Cloud Storage teacher pack

Distinguish synchronized state from independent recovery copies.

For learners around age 14 and curious adults. Three 40-minute sessions. Use with the current AHA Cloud Storage manuscript. References use chapter titles so they work in both print and ebook.

Learning goals

Distinguish synchronized state from independent recovery copies.

Use the terms sync; backup; archive; retention; restore; independent copy. Show the reasoning behind an answer and identify where the example stops applying.

Reading route

1. Sync keeps things in step

2. A backup is a route back

3. Practice bringing something back

Teaching plan

Session 1: Ask the opening question before reading (5 minutes). Read the first selected chapter together (15). Draw the mechanism or compare two possible explanations (15). End with a one-sentence explanation (5).

Session 2: Read the remaining selected material (10 minutes). Complete the worksheet individually, then compare reasoning in pairs (20). Discuss the common wrong turn (10).

Session 3: Revisit one uncertain answer (10 minutes). Try the extension (15). Give a two-minute explanation without the book (10). Use the exit question (5).

Materials and access

Paper, pencil, the book and an optional calculator. Read diagrams aloud, allow spoken or drawn responses, and give extra time for vocabulary. No real accounts or specialist equipment are needed.

Cloud Storage learner worksheet

Opening question

If the same photo appears on three synchronized screens, do you necessarily have three independent backups?

Investigation

Draw a phone, a cloud library and a laptop showing the same synchronized library. Add a dated offline copy. Trace what may happen after a deletion and after losing the account. Do not perform any real deletion.

1. Why can deletion reach more than one screen?

Show your reasoning, label units or evidence, and state any assumptions.

2. What does the dated offline copy protect against?

Show your reasoning, label units or evidence, and state any assumptions.

3. What must you check before calling the copy a usable backup?

Show your reasoning, label units or evidence, and state any assumptions.

Transfer question

A 12 GB archive travels at a steady 6 MB/s. Using decimal units and ignoring overhead, 12,000/6 = 2,000 seconds, about 33.3 minutes.

Exit question

What would you now check before accepting a claim about this topic? Name one specific check and explain why.

Cloud Storage answers and teaching notes

Answer 1

Synchronization can propagate a change to the shared library.

Answer 2

It can provide a separate recovery route if it contains the required files and remains readable and accessible.

Answer 3

Verify completeness, file quality, dates, access credentials where needed and a successful restore test.

Common wrong turn

A thumbnail, an online-only placeholder and a full local file are different things. Recovery windows vary by service and account conditions.

Extension discussion

A 12 GB archive travels at a steady 6 MB/s. Using decimal units and ignoring overhead, 12,000/6 = 2,000 seconds, about 33.3 minutes.

Assess the explanation

Give one point each for a correct conclusion, visible reasoning, correct units or evidence, and a relevant limitation. A correct number with no explanation is not a complete answer. Accept equivalent wording and well-supported alternative interpretations where the question allows them.

If the learner gets stuck

Return to the diagram or the smallest example. Ask what is being counted, compared or transferred. Let the learner revise the answer after explaining the mistake; do not reward speed over understanding.

Family connection

Sketch the household's storage arrangement without changing it. Use a disposable test file and adult supervision only if practicing a restore.