



Integration Opportunities

Science 2.1a,d Students will identify a simple problem that can be solved through the development of a new tool or improved object and draw conclusions based on observations or data.

Math 2.MG.2a Students will demonstrate their understanding of time by identifying the time to the nearest five minutes on both analog and digital clocks while troubleshooting any issues that arise in a classroom clock activity and proposing solutions to those problems.

Music 2.2c Students will develop questions for evaluating and revising music ideas as a group.

English 2.C.3 Students will use oral communication skills to describe the technical problems that they face and how to resolve those problems in conversation, a role play, or classroom brainstorming session.

2.CSY.2 Computing Systems

The student will demonstrate an understanding of how to troubleshoot simple hardware and software problems that may occur during use. (a) Propose solutions to simple hardware and software issues. (b) Use appropriate steps to perform simple troubleshooting tasks.

Understanding the Standard

Common troubleshooting strategies, such as checking connections, power, and swapping parts, can be used on computing systems. Emphasize that troubleshooting may need to address both hardware and software since computing devices are interconnected systems. In second grade, students should use accurate terminology to describe simple hardware and software problems, and be able to follow simple instructions for troubleshooting.

Term	Definition
Keyboard	A device that allows you to type and enter words or text onto a screen
Mouse	A device used to move items on the screen and navigate around the screen.
Screen	An output device that is used to show text, images, and videos on computers.
Trackpad	An input device used to move items on the screen and navigate around the screen.
Touchscreen	A device that senses touch to collect input for the computer while showing text, images, and videos as output from a computer.
Printer	A device that produces a physical copy of information or images on paper.
Troubleshoot	To try to fix a problem.

Prerequisite Knowledge

Students should have a basic understanding of operating computers or devices. For example, turning them on and off. Students should also be familiar with the names of the parts of a computing system so that they can properly describe which part is not working as expected.

Summary of a Lesson

Review the meaning of software and hardware and list items that fall under each category. Offer a selection of devices and encourage students to try different apps, open and close programs, adjust settings, and test various functionalities. Ask students to share at least one problem they encountered. Record student responses, categorizing them under "Hardware Problems" and "Software Problems." Discuss how to correct the problems, using correct terminology. As a class, create anchor charts for solving some of the simpler problems independently, and have students refer back to the anchor charts before asking the teacher for assistance.

