



# Sensory Map Activity

## About this lesson

In this activity, students use their senses to explore and “map” life in a specified setting; in doing so we are able to discover what we may take for granted and what characteristics we may miss and discover the negative and positive impacts on the natural environment.

## Learning objectives

*Students will:*

- Use their senses to explore the natural world
- Gain awareness of how they experience different parts of the natural world
- Discover what organisms are found in the ecosystem they are exploring
- Notice or describe what or why something has a specific characteristic
- Critically analyse how different perspectives lead to media bias; understand how to identify media bias
- Ask questions, corroborate inferences, and draw conclusions about the content and origins of a variety of sources, including mass media

## Key Questions

1. *When we increase our focus/ attention, does anything change? (ex: is the plant that is beside you on its own or are there many with the same leaf structure).*
2. *What characteristics do we notice right away? What takes longer to notice?*
3. *What are the interactions between the things we are seeing, hearing, feeling?*

## Prerequisites

Students should have a background in, and an awareness of the natural environment and its functions. They should know how to identify and categorize object in nature. Students should be able to evaluate and make connections between various living and non-living objects in the natural environment. You may need to review

### BIG IDEA

Living things have features and behaviours that help them survive in their environment.

### SUBJECT

Science Grade 1

### TIME REQUIRED

45 minutes

### SUPPLIES

Drawing paper and pencil crayons

### COMPETENCIES

- Demonstrate curiosity and a sense of wonder about the world
- Observe objects and events in familiar contexts
- Ask questions about familiar objects and events
- Make simple predictions about familiar objects and events
- Make and record observations
- Experience and interpret the local environment
- Sort and classify data and information using drawings
- Compare observations with predictions through discussion
- Identify simple patterns and connections

*\*See last pages for a complete list as prescribed by BC's Ministry of Education*

*Quick recap: What is nature? Give students a few minutes to list as many things they can think that fall into the “nature” category. Invite them to share and list their answers on the board. Make sure to stress that humans are part of nature. \*Note:* You can find resources at [www.ekisc.com](http://www.ekisc.com)

#### WORDS TO KNOW

**Nature:** living entities including humans, plants, and animals; inanimate objects and phenomena, such as geology and weather; and the processes and/or thought patterns associated with each.

**Natural environment:** the non-human aspects of nature.

## Activity 1: Discussion [45 min]

Prepare the students in class with a short discussion on what they *think* they will discover outside. Allow the students to imagine what is beyond the school grounds. Help them to consider the different aspects of nature and how everything interacts. Direct them to think about things that may interrupt the balance of what they are discussing (ie: They may be thinking they will discover birds but cannot hear them due to traffic noise; they may think they will find grass, but the grass may be overrun with dandelions).

Ask the students the following questions:

1. What kind of plants are found on campus? In the forest? Near your house?
2. What kind of animals are found in these places?
3. What things help plants and animals grow?
4. What types of things prevent plants and animals from growing?

#### INVASIVE VOCABULARY

**Invasive:** an organism (plant, animal, fungus, or bacterium) that is not native and has negative effects on our economy, our environment, or our health. Invasive species can spread rapidly to new areas and will often out-compete native species as there are no native predators or diseases to keep them under control.

**Non-native:** Species from other areas of the world that do not occur naturally in an area, and were likely brought by humans, either accidentally or intentionally. Also known as: alien, introduced, exotic.

**Noxious:** A term used by the BC Weed Control Act and Regulations: an invasive species that has been designated by provincial authorities as one that is injurious to agricultural and/or horticultural crops, natural habitats and/or ecosystems, and/or humans or livestock.

**Native:** A species that normally lives and thrives in a particular ecosystem. This can include any species that developed with the surrounding habitat.

**Including Invasive Species in the Observations.** Prompt the discussion with a short (2 minute) [video](#) on the impacts of invasive species. If students haven't already pointed out the impacts of invasive species (plants and animals), explain the impacts to them Ask: *Can you think of any examples you've see in the schoolyard or your neighbourhood?*

**Break It Down.** Not everything in the natural environment was always there, nor do the new objects necessarily belong or fit in. Have students identify how they think new species arrive in their new environment. Interpret them as being “harmful” or “harmless”; or having a “positive” or “negative” effect on nature. *\*Note:* Some students may bring in the concept of humans as invasive; they may also note that some inanimate objects don't belong in the natural environment (dams, roads, mines etc.). These are legitimate concerns, ask them to keep these things in mind when you go outside.

