

### Course Description:

Science K (1 of 2) will introduce students to the field of science. Students will discover what science is, what scientists do, and how they can act as scientists. They can then use this information to practice with science concepts and conduct investigations. The 5 senses will be introduced as a way to gather information about the student's surroundings.

Students will also get the chance to learn about matter and energy. Having an understanding of matter and energy will help students design a solution to reduce the warming effects of sunlight. Students will end the course by examining motion and forces.

### Course Objectives:

- Use facts and math to help you think and tell about science.
- Identify different parts of science.
- Use your five senses to find patterns and properties of things in your environment.
- Sort and group things by their physical and chemical properties.
- Tell about states of matter.
- Show and tell how matter can be changed.
- Tell what light, heat, and sound can do to our bodies.
- Come up with ways to fix a problem that people want to change.
- Use science to test a way to fix a problem.
- Plan and test how forces make things move.
- Tell how forces change how things move.

### Course Overview:

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

- **Warm-Ups** allow for practice of skills or concepts taught in previous lessons. These are graded activities.
- **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.
- **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.

### Required Materials:

Required:

- aluminum foil (several large sheets)
- baking powder (1 teaspoon)
- ball
- ballon
- bowl

- camera/video camera
- cardboard (2-3 large pieces)
- chair
- cinnamon or any other spice (a pinch)
- clay
- crayons/markers/colored pencils
- construction paper (10-12 sheets, including a black sheet and a white sheet)
- container (large enough to put hand in)
- cotton balls (7-8 balls)
- dish soap
- dough (pizza or cookie)
- egg (1)
- fabric (one piece about 1 foot square)
- flashlight
- flour (1 tablespoon)
- frozen ice treat (1)
- frying pan
- glue
- hand lens
- ice cream sprinkles or colored sugar
- ice cubes
- lemon juice (1 tablespoon)
- magnet
- matches (2-3)
- measuring cup
- metal pot or pan
- metal spoon
- mirror
- modeling clay or salt dough
- notebook paper
- objects in solid or liquid states (such as toy car, balloon, water, juice, oil, blocks)
- objects of different sizes, shapes, colors, weights, smells, tastes, and textures (such as apple, glass cup, tree bark, rock, sandpaper, toy car, book, basket, string)
- objects of different temperatures (such as a cold glass of water and a hot mug of water)
- objects made of metal or non-metal to test magnetism (such as coins, plastic and metal paper clips, etc.)
- paper towel roll
- pencils
- pepper (a pinch)
- piece of fruit
- plastic candy wrapper
- plastic wrap (a one-foot square piece)
- plate
- potting soil (1 cup)
- radio
- rolling pin

- rubber bands (2-3 of different sizes)
- ruler
- salt (a pinch)
- salt water (1 tablespoon)
- scale (kitchen or other digital scale)
- scissors
- small cups (7-8)
- spatula
- stopwatch
- stove or hot plate
- straws (10-12)
- sugar (a pinch)
- sugar water (1 tablespoon)
- tape
- tape measure
- thermometer
- timer
- tonic water (1 tablespoon)
- toy blocks (4-6)
- wax paper (1 small sheet)
- wooden spoon
- yarn (one 4-inch piece)

Optional:

- action figures or dolls