

### Course Description:

Science 4 (2 of 2) examines life cycles, animal adaptations, ecosystems, food webs, and using fossil data to provide evidence of how our Earth has changed over time. It also explores the Earth's major systems, materials (rocks and minerals), surface materials (landforms), as well as weather patterns, the water cycle and natural disasters.

### Course Objectives:

- Use information about plants and animals to explain that they have internal and external structures that work to support survival, growth, behavior, and reproduction.
- Explain that some characteristics of plants and animals can be inherited, caused by the environment, or learned behaviors.
- Study environmental and fossil data to see how organisms and environments have changed over time.
- Predict and explain how changes in an ecosystem affect a food web.
- Find out what rocks, soils, water, and atmospheric gases are like and what we use them for.
- Explain from evidence how the use of renewable and nonrenewable natural resources affects the environment differently.
- Make a plan and do a project to learn how things like weathering, erosion, and deposition can change the ground.
- Explain how the connections between Earth's major systems affect the processes of weathering and erosion.
- Study and explain data to learn about weather and climate patterns.
- Think of and compare different solutions to keep people safe from things like floods and earthquakes.
- Identify and describe landforms using models and maps.
- Identify evidence that supports that the Earth's surface has changed over time.
- Draw and talk about the movement of water through the water cycle.

### Required Materials:

#### Required:

- clear plastic storage box (shoe box size)
- colored clay or modeling dough
- craft sand
- crayons/markers/colored pencils
- internet, magazine, or book
- paper
- pencils
- plastic cups (2-3 small)
- plate
- printables (see Course Syllabus for link)
- printer and printer paper (for printables)
- scissors
- spoon
- water

#### Optional

- glass mixing bowl

- medium bowl
- saucer
- dinner plate
- water
- container or hat

### Course Overview:

This course is made up of 6 units. Each unit has five lessons. Lesson are made of up activities that include the following types of learning:

- **Direct Instructions** provide modeling of new skills and concepts. These are not graded activities.
- **Guided Practices** allow for practice of a skill with support. These are graded activities only on a completion basis.
- **Independent Practices** allow for practice of a skill without support. These are graded activities.
- **Checkpoints** test mastery of skills from lessons. These are graded activities.
- **Unit Reviews** allow for practice of skills prior to taking unit exams. These are not graded activities.
- **Unit Exams** test mastery of skills from the unit. These are graded activities.
- **Projects** provide an opportunity for practice of more complex skills across several activities or lessons within a unit. These activities require a final graded submission.