

# High School Syllabus

**Department:** Science

**Course #:** 50501A

**Course Title:** Academic Earth Science

**DESCRIPTION OF COURSE:** (Grade 9) (1 Credit) (Prerequisite: none)

Academic Earth Science is a college prep course. Students are exposed to background information and academic experiences providing them with an understanding of the earth and environment to prepare them for college. Topics covered include physical geology; ecology; the environment and the impact of human activities; conservation of resources; as well as meteorology and climate. Examples of projects might include analysis of an ecosystem, research on local environmental concerns, testing and identifying rock and mineral samples, or plotting weather systems. Students will demonstrate their achievement through tests, quizzes, homework, laboratory investigations and projects.

REQUIRED TOPICS OF STUDY	SUGGESTED INSTRUCTIONAL TIME	STANDARDS/ ELIGIBLE CONTENT
1. <i>Earth and the Biosphere</i> (Ecology, Energy Transfer, Biogeochemical Cycles)	2-4 weeks	CC.3.5.9-10A, CC.3.5.9-10B, CC.3.5.9-10.C, CC3.59-10.D, 3.3.10.A.1; 3.3.10.A.4; 4.1.3.A; 4.1.4.A, 4.1.5.A, 4.1.7.A, 4.1.10.A, 4.1.12.A; 4.1.4.B, 4.1.7.B, 4.1.10.B; 4.1.3.C, 4.1.4.C, 4.1.5.C, 4.1.7.C, 4.1.10.C, 4.1.12.C.
2. <i>Ecosystems and Communities</i> (Community Interactions, Succession, Climate and Biomes)	2-4 weeks	CC.3.5.9-10.B, CC3.59-10.D, CC.3.5.9-10.E, CC.3.6.9-10.B, 3.3.10.A.1; 3.3.10.A.4; 4.1.3.A, 4.1.4.A, 4.1.5.A, 4.1.7.A, 4.1.10.A, 4.1.12.A; 4.1.3.C, 4.1.4.C, 4.1.5.C, 4.1.7.C, 4.1.10.C, 4.1.12.C; 4.1.3.E, 4.1.7.E, 4.1.10.E,
3. <i>Aquatic Ecosystems/Wetlands</i>	2-4 weeks	CC3.59-10.D, CC.3.5.9-10.E, 3.3.10.A.1; 3.3.10.A.4; 4.1.3.A, 4.1.4.A, 4.1.5.A, 4.1.7.A, 4.1.10.A, 4.1.12.A; 4.2.3.B, 4.2.4.B, 4.2.5.B, 4.2.6.B, 4.2.7.B, 4.2.8.B, 4.2.10.B, 4.2.12.B; 4.2.4.C, 4.2.5.C, 4.2.10.C, 4.2.12.C.
4. <i>Population Dynamics and Biodiversity</i>	2-4 weeks	CC.3.5.9-10C, CC3.59-10.D, CC.3.5.9-10A, CC.3.5.9-10G, , CC.3.6.9-10.F, CC.3.6.9-10.H 4.1.3.A, 4.1.4.A, 4.1.5.A, 4.1.7.A, 4.1.10.A, 4.1.12.A, 4.5.7.B, 4.5.10.B, 4.5.12.B,
5. <i>Weathering and Soil</i>	3-4 weeks	CC3.59-10.D, 3.3.10.A1; 4.4.6.A, 4.4.7.A, 4.4.10.A, 4.4.12.A; 4.4.6.B, 4.4.7.B, 4.4.10.B, 4.4.12.B; 4.4.3.C, 4.4.5.C,
6. <i>Water: Surface and Ground</i>	3-4 weeks	CC3.59-10.D, CC.3.6.9-10.B, 3.3.10.A.5; 4.2.4.A, 4.2.5.A, 4.2.7.A, 4.2.8.A, 4.2.10.A, 4.2.12.A,

7. <i>Natural Resources</i> (Minerals, Rocks, Energy, Resources, Waste Management)	4-6 weeks	CC.3.5.9-10C, CC.3.5.9-10A, CC3.59-10.D CC.3.5.9-10.E, CC.3.5.9-10G, CC.3.5.9-10I, CC.3.6.9-10B, CC.3.6.9-10.F, CC.3.6.9-10.G 3.3.10.A.1, 3.3.10.A.2, 4.3.7.A, 4.3.8.A., 4.3.10.A., 4.3.12.A., 4.3.7.B., 4.3.10.B., 4.3.12.B., 4.5.3.D., 4.5.4.D., 4.5.5.D., 4.5.6.D., 4.5.10.D.
8. <i>Plate Tectonics</i> (Mountains, Earthquakes, Volcanoes)	4-5 weeks	CC3.59-10.D, CC.3.5.9-10G, CC.3.6.9-10.B, 3.3.10.A1.
9. <i>Weather and Climate</i> ( <i>As time permits</i> )	4-5 weeks	CC3.59-10.D, CC.3.6.9-10B, 3.3.10.A6.

**RESOURCES:** TRADITIONAL: *Earth Science* (2010) [Publisher: Holt McDougal, ISBN: 10 - 0-55-401565-X]

Labs, activities, and worksheets; Reference books; Laboratory supplies. TECHNOLOGY Internet, videos, computer-aided visuals, *Study Island*.

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