Benchmark Results

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Benchmark#	Description	Remarks/Example
SC.7.E.6.1	Describe the layers of the solid Earth, including the lithosphere, the hot convecting mantle, and the dense metallic liquid and solid cores.	
SC.7.E.6.2	Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).	Florida Standards Connections: MAFS.K12.MP.7: Look for and make use of structure.
SC.7.E.6.3	Identify current methods for measuring the age of Earth and its parts, including the law of superposition and radioactive dating.	
SC.7.E.6.4	Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.	
SC.7.E.6.5	Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building.	
SC.7.E.6.6	Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.	
SC.7.E.6.7	Recognize that heat flow and movement of material within Earth causes earthquakes and volcanic eruptions, and creates mountains and ocean basins.	
SC.7.L.15.1	Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.	

SC.7.L.15.2	Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.	
SC.7.L.15.3	Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.	
SC.7.L.16.1	Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.	Integrate HE.7.C.1.4. Describe how heredity can affect personal health.
SC.7.L.16.2	Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.	
SC.7.L.16.3	Compare and contrast the general processes of sexual reproduction requiring meiosis and asexual reproduction requiring mitosis.	
SC.7.L.16.4	Recognize and explore the impact of biotechnology (cloning, genetic engineering, artificial selection) on the individual, society and the environment.	Integrate HE.7.C.1.4. Describe how heredity can affect personal health.
SC.7.L.17.1	Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.	
SC.7.L.17.2	Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.	

SC.7.L.17.3	Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.	
SC.7.N.1.1	Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.	Florida Standards Connections: LAFS.68.RST.1.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
SC.7.N.1.2	Differentiate replication (by others) from repetition (multiple trials).	
SC.7.N.1.3	Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.	
SC.7.N.1.4	Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.	
SC.7.N.1.5	Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.	
SC.7.N.1.6	Explain that empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.	
SC.7.N.1.7	Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.	

SC.7.N.2.1	Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.	
SC.7.N.3.1	Recognize and explain the difference between theories and laws and give several examples of scientific theories and the evidence that supports them.	
SC.7.N.3.2	Identify the benefits and limitations of the use of scientific models.	Florida Standards Connections: MAFS.K12.MP.4: Model with mathematics.
SC.7.P.10.1	Illustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.	
SC.7.P.10.2	Observe and explain that light can be reflected, refracted, and/or absorbed.	
SC.7.P.10.3	Recognize that light waves, sound waves, and other waves move at different speeds in different materials.	
SC.7.P.11.1	Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.	
SC.7.P.11.2	Investigate and describe the transformation of energy from one form to another.	
SC.7.P.11.3	Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.	
SC.7.P.11.4	Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.	

Idea/Standard	Body Of Knowledge/ Strand	Cognitive Complexity Rating
Earth Structures	Earth and Space Science	Level 2: Basic Application of Skills & Concepts
Earth Structures	Earth and Space Science	Level 3: Strategic Thinking & Complex Reasoning
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Earth Structures	Earth and Space Science	Level 2: Basic Application of Skills & Concepts
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Diversity and Evolution of Living Organisms	Life Science	Level 2: Basic Application of Skills & Concepts

Diversity and Evolution of Living Organisms	Life Science	Level 3: Strategic Thinking & Complex Reasoning
Diversity and Evolution of Living Organisms	Life Science	Level 3: Strategic Thinking & Complex Reasoning
Heredity and Reproduction	Life Science	Level 3: Strategic Thinking & Complex Reasoning
Heredity and Reproduction	Life Science	Level 2: Basic Application of Skills & Concepts
Heredity and Reproduction	Life Science	Level 2: Basic Application of Skills & Concepts
Heredity and Reproduction	Life Science	Level 3: Strategic Thinking & Complex Reasoning
Interdependence	Life Science	Level 3: Strategic Thinking & Complex Reasoning
Interdependence	Life Science	Level 2: Basic Application of Skills & Concepts

Interdependence	Life Science	Level 3: Strategic Thinking & Complex Reasoning
The Practice of Science	Nature of Science	Level 3: Strategic Thinking & Complex Reasoning
The Practice of Science	Nature of Science	Level 2: Basic Application of Skills & Concepts
The Practice of Science	Nature of Science	Level 2: Basic Application of Skills & Concepts
The Practice of Science	Nature of Science	Level 1: Recall
The Practice of Science	Nature of Science	Level 2: Basic Application of Skills & Concepts
The Practice of Science	Nature of Science	Level 2: Basic Application of Skills & Concepts
The Practice of Science	Nature of Science	Level 2: Basic Application of Skills & Concepts

The Characteristics of Scientific Knowledge	Nature of Science	Level 1: Recall
The Role of Theories, Laws, Hypotheses, and Models	Nature of Science	Level 3: Strategic Thinking & Complex Reasoning
The Role of Theories, Laws, Hypotheses, and Models	Nature of Science	Level 2: Basic Application of Skills & Concepts
Forms of Energy	Physical Science	Level 1: Recall
Forms of Energy	Physical Science	Level 3: Strategic Thinking & Complex Reasoning
Forms of Energy	Physical Science	Level 1: Recall
Energy Transfer and Transformations	Physical Science	Level 1: Recall
Energy Transfer and Transformations	Physical Science	Level 2: Basic Application of Skills & Concepts
Energy Transfer and Transformations	Physical Science	Level 3: Strategic Thinking & Complex Reasoning
Energy Transfer and Transformations	Physical Science	Level 2: Basic Application of Skills & Concepts

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