



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

Planned Course for Science

Course: Grade 3 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
- 4.4 Agriculture and Society
- 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 3 SCIENCE, students will explore science through a hands-on, inquiry-based approach to investigate forces and motion, organisms and cells, ecosystems, evolution, heredity and genetics, earth's systems including water and climate. Students will investigate interactions between objects and explain or predict changes in them. Students will explore how organisms are made of cells and can be characterized by common aspects of their structure and functioning. Students will investigate how organisms grow, reproduce, and perpetuate their species by obtaining necessary resources through relationships with other organisms and their environment. Students will investigate how heredity, characteristics, or traits are passed from one generation to the next. Students will explore how the Earth is constantly changing through the lens of the Earth's structure, process, and cycles. These phenomena will be explored using the Pennsylvania Inquiry and Design Practices with a resource that is aligned to the Next Generation Science Standards.

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 3 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:

40 minutes per day for approximately 120 days of 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:**

Motion and Matter: FOSS Science Resources. Delta Education, 2016.

Structures of Life: FOSS Science Resources. Delta Education, 2016.

Water and Climate: FOSS Science Resources. Delta Education, 2016.

Teacher Resources:

Investigation Guides and Teacher Resources for:

- *Motion and Matter: Full Option Science System (FOSS).* Delta Education, 2019, NGSS.
- *Structures of Life: Full Option Science System (FOSS).* Delta Education, 2019, NGSS.
- *Water and Climate: Full Option Science System (FOSS).* Delta Education, 2019, NGSS.

Technology:

“FOSSweb.” Online Resources, www.fossweb.com/.

District approved supplemental technology

Other Resources:

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

- *Motion and Matter*
- *Structures of Life*
- *Water and Climate*

Teacher created resources

District approved supplemental resources and labs