

## **Grade 6:**

# **South Carolina Computer Science and Digital Literacy Process Standards**

The South Carolina Computer Science and Digital Literacy Process Standards should be integrated into every grade level within the South Carolina Computer Science and Digital Literacy Content Standards. Because the Process Standards drive the pedagogical component of teaching and serve as the means by which students should demonstrate understanding of the content standards, the process standards must be incorporated as an integral part of overall student expectations when assessing content understanding.

A computer science literate student can:

1. Foster an inclusive computing culture.
  - a. Recognize that equitable access to computing benefits society as a whole.
  - b. Consider others' perspectives as well as one's own perspective when developing computational solutions.
  - c. Consider the needs of a variety of end users regarding accessibility and usability.
2. Collaborate around computing.
  - a. Select appropriate technological tools that can be used to collaborate on a project.
  - b. Collaborate productively with individuals of varying perspectives, skills, and backgrounds.
  - c. Set and implement equitable expectations and workloads when working in teams.
  - d. Integrate constructive feedback while working in teams.
3. Recognize, define, and analyze computational problems.
  - a. Recognize when it is appropriate to solve a problem computationally.
  - b. Make sense of computational problems and persevere in solving them.
  - c. Relate computational problems to prior knowledge.
  - d. Recognize that there may be multiple approaches to solving a problem.
  - e. Approach problem solving iteratively, using a cyclical process.
4. Create, test, and refine computational artifacts.
  - a. Consider the purpose of computational artifacts for practical use, personal expression, and/or societal impact.
  - b. Recognize when to use the same solution for multiple problems.
  - c. Test computational artifacts systematically by considering multiple scenarios and using test cases.
  - d. Approach troubleshooting systematically.
  - e. Consider performance, reliability, usability, and accessibility when evaluating and refining computational artifacts.
5. Communicate about computing.
  - a. Select and use appropriate technological tools to convey solutions to computing problems.
  - b. Communicate about computational processes and solutions using appropriate terminology consistent with the intended audience and purpose.
  - c. Articulate ideas responsibly by observing intellectual property rights and giving appropriate attribution.

## Grade 6:

# South Carolina Computer Science and Digital Literacy Content Standards

Key Concepts	Standards
<b>Digital Literacy</b>	<b>Standard 1:</b> Use software applications to collaborate and create authentic products.
	<b>The student will:</b>
	6.DL.1.1 Use professional email protocol to communicate and share information with peers and teachers (e.g., addresses, subject line, body, salutations, closing).
	6.DL.1.2 Share documents created using word processing, presentation, and spreadsheet software via email attachments.
	6.DL.1.3 Use formulas in spreadsheets to perform real-world calculations (e.g., creating budgets).
	<b>Standard 2:</b> Understand risks and responsibilities of being a digital citizen.
	<b>The student will:</b>
	6.DL.2.1 Identify rules for safe internet use.
	6.DL.2.2 Identify appropriate use of social media (e.g., cyberbullying prevention).
	6.DL.2.3 Identify appropriate use of computing devices.
	<b>Standard 3:</b> Understand issues associated with appropriate use of personal digital information.
	<b>The student will:</b>
	6.DL.3.1 Define and identify personal digital information.
	6.DL.3.2 Identify consequences of inappropriate sharing of personal digital information.
<b>Standard 4:</b> Demonstrate keyboarding speed and accuracy on a computing device.	
<b>The student will:</b>	
6.DL.4.1 Demonstrate proper keyboarding technique when keying letters, numbers, and symbols at a rate of 20 words per minute.	
<b>Computing Systems</b>	<b>Standard 1:</b> Analyze the use of computing to solve relevant problems.
	<b>The student will:</b>
	6.CS.1.1 Identify and describe the key functional components (e.g., input devices, output devices, processor, operating system, software applications, memory, storage) of a computer.
	6.CS.1.2 Identify relevant problems and how they are solved using computer science and various types of computing devices (e.g., directions to a location can be obtained through Global Position Systems (GPS) and/or online maps).
	<b>Standard 2:</b> Examine how computing devices function.
	<b>The student will:</b>
	6.CS.2.1 Understand various ways software is acquired and installed.
	<b>Standard 3:</b> Evaluate various solutions to common hardware and software problems.
<b>The student will:</b>	
6.CS.3.1 Identify the source of a problem using a systematic process (i.e., troubleshooting).	

