

Grade 3 Science Units:

Motion and Matter (FOSS)

The Foss **Motion and Matter** Module provides students with physical sciences core ideas dealing with forces and interactions, matter and its interactions, and with engineering design. Magnetism and gravity are the forces students explore as they look for patterns of motion to predict future motion.

Students work with magnets and paper clips, wheel and- axle systems, paper air twirlers, and rotating tops. Students use their knowledge of science to enter the engineering design process and through the process refine their science understanding.

- **3.PS2-1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.**
- **3.PS2-2 Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.**
- **3.PS2-3 Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.**
- **3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.**

Water and Climate (FOSS)

The Foss **Water and Climate** Module provides students with experiences to explore the properties of water, the water cycle and weather, interactions between water and other earth materials, and how humans use water as a natural resource.

Students engage in science and engineering practices in the context of water, weather, and climate and explore the crosscutting concepts of patterns; cause and effect; scale, proportion, and quantity; and systems and system models. Students are introduced to the nature of science, how science affects everyday life, and the influence of engineering, technology, and science on society and the natural world.

- **3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. [Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.] [Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.]**
- **3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.**
- **3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.* [Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.]**

Structures of Life (FOSS)

The Foss **Structures of Life** Module deals with big ideas in life science—plants and animals are organisms and exhibit a variety of strategies for life, organisms are complex and have a variety of observable structures and behaviors, organisms have varied but predictable life cycles

and reproduce their own kind, and individual organisms have variations in their traits that may provide an advantage in surviving in the environment.

Students observe, compare, categorize, and care for a selection of organisms. Students engage in science and engineering practices to investigate structures and behaviors of the organisms and learn how some of the structures function in growth and survival. Students look at the interactions between organisms of the same kind, among organisms of different kinds, and between the environment and populations over time.

- **3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.**
- **3-LS4-2 Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.**
- **3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.**
- **3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment.**
- **3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.**