

Day 6 Lesson Plan: Classroom Internet Speed Test

Objective

Students will collect data using a digital tool and explain the variation in internet speed results across different locations.

Word Bytes

- **Upload Speed** – How fast data is sent from your device to the internet.
- **Download Speed** – How fast data is received from the internet to your device.
- **Bandwidth** – The maximum amount of data that can be transferred over a network at a given time.
- **Latency** – The delay before data starts to transfer after a request is made.

Materials

- Internet-connected devices (phones, laptops, or tablets)
- Access to a speed test website or app (e.g., [speedtest.net](https://www.speedtest.net), [fast.com](https://www.fast.com))
- Class data table (Google Sheet or poster paper)
- Colored markers or sticky notes (optional for visualization)

Activities

Hook: Do You Ever Lose Wi-Fi?

- Ask students where in the school they've had trouble with slow or spotty internet. Briefly discuss what they think causes the differences.

Mini-Lesson: What Is Internet Speed?

- Explain the difference between upload and download speeds and what those numbers mean.
 - Give examples:
 - Downloading a video = needs high **download speed**
 - Uploading homework or posting a video = needs high **upload speed**
 - Video calls = need both, plus **low latency**

Activity: [Internet Speed Hunt](#)

- In small teams, students visit multiple locations in the school and run an internet speed test.
- Record:
 - Location
 - Upload speed
 - Download speed
 - Observations (e.g., “Next to the library router was fastest”)
- Add findings to the class data table or spreadsheet.

Analysis & Discussion

- Where was the fastest internet? Slowest?
- What factors might explain the differences (distance from routers, interference, device type)?
- What surprised you?

Extension (Optional)

Students create a simple bar graph comparing download speeds in different locations.

Word Bytes Dictionary Update

Students add today’s terms to their Word Bytes dictionary with examples:

- Upload Speed – Sending a photo to Google Drive
- Download Speed – Streaming a video on YouTube
- Bandwidth – A hallway with only one person walking vs. a hallway with 30 people.
- Latency – The pause before a video starts playing after you hit “Play.”