2026 CSTA PK–12

COMPUTER SCIENCE STANDARDS

Validated Alignment of BootUp PD - English Language Arts + Computer Science

BootUp PD - ELA + CS

This curriculum integrates CS with literacy, engaging students in storytelling, reading, and writing through creative coding projects. Students build their narrative understanding through code.

Learn more: https://bootuppd.org/curriculum-landing/

Alignment Summary

In June 2026, CSTA conducted a rigorous, independent process to validate how these curricular materials align to the 2026 CSTA PK-12 Standards. This process included reviews by multiple independent experts in the CSTA PK-12 Standards, CS teaching, and CS curriculum design. The findings are presented below in two formats: high-level tables summarizing alignment of the curriculum to each concept and/or specialty area, and more granular tables indicating alignment to each standard. Note that the data below reflects only standards that are fully aligned; in many cases, there is partial alignment not indicated below.

Grade 3

Concept	Aligned Standards	Total Standards	Percent Aligned
Algorithms & Design	0	3	0%
Programming	3	5	60%
Data & Analysis	0	3	0%
Systems & Security	0	4	0%
Computing & Society	0	4	0%
Overall	3	19	16%

Grade 4

Concept	Aligned Standards	Total Standards	Percent Aligned
Algorithms & Design	0	3	0%
Programming	2	5	40%
Data & Analysis	0	3	0%
Systems & Security	0	4	0%
Computing & Society	0	4	0%
Overall	2	19	11%

Grade 5

Concept	Aligned Standards	Total Standards	Percent Aligned
Algorithms & Design	0	3	0%
Programming	1	5	20%
Data & Analysis	0	3	0%
Systems & Security	0	4	0%
Computing & Society	0	4	0%
Overall	1	19	5%

Alignment to Grade 3 Foundational Standards

Algorithms & Design

Identifier	Standard	Fully Aligned?
E3-ALG-PS-01	Create an algorithm that includes a combination of sequence, events, iteration, and selection to solve a problem or express an idea.	
E3-ALG-ML-02	Investigate how a machine learning model can change when new data is added to a training set.	
E3-ALG-IM-03	Compare how different algorithms may affect outcomes, situations, and people with a wide range of needs.	

Programming

Identifier	Standard	Fully Aligned?
E3-PRO-PD-04	Develop code from a student-created algorithm that includes a combination of sequence, events, iteration, and selection to solve a problem or express an idea.	✅
E3-PRO-PD-05	Use constructive feedback to improve a program.	✅
E3-PRO-VD-06	Identify the variables being stored and manipulated in a program.	
E3-PRO-RD-07	Articulate how a specific segment of code contributes to the overall purpose of a program.	✅
E3-PRO-TR-08	Debug a program that includes a combination of sequence, events, iteration, and selection.	

Data & Analysis

Identifier	Standard	Fully Aligned?
E3-DAT-DC-09	Evaluate numeric and non-numeric data for accuracy and completeness.	
E3-DAT-DI-10	Investigate a data question involving relationships between multiple attributes.	
E3-DAT-IM-11	Design a data collection process that addresses the needs of people from different backgrounds or groups.	

Systems & Security

Identifier	Standard	Fully Aligned?
E3-SYS-HW-12	Describe the role of software in a computing system to accomplish tasks or solve problems.	
E3-SYS-SE-13	Evaluate how sharing information online might reveal personally identifiable information and other details.	
E3-SYS-NT-14	Explain how people access the internet to gain information and communicate with each other.	
E3-SYS-IM-15	Describe how widely used computing systems may impact an individual's life and community.	

Computing & Society

Identifier	Standard	Fully Aligned?
E3-SOC-HI-16	Examine how computing innovations have changed the ways people live, work, or communicate over time.	
E3-SOC-ET-17	Describe how new technologies create both benefits and risks in personal and family life.	
E3-SOC-HU-18	Examine why people design and build computing technologies.	
E3-SOC-CE-19	Explain how people in different industries use computing technologies and skills to accomplish their work.	

Alignment to Grade 4 Foundational Standards

Algorithms & Design

Identifier	Standard	Fully Aligned?
E4-ALG-PS-01	Create a written representation of an algorithm that includes a combination of sequence, events, iteration, and selection to solve a problem or express an idea.	
E4-ALG-ML-02	Analyze relationships between the properties of training data and a machine learning model's output.	
E4-ALG-IM-03	Evaluate how different algorithms for solving the same problem produce outcomes that may benefit or disadvantage different groups of people.	

