

6.CSY.2 Computing Systems

The student will identify and explain hardware, software, and connectivity problems and troubleshooting solutions. (a) Identify and explain hardware, software, and connectivity problems and solutions with accurate terminology. (b) Identify resources for troubleshooting hardware, software, and connectivity-related problems.



Integration Opportunities

Science 6.1 Ask appropriate questions to troubleshoot problems and offer simple solutions to design problems.

English 6.RV.1a,h Develop and accurately use content-specific vocabulary when encountering problems with computing technology.

Understanding the Standard

This standard asks students to identify whether issues they encounter with their computer have to do with the computing device's hardware, software, or Internet connectivity. For example, if a student drops a laptop, it's likely a hardware issue due to damage. If a student tries to use a particular program on their computer and it keeps quitting or crashing unexpectedly, it's probably a software issue. If a student cannot access a webpage or log in properly, it's probably an Internet connectivity issue. The standard also asks students to find resources for addressing these issues. These resources could include information about a device or an application online, tech support staff in the school, or other places students might find more information about their computer issues. Part of addressing this standard is helping students learn to describe issues they are having with their computer and to narrow down the problem area to hardware, software, or connectivity.

Term	Definition
Hardware	The physical components of a computing device
Software	The programs and operating system of a computing device
Connectivity	Whether or not the computing device has successfully connected to the Internet

Prerequisite Knowledge

Students do not need prerequisite knowledge to address this standard.

Summary of a Lesson

The best way to address this standard is to incorporate these vocabulary terms when helping students troubleshoot their computing devices during class. If you want to teach a particular lesson about this standard, create some scenarios illustrating different kinds of hardware issues. For example: "Rainier was watching a video on YouTube, but then suddenly the video stopped playing. No matter how many times they tried to play the video, it kept stopping. Rainier tried to reload the page, but the whole page went blank!". This scenario points to a connectivity issue. Have students try to match hardware, software, or connectivity problems to each scenario and then brainstorm some strategies for solving the problem. Then, have students brainstorm what they would do next if they can't solve the issue on their own.

If you want to get really fancy, you could try working with your tech support team to procure broken laptops with hardware, software, and connectivity issues. Set these up as stations, and have students experiment with the computer to try and identify which kind of problem each computer is having.