2009 Michigan Educational Technology Standards for Students

Grades 6-8

MICHIGAN Department of **Education**

A goal of No Child Left Behind is that schools will "*assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability.*"

The Michigan Educational Technology Standards for Students (METS-S) are aligned with the International Society for Technology in Education's (ISTE) National Educational Technology Standards for Students (NETS-S) and the Framework for 21st Century Learning. The Michigan standards are intended to provide educators with a specific set of learning expectations that can be used to drive educational technology literacy assessments.

These standards are best delivered by authentic instruction and assessment with direct curricular ties and it is intended that these Standards will be integrated into all content areas. The preparation of our students to the successful in the 21st Century is the responsibility of all educators.

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Technology Literacy
Technology literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21st century.

Universal Design for Learning (UDL)
CAST (the Center for Applied Special Technology) offers three principles to guide UDL: provide multiple means of representation; provide multiple means of expression; and provide multiple means of engagement. CAST asserts that "These UDL Guidelines will assist curriculum developers (these may include teachers, publishers, and others) in designing flexible curricula that reduce barriers to learning and provide robust learning supports to meet the needs of all learners." Educational technologies can be valuable resources for educators in addressing the UDL guidelines. For additional information on UDL, visit the CAST website: www.cast.org.

6-8.CI. Creativity and Innovation—By the end of grade 8 each student will:

6-8.CI.1. apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an audience and to support creativity

6-8.CI.2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience

6-8.CI.3. illustrate a content-related concept using a model, simulation, or concept-mapping software

6-8.CC. Communication and Collaboration—By the end of grade 8 each student will:

6-8.CC.1. use digital resources (e.g., discussion groups, blogs, podcasts, videoconferences, Moodle, Blackboard) to collaborate with peers, experts, and other audiences

6-8.CC.2. use collaborative digital tools to explore common curriculum content with learners from other cultures

6-8.CC.3. identify effective uses of technology to support communication with peers, family, or school personnel

6-8.RI. Research and Information Literacy—By the end of grade 8 each student will:

6-8.RI.1. use a variety of digital resources to locate information

6-8.RI.2. evaluate information from online information resources for accuracy and bias

6-8.RI.3. understand that using information from a single Internet source might result in the reporting of erroneous facts and that multiple sources should always be researched

6-8.RI.4. identify types of web sites based on their domain names (e.g., edu, com, org, gov, net)

6-8.RI.5. employ data-collection technologies (e.g., probes, handheld devices, GPS units, geographic mapping systems) to gather, view, and analyze the results for a content-related problem

6-8.CT. Critical Thinking, Problem Solving, and Decision Making —By the end of grade 8 each student will:

6-8.CT.1. use databases or spreadsheets to make predictions, develop strategies, and evaluate decisions to assist with solving a problem

6-8.CT.2. evaluate available digital resources and select the most appropriate application to accomplish a specific task (e, g., word processor, table, outline, spreadsheet, presentation program)

6-8.CT.3. gather data, examine patterns, and apply information for decision making using available digital resources

6-8.CT.4. describe strategies for solving routine hardware and software problems

6-8.DC. Digital Citizenship—By the end of grade 8 each student will:

6-8.DC.1. provide accurate citations when referencing information sources

6-8.DC.2. discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, viruses, file-sharing)

6-8.DC.3. discuss the consequences related to unethical use of information and communication technologies

6-8.DC.4. discuss possible societal impact of technology in the future and reflect on the importance of technology in the past

6-8.DC.5. create media-rich presentations on the appropriate and ethical use of digital tools and resources

6-8.DC.6. discuss the long term ramifications (digital footprint) of participating in questionable online activities (e.g., posting photos of risqué poses or underage drinking, making threats to others)

6-8.DC.7. describe the potential risks and dangers associated with online communications

6-8.TC. Technology Operations and Concepts—By the end of grade 8 each student will:

6-8.TC.1. identify file formats for a variety of applications (e.g., doc, xls, pdf, txt, jpg, mp3)

6-8.TC.2. use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced materials

6-8.TC.3. perform queries on existing databases

6-8.TC.4. know how to create and use various functions available in a database (e.g., filtering, sorting, charts)

6-8.TC.5. identify a variety of information storage devices (e.g., CDs, DVDs, flash drives, SD cards) and provide rationales for using a certain device for a specific purpose

6-8.TC.6. use accurate technology terminology

6-8.TC.7. use technology to identify and explore various occupations or careers, especially those related to science, technology, engineering, and mathematics

6-8.TC.8. discuss possible uses of technology to support personal pursuits and lifelong learning

6-8.TC.9. understand and discuss how assistive technologies can benefit all individuals

6-8.TC.10. discuss security issues related to e-commerce

For additional information and resources relating to the 2009 METS-S, please visit: http://www.techplan.org/METS