

A-Hiking We Will Go!



Introduction

In the book *Jo MacDonald Hiked in the Woods*, author Mary Quattlebaum introduces children to the trees, plants, and creatures of a forest and models safe, courteous behavior in the wild. In this activity, children learn how to prepare for and take a short nature or woodland walk.

Materials Needed

- ◆ Small backpack or tote bag for a adult with compass, flashlight, whistle, rain poncho, first-aid kit, sunscreen, plastic knife rather than pocket knife (when used at school)
- ◆ Nutritious snack (example, granola bar) and box of water for each child
- ◆ Comfortable, closed-toe shoes and socks

Key Concepts

- ◆ Students answering questions using scientific resources combined with observations.
- ◆ Plan and conduct a simple systematic observation or investigation.
- ◆ Use knowledge and evidence (data) to formulate explanation.
- ◆ Communicate investigations that might be drawn or spoken as well as written.

Procedure

1. Read the book and point out, through *Be a Safe, Courteous Hiker*, the proper way to behave on a nature walk. How is Jo behaving on her hike? Does she try to touch or catch the animals? Pick or eat any wild plants? All little hikers are guests in the home of wild creatures!
2. Ask children to guess what Jo's grandfather is carrying in his bag. Show them the objects in your adult hiking bag and explain the importance of each. (See Note to Parents in *Be a Safe Courteous Hiker* and explanation on American Hiking Society <http://www.americanhiking.org/10essentials/>)
3. Have children wear comfortable shoes and socks. Take a practice nature walk in neighborhood. Ask children to look carefully for insects, birds, animals, and trees.
4. Discuss what they saw and enjoyed most. Record observations either as a class or as individuals.
5. If possible, take a longer "hike" or nature walk in nearby wooded area or a park with trees. If possible, have children carry their own snack and water in tote bags from home. Guide them to notice things from the book as well as additional creatures and plants. Let children know that their presence may affect the animals' behavior. Creatures may hide when humans are near. Stop, rest, and eat snack, making sure to carry out all trash.
6. Repeat step 4. As a class, talk about differences and similarities between what they observed on neighborhood walk (Step 3) and nature walk (Step 5). Discuss possible reasons for them.
7. Try to do neighborhood and/or nature hike again, at another time of year, to experience the same area at different seasons. Discuss differences and possible reasons for them.

Nature Connections

- ◆ As a class, share your observations, as citizen scientists, with the National Wildlife Federation's Wildlife Watch program. <http://www.nwf.org/WildlifeWatch/obs.aspx>
- ◆ Look at photos of a rain forest in book or on Internet. What kinds of plants and animals do the children notice? Are they different from those seen on their nature walk? What might be possible reasons?

Additional Resources

- ◆ **American Hiking Society** <http://americanhiking.org>
- ◆ **Discover the Forest**, www.discovertheforest.org, sponsored by U.S. Forest Service.
- ◆ **USDA Kids Page**, includes information on Smoky the Bear <http://www.srs.fs.usda.gov/ids/index.html>





Forest Drama

Introduction

In the book *Jo MacDonald Hiked in the Woods*, author Mary Quattlebaum introduces children to the trees, plants, and creatures of a forest ecosystem and models safe, courteous behavior in the wild. In this activity and its connections, children draw pictures and make the creatures' sounds and movements.

Materials Needed

- ◆ Paper
- ◆ Markers or crayons
- ◆ Large brown blanket or fabric (optional)

Key Concepts

- ◆ Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.

Procedure

1. Assign each child to a creature in the book (squirrel, owl, etc.).
2. Have students draw a picture of their creature using the book's illustrations as a guide. Or provide a large photo of each creature. Create a "forest" by asking children to stand or sit on the fabric on the floor.
3. Sing the song, with each child making her creature's sound and holding up her picture at the appropriate time. The sounds get softer and softer till the owl's loud "Hooo!"
4. At the end of the song, have children make their noises all together. What a wild lullaby!

