

[K-5 Science Vocabulary link:](#)

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KINDERGARTEN

*All Kindergarten indicators are introduced the 1st Quarter Standard.

Benchmark.

Indicator Kindergarten Science

- 1.1.1 The student identifies properties of objects.
- 1.1.5 The student describes an observation orally and pictorially.
- 2.1.2 The student separates or sorts a group of objects or materials by properties.
- 3.1.4 The student examines the structures/parts of living things.
- 4.2.1 The student observes and recognizes the sun, moon, stars, clouds, birds, airplanes and other objects in the sky.
- 4.2.2 The student describes that the sun provides light and warmth.
- 4.3.1 The student observes changes in the weather from day to day.
- 4.3.3 The student discusses weather safety procedures.
- 5.1.1 The student explores the way things work.
- 6.1.1 The student engages in personal care.
- 6.1.2 The student discusses healthy foods.
- 6.1.3 The student discusses that humans need to practice being safe.
- 7.1.1 The student is involved in explorations that make his/her mind wonder and know that he/she is practicing science.
- 7.1.2 The student uses technology to learn about people in science.

Kindergarten Vocabulary: airplanes, birds, clouds, health, light, material, moon, personal care, safety, sky, sort, stars, sun, warmth

FIRST GRADE

*All First Grade indicators are introduced the 1st Quarter Standard.

Benchmark.

Indicator 1st Grade

- 1.1.2 Classifies and arranges groups of objects by a variety of properties, one property at a time.
- 1.1.5 Describes an observation orally or pictorially.
- 2.1.3 Compares the properties of solids and liquids.
- 2.1.4 Describes the position of an object in relation to other objects.

- 3.1.1 Discusses that organisms live only in environments in which their needs can be met.
 - 3.1.3 Observes living things in various environments.
 - 3.1.4 Examines the structures/parts of living things.
 - 4.1.1 Observes, compares, and sorts earth materials.
 - 4.3.3 Discusses weather safety procedures.
 - 5.1.1 Explores the way things work.
 - 6.1.1 Engages in personal care.
 - 6.1.2 Discusses healthy foods.
 - 6.1.3 Discusses that humans need to practice being safe.
 - 7.1.1 Is involved in explorations that make his/her mind wonder and know that he/she is practicing science.
 - 7.1.2 Uses technology to learn about people in science.
- 1st Grade Vocabulary: basic needs, classify (sort), compare, earth materials, examine, liquid, personal care, safety, solid, habitat
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SECOND GRADE

Indicators introduced during each quarter:

- 3.1.2 Observes life cycles of different living things
- 4.3.1 Observes changes in weather from day to day
- 4.3.2 Records weather changes daily

Vocabulary throughout the year: weather, describe, explore, objects, observe, scientist, predict, graph, thermometer, measure, technology, tools

1st Quarter

- 3.1.1 Discusses that organisms live only in environments

Vocabulary: organisms, environments, habitats, classify

2nd Quarter

- 3.1.1 Discusses that organisms live only in environments

Vocabulary: Same as Q1

3rd Quarter

- 6.1.2 Nutrition- Vocabulary: health, nutrition, measuring cups, measuring spoons,

6.1.1 Dental Health- Vocabulary: safety

2.1.2, 2.1.3 Matter- Vocabulary: properties, solids, liquid, mass, balances, magnifiers, scales

6.1.3 Fire Safety- Vocabulary: safety

4.1.1 Rocks, classify, and observe- Vocabulary: Earth materials, texture, classify

4.3.1-4.3.3 Weather, water cycle (March)- Vocabulary: snow, rain, sleet, wind, violent storms, events

4th Quarter

3.1.2 Life Cycles- insects and plants- Vocabulary: life cycle

3.1.4 Structures and parts of insects and plants- Vocabulary: structures

THIRD AND FOURTH GRADES

Unless indicated otherwise, standards will be taught at various times throughout the year.

Standard 1 – Science as Inquiry

1.1.1. D The student asks questions that he/she can answer by investigating.

1.1.2. D The student plans and conducts a simple investigation.

1.1.3. D The student employs appropriate equipment, *tools*, and safety procedures to gather data.

1.1.4 D The student begins developing the abilities to communicate, critique and analyze his/her own *investigations*, and interprets the work of other students.