<b>Networks and the Internet</b>	<b>Standard 1:</b> Analyze various network structures and how data is transmitted.
	<b>The student will:</b>
	6.NI.1.1 Identify and define hardware required to connect to a network (e.g., connect a school tablet or computer to Wi-Fi, network, or internet).
	6.NI.1.2 Define an IP address and show an example.
	6.NI.1.3 Identify a Uniform Resource Locator (URL).
	6.NI.1.4 Define a packet and explain how they are used to transmit data across a network.
	<b>Standard 2:</b> Identify methods to protect data, information, and computing devices across networks.
	<b>The student will:</b>
	6.NI.2.1 Identify common security risks associated with using computer networks (e.g., compromised passwords, phishing, viruses).
6.NI.2.2 Identify how individuals and organizations protect data and information from security risks associated with using computer networks.	
<b>Data and Analysis</b>	<b>Standard 1:</b> Evaluate the storage and representation of data.
	<b>The student will:</b>
	6.DA.1.1 Identify the file extensions (e.g., .ppt, .pdf, .mp3) associated with software programs.
	<b>Standard 2:</b> Analyze how data is collected with both computational and non-computational tools and processes.
	<b>The student will:</b>
	6.DA.2.1 Explore real-world data collection (e.g., identification number at lunch; teacher taking attendance; grocery store shopping card).
	<b>Standard 3:</b> Analyze various ways to visually represent data.
	<b>The student will:</b>
	6.DA.3.1 Explain how large data sets are represented graphically (e.g., frequency plots, bar graphs).
6.DA.3.2 Represent one set of numerical data (e.g., histograms, box plots, dot plots).	

<b>Algorithms and Programming</b>	<b>Standard 1:</b> Design, evaluate, and modify simple algorithms (e.g., steps to make a sandwich; steps to a popular dance; steps for sending an email).
	<b>The student will:</b>
	6.AP.1.1 Recognize that there are multiple ways to sequence instructions that can lead to the same result.
	6.AP.1.2 Interpret pseudocode and flowcharts.
	<b>Standard 2:</b> Use and compare simple coding control structures (e.g., if-then, loops).
	<b>The student will:</b>
	6.AP.2.1 Select appropriate coding control structures to skip or repeat instructions.
	<b>Standard 3:</b> Decompose problems into subproblems and write code to solve the subproblems (i.e., break down a problem into smaller parts).
	<b>The student will:</b>
	6.AP.3.1 Discuss the parts of a program (e.g., components of creating a video game include keeping score, determining winners/losers, moving characters, designing game art, and advancing levels).
	<b>Standard 4:</b> Design and code programs to solve problems.
	<b>The student will:</b>
	6.AP.4.1 Use a beginner coding language (e.g., drag-and-drop, block-based) to design and code a simple program that solves a problem.
	<b>Standard 5:</b> Identify variables and compare the types of data stored as variables.
<b>The student will:</b>	
6.AP.5.1 Recognize variables that represent information (e.g., age, first name).	
6.AP.5.2 Recognize variables can represent different types of data (e.g., numbers, words, colors, images).	
<b>Impact of Computing</b>	<b>Standard 1:</b> Evaluate the tradeoffs of computing in everyday activities.
	<b>The student will:</b>
	6.IC.1.1 Explore how computer science is and can be used to solve problems in students' daily lives (e.g., "Internet of Things," smart appliances, smart cars).
	6.IC.1.2 Discover positive and negative impacts of computing on society (e.g., personal, health, workforce, economy, education, culture, environment).
	<b>Standard 2:</b> Analyze various computing platforms used for communication.
	<b>The student will:</b>
	6.IC.2.1 Identify current communication methods and computing devices.
	<b>Standard 3:</b> Evaluate the tradeoffs in what and how information is shared digitally.
	<b>The student will:</b>
	6.IC.3.1 Identify guidelines for safely using the internet.
	<b>Standard 4:</b> Evaluate how legal and ethical issues shape computing practices.
	<b>The student will:</b>
6.IC.4.1 Identify unethical and illegal behavior.	

