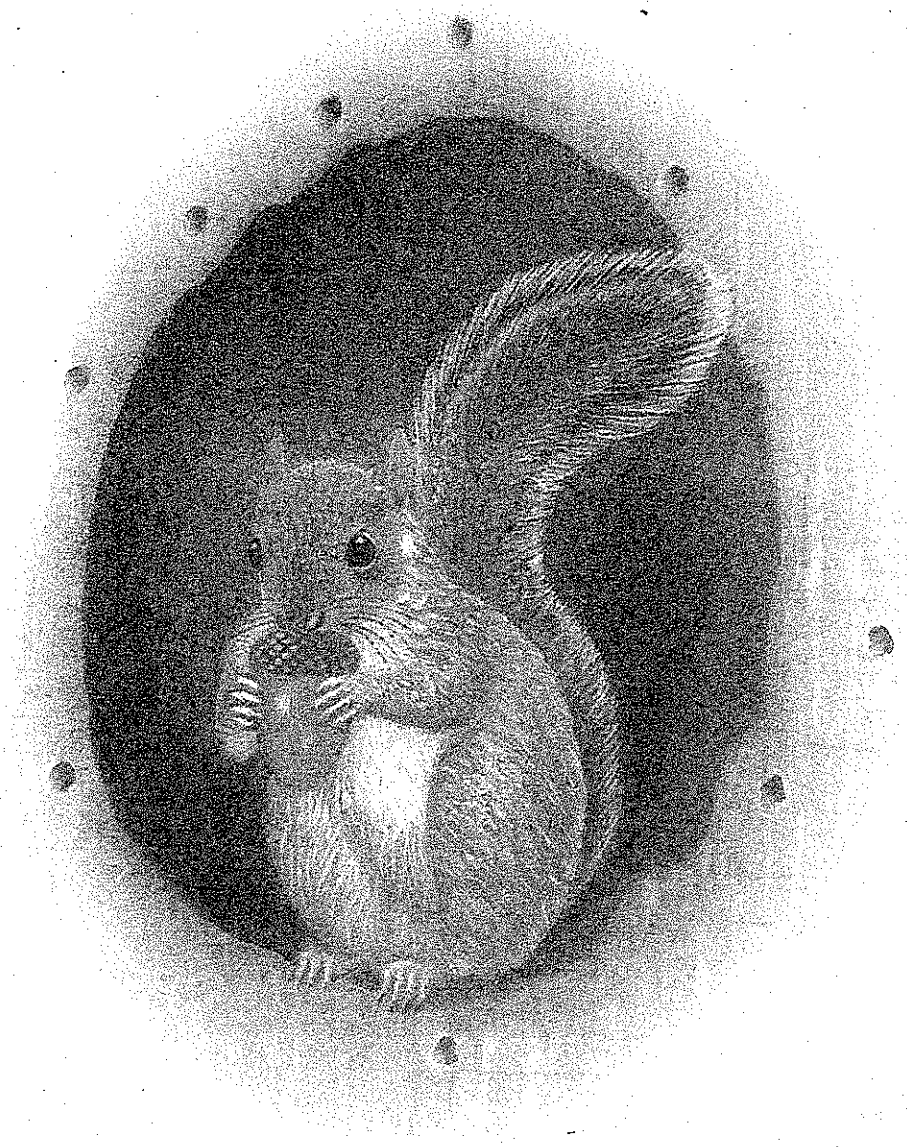
5. They can also live in tree cavities lined with moss, dried grass and feathers.
6. Squirrels can live in the wild for up to 12.5 years
7. They communicate vocally with a variety of sounds. They also use their tails for communication.
8. They eat tree bark, seeds, acorns, walnuts and nuts and fungi found in forests.
9. They can have two litters of babies in a year. One is in February-March and the other in June-July.

