Florida Computer Science

Grade 5

Communication and Collaboration Strand

1 **Demonstrate effective communication.** SC.5.CC.1

- 1 Identify appropriate and inappropriate uses of technology for communication with others. SC.5.CC.1.1
- 2 Demonstrate ways with or without technology that collaborating with others can support problem solving. SC.5.CC.1.2
- 3 Revise and refine thinking based on peer feedback. SC.5.CC.1.3

2 **Utilize information gathered using digital resources.** SC.5.CC.2

- 1 Research and use information gathered from digital resources. SC.5.CC.2.1
- 2 Support ideas using collected evidence through research. SC.5.CC.2.2

Personal Health and Safety Strand

1 **Implement safe and healthy Internet practices in-home or educational settings.** SC.5.HS.1

- 1 Discuss the importance of a search engine's safe-search feature. SC.5.HS.1.1
- 2 Describe the role that parental digital monitoring programs play in Internet safety. SC.5.HS.1.2
- 3 Describe threats to safe and efficient use of electronic devices. SC.5.HS.1.3

2 **Discuss the mental and physiological effects of digital device use.** SC.5.HS.2

- 1 Define the 20-20-20 rule for technology. SC.5.HS.2.1
- 2 Discuss ways to counteract digital fatigue. SC.5.HS.2.2

3 **Discuss the impact of digital media and communication.** SC.5.HS.3

- 1 Explain the impact of digital media, communication and the consequences of cyberbullying and harassment. SC.5.HS.3.1

Computing Components Strand

1. **Apply foundational computer literacy skills.** SC.5.CO.1
   1. Describe the function and purpose of various input/output devices. SC.5.CO.1.1
   2. Create a digital project that answers a research question, clearly communicating thoughts and ideas. SC.5.CO.1.2
   3. Explore the use of keyboard shortcuts. SC.5.CO.1.3
   4. Explore the use of the keyboard with proper finger placement for all rows. SC.5.CO.1.4
   5. Explain how computers access a network and how to effectively troubleshoot. SC.5.CO.1.5
   6. Explain how computers can communicate to transfer data. SC.5.CO.1.6

2. **Introduce the concept of hardware components.** SC.5.CO.2
   1. Identify hardware components in the computation cycle as input, processing, output and storage. Example: As Oscar is playing a game he saved from the previous day, he steers his car with the remote control. He could see the car turn on the screen, but he crashed into the wall and his remote vibrated. Identify the input devices and the output devices. What system components are saving his game and processing information while he plays? SC.5.CO.2.1
   2. Troubleshoot hardware problems that may occur during everyday use. SC.5.CO.2.2

3. **Introduce the concept of software components.** SC.5.CO.3
   1. Identify software components in the computation cycle as input, processing, output and storage. SC.5.CO.3.1
   2. Troubleshoot software problems that may occur during everyday use. SC.5.CO.3.2

Programming and Software Engineering Strand

1. **Investigate the uses of computer programs.** SC.5.PE.1
   1. Explain how computers model intelligent behavior. SC.5.PE.1.1
   2. Create a program in a graphical environment. SC.5.PE.1.2
   3. Create a program using arithmetic operators, conditionals and repetition in programs. SC.5.PE.1.3
   4. Detect and correct program errors. SC.5.PE.1.4

2 **Interpret visual representations of data.** SC.5.PE.2

1 Describe examples of databases from everyday life. SC.5.PE.2.1

2 Identify data types and data structures. SC.5.PE.2.2

3 Analyze the data from a given scenario. Example: Kysha observed the moon for a month and kept a journal describing the moon, including its apparent shape and size. She will analyze her journal to draw conclusions about the moon for that month. Example: Courtney's class has conducted an experiment tracking the spread of Virginia creeper. Students will collect the data and then analyze the data for the spread to create a hypothesis about the plant's growth. SC.5.PE.2.3

3 **Demonstrate problem-solving strategies.** SC.5.PE.3

1 Identify the concepts illustrated by a simulation that offers problems and solutions. SC.5.PE.3.1

2 Solve problems using digital graphic organizers. SC.5.PE.3.2

3 Explain that there are several possible algorithms for searching within a dataset. SC.5.PE.3.3

4 Explain how to identify and correct logical errors in algorithms. SC.5.PE.3.4

Technological Impact Strand

1 **Present periods of technological progress.** SC.5.TI.1

1 Explain how access to technology helps empower individuals and groups. SC.5.TI.1.1

2 Explore various technology-related career paths. SC.5.TI.1.2

3 Evaluate audio and video technologies and their impact on communication. SC.5.TI.1.3

2 **Demonstrate ways to avoid the misuse of information.** SC.5.TI.2

1 Compare digital resources. SC.5.TI.2.1

2 Describe the purpose of copyright. SC.5.TI.2.2

3 Describe the possible consequences for improper use of digital materials that are protected by copyright. SC.5.TI.2.3

4 Verify information from digital resources. SC.5.TI.2.4

5 Demonstrate how to cite sources. SC.5.TI.2.5