## **Grade 7:**

# **South Carolina Computer Science and Digital Literacy Process Standards**

The South Carolina Computer Science and Digital Literacy Process Standards should be integrated into every grade level within the South Carolina Computer Science and Digital Literacy Content Standards. Because the Process Standards drive the pedagogical component of teaching and serve as the means by which students should demonstrate understanding of the content standards, the process standards must be incorporated as an integral part of overall student expectations when assessing content understanding.

A computer science literate student can:

1. Foster an inclusive computing culture.
  - a. Recognize that equitable access to computing benefits society as a whole.
  - b. Consider others' perspectives as well as one's own perspective when developing computational solutions.
  - c. Consider the needs of a variety of end users regarding accessibility and usability.
2. Collaborate around computing.
  - a. Select appropriate technological tools that can be used to collaborate on a project.
  - b. Collaborate productively with individuals of varying perspectives, skills, and backgrounds.
  - c. Set and implement equitable expectations and workloads when working in teams.
  - d. Integrate constructive feedback while working in teams.
3. Recognize, define, and analyze computational problems.
  - a. Recognize when it is appropriate to solve a problem computationally.
  - b. Make sense of computational problems and persevere in solving them.
  - c. Relate computational problems to prior knowledge.
  - d. Recognize that there may be multiple approaches to solving a problem.
  - e. Approach problem solving iteratively, using a cyclical process.
4. Create, test, and refine computational artifacts.
  - a. Consider the purpose of computational artifacts for practical use, personal expression, and/or societal impact.
  - b. Recognize when to use the same solution for multiple problems.
  - c. Test computational artifacts systematically by considering multiple scenarios and using test cases.
  - d. Approach troubleshooting systematically.
  - e. Consider performance, reliability, usability, and accessibility when evaluating and refining computational artifacts.
5. Communicate about computing.
  - a. Select and use appropriate technological tools to convey solutions to computing problems.
  - b. Communicate about computational processes and solutions using appropriate terminology consistent with the intended audience and purpose.
  - c. Articulate ideas responsibly by observing intellectual property rights and giving appropriate attribution.

## Grade 7:

# South Carolina Computer Science and Digital Literacy Content Standards

Key Concepts	Standards
<b>Digital Literacy</b>	<b>Standard 1:</b> Use software applications to collaborate and create authentic products.
	<b>The student will:</b>
	7.DL.1.1 Collaborate in small groups to create and edit online documents in real time (e.g., multiple users editing one document in a shared online space).
	7.DL.1.2 Identify and use appropriate file sharing strategies (e.g., copy and paste, links, email attachments).
	7.DL.1.3 Apply appropriate design principles to presentations (e.g., themes, contrast, animations).
	<b>Standard 2:</b> Understand risks and responsibilities of being a digital citizen.
	<b>The student will:</b>
	7.DL.2.1 Discuss consequences of improper internet use.
	7.DL.2.2 Discuss consequences of improper use of social media (e.g., cyberbullying).
	<b>Standard 3:</b> Understand issues associated with appropriate use of personal digital information.
	<b>The student will:</b>
	7.DL.3.1 Identify appropriate methods for protecting personal digital information.
	<b>Standard 4:</b> Demonstrate keyboarding speed and accuracy on a computing device.
	<b>The student will:</b>
7.DL.4.1 Demonstrate proper keyboarding technique when keying letters, numbers, and symbols at a rate of 25 words per minute.	
<b>Computing Systems</b>	<b>Standard 1:</b> Analyze the use of computing to solve relevant problems.
	<b>The student will:</b>
	7.CS.1.1 Explore an expanded definition of computing devices (e.g., “Internet of Things,” wearable technology, robotics).
	7.CS.1.2 Analyze relevant problems and how they are solved using computer science and various types of computing devices (e.g., Global Positioning System (GPS) and online maps provide guided step-by-step directions to locations).
	<b>Standard 2:</b> Examine how computing devices function.
	<b>The student will:</b>
	7.CS.2.1 Describe processing speed and storage capacity using standard units of measure (e.g., 3 TB hard drive, 256 GB cell phone, 3.8 GHz processor).
	<b>Standard 3:</b> Evaluate various solutions to common hardware and software problems.
	<b>The student will:</b>
	7.CS.3.1 Understand and communicate solutions to various computing problems (e.g., computing device is frozen; webpage does not load; application does not launch; keyboard does not work).
	7.CS.3.2 Understand how rebooting a computing device can solve problems.

