Texas CTE: Science, Technology, Engineering, and Mathematics

Web Communications

Knowledge and skills. WEBCOMM

1 Creativity and innovation. The student demonstrates creative thinking, constructs knowledge, and develops innovative products and processes using technology. The student is expected to: WEBCOMM1

- A demonstrate proficiency in the use of local and online collaboration; WEBCOMM1A
- B create websites using web editors or web authoring programs; WEBCOMM1B
- C evaluate the accessibility and usability of original websites; and WEBCOMM1C
- D conceptualize possible technologies based on current technical trends. WEBCOMM1D

2 Communication and collaboration. The student uses digital technology to work collaboratively toward his or her own learning and the learning of others. The student is expected to: WEBCOMM2

- A analyze and implement the proper and acceptable use of digital/virtual communications technologies such as instant messaging (IM), chat, email, and social networking; WEBCOMM2A
- B define and implement the acquisition, sharing, and use of files taking into consideration primary ownership and copyright; WEBCOMM2B
- C apply decisions regarding the selection, acquisition, and sharing of uniform resource locators (URLs) used in research, taking into consideration their quality, appropriateness, and effectiveness; and WEBCOMM2C
- D solve problems using critical-thinking strategies. WEBCOMM2D

3 Research and information fluency. The student applies digital tools to gather, evaluate, and use information. The student is expected to: WEBCOMM3

- A verify the accuracy, validity, and currency of acquired information; WEBCOMM3A
- B conduct effective searches using Boolean operators; WEBCOMM3B
- C acquire and use appropriate vocabulary terms; WEBCOMM3C
- D cite sources appropriately using established methods; WEBCOMM3D
- E model ethical and legal acquisition of digital information following guidelines in the student code of conduct, including plagiarism and copyright laws; WEBCOMM3E
- F identify and discuss emerging technologies and their impact; WEBCOMM3F
- G understand Internet history and structure and how they impact current use; and WEBCOMM3G
- I demonstrate appropriate use of grammar, spelling, and vocabulary when creating original work. WEBCOMM3H

Skip to main content

4 **Critical thinking, problem solving, and decision making. The student uses critical-thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. The student is expected to:** WEBCOMM4

- A demonstrate the transfer and adaptation of knowledge through the creation of original work; WEBCOMM4A
- B evaluate and implement security measures such as firewalls and Hypertext Transfer Protocol Secure (HTTPS) to protect original work; WEBCOMM4B
- C analyze and follow timelines needed to create, edit, and present original work; WEBCOMM4C
- D verify current licensing issues for software being used for the creation of original work; WEBCOMM4D
- E identify and evaluate the design and functionality of web pages using rubrics; WEBCOMM4E
- F optimize web information for fast download such as dial-up and high-speed Internet and mobile devices; and WEBCOMM4F
- G evaluate original work through self-, peer, and professional review of websites. WEBCOMM4G

5 **Digital citizenship. The student understands human, cultural, and societal issues related to technology and practices legal and ethical behavior. The student is expected to:** WEBCOMM5

- A engage in online activities that follow appropriate behavioral, communication, and privacy guidelines, including ethics, personal security, and verbiage determined by the intended audience; WEBCOMM5A
- B understand the negative impact of inappropriate technology use, including online bullying and harassment; WEBCOMM5B
- C implement online security guidelines, including identity protection, limited personal information sharing, and password protection of a secure website; and WEBCOMM5C
- D advocate and practice safe, legal, and responsible use of information and technology. WEBCOMM5D

6 **Technology operations and concepts. The student demonstrates a sound understanding of technology concepts, systems, and operations. The student is expected to:** WEBCOMM6

- A demonstrate knowledge of hardware such as scanners, cameras, printers, video cameras, and external hard drives; WEBCOMM6A
- B identify the parts of a computer and explain their functions; WEBCOMM6B
- C summarize the need, functionality, and use of servers; WEBCOMM6C
- D identify the advantages and disadvantages of running a personal web server versus using a web server provider; WEBCOMM6D

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E differentiate and appropriately use various input, processing, output, and primary/secondary storage devices; WEBCOMM6E

F create and implement universally accessible documents; WEBCOMM6F

G analyze bandwidth issues as they relate to audience, servers, connectivity, and cost; WEBCOMM6G

H establish a folder/directory hierarchy for storage of a web page and its related or linked files; WEBCOMM6H

I follow file and folder naming conventions, including spacing, special characters, and capitalization; and WEBCOMM6I

J identify basic design principles when creating a website. WEBCOMM6J