



Southmoreland School District

7th Grade Science Curriculum Overview

Overview:

At this level it is expected that the students will apply process knowledge that enables them to become independent learners. These skills include observing, classifying, inferring, predicting, measuring, computing, estimating, communicating, using space/time relationships, defining operationally, raising questions, formulating hypotheses, testing and experimenting, designing controlled experiments, recognizing variables, manipulating variables, interpreting data, formulating models, designing models, and producing solutions. Everyone can use them to solve real-life problems. These process skills are developed across the grade levels and differ in the degree of sophistication, quantitative nature and application to the content.

Students will use the above skills to study the diversity of life. Students will learn to understand how life has changed over a long period of time. This great variety of life forms continues to change even today as genetic instructions within cells are passed from generation to generation, yet the amazing integrity of most species remains.

Module Titles:

Module 1: Inquiry and Design

Module 2: Cells

Module 3: Classification

Module 4: Genetics

Module Overviews:

Module 1: Inquiry and Design

Students explain and apply scientific knowledge, make and interpret observations and use the scientific method to solve problems. They will identify problems, carry out experiments and gather data and analyze the data to solve the problem.

Module 2: Cells

Students will identify the characteristics of living things. They will then look deeper into the cell and identify its structures and their functions. They will then analyze how all of the structures work together to keep a cell and a human alive and healthy.



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Module 3: Classification

Students will look at ways organisms are classified. They will use dichotomous keys to identify unknown organisms. The students will also look at different adaptations of organisms and how they help the organisms survive.

Module 4: Genetics

Students will learn that every organism has a set of genetic instructions that determine inherited traits. They will then look at certain inherited traits and predict the outcomes of genetic crosses. They will also look into processes that can change the makeup of the organism or the outcomes of genetic crosses.