

1.1 There's A Forest In My Jar

Story Extension for this lesson:

This activity can be linked to two points in the story. It can be used in the beginning of the story where Sam and Alex are aware of the forest but have not ventured into it. This lesson can be used as a sub-story about the children and their curiosity of the world around them. Their experiment in a jar can be used as their inquiry investigation that makes them want to go into the forest.

The extension provided in the activity can be used at the end of the story where Sam and Alex investigate the variables that can lead to the reason why the plants and animals are ill.

Grade: 1

Strand: Needs and Characteristics of Living Things

Big Ideas:

- Living things grow, take in food to create energy, make waste, and reproduce. (Overall expectations 2 and 3)
- Living things have basic needs (air, water, food, and shelter) that are met from the environment. (Overall expectations 1, 2, and 3)

Overall Expectations:

1. assess the role of humans in maintaining a healthy environment
2. investigate needs and characteristics of plants and animals, including humans
3. demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans

Instructions:

Specific Expectations:

- 1.2 describe changes or problems that could result from the loss of some kinds of living things that are part of everyday life of view into consideration
- 2.1 follow established safety procedures and humane practices during science and technology investigations
- 2.6 use appropriate science and technology vocabulary, including investigation, explore, needs, space, and food, in oral and written communication
- 3.4 describe the characteristics of a healthy environment, including clean air and water and nutritious food, and explain why it is important for all living things to have a healthy environment
- 3.6 identify what living things provide for other living things

Inquiry Skills (from Smarter Science Framework):

Modelling, Experimenting, Analyzing, Reporting

This activity comes from Project Wild and has been modified to include an extension activity for open inquiry. The purpose of this activity is to have students observe how environments can change.

Procedure:

1. Add soil to a depth of 5 cm in a jar then add enough water to fill the jar to 12.5 cm.
2. Place the jar by a window without the lid and allow the mixture to settle overnight.
3. Place an aquatic plant in the jar. Do not replace the water that evaporates from the jar.
4. Once or twice a week (pending environmental conditions of your classroom), students will add three or four birdseed to the jar. Continue to add seeds even after the water evaporates.
5. Have each student make and record their observations as to what is happening in their jar. (See BLM - Primary Level Log Book)

Background Information:

This activity takes one month to complete. When you place birdseed into the jar during the first week of the experiment, you will notice the seeds germinate and die. This is normal. You have not done anything wrong. This is part of the experiment. The aquatic plant will die as water evaporates down to the soil level. After the aquatic plant dies, the birdseed will now find this environment suitable for growth. Sunflower seeds can be added to represent trees in the forest. You will now need to add water to represent rainfall to keep the soil damp so the seeds continue to grow.

Extension:

You can change this activity from structured inquiry to open inquiry by having your student groups develop their own inquiry question. It is recommended you use the Smarter Science framework to help students develop their own inquiry questions. For more information about Smarter Science and resources to help implement this framework in your classroom, please go to www.smarterscience.ca. Refer to BLM - Steps to Inquiry Level 1 for framework posters.

Materials List:

- 1 litre mason jar per student or per student group
- water
- soil
- aquatic plants
- birdseeds

strand. To complete this activity, students are required to make careful measurements, graph the results, and analyze the data collected.

Subject Area:

Math

Connections:

This lesson can be used in conjunction with the Mathematics curriculum under the Measurement or Data Management

Connects to:

Grade 6