

Standard: CS.HS.01 Grade: K

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Identify by name and locate common **computing devices** and external **hardware** in a variety of environments, using appropriate technical terminology (e.g., mobile devices, desktop computer, laptop computer, mouse, keyboard, **wearables**).

Essential Skills

Identify different **computing devices**.

Identify external **hardware components** of a computing device using correct terminology.

Essential Questions

What are the names of the external and internal parts of a computing device and what do those parts do?

Which parts of the computer are considered **input** devices?

What parts of the computer are considered **output** devices?

Explanation

A computing system is composed of **hardware** and **software**. Hardware consists of physical components that are both internal to and external from the computer. Students should recognize and use appropriate terminology for external hardware and devices such as laptop computers, monitors, keyboards, mice, trackpads, and printers as well as for internal components such as **CPU**, **hard drive**, and **memory**. By first grade students should be able to describe the functions of some of the components. By second grade, students should describe functions of most components as well as of external storage devices such as external hard drives and **cloud storage** (such as Google Drive). This content should be made relevant to the hardware and software available to the students.

Think of this as similar to....

Eyes, ears, skin, nose are **input** devices (external hardware) and the brain is what interprets that input and decides how to react. When you speak or move that is **output**.

Implementation Examples—What would this look like in the classroom?

Title	Description	Link	Content Connection & Notes
How Does a Robot Work?	Grade K- Students build on one another's discoveries to articulate the functions of each control on a robot (such as a Beebot, Code and Go mouse, etc.). They will identify the robots as a computing device and identify the buttons or other external controls as "hardware" that they use to program the robot. Students then apply this knowledge to program a dance or game for their groupmates to actively engage with.	How Does a Robot Work?	A floor robot is used for this activity.
Why do we Use Computers?	Grade K-- Students will discuss different ways that they use computing devices and how those devices can help them. They should think about the different things they call "computers" and how they are used differently. Students should identify the various external parts of the different computing devices (touchscreen, mouse, monitor, buttons on the Beebot) using the correct terminology.	This is a variation of Why do we Use Computers?	
What is a Computer?	Grade K-- Using visuals and class discussions, students will develop their own definition of a computer. Students will use similarities among their computers to determine what makes a device a computer. They can then be presented with other items and determine whether or not it is a computing device. Grade 1-- Students will distinguish among different tasks that different devices can do.	What is a Computer?	This lesson aligns with CS IC.C.01 and is similar to What is a Computer? from Hello Ruby .

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These annotations are a collaboration between [Maryland Center for Computing Education](#) and the [Maryland State Department of Education](#).