

# MISSOURI EDUCATOR GATEWAY ASSESSMENTS

## Field 019 Earth Science

### Content Alignment Table

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 Learning Standards for Science 9, 10, 11	NSTA Standards for Science Teacher Preparation 2011 (NSTA)  Next Generation Science Standards 2013 (NGSS)	Common Core State Standards for Mathematics (CCSS-Math)  Common Core State Standards for ELA & Literacy in History/Social Studies, Science, and Technical Subjects (CCSS-ELA)
0001 Understand the practices of scientific inquiry and engineering design.	S7.1.A-D	NSTA: S1.A.4.a.10; S1.A.4.b.21; S1.A.4.c.25; S4.4a-c  NGSS: Science and Engineering Practices 1-8; HS-ETS1 Engineering Design	CCCS-Math: HS-Statistics and Probability S-ID, S-IC  CCCS-Math: HS-Modeling; N-Q.1, 2, 3; 6.RP.1, 2, 3; 7.RP.1, 2, 3; 8.F.1, 2, 3; 8.EE.4
0002 Understand crosscutting concepts in the sciences and engineering.	S7.1.C, D; S8.2.A, D; S8.3.C-D	NSTA: S1.A.4.b.20; S1.4.c.22-24 NGSS: Crosscutting concepts 1-7	CCCS-ELA: Reading Standards for Literacy in Science and Technical Subjects grades 9-12, Standards 1-10
0003 Understand the relationships between science, technology, and human activity in a global context.	S8.1.B; S8.3.B-D	NSTA: S1.A.4.a.12; S1.A.4.b.19 NGSS: HS-ESS1-3; HS-LS1-LS4; HS-PS2, 4; HS-ETS1	
0004 Understand historical geology.	S4.3.A, C; S5.1.B-C; S5.2.D	NSTA: S1.A.4.a.8, 10; S1.A.4.b.13, 16, 18, 22, 25 NGSS: HS-ESS1; HS-ESS2; HS-LS4	CCSS-Math: A-CED.4

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0005 Understand plate tectonics and the rock cycle.	S5.1.A; S5.2.A-C	NSTA: S1.A.4.a.1-3 NGSS: HS-ESS2	
0006 Understand Earth materials, geologic resources, and Earth's internal structure.	S5.1.A; S5.3.A	NSTA: S1.A.4.a.2-3, 5, 10-12, 19 NGSS: HS-ESS2; HS-ESS3	
0007 Understand the processes of weathering, erosion, and deposition.	S5.2.A	NSTA: S1.A.4.a.3; S1.A.4.b.13 NGSS: HS-ESS2-3	
0008 Understand the hydrologic cycle and its interactions with other Earth systems.	S5.1.B	NSTA: S1.A.4.a.1, 6; S1.a.4.b.15 NGSS: HS-ESS2	
0009 Understand the composition, structure, and properties of oceans.	S5.2.F	NSTA: S1.A.4.a.1, 6, 11; S1.A.4.b.14-15 NGSS: HS-ESS2-3	
0010 Understand the characteristics and properties of freshwater systems.	S5.3.A	NSTA: S1.A.4.a.6, 11; S1.A.4.b.15 NGSS: HS-ESS2-3	
0011 Understand the structure and properties of the atmosphere.	S5.1.C; S5.2.F; S5.3.A	NSTA: S1.A.4.a.1, 5, 7; S1.A.4.b.14, 19 NGSS: HS-ESS2-3	

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0012 Understand the characteristics of weather systems and the circumstances under which various weather conditions develop.	S5.2.F	NSTA: S1.A.4.a.1, 5, 7; S1.A.4.b.14  NGSS: HS-ESS2	
0013 Understand Earth's climate systems and the factors that influence climate.	S5.2.F; S5.3.A	NSTA: S1.A.4.a.4-5, 7; S1.A.4.b.15, 19  NGSS: HS-ESS2-3; HS-LS2	
0014 Understand the characteristics of stars, galaxies, and the universe.	S6.1.A, C	NSTA: S1.A.4.a.8-10; S1.A.4.b.16-17  NGSS: HS-ESS1	
0015 Understand the characteristics and components of the solar system.	S6.1.A	NSTA: S1.A.4.a.8-9; S1.A.4.b.17; S1.A.4.c.25  NGSS: HS-ESS1	CCSS-Math: HS-Modeling
0016 Understand the sun-moon-Earth system and the apparent motions of stars and planets.	S6.1.C; S6.2.C-D	NSTA: S1.A.4.a.8-9; S1.A.4.b.17  NGSS: HS-ESS1	