

Lesson 2.1: Hardware & Software

Objectives

In this lesson, students will:

- ❖ Explain the difference between software and hardware
- ❖ Explain the difference between an output device and an input device

Agenda

| | |
|----------------------------|---------|
| 1. Introduction | 5 mins |
| 2. Hardware vs. Software | 20 mins |
| 3. Hardware Input/Output | 10 mins |
| 4. Wrap-up and Reflections | 10 mins |

Preparation

- “Software or Hardware” (1 copy per student)
- “Input or Output Device” (1 per student)
- Scissors, glue, colored markers

Resources & Links

- Cut-out:
https://hello-ruby-production.s3.amazonaws.com/uploads/exercise_material/attachment/57/Task_16.pdf

Credits:



1. Introduction



Watch the video: <https://youtu.be/P8mkVb5mKas>

Discuss with the students. What did they hear?



Hardware is the components of a computer that we can see and touch. They can be outside of the computer, for example, a mouse, a keyboard, or inside the computer like a chip, not the one you eat, but the small components that make data travel inside the computer. (Show Appendix A)

Software is the programs inside the computer. Ask students to give examples of software (email, an application they use in class, etc...)

2. Hardware vs Software



Each student receives a copy of the activity: “Software or Hardware”

Instructions to give to students:

- Cut out the software and hardware pieces and place them correctly. For instance, the display and the keyboard are examples of hardware.
- Put them in the hardware section.
- Make a match of the hardware and software that work together - like the game and game controller.

3. Hardware: Input / Output



Discussion: hardware also includes devices around the computer (like a keyboard).

These devices can be put in 2 categories: Input and Output. What do you think an input device is, as opposed to an output device?



Watch the first 47 seconds of the video:

<https://www.youtube.com/watch?v=jzwa-HegLk4>



Distribute Input or Output device” to the students. Explain to them that they have to identify if each device is an input device (circle in Green) or an output device (circle in blue).

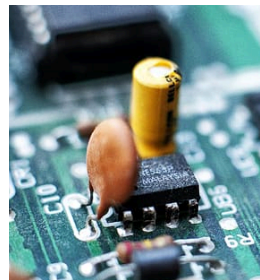
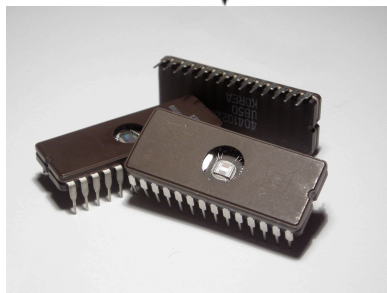
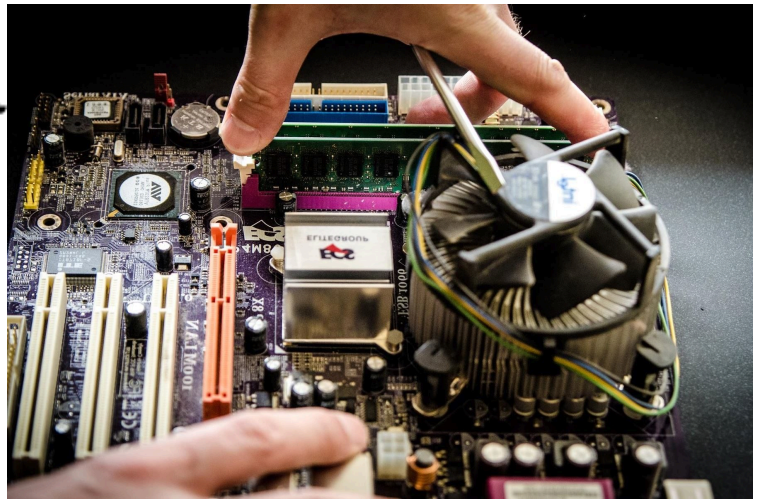
4. Wrap-Up and Reflections



Reflection Points:

- Look at clues to spot a computer: on/off button, screen etc...
- The world is full of computers, which one is your favorite?
- Computers used to take a lot of room, but now computers can be very small. Can you think of a small computer?

Appendix A Pictures of hardware components



TASK 16



SOFTWARE or HARDWARE

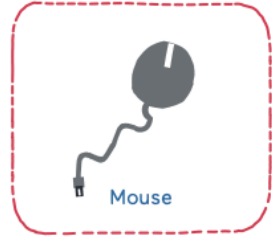
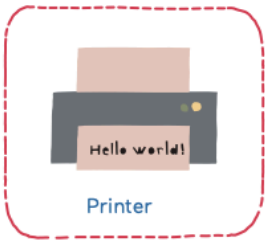
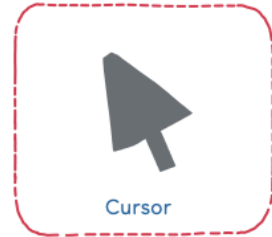
Cut out the software and hardware pieces and put them in the right place. Can you connect each piece of software with a piece of hardware?



Can you think of a few more examples of software and hardware?

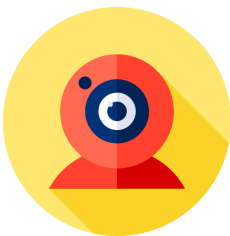


TASK 17
SOFTWARE OR HARDWARE



Input or Output Device?

Circle in **Green** input devices and in **Blue** output devices



Images from [Flaticon.com](https://www.flaticon.com)