

2020 Updates to the 2016 Massachusetts Science & Technology/Engineering Curriculum Framework

April 2020

This document summarizes the changes from the original release of the 2016 Massachusetts Science and Technology/Engineering Framework seen in the updated release in April 2020.

Format & Style

- Edited to match the format and style of the other MA Curriculum Frameworks released since 2017

Guidance on Chemical Safety

- The February 2019 update to [Mass. Gen. Laws c. 149 § 6½](#) requires OSHA protections for all public employees; these protections should be extended to students via policy and practice. Appendix XI has been updated to reflect these changes.
- For standards that reference the use of chemicals, a footnote has been added to direct readers to additional guidance and resources on the safe use of chemicals in Appendix XI.

Grade 5: Earth and Space Science

5-ESS

- **5-ESS3-1:** edited the State Assessment Boundary to amend “Climate change” to “Science of climate change” to further clarify the expectations of the state assessment.

Grade 7: Life Science

7-LS

- **7.MS-LS1-4:** edited to remove State Assessment Boundary on natural selection. Including this State Assessment Boundary led to confusion about whether natural selection could be expected on the Grade 8 MCAS. Although an understanding of natural selection is not expected for standard 7.MS-LS1-4 in 7th grade, an understanding of natural selection is expected for standard 8.MS-LS4-4 at the end of 8th grade and can be expected on the state assessment.

High School Chemistry

HS-Chem

- **HS-PS3-4b:** edited to correctly relate entropy to energy dispersal and enthalpy to heat content.

High School Physics

HS-Phy

- **HS-PS4-1:** edited to correctly remove the State Assessment Boundary on transitions between two media. Explaining how waves transition between two media is expected in standard HS-PS4-5 as an element of explaining how waves interact with matter and can be expected on the state assessment.
- **HS-PS4-5:** edited to correctly classify the list of examples to include both wave behavior and wave interactions with matter. Refraction is added to this list of examples to further clarify that refraction can also be expected on the state assessment as part of an understanding of HS-PS4-5