

FairTest

The National Center for Fair & Open Testing

Massachusetts Mandatory State Standards and Curriculum Frameworks With Local Assessment Compel Student Learning

Massachusetts has very clear and specific standards and curriculum frameworks that dictate the skills and knowledge that each student needs to master each year. Schools and districts are required to teach to the standards and implement the frameworks. They also assess student competency in meeting the standards and learning the specific content knowledge described in clear detail by the frameworks. Furthermore, throughout their initial training and through professional development teachers learn both how to teach effectively so that students can meet these standards and how to assess effectively to ensure that they do.

The state must trust and rely upon educators to make this learning happen and ascertain whether students are learning the material. They are the only ones in a position and with the capacity to do so. Administrative supervision and district and state inspection provide requisite oversight to this process.

Replacing passage of the MCAS for graduation with a requirement that districts certify students have met the state standards based on successful completion of coursework will strengthen the accountability system by more accurately and comprehensively measuring whether students have in fact met the standards.

The current competency determination required for graduation is based on the tenth grade standards in ELA, math, and science. A quick look at a sample of the standards and the frameworks makes it obvious that students will be learning lots of subject matter content and that the **only** way to see if they have done so is through formative and summative assessments implemented by educators in schools that are directly connected to classroom learning. MCAS does not tell you whether students have met all (or even most) of the particular standards as the test is a one-off, relatively short, and very limited snapshot in time.

1. State Standards and Curriculum Frameworks Require Teaching and Learning of Specific Content and Skills

State learning standards and accompanying frameworks cover hundreds of pages, require learning of a **broad** range of knowledge and skills, and are highly specific. A sample of required competencies by the end of tenth grade is illustrative.

Mathematics

Here's something every tenth grader needs to know how to do (as found on page 113 of the Math Curriculum Frameworks) having taken Algebra I:

A. Build a function that models a relationship between two quantities.

1. Write linear, quadratic, and exponential functions that describe a relationship between two quantities.
 - Determine an explicit expression, a recursive process, or steps for calculation from a context.
 - Combine standard function types using arithmetic operations.

Here's what that means practically:

For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.

Learning how to do that takes multiple types of problems and modes of written and mathematical expressions – the work of in course evaluation. Demonstration of genuine understanding of the skill requires completion of a real-world authentic task. A standardized test like the MCAS will not effectively gauge that standard; and on a timed test covering all of algebra and geometry, there is no guarantee this particular skill will be adequately tested.

Science

In science, the standards and frameworks include specific content (like in biology, chemistry and earth science) to be learned, and practices to be demonstrated and followed. Some practices (on page 72 of the Frameworks) to be followed include:

1. Define a design problem that involves the development of a process or system with interacting components and criteria and constraints that may include social, technical, and/or environmental considerations.

2. Develop and/or use a model (including mathematical and computational) to generate data to support explanations, predict phenomena, analyze systems, and/or solve problems.
3. Plan and conduct an investigation, including deciding on the types, amount, and accuracy of data needed to produce reliable measurements, and consider limitations on the precision of the data.

MCAS cannot test whether students know how to engage in these scientific and engineering practices. Only by designing and doing experiments, analyzing data and conducting investigations, and then being assessed by their teachers, can we ascertain whether these science standards have been met.

Here is an example of a specific bit of content knowledge students are supposed to know (page 82 of the Science Frameworks):

HS-LS3-2. Make and defend a claim based on evidence that genetic variations (alleles) may result from (a) new genetic combinations via the processes of crossing over and random segregation of chromosomes during meiosis, (b) mutations that occur during replication, and/or (c) mutations caused by environmental factors. Recognize that mutations that occur in gametes can be passed to offspring.

There is both a specificity of content and mode of demonstration of knowledge required that is most effectively assessed through an authentic formative assessment task.

ELA

The fallacy of thinking that the MCAS adequately assesses what the state has determined are the skills students need to be competent is painfully evident in ELA. Those skills can **only** be developed and evaluated through assessments within academic coursework. The June 2022 MCAS ELA assessed only a fraction of the ELA standards and frameworks, and only did so in a cursory way.

The ELA Standards contain **six** distinct Speaking and Listening Standards. **None** were assessed by the June 2022 MCAS (see pp. 60-61 of June 2022 MCAS ELA). This includes such important skills as the ability to “integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally), evaluating the credibility and accuracy of each source.” (ELA SL 9-10.2).

Most of the ELA Standards assessed on the MCAS are Reading Standards. The Reading Literature (RL) Standards had a total of **nine** questions testing only five standards. Omitted standards RL 10.7-10.10 include the ability to “analyze a critical response to a work or body of literature” (RL 10.7) and probably most importantly

“Independently and proficiently read and comprehend literary texts representing a variety of genres, cultures, and perspectives . . .” (RL 10.10).

Seven of the Reading Information (RI) Standards are tested with **14** total questions. The ability of students to “analyze various accounts of a subject told in different mediums” (RI 10.7) and “analyze seminal documents of historical and literary significance” (RI 10.9) were not assessed at all.

Writing, one of the key skills expected of a high school graduate, is governed by ten different standards. In requiring two short, timed essays, the ELA MCAS purport to assess only three of those standards. Here are three skills **not** assessed by the MCAS:

- The ability to “write narratives to develop experiences or events using effective literary techniques, well-chosen details, and well-structured sequences . . .” (W 9-10.3)(there are five levels of detail further explaining the requirements of the standard).
- The ability to “develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.” (W 9-10.5).
- The ability to “conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.” (W 9-10.7).

Plainly each of these important standards can only be assessed through longer assignments, the evaluation of which comprises the elements of a course grade in ELA. They cannot be, and are not, evaluated by the time challenged MCAS format. The MCAS is not a worthy gatekeeper of a high school diploma.

2. Local School-Based Assessment and Course Grading Achieves Greater Fidelity to Standards than the MCAS

As explained in the above review of Massachusetts Standards and Curriculum Frameworks, local teacher implemented, school-based assessments and grading achieve greater fidelity to, and are a more robust reflection and measure of, the Massachusetts standards. The MCAS is a one-day snapshot with a limited number of items. Its ability to determine the extent of student learning is based on psychometric magic – a selection of items that are purported representative measures of certain standards. The tests fail to assess an important array of skills and knowledge that the state has determined are important for graduation. And they cannot hold a candle to the continuous assessment, monitoring, iteration, and grading in the local school setting.

3. The MCAS is Appropriate as a Comparative Thermostat Among Schools and Districts; It Harms Learning When High Stakes Consequences Are Attached

Under both the *Thrive Act* and the ballot question, the MCAS will still be administered to high school students and used for accountability purposes under ESSA. As a result, the ability to monitor progress and performance of schools and districts and compare them to one another remains. The MCAS can be used to identify troubling trends in order to focus resources and exceptional results that warrant closer examination and investigation into the replicability of the practices that garnered high achievement.

What MCAS scores will not be used for is the ranking, sorting and denial of diplomas for individual students. Students will be judged more appropriately on their performance and acquisition of skills and knowledge over time. As a result, a single exam will not drive daily classroom practice and teachers will not have to narrow the curriculum in anticipation of what is most likely to be on a single test.