Nature Connections

- ◆ During the reading/song, have children make the movement as well as the noise of each creature.
- ◆ Act out as well as sing the song by assigning children to be trees, creatures, or Jo and her grandfather. What movements and sounds might the trees make?
- ◆ The book progresses from day to night, with the final illustration showing all nine creatures at night. Ask children to find them and to draw a forest. What changes do they notice from day to night? Which animals are nocturnal?
- ◆ The book shows a forest at one point in the year. How might the forest and weather change over the four seasons? What happens to the trees? Guide children to look for seasonal changes in the natural world. Every month have children examine a nearby tree and discuss/record the changes in the tree and surroundings over time.
- ◆ Visit a wooded area in person or in a book or on the Internet. Are there creatures that aren't in Jo's woods? As a class, list these missing animals, birds, and insects and their noises, and then add them when you sing the song again.

Additional Resources

- ◆ **A Tree for All Seasons** by Robin Bernard
- ◆ **The Tree in the Ancient Forest** by Carol Reed-Jones, illustrated by Christopher Canyon
- ◆ **Explore the Deciduous Forest** by Linda Tagliaferro
- ◆ **American Forests Kids Page**
<http://www.americanforests.org/resources/kids>



Hide and Seek with Camouflage Critters



Introduction

In the book *Jo MacDonald Hiked in the Woods*, author Mary Quattlebaum introduces children to the trees, plants, and creatures in a forest and models safe, courteous behavior in the wild. In this activity and its connections, children focus on how animal colors and markings can provide protective camouflage.

Materials Needed

- ◆ Several photos of box turtle and chipmunk, printed from Internet. Cut around outline of animals.

Key Concepts

- ◆ Organisms' patterns of behavior relate directly to the environment.
- ◆ Behavior is influenced by internal cues and external cues.
- ◆ Plan and conduct a simple systematic observation.

Procedure

1. Have children look at animals in the book's illustrations. How do the animals' colors (largely brown or gray) help them to blend into their forest surroundings? Have them find the chipmunk and box turtle.
2. What does a box turtle's markings (yellow patterns on dark brown shells) make it look like? (Answer: a rock or pile of leaves speckled with sunlight) A chipmunk's markings (stripes of white and black on golden-brown fur)? (Answer: a sun-dappled leaf beside a tree root, fallen branch, or pile of leaves.)
3. Hide the chipmunk and turtle cut-outs in the classroom, close to photos of natural objects, or outdoors. Have the children find them. Which are the easiest places to spot the critters? Why?

Additional Resources

Nature Connections

- ◆ Assign some children to wear bright colors (red, yellow, blue) and others to wear neutral tones (brown, gray) or provide oversized t-shirts. Which kids are easiest to spot outdoors? Indoors? Does it make a difference if they stand still or move?

- ◆ **I See Animals Hiding** by Jim Arnosky
- ◆ **What Color is Camouflage** by Carolyn Otto, illustrated by Megan Lloyd
- ◆ **Where in the Wild? Camouflaged Creatures Concealed ... and Revealed** by David Schwartz and Yael Schy, illustrated by Dwight Kuhn
- ◆ **Find the Hidden Animals:** <http://kids.nationalgeographic.com/kids/photos/gallery/animal-camouflage/>





In a Bit of Leaf

Introduction

In the book *Jo MacDonald Hiked in the Woods*, author Mary Quattlebaum introduces children to the trees, plants, and creatures in a forest and models safe, courteous behavior in the wild. In this activity, children use observation and several scientific tools to examine a leaf, pine needle, and fern frond.

