

Benton Community Schools
Standards and Benchmarks
Science K-6

1. Understands essential ideas about the composition and structure of the universe and the Earth's place in it
2. Knows the general structure and functions of cells in organisms
3. Understands the basic concepts about the structure and properties of matter
4. Understands motion and the principles that explain it
5. Understands the nature of scientific inquiry

Standard 1 Understands essential ideas about the composition and structure of the universe

K-2 Benchmarks

1. Understands the significance of the sun
2. Develops awareness that moon appears different at various times during the month
3. Understands that the earth is one of several planets that orbit the sun and the moon orbits around the Earth

3-4 Benchmarks

1. Knows that the planets orbiting the Sun have differing sizes, surface features and compositions

5-6 Benchmarks

1. Understands rotation and revolution of planets
2. Develops an awareness of phases of the moon
3. Understands that objects in space are at great distances from each other
4. Knows that gravity is a force which keeps objects in orbit around other objects in space
5. Knows that stars progress through stages in their life cycle and are grouped in galaxies throughout the universe

Standard 2 Knows the general structure and functions of cells in organisms

K-2 Benchmarks

1. Knows that animals require air, water, and food; plants require air, water, and light
2. Knows that animals eat plants or other animals for food and may also use plants or other animals for shelter

3-4 Benchmarks

1. Knows that every plant and animal has different structures which serve specific functions
2. Knows that all organisms are composed of cells
3. Knows that collections of cells in organisms work together to perform different functions for that organism
4. Know that microscopes can be used to view cells and structures, which are too small to be seen by the naked eye

5-6 Benchmarks

1. Know that cells carry on the many functions needed to sustain life and are able to grow and divide
2. Knows that specialized cells perform specialized functions
3. Knows that disease represents a breakdown in structures or functions of an organism

Standard 3 Understands basic concepts about the structure and properties of matter

K-2 Benchmarks

1. Knows that materials have different states (solid, liquid, gas) and some materials change from one state to another
2. Knows that objects can be sorted and classified by different properties and characteristics
3. Knows that things can be done to materials to change some of their properties, but not all materials respond the same way to what is done to them

3-4 Benchmarks

1. Knows that things have properties which can be used to group them and to distinguish between them
2. Knows that materials have different states and can be changed from one state to another by heating or cooling

5-6 Benchmarks

1. Knows that materials can be made of parts that are too small to be seen without magnification

Standard 4 Understands motion and the principles that explain it

K-2 Benchmarks

1. Knows that an object's motion can be changed by a push or a pull by people or by other objects

3-4 Benchmarks

1. Knows that when a force is applied to an object, the object either speeds up, slows down, or goes in a different direction
2. Knows that the greater the force that is applied to an object, the greater the change in motion the object will have. The more massive an object is, the smaller the effect a given force will have
3. Knows that properties of sound such as pitch and loudness can be altered by changing the properties of the sound's source
4. Recognizes different types of simple machines and their use

5-6 Benchmarks

1. Knows that vibrations move at different speeds and materials have different wave lengths, and set up wave-like disturbances that spread away from the source
2. Knows that every object exerts gravitational force on every other object

Standard 5 Understands the nature of scientific knowledge and inquiry

K-2 Benchmarks

1. Understands that they can learn by doing investigations and observations
2. Records learning of investigations and observations
3. Develops awareness of the tools that are used in the scientific process: thermometers, magnifying glasses, rulers, scales, balances, microscopes

3-4 Benchmarks

1. Plans and conducts a simple investigation
2. Records results and observations of investigations
3. Understands how to use tools to gather information: balances, meter tapes, thermometers, graduated cylinders, and hand lenses

5-6 Benchmarks

1. Plans and conducts investigations to generate a hypothesis
2. Observes, records and interprets data from investigations
3. Uses a variety of tools, to gather information: balances, magnifying glasses, microscopes, litmus papers, thermometers, and metric tool