

Science Indicators
First Marking Period
2009-10

Grade	Indicator	Standard Indicator
Kindergarten	K.1.1	Raise questions about the natural world.
Kindergarten	K.3.1	Describe objects in terms of the materials they are made of, such as clay, cloth, paper, etc.
Grade 1	1.2.6	Describe and compare objects in terms of number, shape, texture, size, weight, color, and motion.
Grade 1	1.4.1	Identify when stories give attributes to plants and animals, such as the ability to speak, that they really do not have.
Grade 1	1.5.2	Make and use simple picture graphs to tell about observations.
Grade 1	1.5.3	Observe and describe similar patterns, such as shapes, designs, and events that may show up in nature, like honeycombs, sunflowers, or shells. See similar patterns in the things people make like quilts, baskets, or pottery.
Grade 1	1.6.1	Observe and describe that models, such as toys, are like the real things in some ways but different in others.
Grade 2	2.1.2 a	Use tools such as thermometers to gain more information about an object.
Grade 2	2.3.1	Investigate by observing and then describe that some events in nature have a repeating pattern, such as seasons, day and night, and migrations.
Grade 2	2.3.2	Investigate, compare, and describe weather changes from day to day but recognize, describe, and chart that the temperature and amounts of rain or snow tend to be high, medium, or low in the same months every year.
Grade 2	2.4.6	Observe and describe the different external features of people such as their size, shape, and color of hair, skin, and eyes.
Grade 2	2.4.7	Recognize and discuss that people are more like one another than they are like other animals.
Grade 2	2.4.8	Give examples of different roles people have in families and communities.
Grade 2	2.5.4	Begin to recognize and explain that people are more likely to believe ideas if good reasons are given for them.
Grade 2	2.5.5	Explain that some events can be predicted with certainty such as sunrise and sunset, and some cannot such as storms. Understand that people aren't always sure what will happen since they do not know everything that might have an effect.
Grade 3	3.3.9	Demonstrate that things that make sound do so by vibrating, such as vocal cords and musical instruments.
Grade 3	3.4.6	Explain that people need water, food, air, waste removal, and a particular range of temperatures, just as other animals do.
Grade 3	3.4.7	Explain that eating a variety of healthful foods and getting enough exercise and rest help people stay healthy.
Grade 3	3.4.8	Explain that some things people take into their bodies from the environment can hurt them and give examples of such things.
Grade 3	3.4.9	Explain that some diseases are caused by germs and some are not. Note that diseases caused by germs may be spread to other people. Also understand that washing hands with soap and water reduces the number of germs that can get into the body or that can be passed on to other people.
Grade 3	3.5.4	Illustrate that if 0 and 1 are located on a line, any other number can be depicted as a position on the line.
Grade 4	4.1.2	Recognize and describe that results of scientific investigations are seldom exactly the same. If differences occur, such as a large variation in the measurement of plant growth, propose reasons for why these differences exist, using recorded information about investigations.
Grade 4	4.1.4	Describe how people all over the world have taken part in scientific investigation for many countries.

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Grade 4	4.1.5	Demonstrate how measuring instruments, such as microscopes, telescopes, and cameras, can be used to gather accurate information for making scientific comparisons of objects and events. Note that measuring instruments, such as rulers, can also be used for designing and constructing things that will work properly.
Grade 4	4.2.3	Make simple and safe electrical connections with various plugs, sockets, and terminals.
Grade 4	4.2.4	Use numerical data to describe and compare objects and events.
Grade 4	4.3.10	Demonstrate that the mass of a whole object is always the same as the sum of the masses of its parts.
Grade 4	4.3.11	Investigate, observe, and explain that things give off light often also give off heat.
Grade 4	4.3.12	Investigate, observe, and explain that heat is produced when one object rubs against another, such as one's hands rubbing together.
Grade 4	4.3.13	Observe and describe the things that give off heat, such as people, animals, and the sun.
Grade 4	4.3.15	Demonstrate that without touching them, a magnet pulls all things made of iron and either pushes or pulls other magnets.
Grade 4	4.3.16	Investigate and describe that without touching them, materials that has been electrically charges pulls all other materials and may either puch or pull other charged material.
Grade 4	4.4.7	Describe that human beings have made tools and machines, such as x-rays, microscopes, and computers, to sense and do things that they could not otherwise sense or do at all, or as quickly, or as well.
Grade 4	4.4.8	Know and explain that artifacts and preserved remains provide some evidence of the physical characteristics and possible behavior of human beings who lived a very long time ago.
Grade 4	4.5.1	Explain that the meaning of numerals in many-digit numbers depends on their positions.
Grade 4	4.5.2	Explain that in some situations, "0" means none of something, but in others it may be just the label of some point on a scale.
Grade 4	4.5.5	Explain how reasoning can be distorted by strong feelings.
Grade 5	5.1.1	Recognize and describe that results of similar scientific investigations may turn out differently because of inconsistencies in methods, materials, and observations.
Grade 5	5.1.2	Begin to evaluate the validity of claims based on the amount and quality of the evidence cited.
Grade 5	5.1.3	Explain that doing science involves many different kinds of work and engages men, women, and children of all ages and backgrounds.
Grade 5	5.1.5	Explain that technology extends the ability of people to make positive and/or negative changes in the world.
Grade 5	5.1.6	Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.
Grade 5	5.1.7	Give examples of materials not present in nature, such as cloth, plastic, and concrete, that have become available because of science and technology.
Grade 5	5.2.3	Choose appropriate common materials for making simple mechanical constructions and repairing things.
Grade 5	5.2.4	Keep a notebook to record observations and be able to distinguish inferences from actual observations.
Grade 5	5.2.8	Recognize when and describe that comparisons might not be accurate because some of the conditions are not kept the same.

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Grade 5	5.5.8	Realize and explain that predictions may be more accurate if they are based on large collections of objects or events.
Grade 5	5.5.9	Show how spreading data out on a number line helps to see what the extremes are, where they pile up, and where the gaps are.
Grade 5	5.6.3	Recognize and describe that almost anything has limits on how big or small it can be.
Grade 5	5.6.4	Investigate, observe, and describe that things change in steady, repetitive, or irregular ways, such as toy cars continuing in the same direction and air temperature reading a high or low value. Note that the best way to tell which kinds of change are happening is to make a table or a graph of measurements.