

OCPS BENCHMARK TASK ANALYSES

Subject Area: Science
Grade: 2
Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science

Benchmark Codes	BENCHMARKS
SC.2.N.1.1	Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.
SC.2.N.1.2	Compare the observations made by different groups using the same tools.
SC.2.N.1.3	Ask “how do you know?” in appropriate situations and attempt reasonable answers when asked the same question by others.
SC.2.N.1.4	Explain how particular scientific investigations should yield similar conclusions when repeated.
SC.2.N.1.5	Distinguish between empirical observation (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think).
SC.2.N.1.6	Explain how scientists alone or in groups are always investigating new ways to solve problems.

Benchmark Codes	TASK ANALYSES
	The student ...
SC.2.N.1.1	<ul style="list-style-type: none"> • raises questions about the natural world. • investigates questions in teams through free exploration and systematic observations. • generates appropriate explanations based on those explorations.
SC.2.N.1.2	<ul style="list-style-type: none"> • uses same materials in an investigation and reports and compares results with other groups.
SC.2.N.1.3	<ul style="list-style-type: none"> • asks “how do you know?” in appropriate situations. • attempts reasonable answers when asked the same question by others.
SC.2.N.1.4	<ul style="list-style-type: none"> • explains how particular scientific investigations should have similar conclusions when repeated.
SC.2.N.1.5	<ul style="list-style-type: none"> • distinguishes between empirical observation (what one sees, hears, feels, smells, or tastes) and ideas or inferences (what one thinks).
SC.2.N.1.6	<ul style="list-style-type: none"> • explains how scientists work alone or in groups to investigate new ways to solve problems.



Subject Area: Science
Grade: 2
Body of Knowledge: Earth and Space Science
Big Idea 6: Earth Structure

Benchmark Codes	BENCHMARKS
SC.2.E.6.1	Recognize that Earth is made up of rocks. Rocks come in many sizes and shapes.
SC.2.E.6.2	Describe how small pieces of rock and dead plant and animal parts can be the basis of soil and explain the process by which soil is formed.
SC.2.E.6.3	Classify soil types based on color, texture (size of particles), the ability to retain water, and the ability to support the growth of plants.

Benchmark Codes	TASK ANALYSES
SC.2.E.6.1	<p>The student ...</p> <ul style="list-style-type: none"> • recognizes that Earth is made up of rocks. • investigates the various sizes and shapes of rocks through observation and hands on exploration.
SC.2.E.6.2	<ul style="list-style-type: none"> • collects and observes different types of soil. • uses science tools to observe different soils. • discusses where the materials found in the soils came from (decayed plants and animals) and how soil is formed.
SC.2.E.6.3	<ul style="list-style-type: none"> • classifies soil types based on color and texture. • classifies soil by its ability to retain water. • classifies soil by its ability to support the growth of plants.



Subject Area: Science
Grade: 2
Body of Knowledge: Earth and Space Science
Big Idea 7: Earth Systems and Patterns

Benchmark Codes	BENCHMARKS
SC.2.E.7.1	Compare and describe changing patterns in nature that repeat themselves, such as weather conditions including temperature and precipitation, day to day and season to season.
SC.2.E.7.2	Investigate by observing and measuring, that the Sun's energy directly and indirectly warms the water, land, and air.
SC.2.E.7.3	Investigate, observe and describe how water left in an open container disappears (evaporates), but water in closed container does not disappear (evaporates).
SC.2.E.7.4	Investigate that air is all around us and that moving air is wind.
SC.2.E.7.5	State the importance of preparing for severe weather, lightning, and other weather related events.

Benchmark Codes	TASK ANALYSES
	The student ...
SC.2.E.7.1	<ul style="list-style-type: none"> records long term observations of the seasons. records long term observations of weather, including precipitation and temperature. discusses patterns in nature (seasons/day and night).
SC.2.E.7.2	<ul style="list-style-type: none"> records temperatures of sunny and shady areas outside (include water, land, and air temperatures in both sunny and shady spots). compares the temperatures collected.
SC.2.E.7.3	<ul style="list-style-type: none"> investigates and describes how water left in an open container evaporates, but water in a closed container does not evaporate.
SC.2.E.7.4	<ul style="list-style-type: none"> investigates that air is all around us and that moving air is wind.
SC.2.E.7.5	<ul style="list-style-type: none"> identify types of severe weather (e.g., thunderstorms, lightning, hurricanes, tornadoes). explains the danger of severe weather. understands how to prepare for severe weather situations. practices safety measures for severe weather.



Subject Area: Science
Grade: 2
Body of Knowledge: Physical Science
Big Idea 8: Properties of Matter

Benchmark Codes	BENCHMARKS
SC.2.P.8.1	Observe and measure objects in terms of their properties, including size, shape, color, temperature, weight, texture, sinking or floating in water, and attraction and repulsion of magnets.
SC.2.P.8.2	Identify objects and materials as solid, liquid, or gas.
SC.2.P.8.3	Recognize that solids have a definite shape and that liquids and gases take the shape of their container.
SC.2.P.8.4	Observe and describe water in its solid, liquid, and gaseous states.
SC.2.P.8.5	Measure and compare temperatures taken every day at the same time.
SC.2.P.8.6	Measures and compare the volume of liquids using containers of various shapes and sizes.

