

Lake Washington School District
Teaching and Learning Framework

Grades 3-5

Science

Critical Content | August 2007

Critical Content | Third Grade

Physical

Sound and Energy

- Sounds have identifiable properties
 - Sound is produced by vibrating objects
 - The rate at which objects vibrate changes the pitch of the sound
 - Variables that affect the pitch coming from a sound source are: size, length, tension, and thickness of the material
 - Sound travels through solids, liquids, and air in different ways
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Earth/Space

Rocks and Minerals

- Rocks are composed of earth materials called minerals
 - Rocks and minerals can be sorted by a variety of properties including shape, size, color, texture, and hardness
 - Properties of minerals are used to find out which minerals make up a rock
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Life

Structures and Life Cycles

- Living organisms have basic needs for survival that must be met in their environment
- Specific plants and animals have different structures that serve different functions in survival, reproduction, and growth
- Plants and animals have different life cycles

Critical Content | Fourth Grade

Physical

Electrical and Magnetic Systems

- Magnetic interactions are caused by magnetic forces of attraction and repulsion.
 - A circuit is a complete loop through which an electrical current passes.
 - Energy can be transferred within circuits from electrical energy to light, heat, sound, and electromagnetic energy.
 - Conductors allow electricity to flow, insulators do not.
 - The two types of circuits are parallel and series.
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Earth/Space

The Earth's Water

- Water has specific physical and chemical properties.
 - Water exists on the surface of the Earth in three different states; liquid, gas, and solid, depending upon temperature.
 - Matter expands or contracts depending on its state.
 - Water continually moves through the water cycle.
 - Soils differ in their ability to retain water.
 - Water quality can be affected by human activity.
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Life

Body Systems

- The human body is made up of systems.
- The bones in the skeletal system have different functions: support, protection, and locomotion.
- Joints and muscles perform specific functions in the human body system.

Critical Content | Fifth Grade

Physical

Energy and Motion

- Energy can be stored and then transferred to energy of motion.
 - A force is needed to make an object move or change direction.
 - The same force causes objects of different weights to move differently.
 - Different forces cause objects of the same weight to move differently.
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Earth/Space

Earth's Changing Surface

- The Earth's surface is changed by destructive forces (such as erosion) and constructive forces (such as deposition).
 - Water changes landforms on the Earth's surface.
 - Models can effectively represent objects that are too large to study or processes that occur over time.
 - Certain variables such as the slope of the land, weather conditions, and human activity affect the process of erosion and deposition.
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Life

Ecosystems

- The source of energy for every ecosystem is the sun.
- Energy is transferred through the food web in an ecosystem.
- Organisms have a range of tolerance for environmental factors.
- The survival of organisms depend upon living and non-living factors.
- A change in the ecosystem can affect the growth or survival of an organism.