

## CompuScholar, Inc.

### Alignment to Alabama Digital Literacy and Computer Science Standards

#### 8th Grade

#### Alabama Course Details:

<b>Course Title:</b>	Digital Literacy and Computer Science
<b>Grade Level:</b>	8th Grade
<b>Standards Link:</b>	<a href="#">2025 Alabama Digital Literacy and Computer Science (PDF)</a>

#### CompuScholar Course Details:

<b>Course Title:</b>	CompuScholar: Digital Savvy
<b>Course ISBN:</b>	978-0-9887070-8-5
<b>Course Year:</b>	2026

### Course Description

8th-grade content for Alabama Digital Literacy and Computer Science (DLCS) is organized into five areas of focused study. CompuScholar's "Digital Savvy" course covers these topics as described below.

### Course Standards - 8th Grade

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

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

Computational Thinking	CITATION(S)
<b>Algorithms, Abstraction, and Decomposition</b>	
1. Utilize a programming language to create algorithms that include sequencing, selection, and iteration.	Chapter 22, Lesson 3 (sequencing) Chapter 23, Lessons 2, 3 (selection, iteration) Chapter 23 Activity Supplemental Chapter 2, Lesson 2 / Activity 2 Supplemental Chapter 2, Lesson 4 Supplemental Chapter 2, Activity 5
2. Design multi-branched flowcharts and corresponding pseudocode.	Chapter 22, Lesson 3 Supplemental Chapter 2, Lesson 2 / Activity 2
3. Evaluate programs containing nested logic by applying relational and logical operators to trace conditions, and debug when those conditions do not behave as expected.	Supplemental Chapter 2, Lesson 2 / Activity 2 Supplemental Chapter 2, Lessons 7, 8

4. Decompose a problem into multiple parts to identify each part's functionality and support maintenance and future improvements.	Chapter 22, Lesson 3 Supplemental Chapter 2, Lessons 9
5. Create reusable functions that include inputs to change how the function works and explain how using functions makes code easier to reuse and understand.	Supplemental Chapter 2, Lessons 9
<b>Programming</b>	
6. Improve an existing program by adding new features or increase its efficiency.	Supplemental Chapter 2, Lesson 2 Supplemental Chapter 2, Lesson 2 Activity
7. Explain how software is developed, tested, and maintained to ensure quality.	Supplemental Chapter 2, Lesson 6

<b>Data Science</b>	<b>CITATION(S)</b>
<b>Data Collection and Representation</b>	
8. Design a data store and apply validation techniques. Examples: forms, spreadsheets, databases	Chapter 12, Lessons 2, 3, 4 Chapter 12, Activity 1 Supplemental Chapter 3, Lesson 8
9. Explain how binary data is used in computing systems to represent and process different types of information.	Supplemental Chapter 2, Lessons 1, 3
10. Explain how data size and format affect storage and performance.	Supplemental Chapter 2, Lessons 1
<b>Data Analysis</b>	
11. Use digital tools or visualizations to analyze datasets, detect anomalies, and develop narratives based on findings.	Chapter 10, Lessons 6, 7 Chapter 10, Activity 3 Supplemental Chapter 3, Lesson 8
12. Explain how AI systems use data to make decisions and predictions. [AI]	Supplemental Chapter 4, Lesson 1
<b>Modeling and Simulation</b>	
13. Develop a model or simulation and evaluate its accuracy and limitations.	Supplemental Chapter 2, Lesson 5 / Activity 5

<b>Computing Systems</b>	<b>CITATION(S)</b>
<b>Networks and Internet</b>	
14. Create a diagram of a network to meet specific needs, including modems, routers, and servers.	Chapter 6, Lessons 1, 2
15. Explain how data is broken into packets, sent across the Internet, and reassembled, including how multiple protocols work together for communication.	Chapter 6, Lessons 3, 6
16. Explain how cloud computing enables data access, including the advantages and limitations of technologies that enable data access. Examples: cloud storage, IoT	Chapter 4, Lesson 4 Supplemental Chapter 1, Lesson 6

