

4565: Computing Foundations for a Digital Age

Unit 1

Day 7 Lesson Plan: Computer Hardware Exploration

Objective

Students will identify internal computer components through hands-on exploration of real devices, reinforcing the functions and physical layout of common hardware parts.

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

- Desktop computers, laptops, or other devices that can be safely opened
- Basic tools (e.g., screwdrivers) if needed for opening cases

Activities

Safety Talk & Set-Up

- Begin with a short safety overview: unplug all devices, handle components gently, avoid touching circuitry when possible.
- Provide students with a printed diagram or display an image showing major internal parts for reference.
- Assign students to work in pairs or small groups with one device per group.

Hardware Scavenger Hunt

- Challenge: How many components from the class trading card project can you find in this real device?
- As students explore the internals, have them:
 - Label parts using sticky notes or a worksheet
 - Discuss each part's function aloud or record it in a chart
- Optional worksheet: [Make a Copy – Hardware Scavenger Log](#)

Observation Reflection

- Prompt students to consider:
 - "Which part was easiest to recognize—and why?"
 - "What part surprised you or was hard to find?"
 - "What connections can you make between this hands-on experience and your trading card project?"

Class Debrief

- Invite students to share discoveries, oddities, or questions.
- Optional: Display a disassembled computer and walk through the components again using live examples.
- 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.