

# Grade 5

Adopted 2016

## Earth and Space Science

### **S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.** S5E1

- a. Construct an argument supported by scientific evidence to identify surface features (examples could include deltas, sand dunes, mountains, volcanoes) as being caused by constructive and/or destructive processes (examples could include deposition, weathering, erosion, and impact of organisms). S5E1.A
  - b. Develop simple interactive models to collect data that illustrate how changes in surface features are/were caused by constructive and/or destructive processes. S5E1.B
  - c. Ask questions to obtain information on how technology is used to limit and/or predict the impact of constructive and destructive processes. S5E1.C
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## Physical Science

### **S5P1. Obtain, evaluate, and communicate information to explain the differences between a physical change and a chemical change.** S5P1

- a. Plan and carry out investigations of physical changes by manipulating, separating and mixing dry and liquid materials. S5P1.A
  - b. Construct an argument based on observations to support a claim that the physical changes in the state of water are due to temperature changes, which cause small particles that cannot be seen to move differently. S5P1.B
  - c. Plan and carry out an investigation to determine if a chemical change occurred based on observable evidence (color, gas, temperature change, odor, new substance produced). S5P1.C
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### **S5P2. Obtain, evaluate, and communicate information to investigate electricity.** S5P2

- a. Obtain and combine information from multiple sources to explain the difference between naturally occurring electricity (static) and human-harnessed electricity. S5P2.A
- b. Design a complete, simple electric circuit, and explain all necessary components. S5P2.B
- c. Plan and carry out investigations on common materials to determine if they are insulators or conductors of electricity. S5P2.C

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**S5P3. Obtain, evaluate, and communicate information about magnetism and its relationship to electricity.** S5P3

- a. Construct an argument based on experimental evidence to communicate the differences in function and purpose of an electromagnet and a magnet. S5P3.A
  - b. Plan and carry out an investigation to observe the interaction between a magnetic field and a magnetic object. S5P3.B
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**Life Science**

**S5L1. Obtain, evaluate, and communicate information to group organisms using scientific classification procedures.** S5L1

- a. Develop a model that illustrates how animals are sorted into groups (vertebrate and invertebrate) and how vertebrates are sorted into groups (fish, amphibian, reptile, bird, and mammal) using data from multiple sources. S5L1.A
  - b. Develop a model that illustrates how plants are sorted into groups (seed producers, non-seed producers) using data from multiple sources. S5L1.B
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**S5L2. Obtain, evaluate, and communicate information showing that some characteristics of organisms are inherited and other characteristics are acquired.** S5L2

- a. Ask questions to compare and contrast instincts and learned behaviors. S5L2.A
  - b. Ask questions to compare and contrast inherited and acquired physical traits. S5L2.B
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**S5L3. Obtain, evaluate, and communicate information to compare and contrast the parts of plant and animal cells.** S5L3

- a. Gather evidence by utilizing technology tools to support a claim that plants and animals are comprised of cells too small to be seen without magnification. S5L3.A
  - b. Develop a model to identify and label parts of a plant cell (membrane, wall, cytoplasm, nucleus, chloroplasts) and of an animal cell (membrane, cytoplasm, and nucleus). S5L3.B
  - c. Construct an explanation that differentiates between the structure of plant and animal cells. S5L3.C
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**S5L4. Obtain, evaluate, and communicate information about how microorganisms benefit or harm larger organisms.** S5L4

- a. Construct an argument using scientific evidence to support a claim that some microorganisms are beneficial. S5L4.A
- b. Construct an argument using scientific evidence to support a claim that some microorganisms are harmful. S5L4.B