Montpelier Schools

Eighth Grade

Technology Applications and Information Tools

Ohio Technology Content Standards 3, 4, and 5

Scope and Sequence

Key: I – Introduce, C – Continuation, M - Mastery

Standard 3

Technology for Productivity Applications

Students learn the operations of technology through the usage of technology and productivity tools.

Skills	Level	Comments
Benchmark A: Demonstrate an understanding of concepts underlying hardware, software and connectivity.	C	
Describe how computer and multimedia technology systems work (e.g., asynchronous transfer mode—ATM, Internet protocol—IP, local area networks—LAN, wide area networks—WAN, wireless).	I	

Benchmark B: Select appropriate technology resources to solve problems and support learning.		
Skills	**Level**	**Comments**
Incorporate all available technology tools and resources to research, investigate, solve and present findings in a problem situation.	C	
Create a video production related to a class activity.	C	
Research educational video clips available online for use in class projects (e.g., consider copyright and fair use issues when selecting video clips).	C	
Demonstrate effective keyboarding skills in a word processing environment.	C	

Benchmark C: Use productivity tools to produce creative works, to prepare publications and to construct technology-enhanced models.		
Skills	**Level**	**Comments**
Use content-specific tools, software and simulations to support learning, and research societal and educational problems (e.g., economic simulations, city planning simulation, flight simulators, rapid prototyping).	C	
Apply technology resources to support personal productivity, and learning throughout the curriculum.	C	

Standard 4
Technology and Communication Applications
Students use an array of technologies and apply design concepts to communicate with multiple audiences, acquire and disseminate information, and enhance learning.

Benchmark A:
Communicate information technologically and incorporate principles of design into the creation of messages and communication products.

Skills	Level	Comments
Determine audience characteristics that impact the content of the message (e.g., level of understanding, level of interest).	I	
Differentiate audience factors that influence the selection of the communication tool (e.g., will the message be communicated to an individual or a small or large group? will the message be communicated more than once?).	I	
Examine the connections among message content, context and purpose (e.g., is the content of the message impacted by the context in which the message is given—does the context impact the purpose?).	C	
Reconstruct messages with different communication tools and determine if the tool changes the meaning of the message.	I	
Identify and practice the following Universal Design principles that ensure accessibility for all users of communication projects or products: a Image size b Alt attributes/tags c Use of tables and frames d Use of style sheets e Formatting f Use of color text legibility and readability g Fonts, formatting and captioning	C	

Benchmark B:
Develop, publish and present information in a format that is appropriate for content and audience

Skills	Level	Comments
Construct and publish information in printed and electronic form (e.g., printed reports, resumes, brochures, charts and electronic presentations, videos, Web sites).	C	
Select appropriate file types (documents, sounds, images, and multimedia) based on communication need.	C	
Evaluate information product based on content and audience (e.g., did the information communicate the intended message to the correct audience?).	C	

Benchmark C:
Select appropriate technology communication tools and design collaborative interactive projects and activities to communicate with others.

Skills	Level	Comments
Design collaborative interactive activities or projects (e.g., online election for school office, survey, data collection).	I	
Disseminate results obtained through collaborative research projects to a larger audience (e.g., post results on a Web page, e-mail to group participants).	C	
Select an appropriate communications tool to obtain and share information (e.g., e-mail, chat, message board, video-conferencing, online project).	C	
Critique e-mail to determine communication clarity, and consider appropriate operations and etiquette (e.g., reply, reply all, include original message in reply, etc.).	C	

Standard 5
Technology and Information Literacy
Students engage in information literacy strategies, use the Internet, technology tools and resources, and apply information-management skills to answer questions and expand knowledge.

Benchmark A:
Evaluate the accuracy, authority, objectivity, currency, coverage and relevance of information and data sources.

Skills	Level	Comments
Understand the structure and organization of information sources including key words, subject directory, subject search in a library catalog or search engine.	C	
Demonstrate how to determine copyright issues when creating new products: • Ask permission to use articles, quotations and graphics • Credit information to be included in the product.	I	
Examine two Web sites with opposing viewpoints and describe the objectivity and intent of the author (e.g., candidates in an election, or other public issues).	C	
Evaluate the validity of information by comparing information from different sources for accuracy (e.g., what makes the author an expert—is information the same in multiple sources?).	C	

Benchmark B:
Use technology to conduct research and follow a research process model which includes the following: develop essential question; identify resources; select, use and analyze information; synthesize and generate a product; and evaluate both process and product

Skills	Level	Comments
Formulate an essential question to guide the research process.	C	
Identify and evaluate relevant information and select pertinent information found in each source.	C	
Analyze information, finding connections that lead to a final information product.	C	
Demonstrate how to determine copyright issues when creating new products (e.g., permission to use articles and graphics, credit information to be included).	C	
Use a teacher or district designated citation or style manual to credit sources used in work (e.g., MLA style manual, APA Guidelines, or other selected style manuals).	C	
Digitize information for archiving and future use (e.g., creating an electronic portfolio of curricular projects).	I	
Revise and edit information product	C	
Evaluate final product for its adherence to project requirements (e.g., recognize weaknesses in process and product and find ways to improve).	C	

Benchmark C:
Develop search strategies, retrieve information in a variety of formats and evaluate the quality and appropriate use of Internet resources.

Skills	Level	Comments
Troubleshoot error messages in a Web browser (e.g., verify the address, use refresh and/or stop buttons).	I	
Incorporate Boolean operators in the search process for curricular needs (e.g., know the basic Boolean operators and use them in a search).	M	

Benchmark C:
Develop search strategies, retrieve information in a variety of formats and evaluate the quality and appropriate use of Internet resources.

Skills	Level	Comments
Compare information found in searches completed on different search engines (directories, spiders, meta crawlers) and discuss the differences in how search engines select, rank and display information: a Relevancy b Popularity; and c Paid placement	C	
Compare several Web sites on the same topic and evaluate the purpose of each site (e.g., use several sites for a specific curricular need and note whether the sites have similar or conflicting data).	C	

Benchmark D:
Select, access and use appropriate electronic resources for a defined information need.

Skills	Level	Comments
Select research databases that align with identified information need (e.g., specialized databases on government, science, history, as needed for assignments).	C	
Retrieve information in different types of subscription (fee-based) databases to support information for a curricular need.	C	
Locate and use advanced search features and appropriate tools such as Boolean operators (”AND,” “OR”, or “NOT”) and a thesaurus in an online database.	C	