**Map it out.** Have students draw (or write down) what they feel the natural environment looks like in the place they will be visiting outside. Encourage them to make connections to things they might hear, see, smell, and feel. Have students leave this map in the classroom.

## Activity 2: Explore Outdoors [60 min]

With a new piece of paper (map) go outside and walk through an area silently. Encourage students to connect with their senses as they walk through a forested area, changing to a field, to a sidewalk, drawing what they experience along the way. After transitioning through a few areas, have students sit scattered in a small area.

1. Sitting silently, with their eyes closed encourage students to listen to the sounds around them. Try to think about what be making the sound and have them draw or write what they hear on their map. (1 – 2 minutes depending on attention level of the class).
2. Quietly move around for 1 – 2 minutes. Sniff for smells. Have students draw or write what they smelled.
3. Sit back down. Look around for living things (insects, birds, humans, animals). Have students draw or write what they saw and map out where they saw it.
4. Quietly move around again. Encourage students to feel the textures of the plants and other objects. Encourage them to think of the characteristics of each object. Have them write what they felt.

**Finish up.** Give students 5 minutes online to finish their map while still outside. Ask: *What grabbed your attention, what did you notice that you didn't think of on your other map?* Prompt your students to dig and think a bit deeper by asking: *Was it the colour, coldness, smell? Was there something you that made you feel happy, sad, worried?*

**ImPLY Meaning.** Get students to describe why their map from inside is different from their map from outside. For example:

- Describe how being outside affects you.
- What does it mean to be immersed in the natural environment?
- How and why does \_\_\_ do this?
- Would they change anything about they sensed?

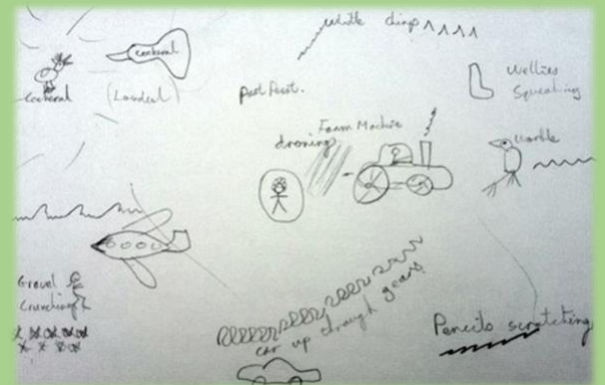
**Share Stories.** Have the students post their maps up on the wall. *\*Note:* Did some students find the same objects? Did someone have a unique experience? Have them compare their maps with those of others to gain insight into different ways of experiencing something.

**Discussion.** It is important to understand the limitations of recalling information from memory and what is actually experienced. It is also important to understand the objects in the natural environment that affect the way the ecosystem or nature was meant to function. Did any students notice negative or positive environmental impacts? Ask: *When we increase our focus does anything change? What do we tend to notice most prominently? What are we missing?*

**Alternatives and Extensions.** Instead of moving around, omit the walk and try it from a stationary location like your “sit spot.” Begin by having students place an “X” on their sensory map where they are sitting and continue from there. This activity can be used to identify the key characteristics of individual objects or areas. Instead of a map, have students imitate what they sense: listen for frog calls and imitate them; pretend to be a tree in the wind. You may also choose to use just one of the senses and create a map of just sounds, or just what you touch.

## MINDFUL WALKING

Continue to prompt your students to be mindful of their surroundings and awaken their senses as they move through each different location. It is a challenge, remind them that it isn't about drawing just what they are seeing but to be aware of what other senses they are noticing.



# Science Grade 1

## BIG IDEA

Living things have features and behaviours that help them survive in their environment.

### Learning Standards

Curricular Competencies	Content
<p><i>Students are expected to be able to do the following:</i></p> <p><b>Questioning and predicting</b></p> <ul style="list-style-type: none"><li>• Demonstrate curiosity and a sense of wonder about the world</li><li>• Observe objects and events in familiar contexts</li><li>• Ask questions about familiar objects and events</li><li>• Make simple predictions about familiar objects and events</li></ul> <p><b>Planning and conducting</b></p> <ul style="list-style-type: none"><li>• Make and record observations</li></ul> <p><b>Processing and analyzing data and information</b></p> <ul style="list-style-type: none"><li>• Experience and interpret the local environment</li><li>• Sort and classify data and information using drawings</li><li>• Compare observations with predictions through discussion</li><li>• Identify simple patterns and connections</li></ul> <p><b>Evaluating</b></p> <ul style="list-style-type: none"><li>• Compare observations with those of others</li><li>• Consider some environmental consequences of their actions</li></ul>	<p><i>Students are expected to know the following:</i></p> <ul style="list-style-type: none"><li>• <b>classification</b> of living and non-living things</li><li>• <b>names</b> of local plants and animals</li><li>• <b>structural features</b> of living things in the local environment</li><li>• <b>behavioural adaptations</b> of animals in the local environment</li><li>• <b>specific properties</b> of materials allow us to use them in different ways</li><li>• natural and artificial <b>sources of light and sound</b></li><li>• <b>properties of light and sound</b> depend on their source and the objects with which they interact</li><li>• <b>common objects in the sky</b></li></ul>