<b>Networks and the Internet</b>	<b>Standard 1:</b> Analyze various network structures and how data is transmitted.
	<b>The student will:</b>
	7.NI.1.1 Identify and compare types of networks (i.e., Local Area Networks (LANs) and Wide Area Networks (WANs)).
	7.NI.1.2 Define and understand how the internet is a network of Wide Area Networks (WANs).
	7.NI.1.3 Compare and contrast network topologies (e.g., ring, star, mesh).
	<b>Standard 2:</b> Identify methods to protect data, information, and computing devices across networks.
	<b>The student will:</b>
	7.NI.2.1 Identify software methods for protecting data transmitted across networks (e.g. anti-virus software). 7.NI.2.2 Identify physical methods for securing computing devices (e.g., biometric-thumb reader, computer lock, restricted access rooms, hardware firewall).
<b>Data and Analysis</b>	<b>Standard 1:</b> Evaluate the storage and representation of data.
	<b>The student will:</b>
	7.DA.1.1 Describe how a picture, audio, and video are stored digitally (e.g., Red, Green, and Blue (RGB), pixels, .wav).
	<b>Standard 2:</b> Analyze how data is collected with both computational and non-computational tools and processes.
	<b>The student will:</b>
	7.DA.2.1 Identify computing devices that assist with data collection (i.e., thermometers, barcode scanners, biometrics, sensors, radio-frequency identification (RFID), wearable technology).
	<b>Standard 3:</b> Analyze various ways to visually represent data.
	<b>The student will:</b>
	7.DA.3.1 Create various graphical representations of large data sets (e.g., frequency plots, bar graphs, presentation software). 7.DA.3.2 Represent two sets of numerical data (e.g., histograms, box plots, dot plots).

<b>Algorithms and Programming</b>	<b>Standard 1:</b> Design, evaluate, and modify simple algorithms (e.g., steps to make a sandwich; steps to a popular dance; steps for sending an email).
	<b>The student will:</b>
	7.AP.1.1 Write sequences of instructions for others to perform tasks.
	7.AP.1.2 Suggest changes to the sequence of instructions that can lead to the same result (e.g., explore different ways to tying shoes).
	7.AP.1.3 Write clear instructions using pseudocode.
	<b>Standard 2:</b> Use and compare simple coding control structures (e.g., if-then, loops).
	<b>The student will:</b>
	7.AP.2.1 Write code using control structures to skip or repeat instructions.
	<b>Standard 3:</b> Decompose problems into subproblems and write code to solve the subproblems (i.e., break down a problem into smaller parts).
	<b>The student will:</b>
	7.AP.3.1 Decompose a problem into smaller parts.
	7.AP.3.2 Identify the parts of a program (e.g., components of creating a video game include keeping score, determining winners/losers, moving characters, designing game art, and advancing level).
	<b>Standard 4:</b> Design and code programs to solve problems.
	<b>The student will:</b>
	7.AP.4.1 Use a beginner coding language (e.g., drag-and-drop, block-based) to design and code a moderately complex program that solves a problem.
	<b>Standard 5:</b> Identify variables and compare the types of data stored as variables.
	<b>The student will:</b>
	7.AP.5.1 Identify variables as a representation for information.
7.AP.5.2 Discuss the differences between the types of data (e.g., characters, integers, decimals).	

