

# 4th Grade

## Navigating the Digital World 1

### 1 Digital Communication - Using devices to stay connected with people. 1.1

- 1 Identify how not to be a cyberbully. 1.1.1
  - 2 Describe how to disengage and/or ask for help/ assistance with cyberbullying and other online threats. 1.1.2
  - 3 Identify positive and negative actions that add to a digital footprint. 1.1.3
  - 4 Understand how to adjust online communication (e.g., use full words, tone, punctuation) based on context and purpose. 1.1.4
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### 2 Digital Privacy & Security - Keeping you safe while exploring and learning online. 1.2

- 1 Describe potential consequences for failing to protect personal information online. 1.2.1
  - 2 Compare and contrast online audiences (e.g., friends, family, online gaming, public posting), including what is appropriate to share. 1.2.2
  - 3 Understand the curiosity gap and how bad actors try to convince you to click. 1.2.3
  - 4 Identify websites for legitimacy, safety and appropriateness. 1.2.4
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### 3 Responsible Use of Technology - Developing good habits to use throughout their digital lives. 1.3

- 1 Develop strategies for choosing alternative activities and setting personal technology use goals. 1.3.1
  - 2 Properly acknowledge sources in all projects (e.g., reports, art, science). 1.3.2
  - 3 Evaluate digital information as either reliable or unreliable. 1.3.3
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## Programming Fundamentals 2

### 1 Computational Thinking - Breaking down big, complex problems into smaller, manageable parts. 2.1

- 1 Create an original pattern and explain its rule. 2.1.1
- 2 Evaluate a set of instructions to see if it will complete the expected task. 2.1.2
- 3 Decompose a complex problem into subtasks. 2.1.3
- 4 Identify relevant information when problem solving. 2.1.4

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## **2 Designing Algorithms- Creating sets of instructions for solving problems.** 2.2

- 1 Design multi-step algorithms that utilize decision-making structures. 2.2.1
- 2 Use debugging strategies to identify and fix errors. 2.2.2

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## **3 Develop Programming Skills - Learning to create simple instructions for computers to express ideas.** 2.3

- 1 Discuss how conditional statements mirror real-world decision making. 2.3.1
- 2 Use block based coding to create programs that include conditional statements (if-else) with comparative operators (<, > and ==) and loops. 2.3.2

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## **Making Decisions with Data** 3

### **1 Data Collection - Gathering and organizing information to understand the importance of data in everyday life.** 3.1

- 1 Identify whether data is relevant to a given question or topic. 3.1.1
- 2 Explain how digital sensors (e.g., thermometer, pulse sensor, light sensor, caliper) can be used as tools to gather data. 3.1.2
- 3 Understand that data should be used to make informed decisions. 3.1.3

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### **2 Data Analysis - Understanding how data can be used to answer questions and make decisions in daily life.** 3.2

- 1 Identify patterns, trends, and relationships in data. 3.2.1
- 2 Develop relevant questions for exploring data. 3.2.2
- 3 Analyze data to draw conclusions and make predictions. 3.2.3

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### **3 Data Representation - Presenting data in various ways that make the information easier to understand and analyze.** 3.3

- 1 Create appropriate visualizations to communicate data insights. 3.3.1
- 2 Communicate data insights persuasively. 3.3.2

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## **Computing Essentials** 4

### **1 Computer Components- Focusing on the basic functions of each part of the computer.** 4.1

- 1 Differentiate between external components(monitor, keyboard, mouse) and the main unit that houses internal components(CPU tower, laptop body). 4.1.1
- 2 Apply proper computer care practices and understand the impact of device usage. 4.1.2
- 3 Identify common operating systems (e.g., macOS, Windows, ChromeOS) and how we interact with them differently. 4.1.3
- 4 Communicate basic computer related problems including what happened, and what steps have already been taken. 4.1.4

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**2 Digital Literacy- Using a variety of digital tools to create, communicate, collaborate, and apply learning across subjects.** 4.2

- 1 Create digital content using spreadsheet software (e.g., graphs and tables), applying formatting. 4.2.1
- 2 Revise digital content, utilizing digital resources (e.g., spelling/grammar check, thesaurus, online research tools) to enhance clarity and impact. 4.2.2
- 3 Demonstrate basic file management (e.g., descriptive file names, create folders, navigate to find files). 4.2.3
- 4 Practice typing including touch typing, symbols and special characters, and keyboard shortcuts (e.g., cut, copy, paste, and undo). 4.2.4

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**3 Connected Devices - Understanding how computers communicate and share information.** 4.3

- 1 Identify examples of Internet of Things (IoT) devices (e.g., thermostat, security cameras, refrigerator, doorbell, kitchen appliances, digital assistant, robot vacuum, outlets, lightbulbs). 4.3.1
- 2 Identify that there are limitations to the bandwidth of a network. 4.3.2
- 3 Describe basic troubleshooting steps for common network issues (e.g., restarting devices, checking network and power cables). 4.3.3