

CARTERVILLE SCHOOL DISTRICT
SCIENCE CURRICULUM
GRADE 6
Revised August 2009

The following Inquiry Skills will be taught throughout the year.

- ❑ Know that the three main branches of Science are Earth, Life and Physical Science.
- ❑ Identify and describe the skills scientists use.
- ❑ Know the steps of the Scientific Method.
- ❑ Formulate questions on a specific science topic and choose the steps needed to answer the questions.
- ❑ Formulate a hypothesis.
- ❑ Conduct scientific experiments distinguishing between control and manipulated variables.
- ❑ Know and be able to use scientific process skills including observing, estimating, and measuring.
- ❑ Collect data for investigations.
- ❑ Construct charts and visualizations to display data.
- ❑ Report and display the results of individual and group investigations.

FIRST QUARTER

- ❑ Explain the process of weathering, including factors that cause weathers and factors that affect the rate of weathering.
- ❑ Describe how soil is formed and how the properties of soil affect plant growth.
- ❑ Describe the effect of climate on soil.
- ❑ Discuss soil conservation.
- ❑ Illustrate and label the movement of fresh water on the Earth's surface and underground.

- ❑ Describe the water cycle and the characteristics of water underground.
- ❑ Examine water pollution, wastewater treatment, and water conservation.
- ❑ Describe the processes of erosion and deposition by water, ice, and gravity.

SECOND QUARTER

- ❑ Explore the atmosphere.
- ❑ Study the circulation of energy in the atmosphere and the greenhouse effect.
- ❑ Examine global winds and air pollution.
- ❑ Understand fundamental principles of meteorology and weather forecasting.
- ❑ Define humidity, clouds, air masses, fronts, severe weather, and weather forecasting.
- ❑ Describe different climates around the world and the factors that influence climate.
- ❑ Explain how climate can change over time.
- ❑ List the planets in the order in which they orbit the sun.
- ❑ Compare the differences between the inner planets and the outer planets.
- ❑ Examine the moons and smaller bodies of the solar system, such as comets, asteroids, and meteoroids.

THIRD QUARTER

- ❑ Differentiate between the physical and chemical properties of matter.
- ❑ Explain how properties can be used to classify matter.
- ❑ Recognize the difference between physical and chemical changes in matter.
- ❑ Explore the four common states of matter.
- ❑ Explain how to measure motion and how forces affect motion.

- ❑ Calculate average speed and average acceleration.
- ❑ Differentiate balanced and unbalanced forces, friction, and gravity.
- ❑ Describe gravity's role in the acceleration of falling objects, in orbiting, and in projectile motion.
- ❑ Study Newton's laws of motion.
- ❑ Calculate momentum and describe the law of conservation of momentum.
- ❑ Identify fluids and the forces caused by fluids, including buoyant force, lift, and drag.
- ❑ Summarize pressure and the factors that affect flight.

FOURTH QUARTER

- ❑ Describe the relationship between energy and work and the way machines do work.
- ❑ Know the different types of simple and compound machines.
- ❑ Compare different forms of energy.
- ❑ Demonstrate how energy is measured and how energy can be converted from one form to another.
- ❑ Generalize about the nature of heat and thermal energy.
- ❑ Identify the difference between heat and temperature.
- ❑ Explain the relationships between matter and heat.
- ❑ Describe different kinds of heating systems, heat engines, and cooling systems.
- ❑ Research a famous scientist. Highlight their important contribution(s) to science and technology.