South Carolina Computer Science and Digital Literacy Standards

Grade 3

Adopted 2017

Process Standards

1. **Foster an inclusive computing culture.**
   a. Recognize that equitable access to computing benefits society as a whole. 1.A
   b. Consider others' perspectives as well as one's own perspective when developing computational solutions. 1.B
   c. Consider the needs of a variety of end users regarding accessibility and usability. 1.C

2. **Collaborate around computing.**
   a. Select appropriate technological tools that can be used to collaborate on a project. 2.A
   b. Collaborate productively with individuals of varying perspectives, skills, and backgrounds. 2.B
   c. Set and implement equitable expectations and workloads when working in teams. 2.C
   d. Integrate constructive feedback while working in teams. 2.D

3. **Recognize, define, and analyze computational problems.**
   a. Recognize when it is appropriate to solve a problem computationally. 3.A
   b. Make sense of computational problems and persevere in solving them. 3.B
   c. Relate computational problems to prior knowledge. 3.C
   d. Recognize that there may be multiple approaches to solving a problem. 3.D
   e. Approach problem solving iteratively, using a cyclical process. 3.E

4. **Create, test, and refine computational artifacts.**
   a. Consider the purpose of computational artifacts for practical use, personal expression, and/or societal impact. 4.A
   b. Recognize when to use the same solution for multiple problems. 4.B
   c. Test computational artifacts systematically by considering multiple scenarios and using test cases. 4.C
   d. Approach troubleshooting systematically. 4.D
   e. Consider performance, reliability, usability, and accessibility when evaluating and refining computational artifacts. 4.E

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5. Communicate about computing.

a. Select and use appropriate technological tools to convey solutions to computing problems. 5.A

b. Communicate about computational processes and solutions using appropriate terminology consistent with the intended audience and purpose. 5.B

c. Articulate ideas responsibly by observing intellectual property rights and giving appropriate attribution. 5.C

Content Standards

DL. Digital Literacy 3.DL

1. Use software applications to create an authentic product. 3.DL.1
    1. Create documents (e.g., essays, letters) using a word processing program. 3.DL.1.1
    2. Edit and format a document using a word processing program to check spelling, change fonts, and change margins. 3.DL.1.2
    3. Format a presentation using presentation software to insert an image/video, change background colors, and change text color. 3.DL.1.3
    4. Understand that bullets are a way to organize a list. 3.DL.1.4
2. Demonstrate an awareness of fundamentals of digital citizenship. 3.DL.2
    1. Demonstrate proper digital etiquette appropriate to the medium (e.g., not using all capital letters in an email). 3.DL.2.1
    2. Recognize the disparity with regards to access to technology around the world and discuss ways in which digital equality may be reached. 3.DL.2.2
3. Demonstrate responsibility when using connected computing devices. 3.DL.3
    1. Understand the importance of acceptable use policies (e.g., to enforce safe internet usage among all members of the community). 3.DL.3.1
    2. Distinguish between online content that is open and free to use and content that is protected by copyright. 3.DL.3.2
    3. Understand the notion of "digital footprint" and the permanence and trackability associated with online communication (e.g., email, social media). 3.DL.3.3
4. Demonstrate effective keyboarding skills on a computing device. 3.DL.4
    1. Demonstrate proper keyboarding technique when keying letters, numbers, and symbols at a rate of 5 words per minute. 3.DL.4.1
    2. Use software capabilities to correct errors. 3.DL.4.2

CS. Computing Systems 3.CS

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1. Identify and analyze various components and functions of computing devices (e.g., tablets, laptops, smartphones). 3.CS.1
    1. Compare and contrast computing devices (e.g., tablets, laptops, smartphones). 3.CS.1.1
    2. Identify the parts of a computing device (e.g., input devices, output devices, processors). 3.CS.1.2
2. Analyze the various types and functions of software. 3.CS.2
    1. Identify actions (e.g., opening a file; closing a window) that are specific to an operating system (e.g., Windows, MacOS, Android, iOS). 3.CS.2.1
    2. Compare operating systems to application software (e.g., word processor, spreadsheet, presentation software, web browser). 3.CS.2.2
3. Apply troubleshooting strategies for identifying simple hardware and software problems that may occur during use. 3.CS.3
    1. Troubleshoot simple hardware problems that may occur during use (e.g., hardware is plugged in or batteries charged; sound is muted/unmuted). 3.CS.3.1
    2. Troubleshoot simple software problems that may occur during use (e.g., refresh or close a web browser; close a program). 3.CS.3.2

NI. Networks and the Internet 3.NI

1. Explore different ways a computer connects to the internet and other computing devices. 3.NI.1
    1. Identify and distinguish between wireless and wired connections. 3.NI.1.1
2. Discover the advantages of internet applications. 3.NI.2
    1. Communicate electronically with others with support from peers, teachers, and others. 3.NI.2.1
    2. Recognize particular websites as sources of research. 3.NI.2.2

DA. Data and Analysis 3.DA

1. Identify various ways in which data is stored and represented. 3.DA.1
    1. Understand the different types of data storage (e.g., flash drives, hard drives, cloud storage). 3.DA.1.1
    2. Identify various kinds of data (e.g., text, images, sounds, numbers). 3.DA.1.2
2. Collect, arrange, and represent data. 3.DA.2
    1. Discuss appropriate tools for collecting data. 3.DA.2.1
    2. Represent data with bar graphs. 3.DA.2.2
3. Interpret and analyze data and information. 3.DA.3
    1. Interpret and analyze given data (i.e., tables). 3.DA.3.1

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4. Understand the accuracy of conclusions and how they are influenced by the amount of data collected. 3.DA.4
    1. Draw conclusions from different types of graphs (i.e., scaled bar graphs, line plots). 3.DA.4.1
    2. Discuss factors that impact accuracy. 3.DA.4.2

AP. Algorithms and Programming 3.AP

1. Recognize that many daily tasks can be described as step-by-step instructions (i.e., algorithms). 3.AP.1
    1. Describe a daily task as a sequence of steps. 3.AP.1.1
2. Use an ordered list of steps (i.e., sequential execution) and simple control structures. 3.AP.2
    1. Describe, using picture models, an ordered list of steps to perform a simple task. 3.AP.2.1
3. Explore how tasks can be decomposed into simple tasks and simple tasks can be composed to form complex tasks. 3.AP.3
    1. Identify a simple task (e.g., eating breakfast; brushing your teeth; walking to the bus stop). 3.AP.3.1
    2. Identify a complex task (e.g., getting ready for school). 3.AP.3.2
4. Develop a program to express an idea or address a problem. 3.AP.4
    1. Use picture directions to design a series of steps to complete a simple task. 3.AP.4.1
    2. Test a series of directions to successfully complete a simple task. 3.AP.4.2

IC. Impact of Computing 3.IC

1. Discuss how computing has impacted society. 3.IC.1
    1. List examples of how computing technology has changed and improved the way people live, work, and interact. 3.IC.1.1
2. Evaluate the relevance and appropriateness of electronic information sources. 3.IC.2
    1. Identify and discuss the relevance and appropriateness of various electronic information sources (e.g., online databases such as Discus; web search engines). 3.IC.2.1