

Unit 4-6 Storage Devices

Technology Concepts

Important lesson background and teaching tips for instructors

In this lesson, learners will become familiar with the features of different storage devices, including **hard drives**, **cloud drives**, and **USB flash drives**. They will discuss the advantages and disadvantages of each drive in order to recommend a drive to suit a specific purpose.

Teaching Tips:

- If you use a **cloud-based storage system** such as Google Drive or OneDrive, consider logging in and showing learners how to upload, view, and download **files**.
- If your learners have **USB flash drives**, consider having them practice moving **files** from the computer to their **USB flash drives**. Additionally, if they have Gmail accounts, consider having them practicing uploading **files** to Google Drive (or a similar service).
- In addition to the drives featured in this lesson, consider discussing the strengths and weaknesses of external hard drives.

Prepare Flash Drives for all students

Unit 4-6 Storage Devices

4-6 Learning Objective Standards

9. Demonstrate knowledge of Windows File Explorer and identify drives on the computer, as well as cloud storage services (e.g., OneDrive Google Drive, BOX, DropBox, etc.).

4-6 Vocabulary

back up

hard drive (C:)

cloud drive

portable

file

External Drive

Recovery

Upload / Download

Jump Drive

Thumb Drive

USB flash drive

Memory Stick

Unit 4-6 Warm-Up Activity

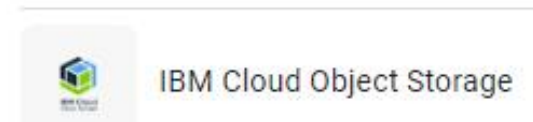
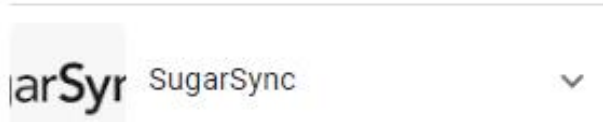
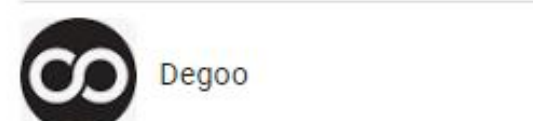
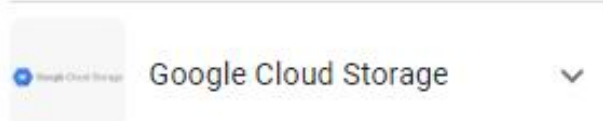
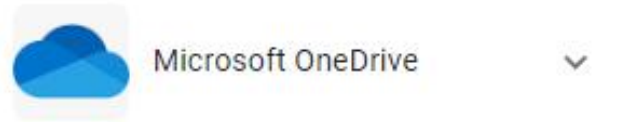
Warm Up

Find out what learners know and prime them for the work ahead.

- Say to learners:
 - ◆ "We all have important papers and office supplies. We keep some of them at home; take some in a bag, and some we might leave at school."
- On the board or in a projected document, write Home, Bag, School.
- For each object listed below, ask learners:
 - ◆ "Where would you keep a _____? Why would you keep it there?"
- Object list:
 - ◆ Notebook
 - ◆ Pencil
 - ◆ Textbook
 - ◆ Passport
 - ◆ Family pictures
 - ◆ Calculator
 - ◆ Water bottle
- Learners discuss in pairs before sharing with the class. Answers will vary based on personal preference.

Unit 4-6 Storage Devices (Some CLOUD SERVICES)

<https://www.usnews.com/360-reviews/technology/best-cloud-storage>



Unit 4-6 Storage Devices

CLOUD Drives Pros and Cons

Cloud Drives

→ Say to learners:

- ◆ "Files can also be stored on the internet. Some companies, like Google and Microsoft, have places where files can be put on the internet. These places are **cloud drives**. To use a **cloud drive**, you have to make an account with a cloud service. Two popular **cloud drive** services are Google Drive and Microsoft OneDrive."

→ Project [Reference A](#) and show learners the logos for Google Drive and Microsoft OneDrive at the bottom of the page.

→ Say to learners:

- ◆ "When files are put onto a **cloud drive**, you can open them from any computer with internet access."
- ◆ "Cloud drives are also good places to **back up** your files. Cloud drives will not break. If you put your files in the **cloud**, you will not lose them."
- ◆ "There are two disadvantages of **cloud drives**. First, **cloud drives** usually do not have a lot of space. If more space is needed, you have to buy it. Second, you always need the internet to use a **cloud drive**. If you do not have internet, you cannot access the **cloud**."

→ Project and show learners (optional):

- ◆ Open a **cloud** service like Google Drive or Microsoft OneDrive.
- ◆ Upload the file titled 'Grocery List'.

Unit 4-6 Storage Devices

Hard Drive Pros and Cons

Hard Drives

→ Say to learners:

◆ "This file 'Grocery List' is saved on my computer. All the files on my computer are saved on the hard drive. The hard drive is like a closet or garage where you can put your stuff."