<b>Impact of Computing</b>	<b>Standard 1:</b> Evaluate the tradeoffs of computing in everyday activities.
	<b>The student will:</b>
	7.IC.1.1 Understand how computer science is and can be used to solve problems in students' daily lives (e.g., voter identification website, online tax filing).
	7.IC.1.2 Compare positive and negative impacts of computing on society (e.g., personal, health, workforce, economy, education, culture, environment).
	<b>Standard 2:</b> Analyze various computing platforms used for communication.
	<b>The student will:</b>
	7.IC.2.1 Describe current communication methods and computing devices.
	<b>Standard 3:</b> Evaluate the tradeoffs in what and how information is shared digitally.
	<b>The student will:</b>
	7.IC.3.1 Understand precautions to protect personal information (i.e., password strength, anti-virus software).
	<b>Standard 4:</b> Evaluate how legal and ethical issues shape computing practices.
	<b>The student will:</b>
	7.IC.4.1 Understand the consequences of unethical and illegal behavior online (e.g., social media, gaming, cyberbullying).
	<b>Standard 5:</b> Understand the importance of access and equity in computing.
	<b>The student will:</b>
	7.IC.5.1 Discuss and understand factors that affect access to computing resources locally, nationally, and globally (e.g., geographical location, socioeconomic status, government structure).
	<b>Standard 6:</b> Explore computer science and computing-intensive careers.
	<b>The student will:</b>
7.IC.6.1 Explain how computer science plays a role in every industry.	
<b>Standard 7:</b> Evaluate the history of computers and computing.	
<b>The student will:</b>	
7.IC.7.1 Understand and communicate the changes in computing and computer science over time.	
7.IC.7.2 Understand and communicate the history and development of the internet.	

## **Grade 8:**

# **South Carolina Computer Science and Digital Literacy Process Standards**

The South Carolina Computer Science and Digital Literacy Process Standards should be integrated into every grade level within the South Carolina Computer Science and Digital Literacy Content Standards. Because the Process Standards drive the pedagogical component of teaching and serve as the means by which students should demonstrate understanding of the content standards, the process standards must be incorporated as an integral part of overall student expectations when assessing content understanding.

A computer science literate student can:

1. Foster an inclusive computing culture.
  - a. Recognize that equitable access to computing benefits society as a whole.
  - b. Consider others' perspectives as well as one's own perspective when developing computational solutions.
  - c. Consider the needs of a variety of end users regarding accessibility and usability.
2. Collaborate around computing.
  - a. Select appropriate technological tools that can be used to collaborate on a project.
  - b. Collaborate productively with individuals of varying perspectives, skills, and backgrounds.
  - c. Set and implement equitable expectations and workloads when working in teams.
  - d. Integrate constructive feedback while working in teams.
3. Recognize, define, and analyze computational problems.
  - a. Recognize when it is appropriate to solve a problem computationally.
  - b. Make sense of computational problems and persevere in solving them.
  - c. Relate computational problems to prior knowledge.
  - d. Recognize that there may be multiple approaches to solving a problem.
  - e. Approach problem solving iteratively, using a cyclical process.
4. Create, test, and refine computational artifacts.
  - a. Consider the purpose of computational artifacts for practical use, personal expression, and/or societal impact.
  - b. Recognize when to use the same solution for multiple problems.
  - c. Test computational artifacts systematically by considering multiple scenarios and using test cases.
  - d. Approach troubleshooting systematically.
  - e. Consider performance, reliability, usability, and accessibility when evaluating and refining computational artifacts.
5. Communicate about computing.
  - a. Select and use appropriate technological tools to convey solutions to computing problems.
  - b. Communicate about computational processes and solutions using appropriate terminology consistent with the intended audience and purpose.
  - c. Articulate ideas responsibly by observing intellectual property rights and giving appropriate attribution.

