

Crosswalk: Previous versus New Earth and Space Science (6-12) Program Standards

General Information about this Revision:

- » The structure has changed to include Professional Skills indicators rather than the previous Performance indicators. » The previous standards only had indicators listed in each standard while the new standards are broken down by Functions and then have the two types of indicators within each Function.
- » The new Earth Science standards are significantly different enough from the previous standards that a standard by standard crosswalk is not helpful. In the chart below, the previous standards are presented in the first column for reference purposes. The new standards are presented in the middle column with notations to the right.
- » The new Earth Science standards are focused on depth of knowledge of the important topics in Earth and Space Sciences.

Standard 1

PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #1 The teacher of earth and space science demonstrates an understanding of the sources of energy that power the dynamic earth system.	Standard 1: Content Pedagogy: Effective science teachers understand how students learn and develop science concepts and practices. They incorporate disciplinary core ideas, scientific and engineering practices, and crosscutting concepts into instruction.	<ul style="list-style-type: none"> • Old Standard 1 is incorporated in new standard 8

Standard 2

PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #2 The teacher of earth and space science demonstrates an understanding of the actions and the interactions of the earth's subsystems: the geosphere, hydrosphere, atmosphere, and biosphere.	Standard 2: Learning Environments: Teachers work with students and others to create and manage environments that support learning.	<ul style="list-style-type: none"> • Old Standard 2 is incorporated in new standard 8

Standard 3

PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #3 The teacher of earth and space science demonstrates an understanding of the	Standard 3: Safety: Effective teachers of science demonstrate and implement safety procedures, material safety practices, and the	<ul style="list-style-type: none"> • Old standard 13 is incorporated in new standard 3

origin and evolution of the dynamic earth system.	ethical treatment and use of living organisms (appropriate to their area of licensure).	<ul style="list-style-type: none"> • New standard 3 focuses on the safety of the physical environment. • Old Standard 3 is incorporated in new standard 8 • An addition to this standard is the ethical treatment and use of living organisms (appropriate to their area of licensure).
Standard 4		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #4 The teacher of earth and space science demonstrates an understanding of the organization of the universe and its development.	Standard 4: Impact on Student Learning: Science teachers provide evidence that students' understanding of disciplinary core ideas, science and engineering practices, and crosscutting concepts have increased in sophistication as a result of instruction. Candidates provide evidence representative of the entire population they teach.	<ul style="list-style-type: none"> • Old Standard 4 is incorporated in new standard 7
Standard 5		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #5 The teacher of earth and space science demonstrates an understanding of the nature of inquiry and the ability necessary to help students do scientific inquiry.	Standard 5: Professional Knowledge and Skills: Effective science teachers are aware of and engage in professional development opportunities to continually improve their knowledge and understanding of science content and pedagogy. They conduct themselves as part of the science education community.	<ul style="list-style-type: none"> • Old Standard 14 is incorporated in new standard 5
Standard 6		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #6 The teacher of earth and space science demonstrates an understanding of the basic relationships between science and technology.	Standard 6: Engineering, Technology, and the Applications of Science: The teacher demonstrates an understanding of concepts and practices of engineering, technology, and	<ul style="list-style-type: none"> • Language was updated • Engineering and the applications of science were included

	the applications of science in developing instruction for students.	
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Standard 7		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #7 The teacher of earth and space science demonstrates an understanding of science as a human endeavor, of the nature of science, and of science from historical perspectives.	Standard 7: Earth’s Place in the Universe: Origin, evolution and properties of the Universe. Effective science teachers demonstrate an understanding of the properties of the Universe, the Earth’s place within the Universe, and origin and evolution of the Universe.	<ul style="list-style-type: none"> • Old Standard 7 is incorporated in new standard 9
Standard 8		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #8 The teacher of earth and space science demonstrates an understanding of the concepts and processes unifying science domains.	Standard 8: Earth’s Materials and Systems: The teacher of earth and space science demonstrates an understanding of the energy sources, processes and cycles within the Earth System.	<ul style="list-style-type: none"> • Old Standard 1 is incorporated in new standard 8 • Old Standard 2 is incorporated in new standard 8
Standard 9		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #9 The teacher of earth and space science demonstrates an understanding of and an ability to teach science effectively.	Standard 9: Earth and human activity: The teacher of Earth and Space sciences demonstrates an understanding of society’s interactions with the planet. How Earth’s processes affect humans and human culture, and how humans affect Earth’s systems.	<ul style="list-style-type: none"> • Old Standard 7 is incorporated in new standard 9

Standard 10		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #10 The teacher of earth and space science enacts a science curriculum that integrates content within the sciences and among other disciplines.		
Standard 11		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #11 The teacher of earth and space science understands how to relate science to the daily lives and interests of students and to a larger framework of human endeavor and understanding.		
Standard 12		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #12 The teacher of earth and space science assesses students' educational progress through a variety of methods.		
Standard 13		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #13 The teacher of earth and space science designs and manages safe and supportive learning environments.		<ul style="list-style-type: none"> • Old standard 13 is incorporated in new standard 2
Standard 14		
PREVIOUS STANDARDS	NEW STANDARDS	WHAT CHANGED?
Standard #14 The teacher of earth and space science improves teaching through ongoing professional practice.		