Northpoint Horizons

CAVS
Correlated to the
Texas Essential Knowledge and Skills *(TEKS)*

Grade 5

This document provides a sampling of the extensive math directives offered throughout the *CAVS* program that meet the Texas Essential Knowledge and Skills *(TEKS).*

Texas Essential Knowledge and Skills	***CAVS* Grade 3-5 Teacher's Guide Examples/Lessons**
Knowledge and Skills	
5.1 Scientific processes. The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices.	
a. demonstrate safe practices during field and laboratory investigations	Lesson 2 – TG pp. 7-12 *How are plant and animal systems different?* Lesson 15 – TG pp. 85-90 *How do we measure matter?* Lesson 21 – TG pp. 121-126 *How does electricity move?*
b. make wise choices in the use and conservation of resources and the disposal or recycling of materials	Lesson 13 – TG pp. 73-78 *What are Earth's natural resources?*
5.2 Scientific processes. The student uses scientific inquiry methods during field and laboratory investigations.	
a. plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology	Lesson 15 – TG pp. 85-90 *How do we measure matter?* Lesson 16 – TG pp. 91-96 *How can matter change?* Lesson 19 – TG pp. 109-114 *How does heat energy move?* Lesson 22 – TG pp. 127-132 *What is Earth's place in the universe?*
b. collect information by observing and measuring	Lesson 14 – TG pp. 79-84 *What makes up matter?*

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	Lesson 15 – TG pp. 85-90 *How do we measure matter?*
c. analyze and interpret information to construct reasonable explanations from direct and indirect evidence	Lesson 20 – TG pp. 115-120 *How does light energy move?* Lesson 21 – TG pp. 121-126 *How does electricity move?*
d. communicate valid conclusions	Lesson 10 – TG pp. 55-60 *What are the layers of Earth?* Lesson 11 – TG pp. 61-66 *What causes earthquakes and volcanoes?*
e. construct simple graphs, tables, maps, and charts to organize, examine and evaluate information.	Lesson 1 – TG pp. 1-6 *How are living things classified?* Lesson 3 – TG pp. 13-18 *How do plants reproduce?* Lesson 22 – TG pp. 127-132 *What is Earth's place in the universe?*
5.3 Scientific processes. The student uses critical thinking and scientific problem solving to make informed decisions.	
a. analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information	Lesson 17 – TG pp. 97-102 *What makes things move?* Lesson 19 – TG pp. 109-114 *How does heat energy move?*
b. draw inferences based on information related to promotional materials for products and services	n/a
c. represent the natural world using models and identify their limitations	Lesson 11 – TG pp. 61-66 *What causes earthquakes and volcanoes?* Lesson 12 – TG pp. 67-72 *How does Earth's surface change?* Lesson 22 – TG pp. 127-132 *What is Earth's place in the universe?*
d. evaluate the impact of research on scientific thought, society, and the environment	Lesson 4 – TG pp. 19-24 *What is an ecosystem?* Lesson 10 – TG pp. 55-60 *What are the layers of Earth?*

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	Lesson 13 – TG pp. 73-78 *What are Earth's natural resources?*
e. connect Grade 5 science concepts with the history of science and contributions of scientists	Lesson 1 – TG pp. 1-6 *How are living things classified?* Lesson 16 – TG pp. 91-96 *How can matter change?*
5.4 Scientific processes. The student knows how to use a variety of tools and methods to conduct science inquiry.	
a. collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets, and safety goggles	Lesson 2 – TG pp. 7-12 *How are plant and animal systems different?* Lesson 16 – TG pp. 91-96 *How can matter change?* Lesson 20 – TG pp. 115-120 *How does light energy move?*
b. demonstrate that repeated investigations may increase the reliability of results	Lesson 19 – TG pp. 109-114 *How does heat energy move?* Lesson 21 – TG pp. 121-126 *How does electricity move?*
5.5 Science concepts. The student knows that a system is a collection of cycles, structures, and processes that interact.	
a. describe some cycles, structures, and processes that are found in a simple system	Lesson 3 – TG pp. 13-18 *How do plants reproduce?* Lesson 4 – TG pp. 19-24 *What is an ecosystem?* Lesson 9 – TG pp. 49-54 *What is the water cycle?* Lesson 22 – TG pp. 127-132 *What is Earth's place in the universe?* Lesson 24 – TG pp. 139-144 *What patterns does Earth repeat?*
b. describe some interactions that occur in a simple system	Lesson 4 – TG pp. 19-24 *What is an ecosystem?* Lesson 5 – TG pp. 25-30 *How does energy flow in an ecosystem?*

