

# Technology Applications, Grade 8

Subject: Technology Applications

Grade: 08

Expectations: 38

Breakouts: 127

## (a) Introduction.

1. Technology includes data communication, data processing, and the devices used for these tasks locally and across networks. Learning to apply these technologies motivates students to develop critical-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-



- (ii) demonstrate innovation in a design process using personal character traits, including demonstrating calculated risk-taking
  - (iii) demonstrate innovation in a design process using personal character traits, including demonstrating tolerance
- (B) discuss and implement a design process that includes planning, selecting digital tools to develop, test, and evaluate design limitations, and refining a prototype or model; and

- (iv) compare and contrast data types, including Boolean data
  - (v) compare and contrast data types, including text-based representations
- (B) apply appropriate search strategies, including keywords, Boolean operators, and limiters, to achieve a specified outcome that includes a variety of file formats.
- (i) apply appropriate search strategies, including keywords, to achieve a specified outcome that includes a variety of file formats
  - (ii) apply appropriate search strategies, including Boolean operators, to achieve a specified outcome that includes a variety of file formats
  - (iii) apply appropriate search strategies, including limiters, to achieve a specified outcome that includes a variety of file formats
- (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, analyze trends, and predict possibilities and develop steps for the creation of an innovative process or product.
- (A) use digital tools in order to transform data, analyze trends, and predict possibilities and develop steps for the creation of an innovative process or product.
- (i) use digital tools in order to transform data for the creation of an innovative process or product
  - (ii) use digital tools in order to analyze trends for the creation of an innovative process or product
  - (iii) use digital tools in order to predict possibilities for the creation of an innovative process or product
  - (iv) use digital tools in order to develop steps for the creation of an innovative process or product
- (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 publish data from a product or process to persuade an intended audience.
- (A) use digital tools to communicate and publish data from a product or process to persuade an intended audience.
- (i) use digital tools to communicate data from a product or process to persuade an intended audience
  - (ii) use digital tools to publish data from a product or process to 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) analyze the importance of managing a digital footprint and how a digital footprint can affect the future;
- (i) analyze the importance of managing a digital footprint
  - (ii) analyze how a digital footprint can affect the future
- (B) create and publish a formal digital communication for a global audience using appropriate digital etiquette; and
- (i) create a formal digital communication for a global audience using appropriate digital etiquette
  - (ii) publish a formal digital communication for a global audience using appropriate digital etiquette
- (C) collaborate and publish for a global audience on digital platforms such as recording and editing videos using appropriate formal and informal digital etiquette.
- (i) collaborate for a global audience on digital

- (iii) publish for a global audience on digital platforms using appropriate formal digital etiquette
  - (iv) publish for a global audience on digital platforms using appropriate informal digital etiquette
- (9) Digital citizenship--ethics and laws. The student recognizes and practices responsible, legal, and ethical behavior while using digital tools and resources. The student is expected to:
- (A) adhere to local acceptable use policy (AUP) and practice and advocate for safe, ethical, and positive online behaviors;
    - (i) adhere to local acceptable use policy (AUP)
    - (ii) practice safe online behaviors
    - (iii) practice ethical online behaviors
    - (iv)
      - (i)
      - )





- (ix) select productivity tools found in publication applications to create digital artifacts, including charts, with increasing complexity
- (x) use productivity tools found in spread sheet [applications] to create digital artifacts, including reports with increasing complexity
- (xi) use productivity tools found in word processing [applications] to create digital artifacts, including reports with increasing complexity
- (xii) use productivity tools found in publication applications to create digital artifacts, including reports, with increasing complexity
- (xiii) use productivity tools found in spread sheet [applications] to create digital artifacts, including graphs with increasing complexity
- (xiv) use productivity tools found in word processing [applications] to create digital artifacts, including graphs with increasing complexity
- (xv) use productivity tools found in publication applications to create digital artifacts, including graphs, with increasing complexity
- (xvi) use productivity tools found in spread sheet [applications] to create digital artifacts, including charts with increasing complexity
- (xvii) use productivity tools found in word processing [applications] to create digital artifacts, including charts with increasing complexity
- (xviii) use productivity tools found in publication applications to create digital artifacts, including charts, with increasing complexity