

1.CSY.2 Computing Systems

The student will use accurate terminology to describe when a computing system might not work as expected. (a) Identify and describe a problem with a device or computing system when it does not work as expected. (b) Propose a solution to simple hardware or software issues.



Understanding the Standard

Students will learn to recognize when a computing system is not functioning as expected. They will understand that hardware or software problems can cause these issues. They will learn that the first step to troubleshooting is communicating the problem. While students are not expected to diagnose complex problems at this stage, they can engage in developmentally appropriate problem-solving activities such as debugging simple programs and seeking help by clearly describing the issue.

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.

Integration Opportunities

English 1.RV.1d,i; English 1.C.2a

Students should use newly learned vocabulary regarding devices and/or computing systems accurately to describe a problem and pose a solution with relevant details.

Math 1.PFA.1 Have students use calculators to extend a repeating or growing pattern. Discuss what to do if calculators encounter problems.

Science 1.1a & 1.1f Given a device that is encountering a problem with hardware or software, students identify the problem(s), communicate the problem, and brainstorm possible solutions.

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

Begin the lesson by emphasizing the importance of recognizing and communicating issues when devices or programs are not functioning properly. Using pictures of vocabulary words displayed on the board, students will participate by raising their hands to identify each device. Review the vocabulary words, followed by an individual activity where students label the vocabulary words in a picture. To demonstrate effective communication, the teacher will show a picture or video of a device problem and conduct a think-aloud about how to express the issue. Introduce sentence starters such as, "The _____ won't work when I _____." The class will then be divided into groups, with each group member receiving a scenario of a device or program problem. Students will take turns sharing scenarios and communicating the problems. The teacher will facilitate a class discussion to review and discuss students' responses.



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