CompuScholar, Inc.

Correlations to the Texas Essential Knowledge and Skills (TEKS):
Technology Applications - 8th Grade

Texas Course Details:

Chapter	Chapter 126. Texas Essential Knowledge and Skills for Technology Applications
Subchapter	Subchapter B. Middle School
Course	§126.19. Technology Applications, Grade 8 (Adopted 2022)
Standards Link	Subchapter B (Middle School)
TEKS Coverage	100%

CompuScholar Course Details:

Course Title:	Tech Essentials
Course ISBN:	978-1-946113-03-0
Course Year:	2023

Course Standards

Note 1: Citation(s) listed may represent a subset of the instances where objectives are met throughout the course.

Note 2: Citation(s) for a "Lesson" refer to the "Lesson Text" elements and associated "Activities" within the course unless otherwise noted. The "Instructional Video" components are supplements designed to introduce or re-enforce the main lesson concepts, and the Lesson Text contains full details.

Knowledge and Skills Statement: (1) Computational thinking--foundations. The student explores the core concepts of computational thinking, a set of problem-solving processes that involve decomposition, pattern recognition, abstraction, and algorithms. The student is expected to:	
Student Expectation	**CITATION(S)**
(A) decompose real-world problems into structured parts using pseudocode;	Chapter 10, Lesson 3
(B) analyze the patterns and sequences found in pseudocode and identify its variables;	Chapter 10, Lesson 3
(C) practice abstraction by developing a generalized algorithm that can solve different types of problems;	Chapter 10, Lesson 1
(D) design a plan collaboratively using pseudocode to document a problem, possible solutions, and an expected timeline for the development of a coded solution;	Chapter 10, Lesson 3 Chapter 11, Lessons 1-2
(E) develop, compare, and improve algorithms for a specific task to solve a problem; and	Chapter 10, Lesson 1
(F) analyze the benefits of using iteration (code and sequence repetition) in algorithms.	Chapter 9, Lesson 3 Chapter 10, Lesson 2

Knowledge and Skills Statement: (2) Computational thinking--applications. The student applies the fundamentals of computer science. The student is expected to:	
Student Expectation	**CITATION(S)**
(A) construct named variables with multiple data types and perform operations on their values;	Chapter 8, Lessons 3-4 Chapter 9, Lesson 1
(B) use a software design process to create text-based programs with nested loops that address different subproblems within a real-world context; and	Chapter 9, Lesson 4
(C) modify and implement previously written code to develop improved programs.	Chapter 10, Lessons 1,4

Knowledge and Skills Statement: (3) Creativity and innovation--innovative design process. The student takes an active role in learning by using a design process and creative thinking to develop and evaluate solutions, considering a variety of local and global perspectives. The student is expected to:	
Student Expectation	**CITATION(S)**
(A) demonstrate innovation in a design process using goal setting and personal character traits, including demonstrating calculated risk-taking and tolerance;	Chapter 11, Lesson 4
(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	Chapter 11, Lessons 2-3
(C) identify how the design process is used in various industries.	Chapter 11, Lessons 1-2

Knowledge and Skills Statement: (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:	
Student Expectation	**CITATION(S)**
(A) evaluate how changes in technology throughout history have impacted various areas of study;	Chapter 12, Lesson 4
(B) evaluate and predict how global trends impact the development of technology; and	Chapter 12, Lesson 4
(C) transfer current knowledge to the learning of newly encountered technologies.	Chapter 12, Lesson 4

Knowledge and Skills Statement: (5) Data literacy, management, and representation--collect data. The student uses advanced digital strategies to collect and represent data. The student is expected to:	
Student Expectation	**CITATION(S)**
(A) compare and contrast data types, including binary, integers, real numbers, Boolean data, and text-based representations; and	Chapter 8, Lesson 3
(B) apply appropriate search strategies, including keywords, Boolean operators, and limiters, to achieve a specified outcome that includes a variety of file formats.	Chapter 5, Lesson 1

