Technology Applications, Grade 5

Subject: Technology Applications
Grade: 05
Expectations: 30
Breakouts: 85

(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-solving process into four steps: decomposition, pattern recognition, abstraction, and algorithms.

    b. Creativity and innovation. Students use innovative design processes to develop solutions to problems. Students plan a solution, create the solution, test the solution, iterate, and debug the solution as needed, and implement a completely new and innovative product.

    e. Practical technology concepts. Students build their knowledge of s keyboarding and use of applications and tools. Students also build including integrating the use of multiple applications.

3. The technology applications TEKS can be integrated into all content areas a have the flexibility of offering technology applications in a variety of setting integrating the technology applications standards in the essential knowledg areas.

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(3) Creativity and innovation--innovative design process. The student takes an active role in learning by using a design process to solve authentic problems for a local or global audience, using a variety of technologies. The student is expected to:

    (A) explain the importance of and demonstrate personal skills and behaviors, including persistence, effective communication, following directions, mental agility, metacognition, problem solving and questioning, that are needed to implement a design process successfully; and

        (i) explain the importance of personal skills and behaviors, including persistence, that are needed to implement a design process successfully

        (ii) explain the importance of personal skills and behaviors, including effective comnme7-6.9 (e)finoАMD 16 ;9 (o)-4.1 ()

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

    (A) identify and collect quantitative and qualitative data with digital tools; and

        (i) identify quantitative data with digital tools

        (ii) identify qualitative data with digital tools

        (iii) collect quantitative data with digital tools

        (iv) collect qualitative data with digital tools

    (B) identify keyword(s), Boolean operators, and limiters within provided search strategies.

        (i) identify keyword(s) within provided search strategies

        (ii) identify Boolean operators within provided search strategies

        (iii) identify limiters within provided search strategies

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

    (A) use digital tools to analyze and transform data and make inferences to answer questions.

        (i) use digital tools to analyze data to answer questions

        (ii) use digital tools to transform data to answer questions

        (iii) use digital tools to make inferences to answer questions

(7) Data literacy, management, and representation--communicate and publish results. The student communicates data through the use of digital tools to inform an audience. The student is expected to use digital tools to communicate and display data using appropriate visualization to inform an intended audience.

    (A) use digital tools to communicate and display data using appropriate visualization to inform an intended audience.

        (i) use digital tools to communicate data using appropriate visualization to inform an intended audience

        (ii) use digital tools to display data using appropriate visualization to inform an intended audience

(8)

(A) demonstrate adherence to local acceptable use policy (AUP) and explain the importance of responsible and ethical technology use;

    (i) demonstrate adherence to local acceptable use policy (AUP)

    (ii) explain the importance of responsible technology use

    (iii) explain the importance of ethical technology use

(B) describe the purpose of copyright law and the possible consequences for inappropriate use of digital content; and

    (i) describe the purpose of copyright law

    (ii) describe the possible consequences for inappropriate use of digital content

(C) create citations for digitaea Tc 0.004 Tw 0.66p 7.807r002 Td dy

(B) perform software application functions, including inserting or deleting text and images and formatting tools or options.

    (i) perform software application functions, including inserting or deleting text

    (ii) perform software application functions, including inserting or deleting images

    (iii) perform software application functions, including formatting tools or options

(12) Practical technology concepts--skills and tools. The student selects appropriate methods or techniques for an assigned task and identifies and solves simple hardware and software problems using common troubleshooting strategies. The student is expected to:

(A) describe and evaluate operating systems, learning management systems, virtual systems, and network systems such as internet, intranet, wireless network, and short-range wireless technology;

    (i) describe operating systems

    (ii) describe learning management systems

    (iii) describe virtual systems

    (iv) describe network systems

    (v) evaluate operating systems

    (vi) evaluate learning management systems

    (vii) evaluate virtual systems

    (viii) evaluate network systems

(B) organize files using appropriate naming conventions and folder structures;

    (i) organize files using appropriate naming conventions

    (ii) organize files using appropriate folder structures

(C) demonstrate proper touch keyboarding techniques with increasing speed and accuracy and ergonomic strategies such as correct hand and body positions;

    (i) demonstrate proper touch keyboarding techniques with increasing speed

    (ii) demonstrate proper touch keyboarding techniques with increasing accuracy

    (iii) demonstrate proper [keyboarding] ergonomic strategies

(D) demonstrate keyboard or other input device shortcuts with fluency; and

    (i) demonstrate keyboard or other input device shortcuts with fluency

(E) use help sources to research application features and solve software issues.

    (i) use help sources to research application features

    (ii) use help sources to solve software issues