Materials Needed

- ◆ One green deciduous leaf and pine needle per child
- ◆ One dead leaf per child (optional)
- ◆ One bracken fern frond per class (optional)
- ◆ Scientific notebook (3-8 pieces of paper stapled)
- ◆ Pencils
- ◆ Magnifying glass
- ◆ Microscope
- ◆ Slide and slide cover

Procedure

1. Tell children that they are scientists and will be making careful observations of leaves using three types of scientific tools (eye, magnifying glass, and microscope).
2. Ask them to draw one big circle on each page of scientific notebook.
3. Give each child one leaf. Read aloud the section "Trees Make Their Own Food" to explain why the leaves are green. Have children examine leaf with hands and eyes. This is Observation 1. Ask what they feel/see or "observe" (for example, smooth on one side, rougher on the other? Spots or discolorations?). Have them list and then draw their observations inside the first circle in notebook. The eye is usually the scientist's first tool.
4. Have children observe a bit of their leaf with a magnifying glass and draw what they see inside the second circle in notebook. This is Observation 2.
5. Place a bit of leaf on slide with cover slip. Have children observe with microscope and draw what they see inside the third circle of notebook. This is Observation 3.
6. Have children compare their different observations. What are similarities and differences between the three drawings for leaf? For pine needle? Now, compare the leaf to the pine needle.
7. Explain that Jo MacDonald was able to see many trees, plants, and leaves with her naked eye. Some plants are so tiny, though, that you can see them only with a microscope—but they are very important. These microscopic plants are an important part, especially, of the ocean food chain.

Key Concepts

- ◆ Students answering questions using scientific resources combined with observations.
- ◆ Plan and conduct a simple systematic observation or investigation.
- ◆ Use simple instruments such as magnifier and microscope to gather data and extend the senses.
- ◆ Communicate investigations that might be drawn or spoken as well as written.
- ◆ Tools help scientists make better observations, measurements, and equipment for investigations.

Nature Connections

- ◆ Examine a dead deciduous leaf by repeating steps 2-6 in procedures above. Have children compare their observations/drawings of green and dead leaf. What are similarities? Differences?
- ◆ Ask children to look at/touch fern frond. What are differences from/similarities to the deciduous leaf? Do they see spores on underside of fern leaves?

Additional Resources

- ◆ **A Tree for All Seasons** by Robin Bernard
- ◆ **A Tree Is a Plant** by Clyde Robert Bulla, illustrated by Stacey Schuett





Squirrel Tales

Introduction

In the book *Jo MacDonald Hiked in the Woods*, author Mary Quattlebaum introduces children to the trees, plants, and creatures in a forest and models safe, courteous behavior in the wild. In this activity, children focus on the squirrel and dramatize, draw, and write about its life cycle and forest experience.

Materials Needed

- ◆ Several pieces of paper
- ◆ Colored markers or crayons

Procedure

1. Ask children to find the squirrel in every illustration in the book. What is it doing?
2. Explain that the book's pictures show the adult squirrel but that its life cycle includes several stages of growth: gestation (pregnancy of mother), live birth, baby, juvenile, and adult.
3. Show children pictures of these five stages from books or Internet. How do the kittens, juveniles, and adults move? What body parts allow them to move that way? What do they eat? (Babies, called kittens, are born hairless and with closed eyes and ears. Like other mammals, squirrels drink their mother's milk. In the juvenile stage, their eyes and ears open, they grow fur and stronger nails for tree climbing, and begin to play with their siblings and learn to survive from their mother.)
4. Have children act out the different stages (helpless baby, developing juvenile in nest, scampering adult).
5. Ask children to draw a picture of each growth stage.
6. Invite children to write and illustrate a story about the adult squirrel. What does it see in the forest? What other creatures does it meet? How does it prepare for winter?



Nature Connections

- ◆ Invite children to write and illustrate a story about a juvenile squirrel. What does it see and do in its nest? What does it see in the forest?
- ◆ Squirrels are very adaptable, meaning they can live in many places. Have kids look for squirrels and nests (called dreys) in their neighborhood and listen for their noises.
- ◆ Squirrels communicate with tail flicks and different sounds. Dr. Robert Lishak has identified several squirrel sounds. In the book, Jo hears the squirrel bark "err-err" to warn other squirrels of possible danger (predators or humans such as Jo and her grandfather). Dr. Lishak labels this the "kuk" sound of alarm. Read about Dr. Lishak's research and other squirrel sounds at http://articles.washingtonpost.com/2012-04-09/local/35451118_1_squirrels-cat-moves-kuk

Key Concepts

- ◆ Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.
- ◆ The environment must supply the needs of organisms.
- ◆ Plants and animals have life cycles.
- ◆ A life cycle includes: birth, development, adulthood, reproduction, and death.
- ◆ Offspring resemble parents.
- ◆ Each organism has different structures for different functions.



