



6th Science Year at a Glance (YAG) 2021-2022



This course emphasizes problem solving using an inquiry-based approach with a focus on physical science. Content strands include scientific investigations and reasoning, whereby students conduct laboratory and field investigations on the following concepts: matter and energy, force, motion, and energy types, earth and space, and organisms and the environment. Mathematics and technology are embedded in this curriculum. Overarching concepts include change and constancy, patterns and cycles, systems, models, and scale.

First Semester		Second Semester	
1st Nine Weeks – 41 days (August 16 th – October 13 th) (September 6 th – Labor day – No School) (October 11 th – Staff Development)		3rd Nine Weeks – 43 days (January 3 th – March 4 th) (January 17 th – MLK – No School) (March 7 th – 11 th – Spring Break)	
TEKS Nature of Science (6.1a,b; 6.2 a-e; 6.3 a-d; 6.4 a,b) Matter and Energy: Physical Properties (6.6 a,b)	Nature of Science (29 days) Aug 16-Sept 24 Students conduct descriptive, comparative and experimental investigations in a safe manner utilizing appropriate scientific tools. In these experiments, they formulate hypotheses, measure and record data, construct data tables and graphs, and formulate conclusions. Matter and Energy: Physical Properties (12 days) Sep 27-Oct 13 Students learn that matter has properties that can be used for classification or identification. Students differentiate between metals, nonmetals and metalloids based on the physical properties and calculate the density of an unknown to identify it.	TEKS Energy Resources and Conservation of Energy (6.7a; 6.9 a,b,c) Force and Motion (6.8 a-e)	Energy Resources and Conservation of Energy (24 days) Jan 3-Feb 4 Students explore the advantages and disadvantages of energy resources and how energy transforms. Students investigate methods of thermal energy transfer and learn how thermal energy moves. Force and Motion (19 days) Feb 7-Mar 4 Students compare and contrast potential and kinetic energy. Students identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces. Students learn to calculate average speed and investigate how inclined planes can be used to reduce the force needed to move a load.
2nd Nine Weeks – 42 days (October 14 th – December 17 th) (November 22 nd – 26 th – Thanksgiving Break) (December 20 th – December 31 st – Holiday Break)		4th Nine Weeks – 44 days (March 14 th – May 25 th) STAAR May 10-13 window (April 8 nd – Good Friday – No School) (April 15 nd – Battle of Flowers – No School)	
TEKS Matter and Energy: Elements and Compounds (6.5 a,b,c) Taxonomic Groups and Ecosystems (6.12 a-f)	Matter and Energy: Elements and Compounds (17 days) Oct 14- Nov 5 Students explore the differences between elements and compounds and recognize that a limited number of elements make up most of the lithosphere, biosphere, atmosphere and hydrosphere. Students learn to identify the evidence of a chemical change in an experiment. Taxonomic Groups and Ecosystems (25 days) Nov 8-Dec 17 Students learn that organisms are composed of cells and can identify prokaryotic and eukaryotic cells, based on the presence or absence of a nucleus. They describe the biotic and abiotic parts of an ecosystem and explain how organisms are classified into domains and kingdoms based on their characteristics. Students recognize that domains are the broadest groups, which are further subdivided into kingdoms.	TEKS Force and Motion (6.8 a-e) Earth Materials and Plate Tectonics (6.6c; 6.10 a-d) Solar System and Exploration (6.11 a-c)	Force and Motion (5 days) March 14-18 Students will measure and graph changes in motion. Earth Materials and Plate Tectonics (22 days) Mar 21- Apr 21 Students identify minerals based on their physical properties. They build a model to illustrate the compositional and mechanical layers of the Earth. Students classify rocks based on their formation. Students identify the major tectonic plates, describe their motion and the geological features that form. Solar System and Exploration (17 days) Apr 22-May 25 Students describe the physical properties, locations, and movements of objects in our Solar System. Students understand that gravity is the force that governs motion in our solar system. Students describe the history and future of space exploration, including the type of equipment and transportation needed for space travel.