

Northpoint Horizons

CAVS (Content Academic Vocabulary System) Correlated to the Florida State Science Content Standards and Benchmarks

Grade 5

This document provides a sampling of the extensive science directives offered throughout the *CAVS* program that meet the Florida Science Content Standards. n/a signifies that a standard is not explicitly met at this grade level.

Science Content Standard/Benchmark	<i>CAVS</i> Science Grade 3-5 Teacher's Guide Examples/Lessons
BIG IDEA 1: The Practice of Science	
SC.5.N.1.1 Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.	Lesson 15 – TG pp. 85-90 <i>How do we measure matter?</i> Lesson 19 – TG pp. 109-114 <i>How does heat energy move?</i> Lesson 20 – TG pp. 115-120 <i>How does light energy move?</i>
SC.5.N.1.2 Explain the difference between an experiment and other types of scientific investigation.	Lesson 14 – TG pp. 79-84 <i>What makes up matter?</i> Lesson 22 – TG pp. 127-132 <i>What is Earth's place in the universe?</i>
SC.5.N.1.3 Recognize and explain the need for repeated experimental trials.	Lesson 2 – TG pp. 7-12 <i>How are plant and animal systems different?</i> Lesson 6 – TG pp. 31-36 <i>What helps an organism live in its ecosystem?</i>

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SC.5.N.1.4 Identify a control group and explain its importance in an experiment.	Lesson 6 – TG pp. 31-36 <i>What helps an organism live in its ecosystem?</i>
SC.5.N.1.5 Recognize and explain that authentic scientific investigation frequently does not parallel the steps of "the scientific method."	Lesson 18 – TG pp. 103-108 <i>How do simple machines help things move?</i>
SC.5.N.1.6 Recognize and explain the difference between personal opinion/interpretation and verified observation.	Lesson 20 – TG pp. 115-120 <i>How does light energy move?</i>
BIG IDEA 2: The Characteristics of Scientific Knowledge	
SC.5.N.2.1 Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.	Lesson 19 – TG pp. 109-114 <i>How does heat energy move?</i>
SC.5.N.2.2 Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others.	Lesson 7 – TG pp. 37-42 <i>What makes up Earth's atmosphere?</i>
BIG IDEA 5: Earth in Space and Time Humans continue to explore Earth's place in space	
SC.5.E.5.1 Recognize that a galaxy consists of gas, dust, and many stars, including any objects orbiting the stars. Identify our home galaxy as the Milky Way.	Lesson 22 – TG pp. 127-132 <i>What is Earth's place in the universe?</i> Lesson 23 – TG pp. 133-138 <i>What are patterns in the sky?</i>
SC.5.E.5.2 Recognize the major common characteristics of all planets and compare/contrast the properties of inner and outer planets.	Lesson 22 – TG pp. 127-132 <i>What is Earth's place in the universe?</i> Lesson 24 – TG pp. 139-144 <i>What patterns does Earth repeat?</i>
SC.5.E.5.3 Distinguish among the following objects of the Solar System -- Sun, planets, moons, asteroids, comets -- and identify Earth's position in it.	Lesson 22 – TG pp. 127-132 <i>What is Earth's place in the universe?</i> Lesson 23 – TG pp. 133-138 <i>What are patterns in the sky?</i> Lesson 24 – TG pp. 139-144 <i>What patterns does Earth repeat?</i>

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BIG IDEA 7: Earth Systems and Patterns Humans continue to explore the interactions among water, air, and land	
SC.5.E.7.1 Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.	Lesson 9 – TG pp. 49-54 <i>What is the water cycle?</i>
SC.5.E.7.2 Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes.	Lesson 9 – TG pp. 49-54 <i>What is the water cycle?</i>
SC.5.E.7.3 Recognize how air temperature, barometric pressure, humidity, wind speed and direction, and precipitation determine the weather in a particular place and time.	Lesson 9 – TG pp. 49-54 <i>What is the water cycle?</i> Lesson 12 – TG pp. 67-72 <i>How does Earth's surface change?</i>
SC.5.E.7.4 Distinguish among the various forms of precipitation (rain, snow, sleet, and hail), making connections to the weather in a particular place and time.	Lesson 9 – TG pp. 49-54 <i>What is the water cycle?</i>
SC.5.E.7.5 Recognize that some of the weather-related differences, such as temperature and humidity, are found among different environments, such as swamps, deserts, and mountains.	n/a
SC.5.E.7.6 Describe characteristics (temperature and precipitation) of different climate zones as they relate to latitude, elevation, and proximity to bodies of water.	Lesson 9 – TG pp. 49-54 <i>What is the water cycle?</i> Lesson 12 – TG pp. 67-72 <i>How does Earth's surface change?</i>
SC.5.E.7.7 Design a family preparedness plan for natural disasters and identify the reasons for having such a plan.	n/a
BIG IDEA 8: Properties of Matter	