Benchmark Codes	TASK ANALYSES
SC.2.P.8.1	The student ... <ul style="list-style-type: none"> • observes and measures objects in terms of their properties, including size, shape, color, temperature, weight, texture, sinking or floating in water, and attraction and repulsion of magnets.
SC.2.P.8.2	The student ... <ul style="list-style-type: none"> • identifies objects and materials as solid, liquid, or gas.
SC.2.P.8.3	The student ... <ul style="list-style-type: none"> • uses various containers to investigate the shapes of solids, liquids, and gases.
SC.2.P.8.4	The student ... <ul style="list-style-type: none"> • observes and describes water in its solid, liquid, and gaseous states.
SC.2.P.8.5	The student ... <ul style="list-style-type: none"> • measures temperature accurately using a thermometer. • maintains a log of temperatures taken in the same outdoor location, at the same time each day to compare results over an extended period of time.
SC.2.P.8.6	The student ... <ul style="list-style-type: none"> • measures and compares the volume of liquids using containers of various shapes and sizes.



Subject Area: Science
Grade: 2
Body of Knowledge: Physical Science
Big Idea 9: Changes of Matter

Benchmark Codes	BENCHMARKS
SC.2.P.9.1	Investigates that materials can be altered to change some of their properties, but not all materials respond the same way to any one alteration.

Benchmark Codes	TASK ANALYSES
SC.2.P.9.1	The student ... <ul style="list-style-type: none"> • explores the way different materials react to the same change (e.g., squeeze paper and squeeze a sponge; twist clay and twist paper). • compares and contrasts results.

Subject Area: Science
Grade: 2
Body of Knowledge: Physical Science
Big Idea 10: Forms of Energy

Benchmark Codes	BENCHMARKS
SC.2.P.10.1	Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars.

Benchmark Codes	TASK ANALYSES
SC.2.P.10.1	The student ... <ul style="list-style-type: none"> • makes real world connections to how electricity and energy are used.



Subject Area: Science
Grade: 2
Body of Knowledge: Physical Science
Big Idea 13: Forces and Changes in Motion

Benchmark Codes	BENCHMARKS
SC.2.P.13.1	Investigate the effect of applying various pushes and pulls on different objects.
SC.2.P.13.2	Demonstrate that magnets can be used to make some things move without touching them.
SC.2.P.13.3	Recognize that objects are pulled toward the ground unless something holds them up.
SC.2.P.13.4	Demonstrate that the greater the force (push or pull) applied to an object, the greater the change in motion of the object.

Benchmark Codes	TASK ANALYSES
SC.2.P.13.1	The student ... <ul style="list-style-type: none"> explores the effects of various pushes and pulls on objects.
SC.2.P.13.2	The student ... <ul style="list-style-type: none"> demonstrates that magnets can be used to make some things move without touching them.
SC.2.P.13.3	The student ... <ul style="list-style-type: none"> recognizes that objects are pulled toward the ground unless something holds them up.
SC.2.P.13.4	The student ... <ul style="list-style-type: none"> demonstrates that the greater the force (push or pull) applied to an object, the greater the change in motion of the object.

Subject Area: Science
Grade: 2
Body of Knowledge: Life Science
Big Idea 14: Organization and Development of Living Organisms

Benchmark Codes	BENCHMARKS
SC.2.L.14.1	Distinguish human body parts (brain, heart, lungs, stomach, muscles, and skeleton) and their basic functions.

Benchmark Codes	TASK ANALYSES
SC.2.L.14.1	The student ... <ul style="list-style-type: none"> identifies and labels the human body parts (brain, heart, lungs, stomach, muscles, skeleton) on a model. explains the basic functions of specified body parts.



Subject Area: Science
Grade: 2
Body of Knowledge: Life Science
Big Idea 16: Heredity and Reproduction

Benchmark Codes	BENCHMARKS
SC.2.L.16.1	Observe and describe major stages in the life cycles of plants and animals, including beans and butterflies.

Benchmark Codes	TASK ANALYSES
SC.2.L.16.1	The student ... <ul style="list-style-type: none"> • understands all living go through a life cycle. • observes and describes major stages in the life cycle of a bean. • observes and describes major stages in the life cycle of a butterfly.

Subject Area: Science
Grade: 2
Body of Knowledge: Life Science
Big Idea 17: Interdependence

Benchmark Codes	BENCHMARKS
SC.2.L.17.1	Compare and contrast the basic needs that all living things, including humans, have for survival.
SC.2.L.17.2	Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.

Benchmark Codes	TASK ANALYSES
SC.2.L.17.1	The student ... <ul style="list-style-type: none"> • recognizes that most living things (including humans) need energy, food, water, air, shelter, and space. • compares and contrasts the basic needs that living things (including humans) have for survival.
SC.2.L.17.2	<ul style="list-style-type: none"> • recognizes and explains that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.

