

Grade 1 Science Units:

Patterns (Investigation 3 Foss)

The **Patterns** unit provides experiences that help students develop an understanding that patterns of the apparent motion of the sun, moon, and stars in the sky can be observed, described, and predicted. Seasonal patterns of sunrise and sunset can be observed, described, and predicted. Students make observations (firsthand or from media) to collect data that can be used to make comparisons and use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. They learn that patterns in the natural world can be observed, used to describe phenomena, and used as evidence.

- **1.ESS1-1. Use observations of the sun, moon, and stars to describe patterns that can be predicted. (Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day.**
- **1.ESS1-2. Make observations at different times of year to relate the amounts of daylight to the time of year. (Emphasis in on the relative comparisons of the amount of daylight in the winter to the amount in the spring or fall)**

Sound and Light (Investigations 1, 2 & 4 FOSS)

The Foss **Sound and Light** Module provides experiences that help students develop an understanding of how to observe and manipulate sound and light. They explore these dimensions of the natural world using simple tools and musical instruments. Students learn that sound comes from vibrating objects. They explore how to change sound volume and pitch, and develop simple models for how sound travels from a source to a receiver. With light, students also work with sources and receivers. They find out what happens when materials with different properties are placed in a beam of light, and explore how to create and change shadows and reflections. Students explore how to use sound and light devices to communicate information and compare the ways that animals use their senses (ears and eyes) to gather information about their environment.

- **1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and sound can make materials vibrate.**
- **1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated.**
- **1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made from different materials in the path of a beam light.**
- **1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.**

Plants and Animals (FOSS)

The Foss **Plants and Animals** Module provides experiences that heighten students' awareness of the way that plants and animals meet their basic needs. Students observe firsthand the structures of plants and discover ways to propagate new plants from mature plants (from seeds, bulbs, roots, and stem cuttings). They observe and describe changes that occur as plants grow, and compare classroom plants to those in the schoolyard. They design terrariums (habitat systems) and provide for the needs of both plants and animals living together in the classroom.

- **1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.**
- **1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring**

survive.

- **1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.**