<b>Cybersecurity</b>	
17. Dissect a previously occurred cybersecurity breach, identify failure points, and explain how better safeguards could have prevented the attack.	Chapter 8, Lessons 2, 3 Supplemental Chapter 1, Lesson 2
18. Evaluate cybersecurity risks across networks, applications, and cloud-based systems and recommend improvements.	Chapter 8, Lessons 1-3 Supplemental Chapter 1, Lesson 2
19. Create a personal cybersecurity plan which includes identifying online risks, evaluating their own digital footprint, adjusting privacy settings, and describing steps to protect their accounts and personal information.	Chapter 8, Lesson 1 Chapter 18, Lesson 4 Supplemental Chapter 1, Lesson 2
<b>Hardware and Software</b>	
20. Demonstrate how hardware components work together in the data processing cycle to perform computing tasks.	Chapter 1, Lesson 2
21. Complete a project by combining multiple software applications.	Chapter 14, Lesson 1, Activities 1, 2, 3 Chapter 25, Lesson 1, Activities 1, 2, 3
22. Evaluate the advantages and disadvantages of open-source and proprietary software in different scenarios.	Chapter 8, Lesson 5

<b>Impact of Computing</b>	<b>CITATION(S)</b>
<b>Career Paths</b>	
23. Research and report on the responsibilities of various careers that use computer science expertise.	Chapter 24, Lesson 1 Chapter 24 Activity Supplemental Chapter 4, Lesson 2
<b>Ethics</b>	
24. Demonstrate safe, legal, and ethical habits when creating and sharing digital content.	Chapter 8, Lessons 1, 5 Chapter 15, Lesson 3 Supplemental Chapter 4, Lesson 4
25. Evaluate ethical dimensions and societal impacts of AI technologies. [AI]	Supplemental Chapter 4, Lessons 2, 3, 4 Supplemental Chapter 4 Activity
<b>Society</b>	
26. Analyze how computing technologies impact laws and influence social structures over time.	Chapter 2, Lesson 5 Supplemental Chapter 1, Lesson 1
<b>Emerging Technology</b>	
27. Research the use of emerging technologies in everyday life, and report on their benefits and limitations. [AI]	Chapter 2, Lesson 5 Supplemental Chapter 1, Lesson 4 Supplemental Chapter 4
<b>Accessibility</b>	
28. Design and implement solutions that address specific accessibility needs, considering feedback and making adjustments.	Chapter 9, Lesson 2 Chapter 11, Lesson 3 Chapter 14, Activity 2 Supplemental Chapter 1, Lesson 3 / Activity 3

29. Research and report on provisions of the Americans with Disabilities Act (ADA) regarding the accessibility of technology.	Supplemental Chapter 1, Lesson 3 / Activity 3
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Digital Proficiency	CITATION(S)
<b>Information Literacy</b>	
30. Synthesize information from credible sources to create an original product.	Chapter 14, Lesson 1, Activities 1, 2, 3 Chapter 25, Lesson 1, Activities 1, 2, 3
31. Explain how digital manipulation influences actions, perceptions, and public opinion. [AI]	Chapter 7, Lesson 3 Supplemental Chapter 1, Lesson 1 / Activity 1 Supplemental Chapter 4, Lesson 3
<b>Digital Life</b>	
32. Develop strategies to manage screen time, handle multitasking, and balance the use of technology in daily life.	Chapter 8, Lesson 1 Chapter 18, Lesson 4 Supplemental Chapter 1, Lesson 4
<b>Digital Tools</b>	
33. Evaluate the effectiveness of digital tools for communication and project-based collaboration.	Chapter 9, Lesson 2 Chapter 10, Lesson 2 Chapter 16
34. Compose professional emails and presentations, demonstrating clear purpose, tone, and etiquette across digital platforms.	Chapter 11, Lesson 6 / Activity 2 Chapter 16, Lesson 1 / Activity
35. Produce new content through guided collaboration with AI systems. [AI]	Chapter 7, Lesson 2 Chapter 9, Lessons 2, 4 Chapter 10, Lesson 7 Chapter 11, Lesson 2 Supplemental Chapter 4, Lesson 4
36. Input text at a rate of 35 words per minute via keyboard or alternative text input method.	Supplemental Chapter 3, Lesson 1 / Activity 1