



MASSACHUSETTS DEPARTMENT OF
ELEMENTARY AND SECONDARY
EDUCATION

*Release of
February 2021
MCAS Biology
Test Information*

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Massachusetts Department of
Elementary and Secondary Education**



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I. Document Purpose and Structure

Document Purpose and Structure

Purpose

The purpose of this document is to share with educators and the public information regarding the February 2021 MCAS Biology test, including the reporting category and standards associated with each item. Beginning in 2019, the Department no longer releases items from the February Biology test. The decision to withhold the items from the February Biology test assists the Department in producing high-quality Biology tests in future years.

Structure

Chapter II of this document contains information for the February 2021 Biology test and has two sections. The **first section** lists the Massachusetts reporting categories under which test results are reported to schools and districts. The reporting categories are based on the content strands in the curriculum framework. The first section also provides the web address for the October 2006 and April 2016 versions of the *Science and Technology/Engineering Curriculum Framework*. In addition, there is a brief overview of the test (number of test sessions, types of items, and reference materials allowed).

The **second section** of the chapter is a table that cross-references each item with its MCAS reporting category and with the 2006 and 2016 framework standards it assesses.

II. February 2021 Biology Test

February 2021 Biology Test

The February 2021 high school MCAS Biology test was based on overlapping learning standards in the October 2006 and April 2016 versions of the *Massachusetts Science and Technology/Engineering Curriculum Framework*. The 2006 and 2016 versions of the framework are available on the Department website at www.doe.mass.edu/frameworks.

Biology test results are reported under the following five legacy MCAS reporting categories:

- Biochemistry and Cell Biology
- Genetics
- Anatomy and Physiology
- Ecology
- Evolution and Biodiversity

The table on the next page indicates each item's reporting category and the 2006 and 2016 framework learning standards each item assesses.

Test Sessions

The MCAS high school Biology test included two separate test sessions. Each session included multiple-choice and open-response items.

Reference Materials and Tools

The high school Biology test was designed to be taken without the aid of a calculator. Students were allowed to have calculators with them during testing, but calculators were not needed to answer questions.

During both Biology test sessions, the use of bilingual word-to-word dictionaries was allowed for current and former English learner students only. No other reference materials were allowed.

Biology
February 2021 Items:
Reporting Categories and Standards

| Item No. | Legacy Reporting Category | 2006 Standard | 2016 Standard |
|-----------------|--------------------------------------|----------------------|----------------------|
| 1 | <i>Evolution and Biodiversity</i> | STE.Bio.Evo5.1 | HS.LS.4.1 |
| 2 | <i>Biochemistry and Cell Biology</i> | STE.Bio.Cell2.6 | HS.LS.1.4 |
| 3 | <i>Genetics</i> | STE.Bio.Gen3.6 | HS.LS.3.3 |
| 4 | <i>Anatomy and Physiology</i> | STE.Bio.AP4.8 | HS.LS.1.3 |
| 5 | <i>Evolution and Biodiversity</i> | STE.Bio.Evo5.2 | HS.LS.4.5 |
| 6 | <i>Ecology</i> | STE.Bio.Eco6.2 | HS.LS.2.7 |
| 7 | <i>Evolution and Biodiversity</i> | STE.Bio.Evo5.1 | HS.LS.4.1 |
| 8 | <i>Ecology</i> | STE.Bio.Eco6.3 | HS.LS.2.4 |
| 9 | <i>Anatomy and Physiology</i> | STE.Bio.AP4.4 | HS.LS.1.2 |
| 10 | <i>Ecology</i> | STE.Bio.Eco6.3 | HS.LS.2.1 |
| 11 | <i>Ecology</i> | STE.Bio.Eco6.1 | HS.LS.2.1 |
| 12 | <i>Ecology</i> | STE.Bio.Eco6.3 | HS.LS.2.1 |
| 13 | <i>Biochemistry and Cell Biology</i> | STE.Bio.Cell2.6 | HS.LS.1.4 |
| 14 | <i>Genetics</i> | STE.Bio.Gen3.3 | HS.LS.3.2 |
| 15 | <i>Evolution and Biodiversity</i> | STE.Bio.Evo5.2 | HS.LS.4.5 |
| 16 | <i>Genetics</i> | STE.Bio.Gen3.4 | HS.LS.3.3 |
| 17 | <i>Anatomy and Physiology</i> | STE.Bio.AP4.1 | HS.LS.1.2 |
| 18 | <i>Biochemistry and Cell Biology</i> | STE.Bio.CL1.2 | HS.LS.1.6 |
| 19 | <i>Ecology</i> | STE.Bio.Eco6.1 | HS.LS.2.1 |
| 20 | <i>Biochemistry and Cell Biology</i> | STE.Bio.Cell2.1 | HS.LS.1.3 |
| 21 | <i>Biochemistry and Cell Biology</i> | STE.Bio.CL1.3 | HS.LS.1.1 |
| 22 | <i>Genetics</i> | STE.Bio.Gen3.3 | HS.LS.3.2 |
| 23 | <i>Biochemistry and Cell Biology</i> | STE.Bio.CL1.2 | HS.LS.1.6 |
| 24 | <i>Biochemistry and Cell Biology</i> | STE.Bio.CL1.2 | HS.LS.1.4 |
| 25 | <i>Biochemistry and Cell Biology</i> | STE.Bio.Cell2.4 | HS.LS.1.7 |
| 26 | <i>Evolution and Biodiversity</i> | STE.Bio.Evo5.3 | HS.LS.4.2 |
| 27 | <i>Ecology</i> | STE.Bio.Eco6.3 | HS.LS.2.1 |
| 28 | <i>Biochemistry and Cell Biology</i> | STE.Bio.Cell2.7 | HS.LS.3.1 |
| 29 | <i>Anatomy and Physiology</i> | STE.Bio.AP4.2 | HS.LS.1.2 |
| 30 | <i>Ecology</i> | STE.Bio.Eco6.3 | HS.LS.2.1 |
| 31 | <i>Biochemistry and Cell Biology</i> | STE.Bio.CL1.2 | HS.LS.1.6 |
| 32 | <i>Evolution and Biodiversity</i> | STE.Bio.Evo5.1 | HS.LS.4.1 |
| 33 | <i>Ecology</i> | STE.Bio.Eco6.1 | HS.LS.2.1 |
| 34 | <i>Anatomy and Physiology</i> | STE.Bio.AP4.4 | HS.LS.1.2 |
| 35 | <i>Evolution and Biodiversity</i> | STE.Bio.Evo5.3 | HS.LS.4.2 |
| 36 | <i>Biochemistry and Cell Biology</i> | STE.Bio.CL1.2 | HS.LS.1.6 |
| 37 | <i>Genetics</i> | STE.Bio.Gen3.3 | HS.LS.3.2 |
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| 39 | <i>Genetics</i> | STE.Bio.Gen3.3 | HS.LS.3.2 |
| 40 | <i>Genetics</i> | STE.Bio.Gen3.6 | HS.LS.3.3 |
| 41 | <i>Genetics</i> | STE.Bio.Gen3.2 | HS.LS.1.4 |
| 42 | <i>Biochemistry and Cell Biology</i> | STE.Bio.CL1.3 | HS.LS.1.1 |
| 43 | <i>Evolution and Biodiversity</i> | STE.Bio.Evo5.3 | HS.LS.4.2 |
| 44 | <i>Anatomy and Physiology</i> | STE.Bio.AP4.6 | HS.LS.3.1 |
| 45 | <i>Genetics</i> | STE.Bio.Gen3.5 | HS.LS.3.3 |