Additional Resources

- ◆ **Gray Squirrel at Pacific Avenue** by Geri Harrington

A Tree for All Seasons



Introduction

In the book *Jo MacDonald Hiked in the Woods*, author Mary Quattlebaum introduces children to the trees, plants, and creatures of a forest and models safe, courteous behavior in the wild. In this activity, children focus on one tree for a year as they learn about seasonal changes and trees as resources and create a classroom scrapbook/display of observations and photos.

Materials Needed

- ◆ Large, nearby tree
- ◆ Camera
- ◆ Classroom scrapbook or display board



Procedure

1. At the beginning of school year or a particular season, choose a large nearby tree for classroom study.
2. Explain that trees are important resources. The way they make food produces oxygen for humans and other creatures to breathe (see *Trees Make Their Own Food* section in book). Humans also use the bark, seeds, and wood of trees to produce things. Show everyday items made of wood (paper, cinnamon, ruler, maple syrup, wooden toy, etc.) For extensive list, see <http://forestinfo.org/kids/documents/4e22bc91fcbd968bad6b55f7a4f3dc711133223478.pdf> Have children find things made from trees in classroom and bring in something from home to show. Make a list for scrapbook/display board and add to it throughout the year.
3. Visit chosen tree and guide children to identify and touch its important parts (roots, trunk, branches, twigs, crown, and leaves; see *Tree Time* activity for more detail). Have them gently touch the bark and look for fruit (acorns, maple "wings," etc.). Take two photos—one of tree alone and one of tree with children. Look for and record on a class list for scrapbook the animals, birds, insects, and fungus that are around, on, or using the tree, any fallen branches, or fruit. What are they doing? Look for moss.
4. Bring one leaf and one fruit back to classroom and include leaf/fruit and photo in class scrapbook or on display board.
5. Repeat step 3 every month or every two weeks till school ends. Encourage children to visit tree on their own as well.
6. At year-end, discuss what children learned about trees. How do trees help people, including providing shade and beauty? What did each child like about this special tree? What creatures did they observe using it at different times of year? Ask children to write a short thank-you note to tree and draw its picture.
7. Visit tree and read these aloud. (Young children should just say their thank-you aloud.)
8. Display the notes and pictures in scrapbook or on board. Discuss the monthly photos of tree. How did it change over the year?

Key Concepts

- ◆ Plants are the base of an ecosystem.
- ◆ All animals depend on plants.
- ◆ Resources are things we get from the living and nonliving environment to meet the needs and wants of a population.
- ◆ Some resources are basic (air, water, soil).
- ◆ Some resources are produced (food, fuel, building materials).
- ◆ Some resources are nonmaterial (beauty).
- ◆ Weather changes from day to day and over the seasons.
- ◆ Plan and conduct a simple systematic observation or investigation.
- ◆ Communicate or analyze investigations that might be drawn and spoken as well as written.

A Tree for All Seasons



Nature Connections

- ◆ Ask children to stand very still and pretend to be trees. Ask them to listen to surrounding sounds and to feel the wind or warmth on their faces. Talk about what they noticed by being still that they might not by moving around. Write a classroom poem (one line per child) about what the tree experiences or individual poems or stories.
- ◆ Talk about the importance of protecting trees, both as resources and for their beauty. Mention how environmentalist John Muir and President Teddy Roosevelt worked to create national parks to protect trees and wildlife. Read aloud Wangari's Trees of Peace by Jeanette Winter or Planting the Trees of Kenya by Claire Nivola. Muir, Roosevelt, and Wangari Maathi all helped to protect trees in big ways. But we can all help in small ways. Brainstorm with children ways of protecting trees such as recycling, and begin to recycle in classroom.
- ◆ Share amazing tree facts: A bristlecone pine tree called Methuselah is the world's longest living single tree, at 4,844 years old. And at 380 feet, a coastal redwood named Hyperion ranks as the world's tallest tree. It towers as high as a 38-story building. Both trees are in California.