→ Project [Reference A](#) to show learners pictures of hard drives at the top of the page.

◆ "The hard drive is a good place to put most of your files. It usually has a lot of space."

◆ "There are some problems with hard drives. Hard drives can break. If the hard drive breaks, you will lose all of your files. Also hard drives are not always portable. Portable means easy to move."

◆ "Because hard drives can break, important files should be saved in more than one place. That way, if your hard drive breaks, you won't lose your files."

◆ "Backing up your files means to make a copy of a file to store in a safe place in case you lose the original file."

→ Ask learners:

◆ "Why is it important to back up files?"

Unit 4-6 Storage Devices

USB Drives Pros and Cons

USB Flash Drives

- Say to learners:
 - ◆ "Another good place to save files is on a **USB flash drive**. **USB flash drives** are also called just **flash drives** or thumb drives."
- Show learners the **USB flash drive**.
- Say to learners:
 - ◆ "**USB flash drives** are **portable**. **Portable** means they are easy to move. They can be kept in a bag or backpack."
 - ◆ "However, **USB flash drives** are usually small. They cannot hold a lot of big files, like movies."
 - ◆ "**USB flash drives** have other disadvantages, too. They can break easily and **USB flash drives** are easy to lose because they are small."
 - ◆ "**USB flash drives** can be a good place to save files you are working on. But remember they can be easily lost or broken. You should not use **USB flash drives** to **back up files**."
- Project and show learners:
 - ◆ Insert the **USB flash drive**.
 - ◆ Drag the file 'Grocery list' into the **USB flash drive**.
 - ◆ Show learners the file in the **USB flash drive**.
 - ◆ Point out that there are two copies of the file, one on the desktop and the other in the **USB flash drive**.
 - ◆ Properly eject the **USB flash drive**.
- Ask learners:
 - ◆ "What are the advantages and disadvantages of **USB flash drives**? Would you store important files on a **USB flash drive**? Why or why not?"

Unit 4-6 Storage Devices - DO IT TOGETHER

DO IT TOGETHER

Teacher asks the class to restate the steps to complete the digital literacy skill modeled. This time, the teacher prompts with questions to learners.

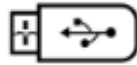
- Ask learners the following aloud. Learners discuss in pairs before sharing answers as a class:
 - ◆ “When you save files on your computer, where do they go?” (**hard drive**)
 - ◆ “I am typing a paper on a school computer. I want to finish typing it at home, but I don’t have internet at home. Where should I store my file?” (**USB flash drive**)
 - ◆ “I have some important files. I am worried if my computer breaks, I will lose them. Where should I **back up** my files? What is the most secure place to **back up** my files?” (**cloud drive**)

Unit 4-6 A Handout

Storage Drives: Advantages and Disadvantages

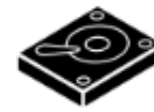
Directions: Below is a list of many advantages and disadvantages of storage drives. Organize the advantages and disadvantages into the tables for **hard drives**, **cloud drives**, and **USB flash drives**.

doesn't break	lots of space
portable (easy to move)	easy to lose
have to buy more space	can use it anywhere without internet
can break	not portable (easy to move)
not a lot of space	can use it anywhere with internet



USB Flash Drives

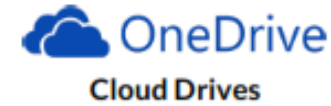
Advantages	Disadvantages



Hard Drives



Advantages	Disadvantages



Google Drive

Advantages	Disadvantages

Unit 4-6 B Handout

Situation one: Maria is typing a paper at the library. She wants to finish it at home, but Maria doesn't have internet at home.

Where should she save her paper? _____

Situation two: Sam has a lot of movies he downloaded from the internet. The files are very big and take up a lot of space. Sam only wants to watch them on his home computer.

Where should he save his movies? _____

Situation three: Awale just finished his taxes. He wants to back up his tax files. Awale wants an extra copy in case his computer breaks.




Where should he back up his tax files? _____

Situation four: Amrit is taking class notes on a school computer. Amrit wants to read his notes at home and at the library. He has internet at school, at home, and at the library.

Where should he save his class notes? _____

What storage drive should they use?

Directions: Read the following situations. Decide: What storage drive should they use?

		 OneDrive
hard drive	USB flash drive	cloud drive

→ Answers:

1. **USB flash drive**
2. **Hard drive (or cloud drive if he buys more storage)**
3. **Cloud drive**
4. **Cloud drive/USB flash drive**

Unit 4-6 C Handout – QUIZ – Storage Drives



Directions: Use the vocabulary words below to label the pictures and complete the sentences.

cloud drive	USB flash drive	hard drive
backing up	portable	file

1) What is this?  _____

2) What is this?  _____

3) What is this?  _____

4) It is a good idea to make a copy of files to store in a safe place in case you lose the original file. This is called _____.

5) USB flash drives are easy to move. USB flash drives are _____ storage drives for files.

6) A _____ is a document, picture, song, or video on your