

Field 241 – Earth and Space Science

Alignment of Test Framework Objectives with State and National Standards

| Illinois Licensure Testing System Framework Objectives for Earth and Space Science | State Board of Education Rules- Title 23 of the Illinois Administrative Code–27.140 | Next Generation Science Standards |
|--|---|---|
| Subarea I: Science Process Skills | | |
| 0001 Understand practices of science and engineering. | a, b, i, o, p, q | MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4, SEP1–8 |
| 0002 Understand crosscutting concepts and their applications across science and engineering disciplines. | j, k, o, p, q | CCC1–7 |
| 0003 Understand the process of reading, and apply knowledge of strategies for promoting students' reading development in the science classroom. | s | |
| Subarea II: Disciplinary Core Ideas | | |
| 0004 Understand the disciplinary core ideas of chemistry. | b, e, o, p, q | MS-PS1-1, MS-PS1-2, MS-PS1-4, MS-PS1-5, MS-PS1-6, MS-PS3-4, HS-PS1-1, HS-PS1-2, HS-PS1-4, HS-PS1-5, HS-PS1-6, HS-PS1-7, HS-PS1-8, HS-PS2-6, SEP1, 2, 4, 5, 6, 8, CCC1–7 |
| 0005 Understand the disciplinary core ideas of physics. | b, e, f, o, p, q | MS-PS2-1, MS-PS2-2, MS-PS2-3, MS-PS2-4, MS-PS2-5, MS-PS3-1, MS-PS3-2, MS-PS3-3, MS-PS3-4, MS-PS3-5, MS-PS-4-1, MS-PS-4-2, MS-PS-4-3, HS-PS2-1, HS-PS2-2, HS-PS2-3, HS-PS2-4, HS-PS2-5, HS-PS3-1, HS-PS3-2, HS-PS3-3, HS-PS3-4, HS-PS4-1, HS-PS4-2, HS-PS4-3, SEP1, 2, 4, 5, 6, 8, CCC1–8 |
| 0006 Understand the disciplinary core ideas of biology. | b, c, d, o, p, q | MS-LS1-1, MS-LS1-2, MS-LS1-3, MS-LS1-4, MS-LS1-5, MS-LS1-6, MS-LS1-7, MS-LS3-1, MS-LS3-2, MS-LS4-1, MS-LS4-2, MS-LS4-4, MS-LS4-6, HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-4, HS-LS1-5, HS-LS1-6, HS-LS1-7, HS-LS2-3, HS-LS3-1, HS-LS3-2, HS-LS3-3, HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, SEP1, 2, 4, 5, 6, 8, CCC1–8 |