Curricular Competencies	Content
<p><b>Applying and innovating</b></p> <ul style="list-style-type: none"><li>• Take part in caring for self, family, classroom, environment, and school through personal approaches</li><li>• Transfer and apply learning to new situations</li></ul>	

- Generate and introduce new or refined ideas when problem solving

**Communicating**

- Communicate observations and ideas using oral or written language, drawing, or role-play
- Express and reflect on personal experiences of **place**

**Big Ideas – Elaborations**

**SCIENCE  
Grade 1**

*Sample questions to support inquiry with students:*

**Living things have features and behaviours that help them survive in their environment.**

- How do local plants and animals depend on their environment?
- How do plants and animals use their features to respond to stimuli in their environments?
- How do plants and animals adapt when their basic needs are not being met?

**Observable patterns and cycles occur in the local sky and landscape.**

- What kinds of patterns in the sky and landscape are you aware of?
- How do patterns and cycles in the sky and landscape affect living things?

Curricular Competencies – Elaborations

- **Questioning and predicting:** Form and function: Form and function refer to something being designed, structured or shaped in a way that will help it perform a certain function or functions. For example, the fins of fish help them propel themselves through the water. The human skeleton provides protection for organs, and support for muscles, and allows people to stand upright. Science recognizes this important relationship between form and function.

*Key questions about form and function:*

- What structural features of plants and animals in your local environment help those plants and animals to function well?
- How do the properties of natural materials (e.g., wood) help determine useful functions for the materials?

- **place:** Place is any environment, locality, or context with which people interact to learn, create memory, reflect on history, connect with culture, and establish identity. The connection between people and place is foundational to First Peoples perspectives of the world.

*Key questions about place:*

- What is place?
- What are some ways in which people experience place?
- How can you gain a sense of place in your local environment?
- How can you share your observations and ideas about living things in your local environment to help someone else learn about place?

Content – Elaborations

- **classification:**
  - Is it living or non-living? Is it a plant, animal or something else?
  - differences between conventional scientific and indigenous ways of classifying
- **names:** e.g., common, indigenous and scientific
- **structural features:** How do stems, roots, leaves, skeleton or no skeleton or exoskeleton, lots of legs, few legs, eyes, etc. help us understand organisms?
- **behavioural adaptations:** dormancy, hibernation, nesting, migration, catching food, camouflage (stick bugs), mimicry (fly that looks like bee), territorialism (squirrels fighting), etc.
- **specific properties:**
  - solids keep shape; liquids and gases flow
  - properties of local materials determine use by First Peoples (local examples: cedar for canoes, mountain goat horns used as spoons, etc.)
- **sources of light:** natural sources include the sun; artificial sources include light bulbs
- **sound:** natural sources include crickets; artificial sources include car horns
- **properties of light:**
  - examples: brightness, colour
  - objects are made visible by radiating their own light or being illuminated by reflected light
  - interactions of light with different objects create images and shadows
  - light interactions can make plants grow, make shadows, or cause sunburn, depending on the source and location (seasons depend on light from the sun and how spread out the sun's rays are)
  - plants grow toward light
- **sound:**
  - examples: pitch, tone, volume
  - ways of making, recording, and transmitting sound, etc.
- **common objects in the sky:**
  - the appearance of the moon and stars at night

Content – Elaborations

- sunrise/set, moonrise/set
- the sun and the moon are important in different cultures, with respect to customs and traditions
- **local First Peoples:** e.g., may include oral history with Elder—origins and local stories
- **seasonal rounds:** Seasonal rounds refers to a pattern of movement from one resource-gathering area to another in a cycle that is followed each year
- **local patterns:** the relationship of local weather to the four seasons in terms of temperature, cloud cover, precipitation, and wind