

Goochland County Public Schools

Grade K Science

Marking Period 1

- K.4** The student will investigate & understand that the position, motion, & physical properties of an object can be described. Key concepts include a) colors of objects; b) shapes of objects; c) textures of objects; d) relative size & weight of objects; & e) relative position of objects.
- K.1** The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning & conducting investigations in which a) basic characteristics or properties of objects are identified by direct observation; b) observations are made from multiple positions to achieve different perspectives; c) a set of objects is sequenced according to size; d) a set of objects is separated into two groups based on a single physical characteristic
- K.7** The student will investigate & understand basic needs & life processes of plants & animals. Key concepts include a) animals need adequate food, water, shelter, air, & space to survive; b) plants need nutrients, water, air, light, & a place to grow to survive; c) plants & animals change as they grow, have varied life cycles, & eventually die; & d) offspring of plants & animals are similar but not identical to their parents or to one another
- K.2** The student will investigate and understand that humans have senses that allow them to seek, find, take in, & react or respond to information in order to learn about their surroundings. Key concepts include a) the five senses & corresponding sensing organs; and b) sensory descriptors used to describe common objects & phenomena.
- K.9** The student will investigate and understand that there are simple repeating patterns in his/her daily life. Key concepts include a) weather observations; b) the shapes & forms of many common natural objects including seeds, cones, & leaves; and c) animal & plant growth.

Marking Period 2

- K.1 & K.9** (See Marking Period 1 for descriptions)
- K.10** The student will investigate and understand that change occurs over time & rates may be fast/slow. Key concepts include a) natural & human-made things may change over time; & b) changes can be observed & measured.
- K.3** The student will investigate and understand that magnets have an effect on some materials, make some things move without touching them, & have useful applications. Key concepts include a) magnetism & its effects; and b) useful applications of magnetism.

Marking Period 3

- K.7 & K.9** (See Marking Period 1 for descriptions)
- K.1** The student will conduct investigations in which e) nonstandard units are used to measure the length, mass, & volume of common objects; f) observations & predictions are made for an unseen member in a sequence of objects; g) a question is developed & predictions are made from one or more observations; h) observations are recorded; i) picture graphs are constructed; j) unusual or unexpected results in an activity are recognized; and k) objects are described both pictorially & verbally.
- K.5** The student will investigate & understand that water flows & has properties that can be observed and tested. Key concepts include a) water occurs in different phases; b) water flows downhill; & c) some materials float in water, while others sink
- K.8** The student will investigate & understand that shadows occur when light is blocked by an object. a) shadows occur when sunlight is blocked; b) shadows can be produced by blocking light.
- K.8** The student will investigate and understand that shadows occur when light is blocked by an object. Key concepts include a) shadows occur in nature when sunlight is blocked by an object; and b) shadows can be produced by blocking artificial light sources

Marking Period 4

- K.1 & K.2** (See Marking Period 1 for descriptions)
- K.6** The student will investigate & understand the differences between living organisms & nonliving objects. Key concepts include a) all things can be classified as living/non-living; & b) living organisms have certain characteristics that distinguish them from nonliving objects including growth, movement, response to the environment, having offspring, & the need for food, air, & water.
- K.11** The student will investigate and understand that materials can be reused, recycled, and conserved. Key concepts include: a) materials & objects can be used over & over again; b) everyday materials can be recycled; & c) water & energy conservation at home & in school helps ensure resources are available for future use.

Science in Kindergarten



The Kindergarten Standards of Learning stress the use of basic science skills to explore common materials, objects, and living things & will begin the development of an understanding that scientific knowledge is based on evidence. Emphasis is placed on using the senses to gather information. Students are expected to develop skills in posing simple questions, measuring, sorting, classifying, and communicating information about the natural world. The science skills are an important focus as students learn about life processes and properties of familiar materials, such as magnets and water. Through phenomena including shadows, patterns of weather, and plant growth, students are introduced to the concept of change. The significance of natural resources and conservation is introduced in the kindergarten standards.

Science Vocabulary

- attract-to draw to itself
- attribute-distinguishing trait or quality
- classify-sorting or grouping with common attributes
- communicate-giving information by talking, writing, using pictures, charts, or symbols
- compare-determining how objects are different
- conserve-to keep from being wasted
- experiment-to do a test and see what happens
- explore-to gain insight from materials, etc.
- floating-the state of an object keeping itself above the water level
- magnet-a piece of iron/steel that has the property of attracting iron/steel
- measuring-determining length, width, or temperature of objects
- observe-using the five senses to learn about an object or event
- predicting-stating possible outcomes based on observations
- recycle-find secondary uses for household and other products, wrappers, etc.
- repel-to draw back; force back
- senses-five ways (by seeing, hearing, smelling, tasting, and touching) to learn about the world
- shadow-darkness cast upon a surface by a body intercepting the light rays
- weather-condition of the atmosphere concerning temperature and moisture

The Five Senses



Suggested Activities

- Using a household refrigerator magnet, investigate which objects are attracted to the magnet.
- Predict the weather each day using observation skills & media information. Example: The temperature is warm and the sky has dark clouds. What will the weather be like today? *It might rain.*
- Collect a variety of fall leaves. Sort the leaves by size, color, or shape.