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| 0007 Understand the disciplinary core ideas of Earth and space science. | b, g, h, o, p, q | NGSS: MS-ESS1-1, MS-ESS1-2, MS-ESS1-4, MS-ESS2-1, MS-ESS2-2, MS-ESS2-3, MS-ESS2-4, MESS2-5, MS-ESS2-6, HS-ESS1-1, HS-ESS1-2, HS-ESS1-3, HS-ESS1-4, HS-ESS1-6, HS-ESS2-3, HS-ESS2-5, SEP1, 2, 4, 5, 6, 8, CCC1–8 |
| 0008 Understand the disciplinary core ideas of environmental science. | b, d, g, o, p, q | MS-LS2-1, MS-LS2-2, MS-LS2-3, MS-LS2-4, MS-LS2-5, MS-ESS3-1, MS-ESS3-2, MS-ESS3-3, MESS3-4, HS-LS2-1, HS-LS2-2, HS-LS2-3, HS-LS2-5, HS-LS2-7, HS-LS4-6, HSESS2-2, HS-ESS2-6, HS-ESS2-7, HS-ESS3-1, HS-ESS3-4, HS-ESS3-6, SEP1, 2, 4, 5, 6, 8, CCC1–8 |
| Subarea III: Astronomy | | |
| 0009 Understand the characteristics and formation of the universe and the objects within it. | a, b, i, o, p | MS-ESS1-2, HS-ESS1-1, HS-ESS1-2, HS-ESS1-3, MS-ETS1-1, MS-ETS1-2, MS-ETS1-3, MS-ETS1-4, SEP1–8 |
| 0010 Understand the solar system and the characteristics and interactions of the objects within it. | j, k, o, p, q | MS-ESS1-1 – 3, MS-ESS2-6, HS-ESS1-4, HS-ESS1-7, CCC1–7 |
| Subarea IV: Earth Systems | | |
| 011 Understand features, characteristics, and interactions of Earth's geologic systems. | b, e, o, p, q | MS-ESS1-4, MS-ESS2-1 – 3, MS-ESS3-1, MS-ESS3-2, MS-ESS3-4, HS-ESS1-5, HS-ESS1-6, HS-ESS2-1, HS-ESS2-2, HS-ESS2-3, HS-ESS2-5, SESS2-6, HS-ESS2-7, HS-ESS3-1, HS-ESS3-2, HS-ESS3-3, HS-ESS3-6, MSPS1-1, MS-PS1-2, MS-PS1-4, MS-PS1-5, MS-PS1-6, MS-PS3-4, HS-PS1-1, HSPS1-2, HS-PS1-4, HS-PS1-5, HS-PS1-6, HS-PS1-7, HS-PS1-8, HS-PS2-6, SEP1, 2, 4, 5, 6, 8, CCC1–7 |

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| 0012 Understand features, characteristics, and interactions of the hydrosphere. | b, e, f, o, p, q | MS-ESS2-3, MS-ESS2-4, MS-ESS2-6, MS-ESS3-1, HS-ESS2-1, HS-ESS2-5, MS-PS2-1, MS-PS2-2, MS-PS2-3, MS-PS2-4, MS-PS2-5, MS-PS3-1, MS-PS3-2, MS-PS3-3, MS-PS3-4, MS-PS3-5, MS-PS-4-1, MS-PS-4-2, MS-PS-4-3, HS-PS2-1, HS PS2-2, HS-PS2-3, HS-PS2-4, HS-PS2-5, HS-PS3-1, HS-PS3-2, HS-PS3-3, HSPS3-4, HS-PS4-1, HS-PS4-2, HS-PS4-3, SEP1, 2, 4, 5, 6, 8, CCC1–8 |
| 0013 Understand features, characteristics, and interactions of the atmosphere, weather, and climate. | b, c, d, o, p, q | MS-ESS2-1, MS-ESS2-5, MS-ESS2-6, MS-ESS3-2, MS-ESS3-5, HS-ESS2-4, HS-ESS2-8, HS-ESS3-1, HS-ESS3-5, HS-ESS3-6, MS-LS1-1, MSLS1-2, MS-LS1-3, MS-LS1-4, MS-LS1-5, MS-LS1-6, MS-LS1-7, MS-LS3-1, MS-LS3-2, MS-LS4-1, MS-LS4-2, MS-LS4-4, MS-LS4-6, HS-LS1-1, HS-LS1-2, HS-LS1-3, HS-LS1-4, HS-LS1-5, HS-LS1-6, HS-LS1-7, HS-LS2-3, HS-LS3-1, HS-LS3-2, HSL3-3, HS-LS4-1, HS-LS4-2, HS-LS4-3, HS-LS4-4, HS-LS4-5, SEP1, 2, 4, 5, 6, 8, CCC1–8 |
| 0014 Understand the dynamic interactions between the atmosphere, biosphere, geosphere, and hydrosphere. | e, f, h, o, p, q, r, s | MS-LS2-3, MS-ESS3-1, MS-ESS3-4, MS-ESS3-5, HS-LS2-1, HS-LS2-5, HS-ESS2-2, HS-ESS2-4, HS-ESS2-6, HS-ESS2-7 |

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