## Grade 8:

# South Carolina Computer Science and Digital Literacy Content Standards

Key Concepts	Standards
<b>Digital Literacy</b>	<b>Standard 1:</b> Use software applications to collaborate and create authentic products.
	<b>The student will:</b>
	8.DL.1.1 Produce documents according to industry standards (e.g., citation styles, agendas, financial statements, resumes).
	8.DL.1.2 Identify and use tabs in a word processing document (i.e., left, right, center, decimal).
	8.DL.1.3 Identify and use appropriate file compression techniques (e.g., zipping folders and files; image and file compression).
	<b>Standard 2:</b> Understand risks and responsibilities of being a digital citizen.
	<b>The student will:</b>
	8.DL.2.1 Explore legal and ethical issues of improper computer and internet use (e.g., music, video, and software piracy; cyberbullying).
	<b>Standard 3:</b> Understand issues associated with appropriate use of personal digital information.
	<b>The student will:</b>
	8.DL.3.1 Explore real-world examples of appropriate and inappropriate sharing of personal digital information.
	<b>Standard 4:</b> Demonstrate keyboarding speed and accuracy on a computing device.
<b>The student will:</b>	
8.DL.4.1 Demonstrate proper keyboarding technique when keying letters, numbers, and symbols at a rate of 30 words per minute.	
<b>Computing Systems</b>	<b>Standard 1:</b> Analyze the use of computing to solve relevant problems.
	<b>The student will:</b>
	8.CS.1.1 Compare and contrast relevant problems and how they are solved using computer science and various types of computing devices (e.g., Global Positioning System (GPS) and online maps include different features, including real-time traffic, satellite images, construction and accident notifications).
	<b>Standard 2:</b> Examine how computing devices function.
	<b>The student will:</b>
	8.CS.2.1 Understand that computers receive and process data as a series of on and off signals (i.e., binary data).
	8.CS.2.2 Determine appropriate hardware, operating systems, and software based upon the needs of users in various career fields (e.g., computing devices used by professional video producers and students differ).
	<b>Standard 3:</b> Evaluate various solutions to common hardware and software problems.
	<b>The student will:</b>
	8.CS.3.1 Understand computer hardware and software compatibility (e.g., applications designed for Android devices cannot run on iOS devices).
8.CS.3.2 Identify appropriate resources for troubleshooting hardware and software problems (e.g., user manuals, online searches, technology support services).	

<b>Networks and the Internet</b>	<b>Standard 1:</b> Analyze various network structures and how data is transmitted.
	<b>The student will:</b>
	8.NI.1.1 Identify a protocol as a set of rules, and identify common protocols (e.g., Hypertext Transfer Protocol (HTTP), File Transfer Protocol (FTP), Internet Protocol (IP), Transmission Control Protocol (TCP)).
	8.NI.1.2 Diagram a small network using a switch and a router.
	8.NI.1.3 Identify the best network topology given a problem (e.g., mesh, tree, ring).
	<b>Standard 2:</b> Identify methods to protect data, information, and computing devices across networks.
	<b>The student will:</b>
	8.NI.2.1 Discuss and understand recent events and trends regarding cybercrimes (i.e., identity theft, hacking). 8.NI.2.2 Discuss and understand the impact of computing copyright issues (i.e., music and software piracy; plagiarism).
<b>Data and Analysis</b>	<b>Standard 1:</b> Evaluate the storage and representation of data.
	<b>The student will:</b>
	8.DA.1.1 Discuss how text, images, and sounds are represented using binary numbers in computing devices.
	8.DA.1.2 Compare and contrast characteristics of a variety of file formats (e.g., software compatibility, file size, compressed and uncompressed files, transparency).
	8.DA.1.3 Compare and contrast current storage mediums and their uses (e.g., flash drives, hard drives, networks, cloud).
	<b>Standard 2:</b> Analyze how data is collected with both computational and non-computational tools and processes.
	<b>The student will:</b>
	8.DA.2.1 Compare and contrast computing devices that assist with data collection (i.e., thermometers, barcode scanners, biometrics, sensors, radio-frequency identification (RFID), wearable technology).
	<b>Standard 3:</b> Analyze various ways to visually represent data.
	<b>The student will:</b>
	8.DA.3.1 Identify components of infographics that can be used to represent numerical data (e.g., scatterplots).
	8.DA.3.2 Make inferences based on collected data (e.g., online video watching history used to recommend new videos users may like).
	8.DA.3.3 Explain how models are used to predict specific behaviors and/or outcomes (e.g., weather data presented in a model used to predict future weather conditions and activity).