Vocabulary: investigation, equipment, tools, scientific method, hypothesis, observations

Standard 2 – Physical Science

Benchmark 1

2.1.1 D The student observes properties of objects and measures those properties using appropriate tools.

2.1.2 D The student describes and classifies objects by more than one property.

2.1.3 D The student observes and records how one object interacts with another object.

2.1.4 D The student recognizes and describes the difference between solids, liquids and gases.

* The student recognizes the difference between physical and chemical changes.

Vocabulary: properties, classify, texture, temperature, transparency, interact, measurement units, mass

Standard 2 – Physical Science

Benchmark 2

2.2.1 D The student moves objects by pushing, pulling, throwing, spinning, dropping, and rolling; and describes the motion.

* Newton's Three Laws of Motion

2.2.2 The student describes the change in position of objects when moved.

2.3.1 (D) Identifies that the source of sound is vibration. * pitch, waves, different mediums, volume.

2.3.2. Discriminates between sounds made by different objects.

2.3.2. Discriminates between various pitches.

Vocabulary: force, energy, gravity

Standard 2 – Physical Science

Benchmark 4

2.4.1 D The student demonstrates that magnets attract and repel.

2.4.2 The student designs a simple experiment to determine whether various objects will be attracted to magnets.

2.4.3 D The student constructs a simple circuit.

Vocabulary: attract, repel, circuit, electricity, conductor, insulator, series circuits, static electricity, open and closed simple and parallel, temporary magnets, compasses.

Standard 3 – Life Science

Benchmark 1

3.1.1 D The student observes different organisms and compares and contrasts how similar functions are served by different structural characteristics.

3.1.2 D The student compares basic needs of different organisms in their environments.

3.1.3 The student discusses ways organisms use their senses to survive in their environments.

Vocabulary: organism, survive, adapt

Standard 3 – Life Science

Benchmark 2

3.2.1 D The student compares, contrasts and asks questions about life cycles of various organisms.

Vocabulary: egg, larva, pupa, adult

Standard 4 – Earth and Space Science

Benchmark 1

4.1.1 D The student collects, observes properties and classifies a variety of earth materials in his/her own environment.

4.1.2 The student experiments with a variety of soil types (clay, silt, sand and loam.)

4.1.3 D The student describes properties of water and process of the water cycle.

4.1.4 The student observes and records the properties of fossils and discusses what fossils are.

Vocabulary: environment, earth materials, natural resources, water cycle, fossil

Standard 4 – Earth and Space Science

Benchmark 2

4.2.3 D The student discusses that the sun provides light and heat (electromagnetic radiation) to maintain the temperature of the earth.

4.2.1 The student observes the moon and stars.

4.2.2 The student observes and compares the length of shadows.

Vocabulary: electromagnetic, radiation

Standard 4 – Earth and Space Science

Benchmark 3

4.3.1 D The student describes changes in the earth's surface.

4.3.2 D The students observes, describes and records daily and seasonal weather changes.

Vocabulary: erosion, rain gauge, Celsius thermometer, anemometer

Standard 5 – Science and Technology

Benchmark 1

5.1.1 D The student identifies a simple design problem (designs a plan, implements the plan, evaluates the results, makes changes to improve the product and communicates the results.)

Vocabulary: design problem

Standard 5 – Science and Technology

Benchmark 2

5.2.1 The student will understand that the design process produces knowledge that can be used to solve a problem and improve our world.

5.2.2 The student invents a product to solve a problem.

5.2.3 The student works with others to solve problems.

5.2.4 The student develops an awareness that women and men of all ages, backgrounds and ethnic groups engage in a variety of scientific and technological work.

Standard 6 – Science in Personal and Environmental Perspectives

Benchmark 1

6.1.1 D The student discusses the nutritional value of various foods and their contribution to health.

6.1.2 The student discusses that safety involves preventing injury by avoiding inappropriate risks and dangers.

6.1.3 The student assumes some responsibility for his/her own health, and the health and well-being of others.

Standard 6 – Science in Personal and Environmental Perspectives

Benchmark 2

6.2.1 The student defines pollution.

6.2.2 The student develops personal actions to solve pollution problems in and around the neighborhood.

6.2.3 The student practices reducing, reusing and recycling.

Vocabulary: pollution

Standard 7 – History and Nature of Science

Benchmark 1

7.1.1 The student recognizes that students participate in science inquiry by asking questions.

7.1.2 The student studies the lives of people who made scientific contributions.

NOTE: The * denote additions to the curriculum
black are delta items and blue aren't delta items.