Programming

Identifier	Standard	Fully Aligned?
E4-PRO-PD-04	Compare different programming solutions to the same problem based on correctness and clarity.	
E4-PRO-PD-05	Collaborate with a team by offering a meaningful contribution to creating a program.	✅
E4-PRO-VD-06	Trace how data flows and changes variable values in a program.	
E4-PRO-RD-07	Document a program to clarify its functionality.	
E4-PRO-TR-08	Debug a program incrementally and repeatedly throughout the development process.	✅

Data & Analysis

Identifier	Standard	Fully Aligned?
E4-DAT-DC-09	Organize collected data into a table using a computational tool, with rows representing records and columns representing attributes.	
E4-DAT-DI-10	Create an explanation that includes at least one data visualization to report the process and results of a data investigation.	
E4-DAT-IM-11	Investigate how data collected about people may affect individuals and groups.	

Systems & Security

Identifier	Standard	Fully Aligned?
E4-SYS-HW-12	Apply a basic troubleshooting process to identify and fix common hardware and software issues.	
E4-SYS-SE-13	Distinguish between authentication and authorization in protecting devices and private information.	
E4-SYS-NT-14	Compare wired and wireless methods that computing devices use to connect to the internet.	
E4-SYS-IM-15	Investigate the impacts of widely used computing systems on natural resources and the environment.	

Computing & Society

Identifier	Standard	Fully Aligned?
E4-SOC-HI-16	Investigate the contributions of diverse individuals and communities in the history of computing.	
E4-SOC-ET-17	Analyze how the limitations of existing technologies can lead to emerging technologies.	
E4-SOC-HU-18	Distinguish between human learning and machine learning processes.	
E4-SOC-CE-19	Investigate how the workforce adopts new computing technologies and continues to update their computing skills.	

Alignment to Grade 5 Foundational Standards

Algorithms & Design

Identifier	Standard	Fully Aligned?
E5-ALG-PS-01	Create a visual representation of an algorithm that includes variables and a combination of sequence, events, iteration, and selection to solve a problem or express an idea.	
E5-ALG-ML-02	Train a machine learning model to make a classification or prediction.	
E5-ALG-IM-03	Articulate how human-centered design principles are incorporated into the development of a computing technology.	

Programming

Identifier	Standard	Fully Aligned?
E5-PRO-PD-04	Create a novel program by modifying or combining elements of existing programs.	✅
E5-PRO-PD-05	Construct individual components of a program that are collaboratively assembled into a programming project.	
E5-PRO-VD-06	Use variables to store, compare, and modify data within a program.	
E5-PRO-RD-07	Create embedded or external documentation for a programming project.	
E5-PRO-TR-08	Debug a program using systematic strategies.	

Data & Analysis

Identifier	Standard	Fully Aligned?
E5-DAT-DC-09	Use computational tools to collect and organize different types of data.	
E5-DAT-DI-10	Analyze a dataset to identify the nature and possible sources of variability in the data.	
E5-DAT-IM-11	Analyze the benefits and risks of a computing technology that uses collected data.	

Systems & Security

Identifier	Standard	Fully Aligned?
E5-SYS-HW-12	Explain how hardware and software components of a computing system work together to perform input and output operations, processing, and storage.	
E5-SYS-SE-13	Describe the concepts of the CIA triad and how each component is important in protecting information.	
E5-SYS-NT-14	Distinguish between the components of wired and wireless networks.	
E5-SYS-IM-15	Examine how computing systems impact culture and the ways people live and work.	

Computing & Society

Identifier	Standard	Fully Aligned?
E5-SOC-HI-16	Analyze how the inclusion or exclusion of diverse individuals and communities has shaped the design, development, and societal impact of computing technologies.	
E5-SOC-ET-17	Examine how people decide whether or not to use emerging technologies.	
E5-SOC-HU-18	Evaluate when it is appropriate to use or not use computing technologies to solve a problem.	
E5-SOC-CE-19	Examine how professionals collaborate while using computing technologies to solve problems.	