Knowledge and Skills Statement: (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:	
Student Expectation	**CITATION(S)**
… 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.	Chapter 2, Lesson 4

Knowledge and Skills Statement: (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:	
Student Expectation	**CITATION(S)**
… use digital tools to communicate and publish data from a product or process to persuade an intended audience.	Chapter 6, Lesson 4 Chapter 7, Lessons 3-4

Knowledge and Skills Statement: (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:	
Student Expectation	**CITATION(S)**
(A) analyze the importance of managing a digital footprint and how a digital footprint can affect the future;	Chapter 12, Lesson 1
(B) create and publish a formal digital communication for a global audience using appropriate digital etiquette; and	Chapter 7, Lessons 2-3
(C) collaborate and publish for a global audience on digital platforms such as recording and editing videos using appropriate formal and informal digital etiquette.	Chapter 7, Lessons 2-3

Knowledge and Skills Statement: (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:	
Student Expectation	**CITATION(S)**
(A) adhere to local acceptable use policy (AUP) and practice and advocate for safe, ethical, and positive online behaviors;	Chapter 12, Lesson 2 Chapter 13, Lessons 1-2
(B) adhere to appropriate intellectual property law when creating digital products;	Chapter 12, Lesson 3
(C) create citations and cite sources for a variety of digital forms of intellectual property; and	Chapter 5, Lesson 3 Chapter 12, Lesson 3
(D) evaluate the bias of digital information sources, including websites.	Chapter 5, Lesson 3

Knowledge and Skills Statement: (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:	
Student Expectation	**CITATION(S)**
(A) analyze real-world scenarios to identify cybersecurity threats and propose ways to prevent harm; and	Chapter 13, Lessons 1-2
(B) evaluate scenarios or case studies to identify warning signs of a cyberbullying victim such as withdrawal or lack of sleep and predict the outcomes for both the victim and the bully.	Chapter 13, Lesson 3

Knowledge and Skills Statement: (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:	
Student Expectation	**CITATION(S)**
(A) combine various file formats for a specific project or audience; and	Chapter 3, Lessons 4-5 Chapter 6, Lessons 4-5
(B) share and seek feedback on files in various formats, including text, raster and vector graphics, video, and audio files.	Chapter 5, Lesson 5 Chapter 4, Lessons 1-4

Knowledge and Skills Statement: (12) Practical technology concepts--skills and tools. The student leverages technology systems, concepts, and operations to produce digital artifacts. The student is expected to:	
Student Expectation	**CITATION(S)**
(A) integrate use of appropriate technology terminology in scholarly inquiry and dialogue such as classroom discussion and written samples;	Chapter 2, Lesson 3 Chapter 5, Lesson 3 Chapter 7, Lesson 2

(B) implement effective file management strategies independently, including file naming conventions, local and remote locations, backup, hierarchy, folder structure, file conversion, tags, and emerging digital organizational strategies;	Chapter 1, Lessons 1-4 Chapter 2, Lesson 5 Chapter 4, Lessons 1, 3
(C) select and use appropriate platform and tools, including selecting and using software or hardware to transfer data;	Chapter 1, Lesson 4 Chapter 3, Lesson 5 Chapter 4, Lesson 1
(D) demonstrate improvement in speed and accuracy as measured by words per minute when applying correct keyboarding techniques;	Chapter 3, Lesson 6
(E) select and use appropriate shortcuts within applications;	Chapter 2, Lesson 2 Chapter 3, Lesson 2
(F) apply appropriate troubleshooting techniques and seek technical assistance as needed;	Chapter 5, Lesson 2 Chapter 10, lesson 4
(G) compare types of local and remote data storage such as cloud architecture or local server and select the appropriate type of storage to store and share data; and	Chapter 1, Lessons 2, 4 Chapter 3, Lesson 5
(H) select and use productivity tools found in spread sheet, word processing, and publication applications to create digital artifacts, including reports, graphs, and charts, with increasing complexity.	Chapter 2, Lessons 3, 5 Chapter 3, Lessons 4, 5 Chapter 6, Lessons 4, 6