

CCR Computer Science Standards	CCR Computer Science Benchmarks (Grades 3-5)*
<b>CCR-CS CT 1.</b> <b>Exhibit computational thinking.</b>	CCR-CS CT 3-5, 1.1. Understand and use the basic steps in algorithmic problem-solving (e.g., problem statement and exploration, examination of sample instances, design, implementation, and testing). [US-CSTA CT 3-6, 1.1.]
	CCR-CS CT 3-5, 1.2. Develop a simple understanding of an algorithm (e.g., search, sequence of events, or sorting) using computer-free exercises. [US-CSTA CT 3-6, 1.2.]
	CCR-CS CT 3-5, 1.3. Demonstrate how a string of bits can be used to represent alphanumeric information. [US-CSTA CT 3-6, 1.3.]
	CCR-CS CT 3-5, 1.4. Describe how a simulation can be used to solve a problem. [US-CSTA CT 3-6, 1.4.]
	CCR-CS CT 3-5, 1.5. Make a list of sub-problems to consider while addressing a larger problem. [US-CSTA CT 3-6, 1.5.]
<b>CCR-CS CPP 2.</b> <b>Know computer programming.</b>	CCR-CS CPP 3-5, 2.1. Construct a program as a set of step-by-step instructions to be acted out (e.g., make a peanut butter and jelly sandwich activity). [US-CSTA CPP 3-6, 3.5.]
	CCR-CS CPP 3-5, 2.2. Implement problem solutions using a block-based visual programming language. [US-CSTA CPP 3-6, 3.6.]
	CCR-CS CPP 3-5, 2.3. Demonstrate good practices in personal information security, using passwords, encryption, and secure transactions. [US-CSTA CPP 6-9 [3-5], 3.6.]
	CCR-CS CPP 3-5, 2.4. Demonstrate strategies for validating information found on the internet (e.g., checking a less respected source against a more respected source; sleuthing the provenance of a claim; locating evidence separate
<b>CCR-CS CD 3.</b> <b>Understand computer hardware and communication systems.</b>	CCR-CS CD 3-5, 3.1. Apply strategies for identifying and solving simple hardware and software problems that may occur during use (e.g., open device manager to see which program is malfunctioning, reboot the computer, check
	CCR-CS CD 3-5, 3.2. Identify the physical location of documents, pictures, website, and programs that are interact with (e.g., on the local computer, on a commercial company's computer local network or in the cloud, on an attached
	CCR-CS CD 3-5, 3.3. Understand the pathways by which information is transferred during routine operations (e.g., when backing up a file to an external drive, the information goes from the computer through the USB cord to a
	CCR-CS CD 3-5, 3.4. Identify a variety of electronic devices that contain computational processors. [US-CSTA CD 6-9 [3-5], 4.2.]
	CCR-CS CD 3-5, 3.5. Describe the major components, functions, and organization of computer systems and networks (e.g., memory, software, operating system, input, output, processor, storage). [US-CSTA CD 6-9 [3-5],
	CCR-CS CD 3-5, 3.6. Recognize that computers model intelligent behavior as found in robotics, speech and language recognition, and computer animation. [US-CSTA CD 3-6, 4.6.]

\*CSTA source noted in brackets is 2011 version of national standards