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SC.5.P.8.1 Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature.	Lesson 14 – TG pp.79-84 <i>What makes up matter?</i> Lesson 15 – TG pp. 85-90 <i>How do we measure matter?</i>
SC.5.P.8.2 Investigate and identify materials that will dissolve in water and those that will not and identify the conditions that will speed up or slow down the dissolving process.	Lesson 16 – TG pp. 91-96 <i>How can matter change?</i>
SC.5.P.8.3 Demonstrate and explain that mixtures of solids can be separated based on observable properties of their parts such as particle size, shape, color, and magnetic attraction.	Lesson 16 – TG pp. 91-96 <i>How can matter change?</i>
SC.5.P.8.4 Explore the scientific theory of atoms (also called atomic theory) by recognizing that all matter is composed of parts that are too small to be seen without magnification.	Lesson 14 – TG pp.79-84 <i>What makes up matter?</i>
BIG IDEA 9: Changes in Matter	
SC.5.P.9.1 Investigate and describe that many physical and chemical changes are affected by temperature.	Lesson 16 – TG pp. 91-96 <i>How can matter change?</i> Lesson 19 – TG pp. 109-114 <i>How does heat energy move?</i>
BIG IDEA 10: Forms of Energy	
SC.5.P.10.1 Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.	Lesson 17 – TG pp. 97-102 <i>What makes things move?</i> Lesson 18 – TG pp. 103-108 <i>How do simple machines help things move?</i> Lesson 19 – TG pp. 109-114 <i>How does heat energy move?</i> Lesson 20- TG pp. 115-120 <i>How does light energy move?</i> Lesson 21 – TG pp. 121-126 <i>How does electricity move?</i>

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SC.5.P.10.2 Investigate and explain that energy has the ability to cause motion or create change.	Lesson 17 – TG pp. 97-102 <i>What makes things move?</i> Lesson 18 – TG pp. 103-108 <i>How do simple machines help things move?</i> Lesson 19 – TG pp. 109-114 <i>How does heat energy move?</i> Lesson 20- TG pp. 115-120 <i>How does light energy move?</i> Lesson 21 – TG pp. 121-126 <i>How does electricity move?</i>
SC.5.P.10.3 Investigate and explain that an electrically-charged object can attract an uncharged object and can either attract or repel another charged object without any contact between the objects.	Lesson 21 – TG pp. 121-126 <i>How does electricity move?</i>
SC.5.P.10.4 Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion.	Lesson 19 – TG pp. 109-114 <i>How does heat energy move?</i> Lesson 20- TG pp. 115-120 <i>How does light energy move?</i> Lesson 21 – TG pp. 121-126 <i>How does electricity move?</i>
BIG IDEA 11: Energy Transfer and Transformations	
SC.5.P.11.1 Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).	Lesson 21 – TG pp. 121-126 <i>How does electricity move?</i>
SC.5.P.11.2 Identify and classify materials that conduct electricity and materials that do not.	Lesson 21 – TG pp. 121-126 <i>How does electricity move?</i>
BIG IDEA 13: Forces and Changes in Motion	
SC.5.P.13.1 Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.	Lesson 17 – TG pp. 97-102 <i>What makes things move?</i> Lesson 18 – TG pp. 103-108 <i>How do simple machines help things move?</i>

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SC.5.P.13.2 Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.	Lesson 17 – TG pp. 97-102 <i>What makes things move?</i> Lesson 18 – TG pp. 103-108 <i>How do simple machines help things move?</i>
SC.5.P.13.3 Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.	Lesson 17 – TG pp. 97-102 <i>What makes things move?</i> Lesson 18 – TG pp. 103-108 <i>How do simple machines help things move?</i>
SC.5.P.13.4 Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced.	Lesson 17 – TG pp. 97-102 <i>What makes things move?</i> Lesson 18 – TG pp. 103-108 <i>How do simple machines help things move?</i>
BIG IDEA 14: Organization and Development of Living Organisms	
SC.5.L.14.1 Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs.	Lesson 2 – TG pp. 7-12 <i>How are plant and animal systems different?</i>
SC.5.L.14.2 Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support – some with internal skeletons other with exoskeletons – while some plants have stems for support.	Lesson 2 – TG pp. 7-12 <i>How are plant and animal systems different?</i>
BIG IDEA 15: Diversity and Evolution of Living Organisms	
SC.5.L.15. Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.	Lesson 4 – TG pp 19-24 <i>What is an ecosystem?</i> Lesson 5 – TG pp. 25-30 <i>How does energy flow in an ecosystem?</i> Lesson 6 – TG pp. 31-36 <i>What helps an organism live in its ecosystem?</i>

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BIG IDEA 17: Interdependence	
SC.5.L.17.1 Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.	Lesson 6 – TG pp. 31-36 <i>What helps an organism live in its ecosystem?</i>