

Growing Students and Science: A Community Partnership to Build Interest and Ability in the Sciences



Making the Connection to
3rd Grade Ohio Academic
Content Standards



Overview Holden Visit: Focus on a Forest Floor Grade 3 - Fall

A forest floor is a dynamic ecosystem, filled with specific plants and animals. The third grade fall field trip will focus on this ecosystem highlighting the ground level of the forest including the soil.

Throughout the program the students will follow an interactive map to help them practice their geography skills. Once in the forest the students will sharpen their observation skills, and learn about the life cycles of two forest animals, chipmunks and wood thrushes. The students will also be incorporating classification by sorting animals into general categories such as bird, mammal, etc.

They will collect forest samples and take them back to the classroom for a teacher lead experiment. In the classroom the students will look closely at the components of soil. They will conduct experiments that will show the composition of soils, and allow the students to discover that not all soils are alike.

Earth Sciences

Grade 3 Indicators

Earth Systems

Observe and describe the composition of soil (e.g., small pieces of rock and decomposed pieces of plants and animals, and products of plants and animals).

Investigate the properties of soil (e.g., color, texture, capacity to retain water, ability to support plant growth).

Investigate that soils are often found in layers and can be different from place to place. (e.g., color, texture, capacity to retain water, ability to support plant growth).

Life Sciences

Grade 3 Indicators

Heredity

Compare the life cycles of different animals including birth to adulthood, reproduction and death (e.g., egg-tadpole-frog, egg-caterpillar-chrysalis-butterfly)

Diversity and Interdependence of Life

Relate animal structures to their specific survival functions.

Classify animals according to their characteristics. (e.g., obtaining food, escaping or hiding from enemies).

Describe how changes in an organism's habitat are sometimes beneficial and sometimes harmful.



Scientific Inquiry

Grade 3 Indicators

Doing Scientific Inquiry

Read and interpret simple tables and graphs produced by self/others.

Record and organize observations (e.g., journals, charts, tables).

Communicate scientific findings to others through a variety of methods (e.g., pictures, written, oral and recorded observations).

Scientific Ways of Knowing

Grade 3 Indicators



Ethical Practices

Keep records of investigations and observations and do not change the records that are different from someone else's work.

Geography

Grade 3 Indicators

Location

Use a compass rose and cardinal directions to describe the relative location of places.

Read and interpret maps by using the map title, map key, direction indicator and symbols to answer questions about the local community.

Overview Classroom Visit: Build a Terrarium Grade 3 - Winter



A terrarium is a collection of plants and animals living in an enclosed container. The basic needs of the animal (food, water, air and shelter) and the basic needs of the plant (water, air and sunlight) are fulfilled in the terrarium. A forest terrarium simulates the forest habitat, a place or type of place where a plant or an animal naturally or normally lives or grows.

A group of 4 or more students will build a forest terrarium. The students will learn what is needed to keep their terrarium habitat healthy. The terrarium will be built with a 2 liter bottle, clear tape and various living and nonliving things. Students will place soil, a plant, leaves, branches and pillbugs in their terrarium. They will observe and record any changes in the nonliving and living things over a period of time. At the end of their observation period they will draw conclusions about their forest habitat terrarium.

Earth Sciences

Grade 3 Indicators

Earth Systems

Investigate the properties of soil (e.g., color, texture, capacity to retain water, ability to support plant growth).

Life Sciences

Grade 3 Indicators

Diversity and Interdependence of Life

Relate animal structures to their specific survival functions (e.g., obtaining food, escaping or hiding from enemies).

Classify animals according to their characteristics (e.g., body coverings and body structure).

Describe how changes in an organism's habitat are sometimes beneficial and sometimes harmful.



Scientific Inquiry

Grade 3 Indicators

Doing Scientific Inquiry

Record and organize observations (e.g., journals, charts, tables).

Communicate scientific findings to others through a variety of methods (e.g., pictures, written, oral and recorded observations).



Scientific Ways of Knowing

Grade 3 Indicators

Ethical Practices

Keep records of investigations and observations and do not change the records that are different from someone else's work.



Overview Interdependence

Grade 3 - Spring

Plants and animals in a community are interdependent, relying on each other in many ways throughout their lives. The deciduous forest has many examples of plant and animal interdependence. Animals depend on plants for food, cover and homes. Plants depend on animals for pollination, seed dispersal and recycling of nutrients.

The investigation begins in the classroom then moves to the forest. In the classroom students will be introduced to the concept of interdependence by reading a book, building a forest mural, exploring insect mouth parts, making a flower and examining a poster. In the forest they will discover real life examples of plant/ animal interdependence by looking for signs of interactions and doing a small plot study of the forest. Students will also be introduced to different ways plants have adapted to discourage leaf-eating insects which will lead into the 4th grade indicators.

Life Sciences

Grade 3 Indicators

Diversity and Interdependence of Life

Relate animal structures to their specific survival functions (e.g., obtaining food, escaping or hiding from enemies).

Classify animals according to their characteristics (e.g., body coverings and body structure).



Scientific Inquiry

Grade 3 Indicators

Doing Scientific Inquiry

Discuss observations and measurements made by other people.

Read and interpret simple tables and graphs produced by self/others.

Record and organize observations (e.g., journals, charts, tables).

Communicate scientific findings to others through a variety of methods (e.g., pictures, written, oral and recorded observations).

Spring



Scientific Ways of Knowing

Grade 3 Indicators

Ethical Practices

Keep records of investigations and observations and do not change the records that are different from someone else's work.