

AR CS Standards 6th Grade

6th Grade	Strand: Computational Thinking and Problem Solving	Content Cluster 1: Students will analyze problem-solving strategies.	CT.1.6.1 Select basic steps to solve algorithmic problems
6th Grade	Strand: Computational Thinking and Problem Solving	Content Cluster 2: Students will analyze connections between elements of mathematics and computer science.	CT.2.6.2 Discuss binary numbers, logic, sets, and functions and their application to computer science
6th Grade	Strand: Computational Thinking and Problem Solving	Content Cluster 2: Students will analyze connections between elements of mathematics and computer science.	CT.2.6.3 Describe events as subsets of a sample set identifying unions, intersections, and complements (e.g., describing information sorted with a Venn diagram)
6th Grade	Strand: Computational Thinking and Problem Solving	Content Cluster 2: Students will analyze connections between elements of mathematics and computer science.	CT.2.6.4 Select variables that appropriately represent data
6th Grade	Strand: Computational Thinking and Problem Solving	Content Cluster 3: Students will solve problems cooperatively and collaboratively.	CT.3.6.1 Analyze appropriate collaborative behaviors (e.g., providing useful feedback, integrating feedback, understanding and accepting multiple perspectives, using socialization) to solve problems
6th Grade	Strand: Data and Information	Content Cluster 4: Students will analyze various ways in which data is represented.	D.4.6.1 Represent a variety of data in multiple formats
6th Grade	Strand: Data and Information	Content Cluster 4: Students will analyze various ways in which data is represented.	D.4.6.2 Discuss how and why binary is used to represent data in a computer
6th Grade	Strand: Data and Information	Content Cluster 5: Students will collect, arrange, and represent data.	D.5.6.1 Collect data using a variety of tools (e.g., analog, digital)
6th Grade	Strand: Data and Information	Content Cluster 5: Students will collect, arrange, and represent data.	D.5.6.2 Describe the characteristics (e.g., collection environment, units of measure, input method) of the collected data
6th Grade	Strand: Data and Information	Content Cluster 5: Students will collect, arrange, and represent data.	D.5.6.3 Evaluate the most effective ways to collect, arrange, and visually represent data

6th Grade	Strand: Data and Information	Content Cluster 6: Students will interpret and analyze data and information.	D.6.6.1 Compare various problems that can be solved using modeling and simulation
6th Grade	Strand: Algorithms and Programs	Content Cluster 7: Students will create, evaluate, and modify algorithms	A.7.6.1 Create algorithms to solve problems and evaluate their effectiveness
6th Grade	Strand: Algorithms and Programs	Content Cluster 7: Students will create, evaluate, and modify algorithms	A.7.6.2 Compare and contrast algorithms of appropriate complexity
6th Grade	Strand: Algorithms and Programs	Content Cluster 7: Students will create, evaluate, and modify algorithms	A.7.6.3 Identify and correct errors within multiple algorithms
6th Grade	Strand: Algorithms and Programs	Content Cluster 7: Students will create, evaluate, and modify algorithms	A.7.6.4 Design and test algorithms of appropriate complexity collaboratively
6th Grade	Strand: Algorithms and Programs	Content Cluster 8: Students will create programs to solve problems.	A.8.6.1 Use a visual block-based and/or text-based programming language individually and collaboratively to solve problems of increasing complexity
6th Grade	Strand: Computers and Communications	Content Cluster 9: Students will analyze the utilization of computers.	CC.9.6.1 Investigate a career that requires computing and technology
6th Grade	Strand: Computers and Communications	Content Cluster 9: Students will analyze the utilization of computers.	CC.9.6.2 Identify what distinguishes humans from machines focusing on human intelligence versus machine intelligence (e.g., robot motion, speech and language understanding, and computer vision)
6th Grade	Strand: Computers and Communications	Content Cluster 10: Students will utilize appropriate digital tools for various applications.	CC.10.6.1 Demonstrate an appropriate level of proficiency with keyboards and other input/output devices. (e.g., printer, student response systems, texting/instant messaging, voice assist)
6th Grade	Strand: Computers and Communications	Content Cluster 10: Students will utilize appropriate digital tools for various applications.	CC.10.6.2 Recognize the expense of the equipment, how care and protection of the computers can prolong use and save the cost of purchasing new equipment, therefore benefiting all students
6th Grade	Strand: Computers and Communications	Content Cluster 10: Students will utilize appropriate digital tools for various applications.	CC.10.6.3 Demonstrate touch typing techniques while increasing speed and maintaining accuracy

6th Grade	Strand: Computers and Communications	Content Cluster 10: Students will utilize appropriate digital tools for various applications.	CC.10.6.4 Practice proper keyboarding technique <ul style="list-style-type: none"> ● posture ● elbows down <ul style="list-style-type: none"> ● body centered in front of keyboard
6th Grade	Strand: Computers and Communications	Content Cluster 11: Students will analyze various components and functions of computers	CC.11.6.1 Apply productivity/multimedia tools to support communication throughout the curriculum
6th Grade	Strand: Computers and Communications	Content Cluster 11: Students will analyze various components and functions of computers	CC.11.6.2 Describe how information can be transmitted by many computing devices via a network
6th Grade	Strand: Computers and Communications	Content Cluster 11: Students will analyze various components and functions of computers	CC.11.6.4 Apply strategies for solving simple hardware and software problems that may occur during use
6th Grade	Strand: Community, Global, and Ethical Impacts	Content Cluster 12: Students will analyze appropriate uses of technology.	CGE.12.6.1 Demonstrate an understanding of positive and negative impact of technology (e.g., mobile computing and communication, web technologies, digital security, virtualization) on the daily life of individuals and society
6th Grade	Strand: Community, Global, and Ethical Impacts	Content Cluster 12: Students will analyze appropriate uses of technology.	CGE.12.6.2 Discuss the difference between appropriate, legal, and ethical uses of technology
6th Grade	Strand: Community, Global, and Ethical Impacts	Content Cluster 12: Students will analyze appropriate uses of technology.	CGE.12.6.3 Demonstrate an understanding of the credibility, bias, accuracy, relevance, age appropriateness, and comprehensiveness of electronic information sources
6th Grade	Strand: Community, Global, and Ethical Impacts	Content Cluster 12: Students will analyze appropriate uses of technology.	GCE.12.6.4 Demonstrate ethical uses in copyright, fair use, and intellectual property in various media (e.g., music, graphics, video, etc.)
6th Grade	Strand: Community, Global, and Ethical Impacts	Content Cluster 12: Students will analyze appropriate uses of technology.	GCE.12.6.5 Demonstrate an understanding of the impact of access to computing resources