



Lois & Jerry Tarkanian Middle School

Science 6 / Science 6 ACC

Mr. Clayton - Mr. Davis - Ms. DeMarce – Ms. Glismann

I. Course Scope

This one-year course for sixth-grade students focuses on understanding of thermal energy, weather and climate, human impact, cells and organisms, and informational processing. Students will use scientific processes, protocols, inquiry, and tools to build understanding of all matter and the interactions between living and non-living things. Critical thinking, collaboration, and communication skills will be used as students develop a foundation for scientific literacy in science content. Technology, history, the nature of science, and career information will be integral components of this course.

Unit 1: Thermal Energy (9 Weeks)

Course Goals:

- To model the flow of water as it changes state through the hydrologic cycle and investigate the role of energy and gravity within Earth's systems.
- To develop an understanding of the relationship between energy and temperature and to engineer a device that maximizes or minimizes thermal energy transfer.

Unit 2: Weather and Climate (7 Weeks)

Course Goals:

- To explain how complex interactions of air masses, the unequal heating of the Earth's surface, and the rotation of the Earth cause patterns in meteorological phenomena affecting weather and climate.

Unit 3: Human Impact (5 Weeks)

Course Goals:

- To evaluate evidence of the natural processes and human activities which contribute to the rise of global temperature.
- To analyze the impact humans have on the environment and design solutions that monitor and minimize the adverse effects.

Unit 4: From Cells to Organisms (7 weeks)

Course Goals:

- To provide evidence that living things are made of one or more specialized cells and model how the cell and its parts contribute to the function of the cell.
- To compare the genetic outcomes that result from asexual and sexual reproduction
- To examine environmental and genetic factors as well as the behavioral and structural traits that influence the reproduction and growth of plants and animals.

Unit 5: Body Systems and Information Processing (5 Weeks)

Course Goal:

- To develop a conceptual understanding of the hierarchical organization of organisms emphasizing the interdependence of body systems and their response to stimuli.

II. Materials

The list of school supplies used in all classes is provided in the School Wide Course Expectations. In addition to these supplies, this course requires students to maintain a science journal/notebook. As the year progresses, each science unit is kept in a separate folder. After the completion of each unit, the folder is taken home so the material is easily accessible for review and tests. For science, your child will need the following for the entire year:

- Five 2 pocket folders with 3 prongs or a notebook
- 10 sheets of college lined paper for each folder

III. Grade Weighting

Grades will be weighted as follows:

	<u>Science 6</u>	<u>Science 6 ACC</u>
Classwork/labs	50%	55%
Tests/Quizzes	40%	35%
Homework	10%	10%