

Department: Science

Course Title: Applied Earth and Space

Course #: 502

DESCRIPTION OF COURSE:

Students in Applied Earth and Space Science understand basic astronomy, geology, meteorology, and oceanography. Students will interpret and understand the phenomena of the natural world. Current environmental concerns are better understood with a rudimentary knowledge of these disciplines. Achievement is demonstrated through quizzes, tests, projects, laboratory investigations and home studies. Students learn that the material presented in this course makes them better prepared for industrial and technical jobs in ever-changing career fields.

REQUIRED TOPICS OF STUDY	SUGGESTED INSTRUCTIONAL TIME	STANDARDS/ ASSESSMENT ANCHORS
Introduction (Scientific Method; Birth of a Theory, Natural and Environmental History of Lehigh Valley)	1 week	3.1.10. (A-D); (3.2.10. A-C)
Exploring Planet Earth (Unit 1) Mapping, Minerals and Rocks	2-3 weeks	3.5.10 A. ; 3.5.10.B. S11.A. (1.2.1; 1.3.2; 1.3.4; 2.1.1; 2.2.1; 2.2.2; 3.1.2; 3.2.2; 3.3.2) S11.D. (1.1.1; 1.1.3; 1.2.1; 1.2.2)
Inside Earth (Unit 2) Plate Tectonics, Earthquakes, and Volcanoes	1-2 weeks	3.5.10 A. ; 3.5.10.B. S11.A. (1.1.4; 1.2.1; 1.3.2; 1.3.4; 2.1.1; 2.1.2; 2.2.2; 3.1.2; 3.2.2; 3.3.3;) S11.D. (1.1.1; 1.1.2; 1.1.3; 1.2.1; 1.2.2)
Earth's Changing Surface (Unit 3) Weathering and Soil, Erosion and Deposition Geologic Time; Energy Resources	3-4 weeks	3.5.10 (A, B); 4.2.10. (A, B, C, D); 4.3.10.B. S11.A. (1.1.1; 1.1.2; 1.1.4; 1.2.1; 1.3.1; 1.3.2; 1.3.3; 1.3.4; 2.1.1; 2.1.2; 2.1.4; 2.1.5; 2.2.2; 3.1.1; 3.1.2; 3.2.1; 3.2.2; 3.2.3; 3.3.2); S11.D. (1.1.1;D.1.1.3; 1.2.1; 1.2.2; 1.3.2; 1.3.3)
Earth's Waters (Unit 4) Weathering, Erosion & Hydrology, Oceanography, Watersheds and Wetlands	4-5 weeks	3.5.10.D.; 4.1.10.(A, C, D, E) S11.A. (1.2.1; 1.3.3; 1.3.4; 2.2.2; 3.1.1; 3.1.2; 3.2.1; 3.2.2; 3.3.3); S11.D. (1.1.3; 1.2.1; 1.2.2; 1.3.1; 1.3.2; 1.3.3)
Weather and Climate (Unit 5) Atmosphere and Weather Factors, Weather Patterns and Climate	3 weeks	3.5.10.C. S11.A. (2.1.3; 2.2.2; 3.1.2; 3.2.1; 3.2.2; 3.2.3; 3.3.3); S11.D. (1.3.2; 2.1.1; 2.1.2; 2.1.4).
Astronomy (Unit 6) Stars, Galaxies, and the Universe; Earth/Moon System and the Solar System	2 weeks	3.4.10.A.; 3.4.10.D. S11.A. (1.1.1; 1.1.2; 1.1.4; 1.1.5; 2.1.4; 2.1.5; 2.2.1; 2.2.2; 3.2.3; 3.3.2; 3.3.3); S11.D. (3.1.1; 3.1.3)

INSTRUCTIONAL RESOURCES:

Traditional: Science Explorer: Earth Science, Prentice Hall: (2002) ISBN: 0-13-062648-1. Textbook, laboratory activities and worksheets; Classroom reference books and supplies; Magazines and Newspapers; *Technology:* Internet, CD-ROMs, videos, Prentice Hall (textbook) website (www.phschool.com/atschool/sci_exp_lep/earth_science/Student_Area/ES_S_BK_index.html)