



**SOUTHERN LEHIGH SCHOOL DISTRICT**  
5775 Main Street  
Center Valley, PA 18034

## **Planned Course for Science**

**Course:** Grade 5 Science

### **Standards:**

This course is aligned to standards within the following categories of the Pennsylvania Academic Standards for Science and Technology and Engineering Education and the Pennsylvania Standards for Environment and Ecology:

- 3.1 Biological Sciences
- 3.2 Physical Sciences: Chemistry and Physics
- 3.3 Earth and Space Sciences
- 4.1 Ecology
- 4.2 Watersheds and Wetlands
- 4.5 Humans and the Environment

### **Course Description:**

The K-12 science program within Southern Lehigh School District will foster the development of scientific thinking and logical reasoning. A rigorous curriculum will provide opportunities for students to learn how to ask questions and define problems in order to plan and carry out investigations. Students will be challenged to construct explanations and design solutions through collaborative experiences where they engage in arguments that are based on evidence. Teachers will provide students with hands-on and authentic experiences aligned to a coherent progression of learning.

In GRADE 5 SCIENCE, students will explore science through a hands-on, inquiry-based approach to investigate mixtures and solutions, Earth and Sun, and living systems. Students will investigate the structure, properties, and interactions of matter, explain and predict interactions between objects within a system, explain how energy is transferred and conserved, how organisms live, grow, respond to their environment and reproduce, explain what is the universe and Earth's place in it, how and why the Earth is constantly changing, and explain how Earth's processes and human activities affect each other.

### **Measurable objectives to be attained by students:**

Specific objectives for this course are aligned to the Next Generation Science Standards, the Pennsylvania Academic Standards for Science and Technology and Engineering Education, and the Pennsylvania Standards for Environment and Ecology as outlined in the Scope and Sequence for Grade 5 Science.

### **Instructional Strategies:**

A science program demands the use of a variety of instructional strategies to foster scientific thinking. Below is a list of suggested strategies for high-quality instruction:

- Instructional components outlined in the *Framework for Teaching* by Charlotte Danielson
- Hands-on learning
- Posing questions for investigation
- Cooperative learning and collaboration
- Inquiry, engineering, and design
- Sense Making Discussions using Sentence Frames
- Science Notebooks

### **Estimated Instructional Time:**

46 minutes per day for one school year

### **Forms of Assessment to Measure Attainment of Course Objectives:**

- Curriculum-based measures
- Benchmark Assessments
- Formative Assessments
- Summative Assessments
- Performance-Based Assessments

### **Resources:**

#### **Student Text Resources:**

*Mixtures and Solutions: FOSS Science Resources.* Delta Education, 2016.

*Living Systems: FOSS Science Resources.* Delta Education, 2016.

*Earth and Sun: FOSS Science Resources.* Delta Education, 2016.

#### **Teacher Resources:**

*Investigations Guides and Teacher Resources* for:

- *Mixtures and Solutions: Full Option Science System (FOSS).* Delta Education, 2019, NGSS.
- *Living Systems: Full Option Science System (FOSS).* Delta Education, 2019, NGSS.
- *Earth and Sun: Full Option Science System (FOSS).* Delta Education, 2019, NGSS.

#### **Technology:**

“FOSSweb.” Online Resources, [www.fossweb.com/](http://www.fossweb.com/).

District approved supplemental technology

#### **Other Resources:**

Full Option Science System (FOSS) 2016 NGSS Resource Kits for:

- *Mixtures and Solutions*
- *Living Systems*
- *Earth and Sun*

Teacher created resources

District approved supplemental resources and labs