

Grades 3-5

Computing Systems **CS**

Devices

- 1 Evaluate the features available on digital devices to perform a variety of classroom tasks. **35-CS-01**
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Hardware and Software

- 2 Model how computer hardware and software work together as a system to accomplish tasks **35-CS-02**
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Troubleshooting

- 3 Determine potential solutions to solve simple hardware and software problems using common troubleshooting strategies. **35-CS-03**
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Networks and the Internet **NI**

Network Communication and Organization

- 1 Model how information is broken down into smaller pieces, transmitted as packets through multiple devices over networks and the Internet, and reassembled at the destination. **35-NI-01**
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Cyber Security

- 2 Explain your digital footprint and how personal information can be protected. **35-NI-02**
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Data and Analysis **DA**

Storage

- 1 Identify the type of data encoded in a file based on file extension. **35-DA-01**
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Storage

- 2 Illustrate the process of file management and version control. **35-DA-02**
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Collection, Visualization, & Transformation

- 3 Organize and present collected data visually to highlight relationships and support a claim. **35-DA-03**
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Influence and Models

- 4 Communicate using data to highlight or predict outcomes. **35-DA-04**
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Algorithms and Programming AP

Algorithms

- 1 Create multiple algorithms for the same task to determine which is the most accurate and efficient. 35-AP-01
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Variables

- 2 Create programs that use variables to store and modify data 35-AP-02
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Control

- 3 Construct programs that include sequences. 35-AP-03
 - 4 Construct programs using simple loops. 35-AP-04
 - 5 Construct programs that implement conditionals. 35-AP-05
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Modularity

- 6 Decompose problems into smaller, manageable, subproblems to facilitate the program development process. 35-AP-06
 - 7 Modify, remix, or incorporate portions of an existing program into one's own work. 35-AP-07
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Program Development

- 8 Apply an iterative process to the development of a program by including diverse perspectives and considering user preferences. 35-AP-08
 - 9 Give appropriate attribution when creating or remixing programs while respecting intellectual property rights. 35-AP-09
 - 10 Identify and debug errors in an algorithm or program to ensure it runs as intended. 35-AP-10
 - 11 Take on varying roles, with teacher guidance, when collaborating with peers during the design, implementation, and review stages of program development. 35-AP-11
 - 12 Describe choices made during program development using code comments, presentations, and demonstrations. 35-AP-12
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Impacts of Computing IC

Culture

- 1 Compare computing technologies that have changed the world and how they both influence and are influenced by cultural practices 35-IC-01
 - 2 Explore the tools that can be used to improve accessibility and usability of technology products for the diverse needs and wants of users. 35-IC-02
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Social Interactions

- 3 Seek diverse perspectives with collaboration for the purpose of improving computational artifacts. 35-IC-03
- 4 Exhibit positive digital citizenship and social responsibility in online interactions. 35-IC-04

Safety, Law, & Ethics

- 5 Utilize public domain or creative commons media, and refrain from copying or using material created by others without permission. [35-IC-05](#)