

# Grade K

Adopted 2018

## Scientific and Engineering Practices

- 1. The student will demonstrate an understanding of scientific and engineering practices by** **K.1**
  - a. asking questions and defining problems **K.1.A**
    - i. ask questions based on observations **K.1.A.I**
    - ii. identify a problem based on need **K.1.A.II**
    - iii. make predictions based on observations **K.1.A.III**
  - b. planning and carrying out investigations **K.1.B**
    - i. make observations to collect data **K.1.B.I**
    - ii. identify characteristics and properties of objects through observations **K.1.B.II**
    - iii. measure the relative length and weight of common objects **K.1.B.III**
    - iv. record information from investigations **K.1.B.IV**
  - c. interpreting, analyzing, and evaluating data **K.1.C**
    - i. describe patterns **K.1.C.I**
    - ii. classify and/or sequence objects based on a single physical characteristic or property **K.1.C.II**
    - iii. organize and represent data **K.1.C.III**
    - iv. read and interpret data in object graphs, picture graphs, and tables **K.1.C.IV**
  - d. constructing and critiquing conclusions and explanations **K.1.D**
    - i. make simple conclusions based on data or observations **K.1.D.I**
  - e. developing and using models **K.1.E**
    - i. distinguish between a model and an actual object **K.1.E.I**
  - f. obtaining, evaluating, and communicating information **K.1.F**
    - i. communicate comparative measures (e.g., heavier, lighter, longer, shorter, more, less, hotter, colder) **K.1.F.I**
    - ii. communicate observations using pictures, drawings, and/or speech **K.1.F.II**

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## Force, Motion, and Energy

- 2. The student will investigate and understand that pushes and pulls affect the motion of objects. Key ideas include** **K.2**

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- a. pushes and pulls can cause an object to move; K.2.A
  - b. pushes and pulls can change the direction of an object; and K.2.B
  - c. changes in motion are related to the strength of the push or pull. K.2.C
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**Matter**

**3. The student will investigate and understand that physical properties of an object can be described. Properties include K.3**

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- a. colors; K.3.A
  - b. shapes and forms; K.3.B
  - c. textures and feel; and K.3.C
  - d. relative sizes and weights of objects. K.3.D
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**4. The student will investigate and understand that water is important in our daily lives and has properties. Key ideas include K.4**

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- a. water has many uses; K.4.A
  - b. water can be found in many places; K.4.B
  - c. water occurs in different phases; and K.4.C
  - d. water flows downhill. K.4.D
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**Living Systems and Processes**

**5. The students will investigate and understand that senses allow humans to seek, find, take in, and react or respond to different information. Key ideas include K.5**

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- a. the five basic senses correspond to specific human body structures; and K.5.A
  - b. senses are used in our daily lives. K.5.B
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**6. The student will investigate and understand that there are differences between living organisms and nonliving objects. Key ideas include K.6**

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- a. all things can be classified as living or nonliving; and K.6.A
  - b. living organisms have certain characteristics that distinguish them from nonliving objects. K.6.B
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**7. The student will investigate and understand that plants and animals have basic needs and life processes. Key ideas include K.7**

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- a. living things need adequate food, water, shelter, air, and space to survive; K.7.A
  - b. plants and animals have life cycles; and K.7.B
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**c. offspring of plants and animals are similar but not identical to their parents or to one another.** K.7.C

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**Earth and Space Systems**

**8. The student will investigate and understand that light influences temperature on Earth's surfaces and can cause shadows. Key ideas include** K.8

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**a. the sun provides light and warms Earth's surface;** K.8.A

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**b. shadows can be produced when sunlight or artificial light is blocked by an object; and** K.8.B

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**c. objects in shadows and objects in sunlight have different temperatures.** K.8.C

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**9. The student will investigate and understand that there are patterns in nature. Key patterns include** K.9

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**a. daily weather;** K.9.A

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**b. seasonal changes; and** K.9.B

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**c. day and night.** K.9.C

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**10. The student will investigate and understand that change occurs over time. Key ideas include** K.10

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**a. natural and human-made things change over time;** K.10.A

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**b. living and nonliving things change over time;** K.10.B

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**c. changes can be observed and measured; and** K.10.C

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**d. changes may be fast or slow.** K.10.D

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**Earth Resources**

**11. The student will investigate and understand that humans use resources. Key ideas include** K.11

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**a. some materials and objects can be used over and over again;** K.11.A

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**b. materials can be recycled; and** K.11.B

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**c. choices we make impact the air, water, land and living things.** K.11.C

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