

Fifth Grade Science
Scope and Sequence 21-22

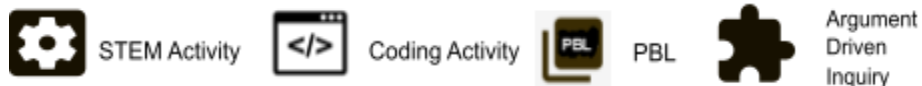
The following is a recommended sequence in which to teach the standards within the clusters

Process Standards should be taught throughout all lessons

- 5.1 Scientific Investigations and Reasoning** The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate and ethical practices.
- 5.1(A) demonstrate safe practices and the use of safety equipment as described in the Texas Safety Standards during classroom and outdoor investigations using equipment, including safety goggles or chemical splash goggles, as appropriate, and gloves, as appropriate.
- 5.1(B) make informed choices in the conservation, disposal, and recycling of materials.
- 5.2 Scientific Investigations and Reasoning** The student uses scientific methods during laboratory and outdoor investigations.
- 5.2(A) describe, plan, and implement simple experimental investigations testing one variable;
- 5.2(B) ask well-defined questions, formulate testable hypotheses, and select and use appropriate equipment and technology;
- 5.2(C) collect and record information using detailed observations and accurate measuring
- 5.2(D) analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence
- 5.2(E) demonstrate that repeated investigations may increase the reliability of results;
- 5.2(F) communicate valid conclusions in both written and verbal forms
- 5.2(G) construct appropriate simple graphs, tables, maps, and charts using technology, including computers, to organize, examine, and evaluate information.
- 5.3 Scientific Investigations and Reasoning** The student uses critical thinking and scientific problem solving to make informed decisions.
- 5.3(A) in all fields of science, analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, including examining all sides of scientific evidence of those scientific explanations, so as to encourage critical thinking by the student
- 5.3(B) draw or develop a model that represents how something works or looks that cannot be seen such as the Sun, Earth, and Moon system and formation of sedimentary rock works or looks
- 5.3(C) connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists.
- 5.4 Scientific Investigations and Reasoning** The student knows how to use a variety of tools and methods to conduct science inquiry.
- 5.4(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, pan balances, triple beam balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observations of habitats or organisms such as terrariums and aquariums






**** Possible suggestions****

Each cluster has a suggested pacing guide of days, you and your team will want to make adjustments based upon your student's needs.









Cluster 1: Physical Science 21-22
TEKS Strands Matter & Energy and Force Motion & Energy
Process Standards should be taught throughout all lessons (see page 1)

5th Grade Science District Snapshot #1 Blueprint

<p>Cluster 1: Physical Science</p> <p>Suggested Pacing: 8/12-10/26</p> <p>Snapshot Window 10/25-10/29</p>	Knowledge and Skills	5.6 Force motion and energy. The student knows that energy occurs in many forms and can be observed in cycles, patterns, and systems. The student is expected to:
	Supporting 	5.6(D) design a simple experimental investigation that tests the effect of force on an object. <i>This lesson needs to be taught first, as it sets up student journals and teaches students how to do ADI labs.</i>
	Knowledge and Skills	5.5 Matter and energy. The student knows that matter has measurable physical properties and those properties determine how matter is classified, changed, and used. The student is expected to:
	Readiness *Essential	5.5(A) classify matter based on measurable, testable, and observable physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating using water as a reference point), solubility in water, and the ability to conduct or insulate thermal energy or electric energy 5.5A Matter Pre Assessment SPAN
	Supporting 	5.5(B) demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand and sand and water 5.5(C) identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water.
	Knowledge and Skills	5.6 Force motion and energy. The student knows that energy occurs in many forms and can be observed in cycles, patterns, and systems. The student is expected to:
	Readiness 	<u>5.6(A)</u> explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy
	Readiness 	<u>5.6B</u> demonstrate that the flow of electricity in closed circuits can produce light, heat, and sound
Readiness *Essential 	<u>5.6(C)</u> demonstrate that light travels in a straight line until it strikes an object and is reflected or travels through one medium to another and is refracted 5.6C Light Pre Assessment SPAN	