FIFTH GRADE

Standard 1: Science as Inquiry

Benchmark 1: Demonstrate abilities necessary to do the processes of scientific inquiry.

- 1.1.1 Identifies questions that can be answered with scientific investigations.
- 1.1.2 Designs and conducts scientific investigations safely using appropriate tools, mathematics, technology, and techniques to gather, analyze and interpret data.
- 1.1.3 Identifies the relationship between evidence and logical conclusions.
- 1.1.4 Communicates scientific procedures, results and explanations.

Vocabulary: scientific inquiry, data, mean, multiple trials, results, data display

Standard 2: Physical Science

Benchmark 1: The student will observe, compare, and classify properties of matter.

- 2.1.1 Compares and classifies the states of matter: solids, liquids, gases, and plasma.

Vocabulary: properties of matter: solid, liquid, gas, plasma; phases/states of matter

Benchmark 2: The student will observe, measure, infer, and classify changes in properties of matter.

- 2.2.2 Measures and graphs the effects of temperature on matter.

Vocabulary: increase, decrease, temperature is a measure

Benchmark 3: The student will investigate motion and forces

2.3.4 Investigates how simple machines multiply force at the expense of distance.

Vocabulary: simple machines, pulleys, levers, inclined plane, wedge, screw, wheel and axles, friction, force, distance

Benchmark 4: The student will understand and demonstrate the transfer of energy.

2.4.1 Understands the difference between potential and kinetic energy.

2.4.3 Observes and communicates how light energy interacts with matter: transmitted reflected, refracted, and absorbed.

Vocabulary: work, energy transformation, mechanical, electrical, chemical, heat energy, transfer, radiation

Standard 3: Life Science

Benchmark 4: The student will identify and relate interactions of populations of organisms within an ecosystem.

3.4.1 Recognizes that all populations living together (biotic resources) and the physical factors (abiotic resources) with which they interact compose an ecosystem.

3.4.2 Understands how limiting factors determine the carrying capacity of an ecosystem.

3.4.3 Traces energy from sun (source of radiant energy) to producers (via photosynthesis-chemical energy) to consumers and decomposers in food webs.

Vocabulary: biotic, abiotic, population, ecosystem, species, producers, consumers, decomposers, photosynthesis, energy, food web

Standard 4: Earth and Space Science

Benchmark 3: Identify and classify stars, planets, and other solar system components.

4.3.1 compares and contrasts the characteristics of stars, planets, moons, comets, and asteroids.

4.3.2 models spatial relationships of the earth/moon/planets/sun system to scale

4.3.3 identifies past and present methods used to explore space.

Vocabulary: stars, planets, moons, comets, asteroids, spherically shaped, solar system, relative sizes and distances, apparent brightness

Benchmark 4: The student will model motions and identify forces that explain Earth phenomena.

4.4.1 Demonstrates and models object/space/time relationships that explain phenomena such as the day, the month, the year, seasons, phases of the moon, eclipses and tides.

Vocabulary: rotation, revolution, tilt, axis, orbit, gravitational pull, tides, moon phases hemisphere, seasons

Standard 6: Science in Personal and Environmental Perspectives

Benchmark 1: The student will understand scientific knowledge relative to personal health.

6.1.1 Identifies individual nutrition, exercise, and rest needs based on science and uses a scientific approach to thinking critically about personal health, lifestyle choices, risks and benefits.

Vocabulary: hygiene, nutrition, exercise, benefits, risks

Benchmark 2: The student will understand the impact of human activity on resources and environment.

6.2.1 Investigates the effects of human activities on the environment and bases decisions on knowledge of benefits and risks.

Vocabulary: recycling, energy sources, energy conservation

Standard 7: History and Nature of Science

Benchmark 2: The student will research contributions to science throughout history

7.2.1 Recognizes that new knowledge leads to new questions and new discoveries, replicates historic experiments to understand principles of science, and relates contributions of men and women to the fields of science.

Vocabulary: sequence of events

Seperate link for 5th grade is combined with 6 & 7 on KSDE website
