

Kindergarten Science Standards and Benchmarks

Standard #1: Scientific Thinking and Practice

Definition I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

<u>Benchmark #1:</u> Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.	Performance Objective 1	<input type="checkbox"/> Use observation and questioning skills in science inquiry (e.g., What happens when something is pushed or pulled?).
	Performance Objective 2	<input type="checkbox"/> Ask and answer questions about surroundings and share findings with classmates.
	Performance Objective 3	<input type="checkbox"/> Record observations and data with pictures, numbers, and/or symbols.
<u>Benchmark #2:</u> Use scientific thinking and knowledge and communicate findings.	Performance Objective 1	<input type="checkbox"/> Communicate observations and answer questions about surroundings.
<u>Benchmark #3:</u> Use mathematical skills and vocabulary to analyze data, understand patterns and relationships, and communicate findings.	Performance Objective 1	<input type="checkbox"/> Observe and describe the relative size and characteristics of objects (e.g., bigger, brighter, louder, smellier).

Standard #2: Content of Science**Definition I (Physical Science):** Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

<u>Benchmark #1:</u> Recognize that matter has different forms and properties.	Performance Objective 1	<input type="checkbox"/> Observe that objects are made of different types of materials (e.g., metal, plastic, cloth, wood).
	Performance Objective 2	<input type="checkbox"/> Observe that different materials have different properties, (e.g., color, odor).
<u>Benchmark #2:</u> Know that energy is needed to get things done and that energy has different forms.	Performance Objective 1	<input type="checkbox"/> Observe how energy does things (e.g. batteries, the sun, wind, electricity).
<u>Benchmark #3:</u> Identify forces and describe the motion of objects.	Performance Objective 1	<input type="checkbox"/> Observe that things move in many different ways (e.g., straight line, vibration, circular).
	Performance Objective 2	<input type="checkbox"/> Know that the position and motion of an object (direction or speed) are changed by pushing or pulling it.

Standard #2: Content of Science**Definition II (Life Science):** Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.

<u>Benchmark #1:</u> Know that living things have diverse forms, structures, functions, and habitats.	Performance Objective 1	<input type="checkbox"/> Identify major structures of common living organisms (e.g., stems, leaves, and roots of plants; arms, wings, and legs of animals).
	Performance Objective 2	<input type="checkbox"/> Observe that differences exist among individual living organisms (e.g., plants, animals) of the same kind.
<u>Benchmark #2:</u> Know that living things have similarities and differences and that living things change over time.	Performance Objective 1	<input type="checkbox"/> Observe and describe similarities and differences in the appearance and behavior of living organisms (e.g., plants, animals),
	Performance Objective 2	<input type="checkbox"/> Observe that living organisms (e.g., plants, animals) closely resemble their parents.
<u>Benchmark #3:</u> Know the parts of the human body and their functions.	Performance Objective 1	<input type="checkbox"/> Use the senses (e.g., sight, hearing, smell, taste, touch) to observe surroundings, and describe the observations.
	Performance Objective 2	<input type="checkbox"/> Identify the parts of the human body (e.g., legs, arms, head, hands) and the functions of these parts.

Standard #2: Content of Science**Definition III (Earth and Space Science):** Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.

<u>Benchmark #1:</u> Know the structure of the solar system and the objects in the universe.	Performance Objective 1	<input type="checkbox"/> Observe that there are many objects in the night sky and that some are brighter than others.
	Performance Objective 2	<input type="checkbox"/> Describe the location and movements of objects in the sky (e.g., stars, sun, moon).
<u>Benchmark #2:</u> Know the structure and formation of Earth and its atmosphere and the processes that shape them.	Performance Objective 1	<input type="checkbox"/> Observe that changes in weather occur from day to day and season to season.
	Performance Objective 2	<input type="checkbox"/> Observe that the sun warms the land and water and they warm the air.

Standard #3: Science and Society**Definition I:** Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.

<u>Benchmark #1:</u> Describe how science influences decisions made by individuals and societies.	Performance Objective 1	<input type="checkbox"/> Recognize that germs exist and may cause disease.
	Performance Objective 2	<input type="checkbox"/> Describe how science helps provide products we use every day (e.g., gasoline for cars; electricity for lights, refrigerators, TVs; gas or electricity for heating, cooking).