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DRAFT CHANGES TO

SUBJECT MATTER KNOWLEDGE REQUIREMENTS

FOR EDUCATOR LICENSURE

PUBLIC COMMENT: WWW.SURVEYGIZMO.COM/S3/3620828/DRAFT-Public-Comment-SMK-Updates

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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.

DIGITAL LITERACY AND COMPUTER SCIENCE

DRAFT SUBJECT MATTER KNOWLEDGE REQUIREMENTS 2017 (NEW LICENSE FIELD)

DIGITAL LITERACY AND COMPUTER SCIENCE (DLCS), LEVEL 5-12

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

Principles and concepts in the following areas:
(a) Computing and Society
    1. Understand safety and security concepts, security and recovery strategies, and how to deal with cyberbullying and peer pressure.
    2. Understand, analyze impact and intent of, and apply technology laws, license agreements and permissions.
    3. Recognize, analyze, and evaluate the impact of technology, assistive technology, technology proficiencies, and cybercrime in people's lives, commerce, and society.
(b) Digital Tools and Collaboration
    1. Selection and use of digital tools or resources to create an artifact, solve a problem, communicate, or publish online.
    2. Use of advance research skills including advanced searches, digital source evaluation, synthesis of information and appropriate digital citation.
(c) Computing Systems
    1. Selection and use of computing devices to accomplish a real-world task.
    2. Understand how computing device components work. Use of troubleshooting strategies to solve routine hardware and software problems.
    3. Understand how networks communicate, their vulnerabilities and issues that may impact their functionality. Evaluate the benefits of using a service with respect to function and quality.
(d) Computational Thinking
    1. Decompose tasks/problems into sub-problems to plan solutions.
    2. Creation of a new representation through generalization and decomposition. Write and debug algorithms in a structured language (pseudocode).
    3. Understand how different data representation effects storage and quality. Create, modify, and manipulate data structures, data sets, and data visualizations.
    4. Use of iterative design process to create an artifact or solve a problem.
    5. Creation of models and simulations to formulate, test, analyze, and refine a hypothesis.