



Curriculum – Sixth Grade Science

Capital's science curriculum is aligned with state and national standards. Teachers utilize research-based materials and strategies to provide all students with experiences in the life, earth, and physical sciences while developing critical thinking and problem-solving skills. Students will develop an understanding of important science concepts as they demonstrate process skills such as observing, measuring, predicting, and communicating. The science curriculum engages students in hands-on, inquiry-based, integrated units which serve as a foundation for success in an increasingly-complex scientific and technological world.

This year your child's curriculum will include the following:

UNIT ONE: My Body and Me

Curricular Materials Utilized: SEPUP My Body and Me Module

Unit Overview: In the beginning of this unit, students investigate important ideas about the nature of science, the traditional scientific method, and experimental design. Students focus on the role of organ systems in providing nutrients and oxygen to the body and transporting and eliminating wastes. They also investigate the use of medication and the role of nutrition and exercise, and heart disease in maintaining or disrupting a stable internal balance.

Essential Questions:

- What is involved in preparing a quality scientific investigation?
- How can variables influence the results of an investigation?
- What is the role of the respiratory, circulatory and digestive system in maintaining a healthy body?

UNIT TWO: Simple Machines

Curricular Materials Utilized: Unit Developed by the Delaware State University and the Delaware Science Coalition

Unit Overview: The focus of this module is the physical concepts that surround the topic of simple machines. The key concept of energy as well as the force & distance relationship is emphasized throughout the investigations. The concept of "work" is de-emphasized as it is more appropriate for high school level students.

Essential Questions:

- How do simple machines create a mechanical advantage for humans?

For more information about your child's Science curriculum, please contact your child's teacher or call the Curriculum Office at 857-4234.

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UNIT THREE: Forces that Cause Motion

Curricular Materials Utilized: Unit Developed by the University of Delaware and the Delaware Science Coalition

Unit Overview: This unit is designed to complement the introduction to forces in Grade 5 and introduction to electricity in Grade 4. Students learn to identify and describe mechanical, electrical and electromagnetic forces in nature as well as form mathematical and physical models of their behavior. Students build an understanding of how motion and force are connected by investigating how these forces combine together to power and move an electric toy car. In addition, students learn to identify various types of mechanical energy and begin to build an understanding of energy transformations.

Essential Questions:

- How do forces affect the motion of an object?
- How can we measure and calculate the speed of a moving object?
- What is electrical energy and how is it related to magnetism?

UNIT FOUR: Earth's History

Curricular Materials Utilized: FOSS Earth's History Module

Unit Overview: The Earth History unit emphasizes the use of knowledge and evidence to construct explanations about the processes and systems that have operated over geological time.

Essential Questions:

- How do constructive and destructive processes shape the surface of the Earth?
- How are rock layers and fossils used to provide evidence of Earth's history?