

MISSOURI EDUCATOR GATEWAY ASSESSMENTS

Field 077 Earth Science

Content Alignment Study

The Content Alignment Study below provides information about the alignment of knowledge and skills described in the competencies that make up the test framework for this licensure test with the state and national standards designated by the Department of Elementary and Secondary Education for this field. The table indicates those portions of the relevant state and/or national standards that are addressed -- in whole or in part -- by each competency.

Test Competency	Missouri 6–12 Science Grade-Level Expectations	Next Generation Science Standards (NGSS) and National Science Teaching Association (NSTA) Standards
Earth’s Place in the Universe		
0001 Demonstrate knowledge of the origin, evolution, and structure of the universe.	6-8.ESS1.A.3, 6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS1.A.2, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS1-3, MS-ETS1-1-4, HS-ESS1-2, HS-ETS1-1-4
0002 Apply knowledge of stars and their life cycles.	6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS1.A.1, 9-12.ESS1.A.3, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ETS1-1-4, HS-ESS1-1, HS-ESS1-3, HS-ETS1-1-4
0003 Analyze the solar system and the interactions of the Earth-sun-moon system.	6-8.ESS1.A.1, 6-8.ESS1.A.2, 6-8.ESS1.A.3, 6-8.ESS1.B.1, 6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS1.B.1, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS1-1-2, MS-ETS1-1-4, HS-ESS1-4, HS-ETS1-1-4
Earth’s Systems: Geosphere		
0004 Apply knowledge of Earth's internal structure and the history of Earth.	6-8.ESS1.C.1, 6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS1.C.2, 9-12.ESS2.A.3, 9-12.ESS2.E.1, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS1-4, MS-ESS2-2, MS-ETS1-1-4, HS-ESS1-6, HS-ESS2-1, HS-ESS2-3, HS-ESS2-7, HS-ETS1-1-4

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0005 Analyze plate tectonics and the impact of plate movement.	6-8.ESS2.A.1, 6-8.ESS2.B.1, 6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS1.C.1, 9-12.ESS2.A.1, 9-12.ESS2.A.3, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS2-2-3, MS-ETS1-1-4, HS-ESS1-5, HS-ESS2-1, HS-ETS1-1-4
0006 Apply knowledge of Earth materials, the rock cycle, and the processes of weathering, erosion, and deposition.	6-8.ESS2.A.1, 6-8.ESS2.A.2, 6-8.ETS1A.1 6-8.ETS1.B.1-3, 9-12.ESS2.A.2, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS2-1-2, MS-ETS1-1-4, HS-ESS2-1-2, HS-ESS2-5, HS-ETS1-1-4
Earth's Systems: Hydrosphere, Atmosphere, Weather, and Climate		
0007 Demonstrate knowledge of the processes of the hydrosphere and characteristics of oceanic and freshwater systems.	6-8.ESS2.C.1, 6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS2.A.2, 9-12.ESS2.C.1, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS2-4, MS-ESS2-6, MS-ETS1-1-4, HS-ESS2-5, HS-ETS1-1-4
0008 Demonstrate knowledge of the composition, structure, and processes of the atmosphere.	6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS2.A.2, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS2-5-6, MS-ETS1-1-4, HS-ESS2-2, HS-ESS3-6, HS-ETS1-1-4
0009 Demonstrate knowledge of Earth's weather and climate.	6-8.ESS2.C.2, 6-8.ESS2.C.3, 6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS2.A.4, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS2-5-6, MS-ESS3-5, MS-ETS1-1-4, HS-ESS2-4, HS-ESS3-5, HS-ETS1-1-4

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Earth and Human Activity		
0010 Analyze geochemical cycles, natural resources, and energy.	6-8.ESS3.A.1, 6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS2.D.1, 9-12.ESS3.A.1, 9-12.ESS3.A.2, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS3-1, MS-ESS3-4, MS-ETS1-1-4, HS-ESS2-6, HS-ESS3-1-3, HS-ETS1-1-4
0011 Demonstrate knowledge of natural hazards and their effects on human societies.	6-8.ESS3.B.1, 6-8.ESS3.D.1, 6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS3.A.1, 9-12.ESS3.D.1, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS3-2-3, MS-ESS3-5, MS-ETS1-1-4, HS-ESS3-1, HS-ESS3-5-6, HS-ETS1-1-4
0012 Demonstrate knowledge of the effects and mitigation of human activities on Earth systems.	6-8.ESS3.C.1, 6-8.ESS3.C.2, 6-8.ETS1.A.1, 6-8.ETS1.B.1-3, 9-12.ESS2.A.2, 9-12.ESS3.C.1, 9-12.ESS3.C.2, 9-12.ESS2.D.1, 9-12.ESS3.D.2, 9-12.ETS1.A.1-2, 9-12.ETS1.B.1-2	MS-ESS3-3-5, MS-ETS1-1-4, HS-ESS3-1-6, HS-ETS1-1-4
Chemistry		
0013 Apply knowledge of chemistry concepts.	6-8.PS1.A.1-2,4, 6-8.PS1.B.1-2, 6-8.PS1.B.1-2, 6-8.PS3.A.4, 9-12.PS.1.A.1, 9-12.PS.1.A.2, 9-12.PS.1.A.5, 9-12.PS.1.B.3	MS-PS1-1-2, MS-PS1-4, MS-PS1-5, HS-PS1-1, HS-PS1-2, HS-PS1-4, HS-PS1-7, HS-PS3-4

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Physics		
0014 Apply knowledge of physics concepts.	6-8.PS2.A.1-2, 6-8.PS2.B.1-3, 6-8.PS3.A.1-3, 6-8.PS3.B.1, 6-8.PS4.A.1-2, 9-12.PS2.A.1, 9-12.PS2.A.2, 9-12.PS2.A.3, 9-12.PS2.B.1-2, 9-12.PS3.A.2-3, 9-12.PS3.B.1, 9-12.PS3.C.1, 9-12.PS4.A.1, 9-12.PS4.B.1-2	MS-PS2-1-5, MS-PS3-1-5, MS-PS4-1-2, HS-PS2-1-5, HS-PS3-1, HS-PS3-2, HS-PS3-4-5
Biology		
0015 Apply knowledge of biology concepts.	6-8.LS1.A.1-4, 6-8.LS1.B.1-2, 6-8.LS1.C.1, 6-8.LS2.A.1-2, 6-8.LS2.B.1, 6-8.LS2.C.1, 6-8.LS4.B.1-2, 6-8.LS4.C.1, 9-12.LS1.A.1-3, 9-12.LS1.B.1, 9-12.LS1.C.1-2, 9-12.LS2.A.1, 9-12.LS2.B.1-3, 9-12.LS2.C.1, 9-12.LS3.A.1, 9-12.LS3.B.1-4, 9-12.LS4.A.1-2, 9-12.LS4.B.1-2, 9-12.LS4.C.1-2	MS-LS1-1-4, MS-LS1-6-8, MS-LS2-1-4, MS-LS3-1-2, MS-LS4-1-6, HS-LS1-1-5, HS-LS1-7, HS-LS2-1-6, HS-LS3-1-3, HS-LS4-1-5