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	Lesson 6 – TG pp. 31-36 *What helps an organism live in its ecosystem?*
5.6 Science concepts. The student knows that some change occurs in cycles.	
a. identify events and describe changes that occur on a regular basis such as in daily, weekly, lunar, and seasonal cycles	Lesson 3 – TG pp. 13-18 *How do plants reproduce?* Lesson 4 – TG pp. 19-24 *What is an ecosystem?* Lesson 9 – TG pp. 49-54 *What is the water cycle?* Lesson 12 – TG pp. 67-72 *How does Earth's surface change?* Lesson 23 – TG pp. 133-138 *What are patterns in the sky?* Lesson 24 – TG pp. 139-144 *What patterns does Earth repeat?*
b. identify the significance of the water, carbon, and nitrogen cycles	Lesson 7 – TG pp. 37-42 *What makes up Earth's atmosphere?* Lesson 9 – TG pp. 49-54 *What is the water cycle?*
c. describe and compare life cycles of plants and animals	Lesson 2 – TG pp. 7-12 *How are plant and animal systems different?* Lesson 3 – TG pp. 13-18 *How do plants reproduce?*
5.7 Science concepts. The student knows that matter has physical properties.	
a. classify matter based on its physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound	Lesson 19 – TG pp. 109-114 *How does heat energy move?* Lesson 21 – TG pp. 121-126 *How does electricity move?*

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b. demonstrate that some mixtures maintain the physical properties of their ingredients	Lesson 14 – TG pp. 79-84 *What makes up matter?* Lesson 15 – TG pp. 85-90 *How do we measure matter?* Lesson 16 – TG pp. 91-96 *How can matter change?*
c. identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving sugar in water	Lesson 21 – TG pp. 121-126 *How does electricity move?*
d. observe and measure characteristic properties of substances that remain constant such as boiling points and melting points	Lesson 16 – TG pp. 91-96 *How can matter change?* Lesson 19 – TG pp. 109-114 *How does heat energy move?*
5.8 Science concepts. The student knows that energy occurs in many forms.	
a. differentiate among forms of energy including light, heat, electrical, and solar energy	Lesson 19 – TG pp. 109-114 *How does heat energy move?* Lesson 20 – TG pp. 115-120 *How does light energy move?* Lesson 21 – TG pp. 121-126 *How does electricity move?*
b. identify and demonstrate everyday examples of how light is reflected, such as from tinted windows, and refracted, such as in cameras, telescopes, and eyeglasses	Lesson 20 – TG pp. 115-120 *How does light energy move?*
c. demonstrate that electricity can flow in a circuit and can produce heat, light, sound, and magnetic effects	Lesson 21 – TG pp. 121-126 *How does electricity move?*
d. verify that vibrating an object can produce sound	CAVS K-2 Lesson 20 – TG pp. 115-120 *What makes sound?*
5.9 Science concepts. The student knows that adaptations may increase the survival of members of a species.	