Additional Resources

- ◆ **A Tree for All Seasons** by Robin Bernard
- ◆ **A Tree Is a Plant** by Clyde Robert Bulla, illustrated by Stacey Schuett
- ◆ **Tell Me, Tree: All About Trees for Kids** by Gail Gibbons
- ◆ **Be a Friend to Trees** by Patricia Lauber
- ◆ **The Tree in the Ancient Forest** by Carol Reed-Jones, illustrated by Christopher Canyon
- ◆ **National Arbor Day Explore**
<http://www.arborday.org/explore/>



Tree Time

Introduction



In the book *Jo MacDonald Hiked in the Woods*, author Mary Quattlebaum introduces children to the trees, plants, and creatures of a forest and models safe, courteous behavior in the wild. In this activity, children learn about different types of trees, draw a tree, and collect and display leaves and fruit (acorns, seed balls, etc.).

Materials Needed

- ◆ Construction paper (green, brown, gray, red, yellow)
- ◆ Strong white paper
- ◆ Scissors
- ◆ Crayons or markers
- ◆ Collected leaves and fruit (acorn, pine cone)

Key Concepts

- ◆ Plants are the base of an ecosystem.
- ◆ All animals depend on plants.
- ◆ All organisms have different needs.

Procedure

1. Bring in leaves and fruit from one deciduous tree (oak, acorn) and one evergreen tree (pine, cone) in the book. Have children observe carefully (color, shape), smell, and touch them.
2. Point out parts of tree (roots, trunk, branches, twigs, crown, leaves) on diagram of tree (example, <http://www.kidzone.ws/plants/trees.html>). The bark is the tree's harder, protective outer covering. The fruit (acorn, pine cone) often surrounds the seed.

As a class, look at several trees outdoors and identify parts. Guide children to gently touch bark, leaves, and visible roots. Collect a leaf and fruit (if available).
3. Ask children to collect leaf or needle and fruit from one of book's four trees (oak, maple, sycamore, pine). Or ask them to collect leaf/fruit from any tree in their neighborhood or nearby woods and identify (at home or school) with tree guide or Internet.
4. Have children cut out construction paper trunk, branches, and twigs (brown or gray) and leaves (green or appropriate autumnal color). Glue those to the page along with the collected leaf and fruit; label with tree name.
5. Ask children to draw some of the creatures from Jo's woods on paper with tree. Is creature finding food, nesting, or seeking shelter or protection in tree?
6. Tape trees onto classroom walls to create an indoor forest.

Nature Connections

◆ Read aloud the descriptions of the four types of trees. Trees provide food, shelter, and nesting places for many creatures. Ask children to look at each picture to discover whether an animal is using it in one of those three ways.

◆ Bring in maple syrup or maple candy and let children taste. This short video shows how maple trees are tapped. <http://www.youtube.com/watch?v=DwbgwBnRnG8>

Additional Resources

- ◆ **In a Nutshell** by Joseph Anthony, illus. by Cris Arbo
- ◆ **A Tree for All Seasons** by Robin Bernard
- ◆ **A Tree Is a Plant** by Clyde Robert Bulla, illus. by Stacey Schuett
- ◆ **Tell Me, Tree: All About Trees for Kids** by Gail Gibbons
- ◆ **The Tree in the Ancient Forest** by Carol Reed-Jones, illus. by Christopher Canyon
- ◆ **National Arbor Day Explore:**
<http://www.arboday.org/explore/>



**JO MacDonald
Hiked in the Woods**

By Mary Quattlebaum
Illustrated by Laura J Bryant



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