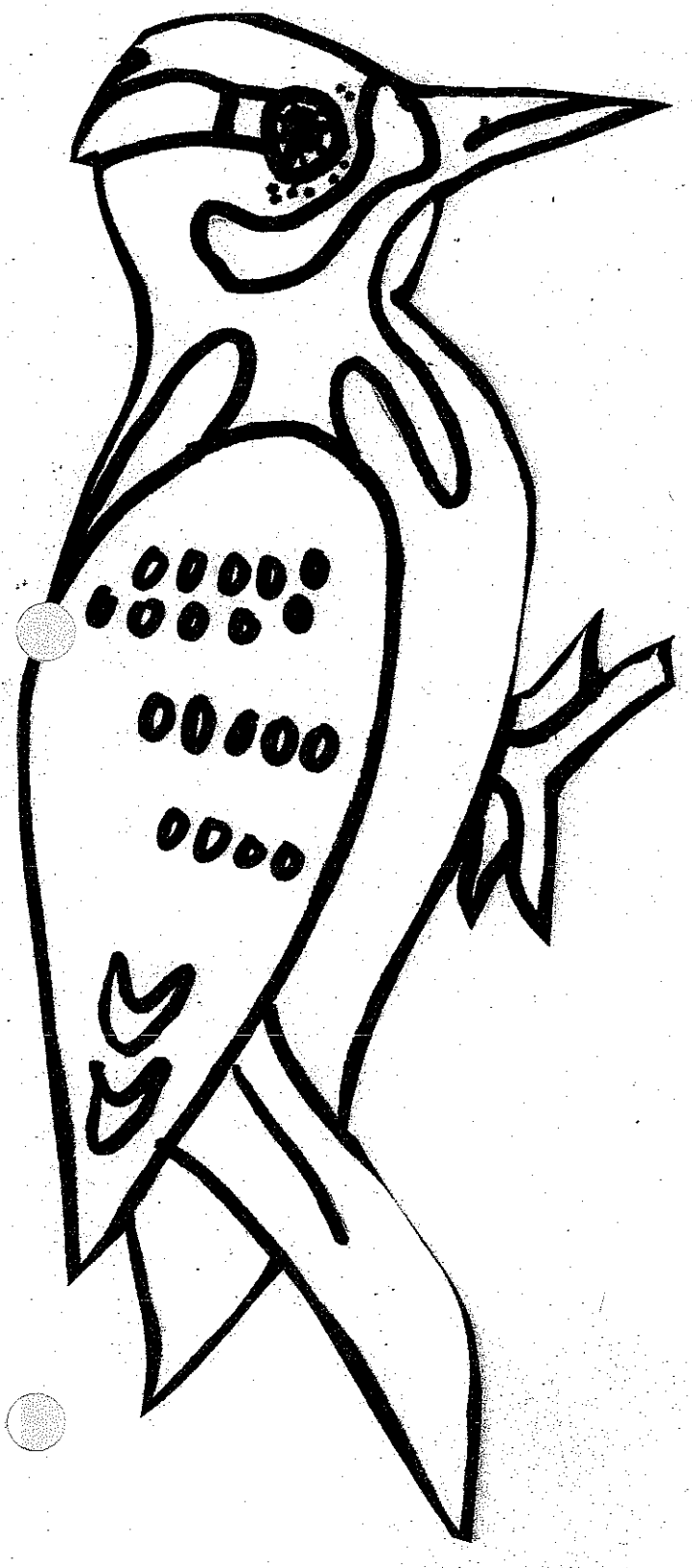
Tree Frog:

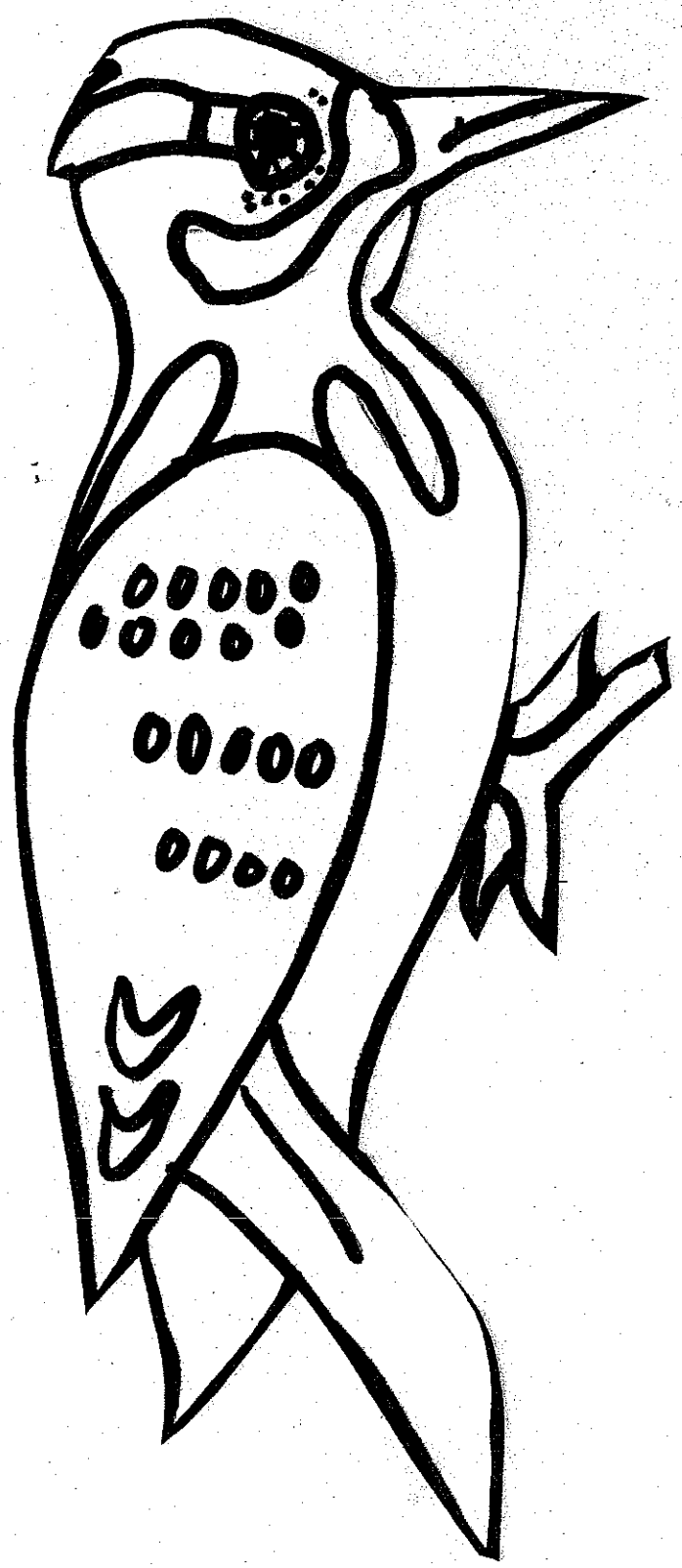
1. Tree frogs live most of their lives in the trees. They only descend to spawn.
2. Some build foam nests in trees on leaves, but can use cavities in the trees for their shelters.
3. The color on the back of the frog is usually green, but they use camouflage change colors in different locations.
4. They are usually tiny because their weight has to be carried on liaves and twigs.
5. The toes are long with discs for better grabbing.

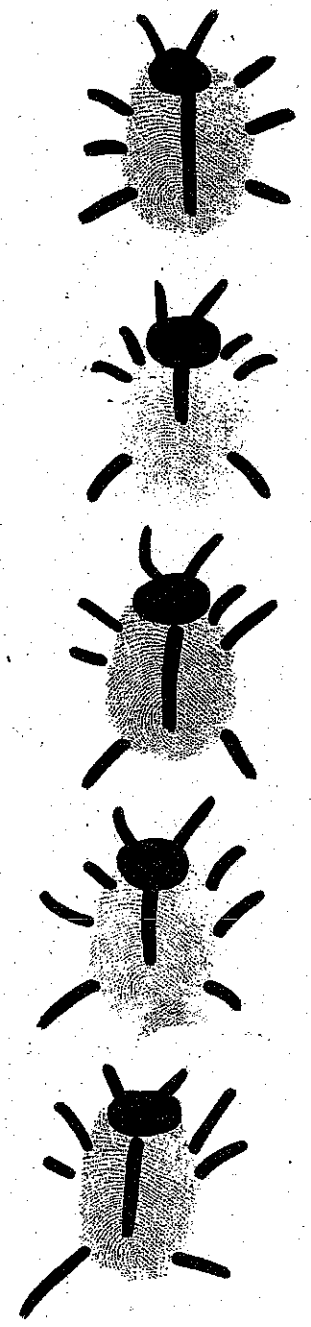












Habitat Sweet Habitat

shelter water air food

Once upon a time there were Three Bears, Momma Bear, Papa Bear and Baby Bear. They lived in a _____ in the woods. One morning the Three Bears woke up.

Papa Bear said, "Smell that fresh morning _____."

Momma Bear said, "I'm thirsty I need a drink of _____."

And, Baby Bear said, "I'm hungry. I need _____."

So Papa Bear made breakfast for the bears.

Papa Bear said, "I love the smell of porridge in the _____."

Momma Bear had a big drink of _____with her porridge.

And, Baby Bear said, "Porridge is my favorite _____."

The three Bears tasted their porridge and they all shouted together, "Ouch, this porridge is too hot!" Let's go for a walk in the morning _____ in the woods, and let the porridge cool down. They put their sweaters on because the _____ was cool.

The Three Bears left their _____ and walked to the stream. There they had a drink of cool _____. They found nuts and berries. "This will make _____ for dinner", said Momma Bear.

When they returned to their _____, they found a little girl named Goldilocks. She was lost. They gave her _____and _____ and showed her the way home. As she left the Three Bears, she turned around and threw them a kiss in the morning _____.