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a. compare the adaptive characteristics of species that improve their ability to survive and reproduce in an ecosystem	Lesson 4 – TG pp. 19-24 *What is an ecosystem?* Lesson 5 – TG pp. 25-30 *How does energy flow in an ecosystem?* Lesson 6 – TG pp. 31-36 *What helps an organism live in its ecosystem?*
b. analyze and describe adaptive characteristics that result in an organism's unique niche in an ecosystem	Lesson 4 – TG pp. 19-24 *What is an ecosystem?* Lesson 5 – TG pp. 25-30 *How does energy flow in an ecosystem?* Lesson 6 – TG pp. 31-36 *What helps an organism live in its ecosystem?*
c. predict some adaptive characteristics required for survival and reproduction by an organism in an ecosystem	Lesson 4 – TG pp. 19-24 *What is an ecosystem?* Lesson 5 – TG pp. 25-30 *How does energy flow in an ecosystem?* Lesson 6 – TG pp. 31-36 *What helps an organism live in its ecosystem?*
5.10 Science concepts. The student knows that likenesses between offspring and parents can be inherited or learned.	
a. identify traits that are inherited from parent to offspring in plants and animals	Lesson 2 – TG pp. 7-12 *How are plant and animal systems different?* Lesson 3 – TG pp. 13-18 *How do plants reproduce?* Lesson 6 – TG pp. 31-36 *What helps an organism live in its ecosystem?*
b. give examples of learned characteristics that result from the influence of the environment.	Lesson 6 – TG pp. 31-36 *What helps an organism live in its ecosystem?*
5.11 Science concepts. The student knows that certain past events affect present and future events.	
a. identify and observe actions that require time for changes to be measurable, including growth, erosion, dissolving, weathering, and flow	Lesson 3 – TG pp. 13-18 *How do plants reproduce?* Lesson 8 – TG pp. 43-48 *How are rocks classified?* Lesson 10 – TG pp. 55-60

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	What are the layers of Earth? Lesson 11 – TG pp. 61-66 *What causes earthquakes and volcanoes?* Lesson 12 – TG pp. 67-72 *How does Earth's surface change?* Lesson 16 – TG pp. 91-96 *How can matter change?*
b. draw conclusions about "what happened before" using data such as from tree-growth rings and sedimentary rock sequences	Lesson 8 – TG pp. 43-48 *How are rocks classified?* Lesson 10 – TG pp. 55-60 *What are the layers of Earth?* Lesson 11 – TG pp. 61-66 *What causes earthquakes and volcanoes?*
c. identify past events that led to the formation of the Earth's renewable, non-renewable, and inexhaustible resources	Lesson 12 – TG pp. 67-72 *How does Earth's surface change?* Lesson 13 – TG pp. 73-78 *What are Earth's natural resources?*
5.12 **Science concepts. The student knows that the natural world includes earth materials and objects in the sky.**	
a. interpret how land forms are the result of a combination of constructive and destructive forces such as deposition of sediment and weathering	Lesson 8 – TG pp. 43-48 *How are rocks classified?* Lesson 10 – TG pp. 55-60 *What are the layers of Earth?* Lesson 12 – TG pp. 67-72 *How does Earth's surface change?*
b. describe processes responsible for the formation of coal, oil, gas, and minerals	Lesson 8 – TG pp. 43-48 *How are rocks classified?* Lesson 10 – TG pp. 55-60 *What are the layers of Earth?* Lesson 12 – TG pp. 67-72 *How does Earth's surface change?* Lesson 13 – TG pp. 73-78 *What are Earth's natural resources?*

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c. identify the physical characteristics of the Earth and compare them to the physical characteristics of the moon	Lesson 22 – TG pp. 127-132 *What is Earth's place in the universe?* Lesson 23 – TG pp. 133-138 *What are patterns in the sky?* Lesson 24 – TG pp. 139-144 *What patterns does Earth repeat?*
d. identify gravity as the force that keeps planets in orbit around the Sun and the moon in orbit around the Earth	Lesson 22 – TG pp. 127-132 *What is Earth's place in the universe?* Lesson 23 – TG pp. 133-138 *What are patterns in the sky?* Lesson 24 – TG pp. 139-144 *What patterns does Earth repeat?*