

•	<i>The standard is clearly addressed by program activities.</i>
-	<i>This standard potentially could be addressed as part of a FIRST® program either by actions that the coach or teacher takes when working with the students or by conditions established by the program.</i>
Number	Standard
Grades 6-8	
Topic: Computing Systems	
2-CS-01	Recommend improvements to the design of computing devices, based on an analysis of how users interact with the devices.
2-CS-02	Design projects that combine hardware and software components to collect and exchange data.
2-CS-03	Systematically identify and fix problems with computing devices and their components.
Topic: Networks and the Internet	
2-NI-04	Model the role of protocols in transmitting data across networks and the Internet.
2-NI-05	Explain how physical and digital security measures protect electronic information.
2-NI-06	Apply multiple methods of encryption to model the secure transmission of information.
Topic: Data and Analysis	
2-DA-07	Represent data using multiple encoding schemes.
2-DA-08	Collect data using computational tools and transform the data to make it more useful and reliable.
2-DA-09	Refine computational models based on the data they have generated.

Topic: Algorithms and Programming	
2-AP-10	Use flowcharts and/or pseudocode to address complex problems as algorithms.
2-AP-11	Create clearly named variables that represent different data types and perform operations on their values.
2-AP-12	Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals.
2-AP-13	Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs.
2-AP-14	Create procedures with parameters to organize code and make it easier to reuse.
2-AP-15	Seek and incorporate feedback from team members and users to refine a solution that meets user needs.
2-AP-16	Incorporate existing code, media, and libraries into original programs, and give attribution.
2-AP-17	Systematically test and refine programs using a range of test cases.
2-AP-18	Distribute tasks and maintain a project timeline when collaboratively developing computational artifacts.
2-AP-19	Document programs in order to make them easier to follow, test, and debug.
Topic: Impacts of Computing	
2-IC-20	Compare tradeoffs associated with computing technologies that affect people's everyday activities and career options.
2-IC-21	Discuss issues of bias and accessibility in the design of existing technologies.
2-IC-22	Collaborate with many contributors through strategies such as crowdsourcing or surveys when creating a computational artifact.
2-IC-23	Describe tradeoffs between allowing information to be public and keeping information private and secure.