

K.CSY.2 Computing Systems

The student will identify when a computing device might not work as expected. (a) Identify a problem with a computing device when it is not working as expected. (b) Explain what to do when a computing device is not working as expected.



Integration Opportunities

Understanding the Standard

Computing devices sometimes have problems with their hardware or software. Students will learn to identify problems, like apps that won't work, low or no sound, a blank screen, or a computer that won't power on. They will also learn basic troubleshooting steps, such as restarting the device or checking connections, to help resolve common problems. Kindergarteners should practice procedures for alerting a trusted adult about a device problem and demonstrating patience while participating in troubleshooting.

Term	Definition
Computing device	An electronic device that can store and receive information.
Troubleshoot	To try to fix a problem.
Keyboard	An input device that allows you to type and enter words or text onto a screen.
Mouse	An input 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.
Printer	An output device that produces a physical copy of information or images on paper.

English K.RV.1c Students will use vocabulary across content areas including computer science vocabulary.

Science K.1a Students demonstrate an understanding of the scientific & engineering practices by asking questions and defining problems in order to troubleshoot a device not working as expected.

Math K.NS.2a Students practice identifying when a tablet or computer isn't working (e.g., it won't turn on) and use counting skills to follow steps sequentially (e.g., 1. Check the power button, 2. Plug in the charger).

Prerequisite Knowledge

Students should have a basic understanding of operating computers or devices. For example, turning them on and off. They should be able to name or describe the parts of a computing device.

Summary of a Lesson

The teacher will lead a whole-class discussion to assess students' prior knowledge by asking them if they have ever experienced any issues with computers or electronic devices. The teacher will demonstrate scenarios or present pictures depicting various computer issues, such as an app not working, no sound, or a device not turning on. Students will be prompted to identify and name the problems. Next, the class will be divided into small groups, and each group will be given a set of pictures illustrating computer issues. Within their groups, students will take turns identifying and naming the problems depicted in the pictures. After each student has shared, regroup the whole class. The teacher will then display the pictures again, inviting students to explain the problems they previously named.