<b>Algorithms and Programming</b>	<b>Standard 1:</b> Design, evaluate, and modify simple algorithms (e.g., steps to make a sandwich; steps to a popular dance; steps for sending an email).
	<b>The student will:</b>
	8.AP.1.1 Modify a sequence of instructions to solve problems.
	8.AP.1.2 Make changes to the sequence of instructions that can lead to the same result.
	8.AP.1.3 Write clear instructions using flowcharts.
	<b>Standard 2:</b> Use and compare simple coding control structures (e.g., if-then, loops).
	<b>The student will:</b>
	8.AP.2.1 Modify an algorithm using conditionals and iteration.
	<b>Standard 3:</b> Decompose problems into subproblems and write code to solve the subproblems (i.e., break down a problem into smaller parts).
	<b>The student will:</b>
	8.AP.3.1 Decompose a problem into functional parts.
	8.AP.3.2 Compose a program with multiple parts.
	<b>Standard 4:</b> Design and code programs to solve problems.
	<b>The student will:</b>
	8.AP.4.1 Use a beginner coding language (e.g., drag-and-drop, block-based) to design and code a complex program that solves a problem.
	<b>Standard 5:</b> Identify variables and compare the types of data stored as variables.
	<b>The student will:</b>
8.AP.5.1 Compare and contrast variables that change or are constant.	
8.AP.5.2 Identify the variables needed to solve a given problem (i.e., information that needs to be tracked).	

Impact of Computing

	<b>Standard 1:</b> Evaluate the tradeoffs of computing in everyday activities.
	<b>The student will:</b>
8.IC.1.1	Justify how computer science is and can be used to solve problems in students' daily lives (e.g., mobile applications to accomplish tasks or solve problems in a neighborhood; remote traffic control).
8.IC.1.2	Analyze positive and negative impacts of computing on society (e.g., personal, health, workforce, economy, education, culture, environment).
	<b>Standard 2:</b> Analyze various computing platforms used for communication.
	<b>The student will:</b>
8.IC.2.1	Compare and contrast current communication methods and computing devices.
	<b>Standard 3:</b> Evaluate the tradeoffs in what and how information is shared digitally.
	<b>The student will:</b>
8.IC.3.1	Identify risks associated with sharing information digitally (e.g., phishing, identity theft, hacking).
	<b>Standard 4:</b> Evaluate how legal and ethical issues shape computing practices.
	<b>The student will:</b>
8.IC.4.1	Investigate recent laws that have been created to govern computer use (e.g., privacy, piracy, censorship, intellectual property).
	<b>Standard 5:</b> Understand the importance of access and equity in computing.
	<b>The student will:</b>
8.IC.5.1	Investigate historical and current trends of underrepresentation in computer science (e.g., race, ethnicity, gender, socioeconomic status).
8.IC.5.2	Recognize computer scientists from underrepresented populations who have advanced computing.
8.IC.5.3	Explain how the lack of diverse perspectives and backgrounds restricts possible solutions to computational problems (e.g., first iteration of Google Maps included only driving directions, but later public transit and walking directions were added).
	<b>Standard 6:</b> Explore computer science and computing-intensive careers.
	<b>The student will:</b>
8.IC.6.1	Identify traditional and nontraditional careers that use computer science (e.g., computer science in agriculture, medical, and public safety fields).
8.IC.6.2	Relate the five disciplines of computing (i.e., computer science, software engineering, information technology, information systems, and computer engineering) to careers in various industries (e.g., advancements in healthcare, national security, and transportation).
	<b>Standard 7:</b> Evaluate the history of computers and computing.
	<b>The student will:</b>
8.IC.7.1	Analyze the impact of computing and computer science over time (e.g., advantages such as faster, more efficient completion of tasks and access to the information; disadvantages such as fewer human jobs due to automation).
8.IC.7.2	Understand the historical impact and future potential of exponential growth in computing (i.e., Moore's Law).
8.IC.7.3	Identify and describe emerging technologies (e.g., virtual reality, biometrics, health monitoring systems).