

SAU 15
Auburn, Candia, Hooksett
Grade 6
POWER STANDARDS
Science

EARTH

Landforms and Soil

- ❖ **Students will be able to identify various landforms on the Earth's surface and how they change over time.**
 - **S:ESS1:6:2.2** Describe and define the different landforms on the Earth's surface, such as coastlines, rivers, mountains, deltas, canyons, etc.
 - **S:ESS1:6:2.3** Identify and distinguish between various landforms using a map and/or digital images
 - **S:ESS1:6:3.1** Recognize that fossils offer important evidence relating to changes in life forms and environmental conditions over geologic time.
 - **S:ESS1:6:3.2** Identify connections between fossil evidence and geological events, such as changes in atmospheric composition, movement of tectonic plates, and asteroid/comet impact; and develop a means of sequencing this evidence.
 - **S:ESS1:6:5.2** Explain how some changes to the Earth's surface happen abruptly, as a result of landslides, earthquakes and volcanic eruptions; while other changes happen very slowly as a result of weathering, erosions and deposition of sediment caused by waves, wind, water and ice.
 - **S:ESS1:6:6.1** Explain how soil is formed from combinations of weathered rock and decomposed plant and animal remains, and that it contains living organisms.
 - **S:ESS1:6:6.2** Identify the components of soil and other factors, such as bacteria, fungi and worms, which influence its texture, fertility, and resistance to erosion.
 - **S:ESS1:6:6.3** Describe the properties of soil, such as color, texture, capacity to retain water, and its ability to support plant life.

PHYSICAL

Matter

- ❖ **Students can explain the relationship between atoms and elements, and they can list the chemical and physical properties of substances.**
 - **S:PS1:6:1.1** Recognize that all matter is composed of minute particles called atoms; and explain that all substances are composed of atoms, each arranged into different groupings.
 - **S:PS1:6:1.2** Identify elements as substances that contain only one kind of atom; and explain that elements do not break down by normal laboratory reactions, such as heating, exposure to electric current, and reaction to acid.
 - **S:PS1:6:1.3** Recognize that over one hundred elements exist, and identify the periodic table as a tool for organizing the information about them.
 - **S:PS1:6:2.1** Identify elements according to their common properties, such as highly reactive metals, less reactive metals, highly reactive non-metals and almost non-reactive gases.
 - **S:PS1:6:2.3** Differentiate between weight and mass.
 - **S:PS1:6:2.4** Identify energy as a property of many substances.
 - **S:PS2:6:1.1** Differentiate between a physical change, such as melting, and a chemical change, such as rusting.
 - **S:PS2:6:2.1** Describe how mass remains constant in a closed system and provide examples relating to both physical and chemical change.

Electrical Energy

- ❖ **Students can illustrate the uses of and electrical current.**
 - **S:PS2:6:3.5** Explain how electrical circuits can be used to transfer energy in order to produce heat, light, sound, and chemical changes.
 - **S:PS3:6:1.1** Recognize that just as electric currents can produce magnetic forces, magnets can cause electric currents.
 - **S:PS4:6:3.1** Explain how a battery changes chemical energy into electrical energy.
 - **S:PS4:6:3.2** Demonstrate how to produce a magnetic force with an electric current, such as an electromagnet, and how to produce an electric current with a magnet, such as a generator.
 - **S:PS4:6:3.3** Provide an example to show that manufacturing processes involve changing natural materials into finished products through a series of processes that involve physical and/or chemical changes

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LIFE

Living Things

❖ Students can classify living things.

- **S:LS1:6:1.1** Identify ways in which living things can be grouped and organized, such as taxonomic groups of plants, animals and fungi.
- **S:LS1:6:1.2** Categorize organisms into kingdoms that are currently recognized, according to shared characteristics.
- **S:LS1:6:2.1** Recognize that all living things are composed of cells, and explain that while many organisms are single celled, such as yeast, others, including humans, are multicellular.

Cells, Tissues, Organs

❖ Students can show the relationship between cells, tissues, organs and systems.

- **S:LS1:6:2.2** Explain that the way in which cells function is similar in all organisms.
- **S:LS1:6:2.3** Recognize that cells use energy obtain from food, to conduct the functions necessary to sustain life, such as cell growth.
- **S:LS1:6:2.4** Recognize and describe the hierarchical organization of living systems, including cells, tissues, organs, organ systems, whole organisms, and ecosystems.
- **S:LS1:6:2.5** Explain that multicellular organisms have specialized cells, tissues, organs and organ systems that perform certain necessary functions, including digestion, respiration, reproduction, circulation, excretion, movement, control and coordination and protection from disease.
- **S:LS1:6:2.6** Recognize that the human cells found in tissues and organs are similar to those of other animals, but somewhat different from cells found in plants.
- **S:LS1:6:3.1** Explain that cells repeatedly divide to make more cells for growth and repair.
- **S:LS1:6:3.2** Explain that the same genetic information is copied in each cell of a new organism.

HEALTH

Human Body

❖ Students can explain ways in which the human body defends itself against disease.

They will also know that many things influence human life.

- **S:LS4:5:2.1** Explain that the human body has ways to defend itself against disease causing organisms and describe how defenders, including tears, saliva, the skin, some blood cells and stomach secretions support the defense process.
- **S:LS4:5:3.1** Recognize that the length and quality of human life are influenced by many factors including sanitation, diet, medical care, gender, genes, environmental conditions, and personal health behaviors.