

Alignment of OAE Earth and Space Science Assessment Framework with Ohio-specified Standards

This alignment study identifies the national and/or Ohio educational standards that are addressed in whole or in part by each competency of the assessment framework. An indication of alignment does not necessarily imply complete congruence of the content of an OAE test competency with the relevant standard. The information in this document is subject to change if revisions are made to the assessment framework. Any changes will fully supersede the information contained in this document.

Competencies		Ohio Educational Preparation Standards	Ohio Educator Standards	Ohio Student Standards	
Earth Sciences (7-12)		NSTA 2012 Standards for Science Teacher Preparation: Secondary Science Content Analysis Form	Ohio Standards for the Teaching Profession	Ohio Revised Science Standards and Model Curriculum: High School	CCSS - Reading Standards for Literacy in Science and Technical Subjects
<u>Nature of Science</u>					
0001	Understand principles and processes of scientific inquiry.	Unifying Concepts: A.1-3; Earth/Space Sci: A.10; B.21	2	Science Inquiry and Application	Gr. 6-12: 2-4; 7-8
0002	Understand the history and nature of science.	Unifying Concepts: A.1, A.2, A.4 Chem: B.25 Phys: B.20 Bio: B.19 Earth/Space Sci: B.20	2	Science Inquiry and Application	

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0003	Understand the relationships between science, technology, engineering, and mathematics.	Unifying Concepts: A.5 Earth/Space Sci: A.12; B.19	2	Science Inquiry and Application	Gr. 6-12: 1-2; 4
<u>Geology</u>					
0004	Understand historical geology.	Earth/Space Sci: A.3; A.5; A.8; B.13; B.16; B.18	2	Phys. Geol: Earth's History	
0005	Understand plate tectonics and the rock cycle.	Earth/Space Sci: A.1; A.3-A.5; B.13; B.18	2	Phys. Geol: Plate Tectonics	
0006	Understand Earth materials, geologic resources, and Earth's internal structure.	Earth/Space Sci: A.2; A.4-A.5; A.11; B.19	2	Phys. Geol: Minerals; Igneous, Metamorphic, and Sedimentary rocks; Plate Tectonics (internal Earth)	
0007	Understand the processes of weathering, erosion, and deposition.	Earth/Space Sci: A.1; A.3-.4; A.6; B.13	2	Phys. Geol: Igneous, Metamorphic, and Sedimentary Rocks	

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<u>Oceanography and Freshwater Systems</u>					
0008	Understand the hydrologic cycle and its interaction with other Earth systems.	Earth/Space Sci: A.1-A.6; B.14-B.15	2	Phys. Geol: Igneous, Metamorphic, and Sedimentary Rocks; Earth's Resources	
0009	Understand the composition, structure, and properties of oceans.	Earth/Space Sci: A.1-A.4; A.6; A.11-A.12; B.14	2	Phys. Geol: Igneous, Metamorphic, and Sedimentary Rocks; Earth's Resources	
0010	Understand the characteristics and properties of freshwater systems.	Earth/Space Sci: A.1-A.4; A.6; A.11-A.12; B.15	2	Phys. Geol: Earth's Resources	
<u>The Atmosphere, Weather, and Climate</u>					
0011	Understand the structure and properties of the atmosphere.	Earth/Space Sci: A.1-A.2; A.4-A.7; A.12; B.14-B.15; B.19	2	Env. Sci: Earth System	
0012	Understand the characteristics of weather systems and the circumstances under which various weather conditions develop.	Earth/Space Sci: A.1; A.5-A.7; A.12; B.14-B.15; B.19	2	Env. Sci: Earth Systems	Gr. 6-12: 4

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0013	Understand Earth's climate systems and the factors that influence climate.	Earth/Space Sci: A.1-A.2; A.4-A.7; A.12; B.14-B.15; B.19	2	Env. Sci: Earth Systems	
<u>Astronomy</u>					
0014	Understand the characteristics of stars, galaxies, and the universe.	Earth/Space Sci: A.9; B.16-B.17	2	Phys. Sci: The Universe	
0015	Understand characteristics and components of the solar system.	Earth/Space Sci: A.8; B.13; B.16	2	Phys. Sci: The Universe	
0016	Understand the sun-moon-Earth system and the apparent motions of stars and planets.	Earth/Space Sci: A.1; A.5; A.7; B.17	2	Phys. Sci: The Universe	