

4565: Computing Foundations for a Digital Age

Unit 1

Day 7 Alternate Lesson Plan: Virtual Hardware Exploration

Objective

Students will identify key internal computer components and explain their functions and identify their system roles or support functions using an interactive virtual exploration of computer hardware.

Word Bytes

- **Storage Device** – Hardware used to store digital data (e.g., hard drives, SSDs, flash drives).
- **Power Supply Unit (PSU)** – The component that converts electrical power from an outlet into usable power for the internal parts of a computer.

Materials

- Internet-connected devices
- [Inside a Computer – Interactive Website \(HowStuffWorks\)](#)
- Virtual Hardware Scavenger Hunt worksheet

Activities

Hook Discussion: What's Inside? — 5 minutes

- Ask: “Have you ever wondered what’s *really* inside your laptop or desktop?”
- Let students brainstorm what they think is under the hood before they explore.

Virtual Hardware Tour — 10 minutes

- Students explore this interactive breakdown:
 - [Inside a Computer – HowStuffWorks](#)
- Encourage them to click through every section (e.g., motherboard, hard drive, CPU).

Scavenger Hunt Worksheet — 22 minutes

- Students complete the Virtual Hardware Scavenger Hunt Worksheet as they explore.
- Tasks include:
 - ☐ Describing what each part does
 - ☐ Identifying each part's system role as input, processing, output, storage, or communication. For supporting components, identifying the support function, such as power, cooling, or connection.
 - ☐ Matching each term to what they saw on the site
 - ☐ Reflecting on which parts were most surprising or essential

Wrap-Up Discussion / Exit Ticket & Word Bytes — 8 minutes

- Prompt 1: “Choose one component from today’s exploration. What does it do, what system role or support function does it have, and what might happen if it stopped working?”
- Prompt 2: “What surprised you about the inside of a computer?”
- Students add “**storage device**” and “**power supply unit (PSU)**” to their Word Bytes dictionary with examples.
 - **Suggested examples:**
 - Storage Device – Your phone’s hard drive stores your photos.
 - Power Supply Unit – Converts electricity so your computer can run.