



Western Upper Peninsula Center for Science, Mathematics and Environmental Education

A partnership of

Copper Country & Gogebic-Ontonagon Intermediate School Districts and Michigan Technological University
Serving schools and communities in Houghton, Baraga, Gogebic, Ontonagon and Keweenaw Counties

Senses Detectives

Duration: 60-120 minutes

Age group: Kindergarten

Lesson Overview: By listening carefully and looking closely, students use their senses to discover the many shapes, colors, textures around them as they discover the living and nonliving parts of the forest. After identifying what all living things need to survive, students will search the forest for the needs of real animals.

Michigan GLEC's: SCI: S.IP.00.11-14; S.IA.00.12-14; L.OL.00.11-12

Learning Objectives

Students will be able to:

1. Identify the five senses and use four of them to observe and describe the world around them (sight, hearing, taste, touch and smell). Stress the limited use of taste in science.
2. Describe how living things are different from non living things.

List of Materials Needed

- Animal ear examples (pictures or stuffed animals)
- Egg cartons- one for each student or group of students
- Parts of a tree and a rock each in a brown bag
- Scented candle
- Blindfolds
- Film canisters various materials inside (matching sounds)
- Paint chip colors- one for each student or group of students
- Letter cards- one for each student or group of students
- Shape cards- one for each student or group of students
- Bag of rocks
- 5 film containers filled with scented cotton balls.

Introduction (5 min.)

Tell the students we are going to explore the forest today. Review what season it is and how we know it is fall (getting colder, shorter days, leaves are turning colors, etc). What will we find in the forest? (Have them name animals and plants that they think might live in this forest). Explain that forests have different parts some are living and some are non-living. Ask them to tell you how the two are different. Tell them that they are going to use their senses to investigate the forest and decide which parts are living and which parts are nonliving. Do they know the five senses? The five

senses are taste, touch, hearing, smell, and vision. Which senses do you feel are most important to humans? To animals? Stress the limited use of taste TODAY and in science in general. We are going to do some activities that use our senses. Are you ready? Let's go!

1. HEARING: Sound Map Activity (10 min.)

1. Have the students form a circle and everyone stands facing the inside.

What do we call the part of an animal that hears sounds? Do all animals' ears look the same? Give a few examples (rabbits, elephants, dogs, cats, etc.). Why would it be important for animals to be able to hear well?

2. Ask students what kinds of sounds we might hear in the forest. Peak their interests by asking who thinks they will be able to hear 5 or more different sounds? Ask students to close their eyes, sit quietly and listen. Each time they hear a sound, they should hold up another finger. Continue sitting until students have heard at least five sounds. Have students open their eyes and share with each other a description of the different sounds that they heard. Was it loud, soft, high-pitched, only heard once or repeated. **Did the sound come from a living thing or a non-living thing?** Could they accurately identify each sound?

3. Show them animal ears and how cupping their ears to make them more "animal-like" can increase their hearing.

2. SIGHT: Forest Foray (15 min.)

1. Keep students in a circle and explain that next students will be using their sense of sight to observe the variety of objects in the forest.
2. Pass out shape cards to each student or pair of students. Have them look for something that matches the shape they were given.

Instruct students to NOT pick flowers, as they won't know which might be sensitive species. Avoid collecting insects—although it is fine to look at them! The item has to fit in the container. After collecting, have students sit in a circle, and share their collections with the other students. **Ask each child to tell you if the object is living or nonliving! (or possibly have them raise their hands if they think is living, or raise their hands if they think it is non-living...this encourages ALL the students to think about it).** Repeat activity with letters and shapes

3. SMELL: New Scented Candle Activity (10 min) (may want to break the large group up into smaller groups)

1. Ask the students if they have ever smelled a scented candle. Have a scented candle on hand to show as an example. Tell the students that they are going to come up with a scent for a brand new candle. To do this they will have to conduct some research using their noses. Explain that they will be taking a short walk, stopping frequently to smell things, each time the group stops, the students will vote on if they think the object smells good or bad. Raise their hand if they think it smells good, raise their hand if they think it smells bad. If most think it smells good, then the leader will write it on a list. When the hike is over have the students form a circle and read them the list of what smelled good. **Ask them to identify what was living and what was non-living.** Tell them the research is complete and it's time to come up with a new scented candle. Work together to come up with a name that combines all or most of the items on your

list. For example if your group liked the smell of mud and wood chips, maybe call the scent Mud Chips, or if the group only liked the scent of flowers, maybe call the new scent Flowerific!

4. TOUCH: Tree Parts Activity (10min.)

Have students stand in a circle. Pass out brown bags with different parts from a tree in them (cones, needles, leaves, bark, seeds). Have students feel in the bags and try to guess (to themselves) what is in the bag. Once everyone has felt in each of the bags, show them what was in each one.

Optional- add a rock to one of the bags. Ask the students if most of the objects come from living or non living things. What was the non-living thing, what was the living thing?

ADDITIONAL ACTIVITIES

Find your rock (10 min)

Show students the bag of sandstone rocks. Pass out a rock to each student and tell them to OBSERVE it very closely. How does it feel, what are the colors on it, what is its shape? After a few minutes of observation collect all of the rocks and have the students, a few at a time, try to find their rock. Add a few extra rocks to make it more difficult for the last students.

Fox & Mouse Game (10-15 min.)

Tell the students that now we are going to play a game that illustrates how a fox uses sound to catch its dinner! First, ask students if they know what foxes like to eat. Next, ask how foxes are able to locate mice or rabbits---using their ears! Have the students stand in a big circle, and model how the “Fox & Mouse” game is played (described on pages 108-109 of *Sharing Nature with Children*). Have the fox close their eyes, or put a shirt/jacket over their eyes, so it can't see. While the mouse's eyes remain open, the mouse must be constantly shaking a small film canister with paper clips inside to make noise which allows the fox to know where the mouse is and to try and catch it. At the end, discuss how animals (predators) find their food, and how other animals (prey) keep from getting eaten.

Guess the smell (10-15 min.)

Take the lids off of the 5 film containers with scented cotton balls. Have the students smell the cotton ball and try to guess what it is from. Remind students to NOT REMOVE the cottonball.

Assessment (5 min)

Ask students to list their five senses.

Did we use all five of our senses today?

Which one(s) did we *not* use? (We didn't use our sense of taste)

Would it be hard if you couldn't see, hear, taste, smell or feel?

Do different animals rely on some senses more than others?

How are living things different from non-living things?

Ask students to name some living things they found and non-living things they found.

Sources and additional information

1. Cornell, Joseph. *Sharing Nature with Children*. 1998 (2nd Edition). Dawn Publications, Nevada City, CA. Bat and Moth Page 108-109. Sounds and Colors Page 40-41. Meet a Tree Page 28.
2. Cornell, Joseph. *Sharing Nature with Children II*. 1989. Dawn Publications, Nevada City, CA.

3. American Forest Foundation. *Project Learning Tree*. 1997. Fifth Edition. American Forest Foundation, Washington, D.C. Peppermint Beetle Page 7.
4. Wisconsin K-12 Forestry Education Program. LEAF Guide K-1. Field Enhancement 2 Sensing the Forest, pg. 92-97. Wisconsin Department of Natural Resources, Stevens Point, WI.