

LESSON 4

Computer Storage and Memory: Where Your Work Actually Lives

60 minutes

ICT1: Introduction to the computer and word processing

Outcome M1.U1.3

Outcome M1.U1.2

WHAT THIS LESSON DOES

Explore how computers use RAM for temporary work and permanent storage for saving files. Learn why unsaved work disappears during power cuts. Practise saving your project file to local, USB and cloud locations to keep it secure.

CURRICULUM OUTCOMES

Outcome	What the specification asks for
M1.U1.3	Explain the key concepts in relation to file storage, management and retrieval.
M1.U1.2	Understand and explain key concepts relating to devices, storage and software.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Explain the difference between RAM (working memory) and permanent storage
- Compare local drives, USB, external drives and cloud storage for school work
- Describe what happens to unsaved work when power is lost and why save-often matters
- Save the same file to local, USB (or simulated) and cloud locations and evidence each save

BEFORE THE BELL

- Know which cloud the school uses (OneDrive or Google Drive) and its URL, and say it aloud once at the start.
- Run the 01_project_brief check as a door routine while students sit, not inside the five-minute Introduction. A one-line stub is fine if it is missing.
- Prep a 3-4 minute live demo: download if the file is cloud-native, then local Documents, then USB or USB_Simulated, then upload into cloud Project Portfolio, with a screenshot and caption at each stop.
- Check whether USB ports are enabled on the classroom machines, and have USB sticks or permission for students to create a USB_Simulated folder on the Desktop.
- Projector or shared screen for the drag-sort, in challenge mode so wrong drops bounce.
- Leave the Common Issues table projected during Portfolio Build, and if the build overruns, be ready to shorten Reflection to a two-minute stand-up with one voice for cloud and one for a carried USB, so the evidence document still gets saved before the bell.

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HOW THE LESSON RUNS

5 min	introduction	Introduction
8 min	content	Key concepts
12 min	activity	Where does it live when the power goes?
3 min	content	Common issues
22 min	activity	Portfolio Build
5 min	content	Reflection
5 min	summary	Lesson summary

TEACHING MOVES

- Key concepts: teach only the two-row RAM vs permanent table live; name local / portable / cloud from the Three homes list; keep Save often as one spoken line.
- Drag-sort: cluster the three unsaved cards as one family in talk-first before students drag.
- Demo once with a frozen model screenshot that shows 01_project_brief readable; then circulate.
- Hard midpoint at about 12 minutes of student work: local plus portable or cloud before screenshots.
- Keep the common issues table visible during Portfolio Build.

WHAT TO WATCH FOR

- Trying to copy a browser-only Doc without downloading first: force File → Download into Documents.
- Mac Cmd+Shift+4 alone: image is on Desktop, not clipboard, use Cmd+Control+Shift+4 or Insert the Desktop file.
- Saving only to the local drive: require all three locations and storage-type captions.
- Cloud file not in Project Portfolio folder: open the folder before uploading.
- Three crops of the same window: each shot must show a different location UI.
- Screenshot misses the filename: require 01_project_brief visible in every shot.

DIFFERENTIATION

- Support: Use the four-tick checklist under success criteria (Local Documents / USB or USB_Simulated / Cloud Project Portfolio / three captioned screenshots).
- Extension: Have students justify the most reliable storage for offline project work, or complete the free-space estimate in the summary challenge.
- Support: Permit paired help finding cloud folders once a student's own three places are done.