Cluster 2: Earth Science 21-22
TEKS Strands Earth and Space I & II
Process Standards should be taught throughout all lessons (see page 1)

5th Grade Science District Snapshot #2 Blueprint


<p>Cluster 2: Earth Science</p> <p>Suggested Pacing: 11/1-1/21</p> <p>Snapshot Window 1/24-1/28</p>	<p>Knowledge and Skills</p>	<p>5.8 Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon systems. The student is expected to:</p>
	<p>Supporting</p> <p> </p>	<p>5.8(A) differentiate between weather and climate</p>
	<p>Supporting</p>	<p>5.8(B) explain how the sun and the ocean interact in the water cycle</p>
	<p>Supporting</p>	<p>5.8(D) identify and compare the physical characteristics of the Sun, Earth, and Moon</p>
	<p>Readiness *Essential</p> <p> </p>	<p>5.8(C) demonstrate that Earth rotates on its axis once approximately every 24 hours causing the day/night cycle and the apparent movement of the sun across the sky Science 5.8C Seasons Pre Assessment SPAN</p>
	<p>Knowledge and Skills</p>	<p>5.7 Earth and space. The student knows that Earth's surface is constantly changing and consists of useful resources. The student is expected to:</p>
	<p>Readiness *Essential</p>	<p>5.7(A) explore the processes that led to the formation of sedimentary rocks and fossil fuels 5.7A Sedimentary Rock Pre Assessment SPAN</p>
	<p>Readiness *Essential</p> <p> </p>	<p>5.7(B) recognize how landforms such as deltas, canyons, and sand dunes are the result of changes to Earth's surface by wind, water, and ice Science 5.7B Landforms Pre Assessment SPAN</p>

Cluster 3: Life Science 21-22
TEKS Strands Organisms & Environments I & II
Process Standards should be taught throughout all lessons (see page 1)

5th Grade Science District Snapshot #3 Blueprint

<p>Cluster 3: Life Science</p> <p>Suggested Pacing: 1/31-4/19</p> <p>Snapshot Window 4/19-4/22</p>	Knowledge and Skills	5.9 Organisms and environments. The student knows that there are relationships, systems, and cycles within environments. The student is expected to:
	Readiness *Essential	5.9(A) observe the way organisms live and survive in their ecosystem by interacting with the living and nonliving components Science 5.9A Environments Pre Assessment SPAN
	Readiness 	5.9(B) describe the flow of energy within a food web, including the roles of the Sun, producers, consumers and decomposers
	Supporting	5.9(C) predict the effects of changes in ecosystems caused by living organisms, including humans, such as the overpopulation of grazers or the building of highways
	Supporting 	5.9(D) identify fossils as evidence of past living organisms and the nature of the environments at the time using models
	Knowledge and Skills	5.10 Organisms and Environments The student knows that organisms have structures and behaviors that help them survive within their environments. The student is expected to:
	Readiness *Essential	5.10(A) compare the structures and functions of different species that help them live and survive in a specific environment such as hooves on prairie animals or webbed feet in aquatic animals Science 5.10A Organisms Pre Assessment SPAN
	Readiness 	5.10(B) differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle

Cluster 4: End of Year
Process Standards should be taught throughout all lessons (see page 1)

<p>Cluster 4: End of Year</p>	<p>All TEKS</p>	<p>STAAR Review 4/26-5/9 STAAR TEST May 12th</p>
<p>Suggested Pacing: 4/22-5/20</p>	<p>STEMscopes Engineering challenges</p> 	<p>EOY Build a Better Swing 5E lesson located in GPS - Force, Motion and Energy EOY Build a Better Airplane 5E lesson located in GPS- Force, Motion and Energy EOY Build a Barge located in GPS- Force, Motion and Energy</p>