CompuScholar, Inc.

Alignment to the Oklahoma Academic Standards (OAS) for

Education Technology

Tech Essentials

Oklahoma Standards Information:

OAS Page	Oklahoma Academic Standards
Standards Link:	2016 ISTE Standards for Students

CompuScholar Course Details:

Course Title:	Tech Essentials
Course ISBN:	978-1-946113-03-0
Course Year:	2024

Course Description

CompuScholar's ***Tech Essentials*** curriculum is commonly used for **Digital Literacy or Computer Skills** courses in middle schools. The course covers introductory computer topics such as files, word processors, spreadsheets, presentation apps, digital citizenship, cybersecurity, and coding concepts.

Oklahoma Subject Codes

This course is best used as a primary resource for the following subjects:

1336 - Computer / Tech Literacy

1337 - Computer Applications

Oklahoma Academic Standards (OAS) for Education Technology (ISTE)

Note 1: Citation(s) for a "Lesson" refer to the "**Lesson Text**" page where instruction of concepts is found. Additional hands-on practice can be found in the nearby "**Chapter Activity**" pages within that chapter.

Note 2: The "Instructional Video" components are optional supplements designed to introduce or reinforce the main lesson concepts and are not cited as standards-bearing content.

Note 3: Citation(s) to "Supplemental" or "Suppl." Chapters refer to Supplemental Chapters found at the end of the course.

1. Empowered Learner	CITATIONS
a. articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.	Chapter 1, "Welcome to the Tech Essentials Course"

b. build networks and customize their learning environments in ways that support the learning process.	Each student can optionally watch instructional videos before or after reading the lesson text or not at all, based on personal learning preferences. Students will also select software packages to learn that are appropriate for their environment. See Lesson 1 in Chapters 2, 3, 4, and 6 as examples.
c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.	Soliciting and incorporating feedback from peers and teachers is an integral part of many exercises. See: Chapter 3, Lesson 5 Chapter 4, Lessons 2, 3 Chapter 7, Lesson 1 & Activity 3 Chapter 11, Lesson 1
d. understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.	Technology operations are covered throughout the course. Students will also select software packages to learn that are appropriate for their environment. See Lesson 1 in Chapters 2, 3, 4, and 6 as examples. See Chapter 5, Lesson 2 and Chapter 10, Lesson 4 for troubleshooting. See Chapter 12, Lesson 4 for applying knowledge to explore new technologies.

2. Digital Citizen	**CITATIONS**
a. cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.	Chapter 12, Lesson 1
b. engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.	Chapter 12, Lessons 1, 2 Chapter 13
c. demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.	Chapter 12, Lesson 3
d. manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.	Chapter 12, Lesson 1

3. Knowledge Constructor	**CITATIONS**
a. plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.	Chapter 5, Lesson 1 Chapter 7, Lesson 1 & Activity 1
b. evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.	Chapter 5, Lesson 3 Chapter 7, Activity 1

c. curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.	Students learn to use spreadsheets, word processors, and presentation apps in Chapters 2, 3, and 6. Students learn how to fuse elements of those apps together as needed - e.g. placing spreadsheet chart in a word processing document (Chapter 3, Lesson 4) and presentation (Chapter 6, Lesson 4). Students also learn how to create or edit multimedia artifacts (images, etc.) in Chapter 4 and integrate those into presentations in Chapter 6, Lesson 5. The group presentation project in Chapter 7 incorporates all artifacts from multiple apps.
d. build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.	Chapter 7, Lesson 1 and Activities 1, 2, 3 Chapter 11, Lesson 4 and Activities 1, 2, 3 Chapter 13 Activity

4. Innovative Designer	**CITATIONS**
a. know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.	Students learn and apply classic SDLC (Software Development LifeCycle) stages including requirements, design, implementation, and testing in Chapter 11.
b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.	Students will select and use digital tools for collaboration, documentation, coding, and testing in Chapter 11.
c. develop, test and refine prototypes as part of a cyclical design process.	Students learn and apply classic SDLC (Software Development LifeCycle) stages including iterative test plans in Chapter 11, Lesson 3 and Activity 4.
d. exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.	Chapters 7 and 11 both provide opportunities to work on self-directed, open-ended projects with minimal guidelines.

5. Computational Thinker	**CITATIONS**
a. formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.	Chapter 2, Lessons 3, 4 (spreadsheet-assisted data analysis) Chapter 7, Lesson 4 and Activities 1, 2 (leveraging data to explore topics and draw conclusions)
b. collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.	Chapter 2, Lessons 3, 4 (spreadsheet-assisted data analysis) Chapter 7, Lesson 4 and Activities 1, 2 (collecting creative data and representing in multiple ways within a unique project)
c. break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.	Chapter 10, Lessons 1, 2, 3 (algorithm analysis, flowcharting, and pseudocode)

d. understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.	Chapters 8, 9, and 10 cover introductory coding concepts such a sequence, decision-making, and looping to create algorithms. See also Chapter 10, Lesson 4 for testing (debugging).

6. Creative Communicator	**CITATIONS**
a. choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.	Students will select software packages that are appropriate for their tasks - see Lesson 1 in Chapters 2, 3, 4, and 6 as examples. See also Chapter 7, Lesson 3 for selection of collaboration tools.
b. create original works or responsibly repurpose or remix digital resources into new creations.	Students create original digital artifacts in several chapter activities. See the activities in Chapters 4, 6, 7, 11 as examples.
c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.	See the Chapter 7 project for presenting a unique topic through charts, slides, and other visual aids. See Chapter 10, Lessons 1, 2, 3 for modeling algorithms using abstraction, flowcharts, and pseudocode.
d. publish or present content that customizes the message and medium for their intended audiences.	Chapter 7, Lessons 2, 4 and Activity 3

7. Global Collaborator	**CITATIONS**
a. use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.	Chapter 5 (learning & getting help online) Chapter 7, Lesson 1 (teamwork) Chapter 7, Lesson 3 (collaboration tools) Chapter 7 Activities (gain understanding of a topic)
b. use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.	Chapter 1, Lesson 4 (cloud storage & collaboration) Chapter 3, Lesson 3 (publishing & sharing docs online) Chapter 7, Lesson 3 (collaboration tools) Chapter 7 and 11 (group projects)
c. contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.	See Chapters 7 and 11 for comprehensive team projects.
d. explore local and global issues and use collaborative technologies to work with others to investigate solutions.	Chapter 3, Lesson 3 (publishing & sharing docs online) Chapter 7, Lesson 3 (collaboration tools) Chapter 7 (group project allows teams to explore any local or global issue)