

Be a Naturalist!

This activity is directly tied to the third spread, pages 5 and 6, in the *What's In Your World?* publication located inside the back pocket of the activity tool kit.

Explore the natural world!

Use your five senses to observe the world around you. Students will learn to develop their skills as nature detectives through senses investigations, journaling and drawing in a micro-mapping project.

Levels

Grades 4-8

Subjects

Science, Art, Language Arts, Mathematics

Skills

Discussing, Mapping, Drawing, Investigating, Examining, Observing, Sensory Awareness

Concepts

Scientific investigation using observation, tools, measurements and data collection;
diversity of life;
inquiry process; structure and function of living things'
micro and macro environments

Objectives

Students will use their senses to make observations of the world around them.
Students will use skills of journaling, sketching and mapping to investigate the natural world.

Materials (20 student class-size)

What's in Your World? booklets (pp. 5-6) - 1 per student
blindfolds - 1 per student
Jelly beans - 1 per student
3 cloth or paper bags each with a natural item inside
numbered film canisters containing cotton ball, swabbed
with scent (vanilla, cherry, rootbeer, mint, lemon,
orange, etc.) - 1 canister per student
journal or notebook - 1 per student
graph paper - 1 per student
pencil - 1 per student
colored pencils - 1 per student
tape measures or meter sticks, stakes or flags, string or
surveying tape

Time Considerations

Preparation - 30 minutes
Activity - 90 minutes

Lesson Overview

- Becoming a Naturalist - Senses Investigation (45 minutes)
- Micro Maps (45 minutes)

Background

A naturalist is someone who is curious about the natural world. They look at the plants, animals, insects, and landscape around them and ask questions. A naturalist wanders and wonders. If you could read a naturalist's thoughts, they might go like this: *Being a naturalist is about asking questions and discovering answers.* Naturalists keep their eyes and ears open--they observe the world around them. They record what they have seen and heard by writing down and sketching their observations. Sometimes, naturalists look at a single plant or animal. Other times they look at a whole community of plants and animals and how they affect each other. They may inventory the number and kinds of plants, animals, and other things in that community. This helps them develop research questions that can be tested and answered to learn more about the natural environment.



Senses Investigation

(45 minutes)

STEP ONE. Begin activity with a discussion of the term naturalist. *What is a naturalist? What does a naturalist do? Lewis and Clark were naturalists on their expedition--what sorts of things did they do?*

STEP TWO. Ask students to read page 5 in the *What's in Your World?* booklet.

STEP THREE. Discuss the tools that a naturalist uses to study the natural world. Review the five senses and the naturalist skills of journaling, drawing and mapping.

How do these tools help a naturalist study and understand the natural world?

STEP FOUR. Now tell the students that they will be practicing using their naturalist skills in a senses investigation--using their sense of taste, sight, touch, smell and hearing.

STEP FIVE. Taste: Blind Taste Test- Tell the students that you will be handing them something and they have to figure out what it is without using their sense of sight. Have students sit in a circle and blindfold each student. Tell the students that the blindfolds may not completely prevent them from using their eyes, but the blindfolds are friendly reminders to not use your eyes.

Hand each student a jelly bean and ask for observations--*how does it smell?*

How does it feel?

Ask the students to give you good descriptive words, not what the object actually is. Now ask the students if they think there is another sense they could use to identify the object.

Taste!

Tell them to go ahead and taste the object.

How does it taste?

What is the object?

What flavor do you think the jelly bean is?

STEP SIX. Touch: *Mystery Bags*--Before lesson, have three bags with three different natural items set up in the classroom. Tell the students that the bags are *mystery bags* and you have an item in each bag--*what sense do they think they will use to figure out what is in the box? Touch!*

Ask students to place their hand in the *mystery bags* one at a time to identify the objects inside of them. After all the students have gone, ask for words describing the objects in each box. Reveal the object dramatically--*was it what they thought was in the box?*

STEP SEVEN. Smell: Hand out numbered film canisters filled with different scents to the students. Ask the students to identify the smells of each of the numbered film canisters. Use the following questions for discussion jumping points.

Without seeing what you smell can you tell what it is?

What types of things smell good?

What types of things smell bad?

What types of smells are outside today?

STEP EIGHT. Hearing (outside): Sounds--Ask students to sit quietly for 2 minutes with their eyes closed. Tell students to count how many noises they hear during this time on their fingers. *What were the noises?*

STEP NINE. Sight (outside): Ask students to look at a hillside for 30 seconds. Then ask students to close their eyes. Ask the students questions about the hillside and see if they can remember what they saw.

Were there clouds in the sky? (Eyes still closed) have them point to where the closest tree/bush is, etc.



BE A NATURALIST! MICRO MAPS LESSON DETAILS

Micro Maps

(45 minutes)

STEP ONE. Begin the activity by reviewing the tools that a naturalist uses.

What types of things did Lewis and Clark do to show people what the West looked like?

They did journaling, sketching and made maps along their journey to represent the landscapes of the West.

STEP TWO. Ask students to read page 6 in their *What's in Your World?* booklet.

STEP THREE. Tell students that they are going to be using naturalist skills of journaling, sketching and mapping to investigate the natural world as Lewis and Clark did.

STEP FOUR. Take the students outside with journaling, sketching and mapping supplies. Ask the students to make observations of the outside space, using their senses. The students should record their observations in their journals or notebooks.

STEP FIVE. Next, tell the students that they will be doing a mapping project. Though, instead of a large map of an area, they will be creating a micro-map--a close-up map that shows details of a small area.

Discuss the concept of scale and perspective with students as well. During this activity, they will be working in pairs or small groups to measure out a 1-meter square, using a tape measure or meter stick, and marking the corners of their 1-meter square with stakes or flags. Next, they will run string or surveying tape between the stakes to mark the square.

STEP SIX. To begin their micro-map, the students will draw a square on a piece of graph paper, which will be the method of recording what they find. Next, have the students sketch the larger and more general features in their plot. After, have the students get down on their knees and look very closely at their square plot.

What do you see?

Are their plants, insects, worms?

Is the soil sandy or rocky?

Remind students of different features on a map and using symbols to represent features in their plot. Using colored pencils, have them record the details of their plot on their map, working from one corner, outward until they have mapped the whole square meter.

STEP SEVEN. Once the students have finished, ask them to use their observations and micro-maps to create a list of all the things that they have found. They may write a general list or a more detailed list with names of plants and animals. Ask for volunteers to share their findings with the class.

