FIFTH GRADE SCIENCE

Course Overview

The performance expectations in fifth grade help students formulate answers to questions such as: "When matter changes, does its weight change? How much water can be found in different places on Earth? Can new substances be created by combining other substances? How does matter cycle through ecosystems? Where does the energy in food come from and what is it used for? How do lengths and directions of shadows or relative lengths of day and night change from day to day, and how does the appearance of some stars change in different seasons?" In the fifth grade performance expectations, students are expected to demonstrate grade-appropriate proficiency in developing and using models, planning and carrying out investigations, analyzing and interpreting data, using mathematics and computational thinking, engaging in argument from evidence, and obtaining, evaluating, and communicating information; and to use these practices to demonstrate understanding of the core ideas.

Unit	Estimated Class Time	Overview
Unit 1 *Matter*	5 weeks	Students will be able to independently use their learning to analyze scale, proportion and quantity to measure and describe physical quantities. Students are able to describe that matter is made of particles too small to be seen through the development of a model. Students develop an understanding of the idea that regardless of the type of change that matter undergoes, the total weight of matter is conserved.
Unit 2 *Chemical and Physical Changes*	5 weeks	Students will be able to independently use their learning to analyze cause and effect relationships in order to identify, test and explain change in matter. Students determine whether the mixing of two or more substances results in new substances.
Unit 3 *Space*	8 weeks	Students will be able to independently use their learning to analyze patterns and how they can be used to sort, classify, communicate and analyze simple rates of change for natural phenomena. Students are expected to develop an understanding of patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.
Unit 4 *Ecosystems*	5 weeks	Students will be able to construct explanations of how matter cycles through ecosystems. Using models, students can describe the movement of matter among plants, animals, decomposers, and the environment and that energy in animals' food was once energy from the sun.
Unit 5 *Earth's Systems*	5 weeks	Through the development of a model using an example, students are able to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. They describe and graph data to provide evidence about the distribution of water on Earth.
Unit 6 *Earth's Resources*	7 weeks	Students will be able to independently obtain and combine information from various sources to analyze Earth's resources, the effect that humans have on it, and strategies to help preserve these resources.