



## Grade 5 Science Curriculum

**K-12 Benchmarks**

**Inquiry:** Students will become scientifically literate citizens who develop and apply the skills of scientific inquiry by ...

- ✓ solving problems by applying scientific/mathematical reasoning,
- ✓ safely using the tools of science through active, hand-on experiences,
- ✓ analyzing and synthesizing information, and
- ✓ communicate understanding of science concepts.

**Knowledge:** Experience the richness and excitement of knowing about and understanding the natural world.

**Apply:** Develop scientific habits of mind in order to apply scientific processes and principles to everyday aspects of life.

▲ = Indicator studied in Grade 5 and assessed on Grade 7 Kansas Science Assessment

Standard: Physical Science Topic: Variables of Motion	Standard: Physical Science Topic: Light and Sound Energy	Standard: Life Science Topic: Human Body Systems	Standard: Earth-Space Science Topic: Oceans	Standard: Earth-Space Science Topic: Weather
<b>Inquiry:</b> ▲ Explore variables of motion. ▲ Predict, describe, measure, and represent and analyze data showing the motion of an object (position, direction of motion, speed, potential and kinetic energy). ▲ Design and conduct a test of a hypothesis regarding the variables that affect motion.	<b>Inquiry:</b> ▲ Observe variables of sound energy.  ▲ Observe the variables of light energy and how it interacts with matter.	<b>Inquiry:</b> Build models of organs and body system.  ▲ Classify major organs by body systems.	<b>Inquiry:</b> ▲ Identify physical variables of the ocean.  ▲ Create a model (2-D or 3-D) of the ocean floor.  ▲ Describe and classify ocean dwelling organisms.  ▲ Map ocean circulation.	<b>Inquiry:</b> ▲ Build and use weather instruments to collect data.  Measure weather variables
<b>Knowledge:</b> ▲ Identify gravity and friction and other forces that affect the motion of an object.  ▲ Recognizes and describes examples of Newton's Laws of Motion.	<b>Knowledge:</b> ▲ Designs and conducts scientific investigations to modify sound. ▲ Relate that sound is due to vibrations that transfer energy. Demonstrate that sound travels better in a solid than in a liquid or a gas. ▲ Relate and demonstrate that white light is made of all colors of light. ▲ Compare and contrast light and sound energy.	<b>Knowledge:</b> ▲ Identify and describe the structures and functions of the circulatory, digestive, and respiratory systems.	<b>K knowledge:</b> ▲ Identify and describe motions of oceans.  ▲ Identify and communicate how organisms have adapted to ocean depths and other ocean variables.	<b>Knowledge:</b> ▲ Observe and identify weather variables and their relationships in producing weather phenomena.  Identify patterns in weather data.
<b>Application:</b> ▲ Apply understandings of the variables of motion to build a device and test its motion. (Ex. Paper airplane, skimmer, jet toy car).	<b>Application:</b> Apply under-standings of sound and light energy to everyday experiences.	<b>Application:</b> Show interrelations of human circulatory, digestive, and respiratory systems to their function in the entire body.  ▲ Apply understanding of the circulatory, respiratory, and digestive systems to actions that maintain health.	<b>Application:</b> ▲ Describe how oceans affect life in Kansas and all over the world.	<b>Application:</b> ▲ Identify signs of severe weather, and identify risks and safety procedures for severe weather.