

MISSOURI EDUCATOR GATEWAY ASSESSMENTS

Field 016 Biology

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.2.a.9; S1.A.2.b.19; S1.A.2.c.23; S4.4a, 4b, 4c 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.1-3; 6.RP.1-3; 7.RP.1-3; 8.F.1-3; 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.2.b.18-19; S1.A.2.c.20-22 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.2.a.10; S1.A.2.b.17 NGSS: HS-ESS1-3; HS-LS1-3, LS4; HS-PS2, 4; HS-ETS1	
0004 Understand the chemistry of living systems.	S1.1.A, E, H; S3.2.D-F	NSTA: S1.A.2.a.1, 11; S1.A.2.c.20 NGSS: HS-LS1	
0005 Understand cell structure, function, and bioenergetics.	S3.1.A-C, F	NSTA: S1.A.2.a.6, 11 NGSS: HS-LS1	

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0006 Understand molecular genetics.	S3.3.B-E	NSTA: S1.A.2.a.5, 12; S1.A.2.b.16 NGSS: HS-LS3	
0007 Understand patterns and processes of inheritance.	S3.3.A-C. E-F	NSTA: S1.A.2.a.5, 12 NGSS: HS-LS3	CCSS-Math: 7.RP
0008 Understand the mechanisms of biological evolution.	S4.3.A-C	NSTA: S1.A.2.a.13 NGSS: HS-LS4	
0009 Understand the scientific explanations and evidence for the history of life on Earth.	S3.1.E; S4.3.A, C	NSTA: S1.A.2.a.13; S1.A.2.c.22 NGSS: HS-LS4	
0010 Understand the structures and functions of organisms and their life cycles.	S3.1.B; S3.3.A	NSTA: S1.A.2.a.1-2; S1.A.2.b.15 NGSS: HS-LS1	
0011 Understand how organisms obtain, store, and use energy and matter to maintain homeostasis.	S3.1.C; S3.2.A-B, D, F	NSTA: S1.A.2.a.1-2, 8 NGSS: HS-LS1	
0012 Understand populations and communities.	S4.1.A-B, D	NSTA: S1.A.2.a.4, 7; S1.A.2.b.14 NGSS: HS-LS2	

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0013 Understand ecosystems and biomes.	S4.1.C-D; S4.2.A-B; S5.3.A	NSTA: S1.A.2.a.3; S1.A.2.b.14 NGSS: HS-LS2	
0014 Understand the effects of human activities on the biosphere.	S4.1.C; S5.3.A	NSTA: S1.A.2.a.3-4; S1.A.2.c.17 NGSS: HS-LS2	