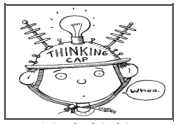
# 8th Grade Tech Apps

| Strand | Knowledge and Skill | Student Expectation |
|---|---|---|
| Creativity and Innovation | **1. The student uses creative thinking and innovative processes to construct knowledge, generate new ideas, and create products. The student is expected to:** | (A) identify, create, and use files in various formats, including text, raster and vector graphics, video, and audio files;<br>(B) create, present, and publish original works as a means of personal or group expression;<br>(C) explore complex systems or issues using models, simulations, and new technologies to develop hypotheses, modify input, and analyze results; and<br>(D) analyze trends and forecast possibilities. |
| Communication and Collaboration | **2. The student collaborates and communicates both locally and globally to reinforce and promote learning. The student is expected to:** | (A) create and manage personal learning networks to collaborate and publish with peers, experts, or others using digital tools such as blogs, wikis, audio/video communication, or other emerging technologies;<br>(B) communicate effectively with multiple audiences using a variety of media and formats; and<br>(C) create and publish products using technical writing strategies. |
| Research and Information Fluency | **3. The student acquires, analyzes, and manages content from digital resources. The student is expected to:** | (A) create a research plan to guide inquiry;<br>(B) plan, use, and evaluate various search strategies, including keyword(s) and Boolean operators;<br>(C) select and evaluate various types of digital resources for accuracy and validity; and<br>(D) process data and communicate results. |
|   Critical Thinking, Problem Solving and Decision Making | **4. The student makes informed decisions by applying critical-thinking and problem-solving skills. The student is expected to:** | (A) identify and define relevant problems and significant questions for investigation;<br>(B) plan and manage activities to develop a solution, design a computer program, or complete a project;<br>(C) collect and analyze data to identify solutions and make informed decisions;<br>(D) use multiple processes and diverse perspectives to explore alternative solutions;<br>(E) make informed decisions and support reasoning; and<br>(F) transfer current knowledge to the learning of newly encountered technologies. |
| Digital Citizenship | **5. The student practices safe, responsible, legal, and ethical behavior while using technology tools and resources. The student is expected to:** | (A) understand, explain, and practice copyright principles, including current laws, fair use guidelines, creative commons, open source, and public domain;<br>(B) practice and explain ethical acquisition of information and standard methods for citing sources;<br>(C) practice and explain safe and appropriate online behavior, personal security guidelines, digital identity, digital etiquette, and acceptable use of technology; and<br>(D) understand and explain the negative impact of inappropriate technology use, including online bullying and harassment, hacking, intentional virus setting, invasion of privacy, and piracy such as software, music, video, and other media. |
| Technology Operations and Concepts | **6. The student demonstrates a thorough understanding of technology concepts, systems, and operations. The student is expected to:** | **(A) define and use current technology terminology appropriately;**<br>**(B) evaluate and select technology tools based on licensing, application, and support;**<br>**(C) identify, understand, and use operating systems;**<br>**(D) understand and use software applications, including selecting and using software for a defined task;**<br>**(E) identify, understand, and use hardware systems;**<br>**(F) apply troubleshooting techniques, including restarting systems, checking power issues, resolving software compatibility, verifying network connectivity, connecting to remote resources, and modifying display properties;**<br>**(G) implement effective file management strategies such as file naming conventions, location, backup, hierarchy, folder structure, file conversion, tags, labels, and emerging digital organizational strategies;**<br>**(H) evaluate how changes in technology throughout history have impacted various areas of study;**<br>**(I) evaluate the relevance of technology as it applies to college and career readiness, life-long learning, and daily living;**<br>**(J) use a variety of local and remote input sources;**<br>**(K) use keyboarding techniques and ergonomic strategies while building speed and accuracy;**<br>**(L) create and edit files with productivity tools, including:**<br>**(i) a word processing document using digital typography standards such as page layout, font formatting, paragraph formatting, mail merge, and list attributes;**<br>**(ii) a spreadsheet workbook using advanced computational and graphic components such as complex formulas, advanced functions, data types, and chart generation;**<br>**(iii) a database by manipulating components, including defining fields, entering data, and designing layouts appropriate for reporting; and**<br>**(iv) a digital publication using relevant publication standards and graphic design principles;**<br>**(M) plan and create non-linear media projects using graphic design principles; and**<br>**(N) integrate two or more technology tools to create a new digital product.** |

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