

DRAFT CHANGES TO SUBJECT MATTER KNOWLEDGE REQUIREMENTS FOR EDUCATOR LICENSURE

PUBLIC COMMENT: WWW.SURVEYGIZMO.COM/S3/3620828/DRAFT-PUBLIC-COMMENT-SMK-UPDATES

Subject matter knowledge requirements (SMKs) outline the minimum level of content and pedagogical skills Massachusetts educators are expected to hold. SMKs establish the content assessed in Massachusetts Tests for Educator Licensure ([MTEL](#)) and guide content-area coursework for educator preparation programs. SMKs are aligned to [Massachusetts curriculum frameworks](#).

Massachusetts regulation [603 CMR 7.06](#) requires a public comment period of at least thirty days prior to any changes to the guidelines where SMKs are published. More information on the 2017 proposed changes is available at [www.doe.mass.edu/edprep](http://WWW.DOE.MASS.EDU/EDPREP).

INSTRUCTIONAL TECHNOLOGY – SPECIALIST TEACHER

CURRENT SUBJECT MATTER KNOWLEDGE REQUIREMENTS 2011-2016

INSTRUCTIONAL TECHNOLOGY, ALL LEVELS (TEACHER LICENSE)

(a) The following topics will be addressed on a test of subject matter knowledge:

1. Technology tools for word processing, databases, spreadsheets, print/graphic utilities, multi- and hypermedia, presentations, videos for the purpose of formal and informal assessment, instruction, and administration for professional and instructional use.
2. Communications and research tools such as email, World Wide Web, web browsers and other online applications that link to the state standards and requirements, for professional and instructional use.
3. Criteria for selection, evaluation, and use of appropriate computer/technology based materials to support a variety of instructional methods.
4. Ethical and social issues surrounding privacy, copyright, and crime relating to educational technology and resources.

(b) The following topics shall be included in an approved program but will not be addressed on a test of subject matter knowledge:

1. Use of resources for adaptive/assistive devices that provide access for all students.
2. Methods to support classroom teachers and other school personnel in improving student learning through appropriate use of technology in the classroom, including consultation techniques and professional development.

DRAFT CHANGES TO SUBJECT MATTER KNOWLEDGE REQUIREMENTS 2017

INSTRUCTIONAL TECHNOLOGY SPECIALIST, ALL LEVELS

The following topics will be addressed on a **subject matter knowledge test**:

(a) Understand safety and security concepts, security and recovery strategies, and how to deal with



cyberbullying and peer pressure.

- (b) Understand, analyze impact of, and apply technology laws and license agreements and permissions.
- (c) Recognize, analyze, and evaluate the impact of technology, including cybercrime and assistive technology, in people's lives, commerce, and society.
- (d) Understand what it means to be a good digital citizen.
- (e) Selection and use of appropriate digital tools and varied input techniques, such as keyboards and speech recognition software, to publish multimedia artifacts or to communicate, collaborate, or exchange information.
- (f) Use of online research skills to gather relevant information from multiple digital sources, evaluate the credibility and accuracy of sources, and appropriately attribute sources.
- (g) Understand that computing devices can take different forms and have different components.
- (h) Selection and use of a variety of computing devices and digital tools to troubleshoot and solve simple problems.
- (i) Differentiation between tasks that are best done by computing systems and humans.
- (j) Understand the components of a network and network authentication.
- (k) Basic understanding of the relationship among computing systems, networks, and services.
- (l) Understand binary and Boolean logic and how these are implemented in computer hardware and software.
- (m) Understand how graphics and text are represented in a computer system.
- (n) Basic understanding of abstractions, computer programs (such as block-based programs), algorithms, and databases.
- (o) How information can be collected, used, and presented with computing devices or digital tools.
- (p) How to create a model and use data from a simulation.
- (q) Understand how to decompose tasks/problems into sub-problems to plan solutions.
- (r) Understand how to write and analyze algorithms and block-based computer programs using an iterative design process.

The following topics shall be included in an **approved program**, but, will not be addressed on a subject matter knowledge test:

- (a) Collaboration with school and district leaders, content specialists and other stakeholders to identify the appropriate uses of technology resources to support the development, communication, and implementation of plans for improving student performance under M.G.L. c. 69, § 11.
- (b) Coaching, modeling, observation, and feedback for teachers in the integration of in-person learning and technology to improve, facilitate, and extend learning and instruction within and beyond the classroom; continuously monitor student progress to inform tailoring of instruction; individualize learning for each student; and allow students to advance to new content based upon mastery.
- (c) Strategies for achieving equitable access to digital resources outside the classroom and connecting educators, students, and parents/guardians.
- (d) Coaching of teachers and instruction to students in the safe, healthy, legal, and ethical uses of digital information and technologies in people's lives, commerce, and society.
- (e) The impact of technology on instructional practice, student learning, and resource allocation at the school and district level.
- (f) The selection, support, and evaluation of the use of assistive and adaptive technology and accessible educational materials for students and adults.

