

Course Summary with Big Ideas:

The Lewisburg Area School District fourth grade science instruction maximizes student learning by providing science instruction incorporating STEM learning activities aligned with the Pennsylvania State Standards for Science and Technology, including energy, analyzing and interpreting data, constructing explanations and designing solutions, planning and carrying out investigations, information processing, and natural resources. In fourth grade we learn about coding, energy, ecosystems, soils, rocks and landforms, embryology, maturation, and magnification.

Grade Level Modules (Units):

**Suggested Timeline
of Weeks or # of Class Periods/Lessons**

1. What is a scientist? (scientific method, observation, recording data, etc.)	5 lessons
2. Soils, Rocks, and Landforms	12 lessons
3. Ecosystems	18 lessons
4. Energy	35 lessons
5. Embryology & Maturation	10 lessons
6. Magnification	5 lessons
7. Coding	5 lessons
Student-paced curriculum minimum of 30 hours	

Learning Activities/Modes of Formative and Summative Assessment:

Large group instruction	FOSS web (online resources)
Checklists / Teacher Observation	Vocabulary Development
Small group work	Research Projects
Writing in Response	Projects with Rubrics
Think-Aloud	Hands-on Lab activities
Tests and Quizzes	Student-paced learning
STEM learning/project based learning	

Primary Instructional Resources:

Ecosystems: Carolina Biological Supply Co. 2004
Power of Magnification: Center for Science and Health Education Penn State 2000
Embryology in the Classroom: National 4H Cooperative System 2003
Energy: Next Generation FOSS 2018
Soils, Rocks, and Landforms: Next Generation FOSS 2018
Acceptable Internet sites and apps, including [https://code.org]