Subject: Technology Applications
Grade: 07
Expectations: 36
Breakouts: 97

(a) Introduction.   -thinking skills, higher-order thinking, and innovative problem solving. Technology applications incorporates the study of digital tools, devices, communication, and programming to empower students to apply current and emerging technologies in their careers, their education, and beyond.

2. The technology applications Texas Essential Knowledge and Skills (TEKS) consist of five strands that prepare students to be literate in technology applications by Grade 8: computational thinking; creativity and innovation; data literacy, management, and representation; digital citizenship; and practical technology concepts. Communication and collaboration skills are embedded across the strands.

    a. Computational thinking. Students break down the problem-

(B)

(B) discuss and implement a design process that includes planning and selecting digital tools to develop and refine a prototype or model through trial and error; and

    (i) discuss a design process that includes planning digital tools to develop a prototype or model through trial and error

    (ii) discuss a design process that includes selecting digital tools to develop a prototype or model through trial and error

    (iii) discuss a design process that includes planning digital tools to refine a prototype or model through trial and error

    (iv) discuss a design process that includes selecting digital tools to refine a prototype or model through trial and error

    (v) implement a design process that includes planning digital tools to develop a prototype or model through trial and error

    (vi) implement a design process that includes selecting digital tools to develop a prototype or model through trial and error

    (vii) implement a design process that includes planning digital tools to refine a prototype or model through trial and error

    (viii) implement a design process that includes selecting digital tools to refine a prototype or model through trial and error

(C) identify how the design process is used in various industries.

    (i) identify how the design process is used in various industries

(4) Creativity and innovation--emerging technologies. The student demonstrates a thorough understanding of the role of technology throughout history and its impact on societies. The student is expected to:

(A) explain how changes in technology throughout history have impacted various areas of study;

    (i) explain how changes in technology throughout history have impacted various areas of study

(B) explain how global trends impact the development of technology; and

    (i) explain how global trends impact the development of technology

(C) transfer current knowledge to the learning of newly encountered technologies.

    (i) transfer current knowledge to the learning of newly encountered technologies

(5) Data literacy, management, and representation--collect data. The student uses advanced digital strategies to collect and represent data. The student is expected to:

(A) demonstrate how data can be represented in a binary number system; and

    (i) demonstrate how data can be represented in a binary number system

(B) evaluate advanced search strategies, including keywords, Boolean operators, and limiters.

    (i) evaluate advanced search strategies, including keywords

    (ii) evaluate advanced search strategies, including Boolean operators

    (iii) evaluate advanced search strategies, including limiters

(6) Data literacy, management, and representation--organize, manage, and analyze data. The student uses digital tools to transform data, make inferences, and predictions. The student is expected to use digital tools in order to transform data to analyze trends and make inferences and predictions.

    (A) use digital tools in order to transform data to analyze trends and make inferences and predictions.

        (i) use digital tools in order to transform data to analyze trends

        (ii) use digital tools in order to transform data to make inferences

        (iii) use digital tools in order to transform data to make predictions

(7) Data literacy, management, and representation--communicate and publish results. The student creates digital products to communicate data to an audience for an intended purpose. The student is expected to use digital tools to communicate and display data from a product or process to inform or persuade an intended audience.

    (A) use digital tools to communicate and display data from a product or process to inform or persuade an intended audience.

        (i) use digital tools to communicate data from a product or process to inform or persuade an intended audience

        (ii) use digital tools to display data from a product or process to inform or persuade an intended audience

(8) Digital citizenship--social interactions. The student understands different styles of digital communication and that a student's actions online can have a long-term impact. The student is expected to:

    (A) classify actions as having a positive or negative effect on a digital footprint;

        (i) classify actions as having a positive or negative effect on a digital footprint

    (B) create and revise formal and informal communications using a feedback process and appropriate digital etiquette; and

        (i) create formal communications using a feedback process

        (ii) create formal communications using appropriate digital etiquette

        (iii)

      (ii)   practice safe online behaviors

      (iii)   practice ethical online behaviors

      (iv)   practice positive online behaviors

      (v)   model safe online behaviors

      (vi)   model ethical online behaviors

      (vii)   model positive online behaviors

(B) explain the importance of intellectual property laws, including the benefits of protection for content owners, and the consequences of violating these laws;

      (i)   explain the importance of intellectual property laws, including the benefits of protection for content owners

      (ii)   explain the importance of intellectual property laws, including the consequences of violating these laws

(C) create citations and cite sources for a variety of digital forms of intellectual property; and

      (i)   create citations for a variety of digital forms of intellectual property

      (ii)   cite sources for a variety of digital forms of intellectual property

(D) evaluate how various types of media, including social media, and technology can be used to exaggerate and misrepresent information.

      (i)   evaluate how various types of media, including social media, can be used to exaggerate information

      (ii)   evaluate how various types of media, including social media, can be used to misrepresent information

      (iii)   evaluate how technology can be used to exaggerate information

      (iv)   evaluate how technology can be used to misrepresent information

(10) Digital citizenship--privacy, safety, and security. The student practices safe, legal, and ethical digital behaviors to become a socially responsible digital citizen. The student is expected to:

(A) describe and model ways to protect oneself from real-world cybersecurity attacks; and

      (i)   describe ways to protect oneself from real-world cybersecurity attacks

      (ii)   model ways to protect oneself from real-world cybersecurity attacks

(B) analyze the negative impacts of cyberbullying on the victim and the bully.

      (i)   analyze the negative impacts of cyberbullying on the victim

      (ii)   analyze the negative impacts of cyberbullying on the bully

(11) Practical technology concepts--processes. The student evaluates and selects appropriate methods or techniques for an independent project and identifies and solves common hardware and software problems using troubleshooting strategies. The student is expected to choose a variety of digital tools to create, share, and communicate digital artifacts.

(A) choose a variety of digital tools to create, share, and communicate digital artifacts.

      (i)   choose a variety of digital tools to create digital artifacts

      (ii)   choose a variety of digital tools to share digital artifacts

      (iii)   choose a variety of digital tools to communicate digital artifacts

(12) Practical technology concepts--skills and tools. The student leverages technology systems, concepts, and operations to produce digital artifacts. The student is expected to:

    (A) demonstrate proficiency in the appropriate use of technology terminology in projects through team collaboration and communication;

        (i)   demonstrate proficiency in the appropriate use of technology terminology in projects through team collaboration

        (ii)   demonstrate proficiency in the appropriate use of technology terminology in projects through team communication

    (B) demonstrate effective file management strategies such as file naming conventions, local and remote locations, backup, hierarchy, folder structure, file conversion, tags, and emerging digital organizational strategies with assistance;

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(ii)   use a variety of types of remote data storage to store or share data

(H) select and use productivity tools found in spread sheet, word processing, and publication applications to create digital artifacts such as reports, graphs, and charts with increasing complexity.

(i)   select productivity tools found in spread sheet [applications] to create digital artifacts with increasing complexity

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