

Windows 10, Lesson 6: Storage Drives

| Northstar Digital Literacy Standards <i>This lesson aligns with the following standard/s.</i> | Vocabulary <i>This lesson focuses on the following digital literacy terms.</i> | | | | | | |
|---|---|---------|------------|-------------|----------|----------|-------------|
| <p>9. Demonstrate knowledge of Windows File Explorer and identify drives on the computer, as well as cloud storage services (e.g., OneDrive).</p> | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; padding: 5px;">back up</td> <td style="width: 50%; padding: 5px;">hard drive</td> </tr> <tr> <td style="padding: 5px;">cloud drive</td> <td style="padding: 5px;">portable</td> </tr> <tr> <td style="padding: 5px;">file USB</td> <td style="padding: 5px;">flash drive</td> </tr> </table> | back up | hard drive | cloud drive | portable | file USB | flash drive |
| back up | hard drive | | | | | | |
| cloud drive | portable | | | | | | |
| file USB | flash drive | | | | | | |

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.

| Teacher Prep Guide <i>Follow these steps to prepare for teaching this lesson</i> | |
|--|--|
| General Prep | <ul style="list-style-type: none"> <input type="checkbox"/> Bring a USB flash drive and prepare to demonstrate how to add files to it. <input type="checkbox"/> Prepare to project Reference A for Model & Explain. <input type="checkbox"/> Prepare to project Reference B for Pair Explore. |
| Pair Explore | <ul style="list-style-type: none"> <input type="checkbox"/> Copy Handout A for each learner (two pages). |
| Task | <ul style="list-style-type: none"> <input type="checkbox"/> Copy Handout B for each learner. |
| Vocabulary Work | <ul style="list-style-type: none"> <input type="checkbox"/> Copy Handout C for each learner. |

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.

We will Learn...

Sharing learner friendly objectives helps set goals for today's learning.

List objectives on board or project. Read through them together to set goals for today's learning.

We will learn to:

recognize the features of different storage drives, including **USB flash drives**, **hard drives**, and **cloud drives**.

list the advantages (strengths) and disadvantages (weaknesses) of each storage drive.

MODEL & EXPLAIN

Teacher models and explains (thinks aloud) to complete a digital literacy task while learners observe. To help learners focus on the demonstration, they should not work on their own computers at this time.

Saving Files to Drives

- Say to learners:
 - ◆ “Many people keep books and papers in their desks. They might have notebooks, textbooks, schedules, resumes, and homework in their desks. In the same way, computers have **files**. A **file** is a document, picture, song, or video on your computer.”
 - ◆ “On computers, we use programs to make **files**. For example, Microsoft Word can be used to make a document **file** of a grocery list.”

→ Project and show learners:

- ◆ Open 'Word'.
- ◆ Click 'Blank document'.
- ◆ Type a short grocery list.
- ◆ Save the **file** as "Grocery list" on the **desktop**.

→ Say to learners:

- ◆ "**Files** can be saved in different places. **Files** can be kept on our computer, on **USB flash drives** that are easy to move, or in **cloud drives** that let us use our **files** on any computer with internet."

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**?"

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'.

◆ Show learners the **file** in the **cloud**.

→ Ask learners:

◆ “What are the advantages and disadvantages of **cloud drives**?”

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?”

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**)

PAIR EXPLORE

Teacher has modeled the skills, and skills have been practiced together. Now, allow learners time to explore these skills with a partner without step-by-step guidance from the teacher. *Refer to the "How to Facilitate Pair Explore" for teacher support.

- Project [Reference B](#) for support.
- Give learners [Handout A](#).
- Working in pairs or small groups, learners write down some of the advantages and disadvantages of each of the storage drives.

Task

Learners practice skills by completing an authentic task/s.

- Give learners [Handout B](#).
- In pairs, learners read the situations and decide what storage drive to recommend for each situation. Answers may vary.
- Check answers as a class.
- For each situation, ask learners:
 - ◆ "Why would you recommend that storage 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**

Vocabulary Work

Learners practice vocabulary presented within the lesson.

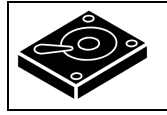
- Give learners [Handout C](#).
- Learners label the storage drives.
- Then, they complete the sentences using their own words.
- Check answers as a class.

Wrap-Up

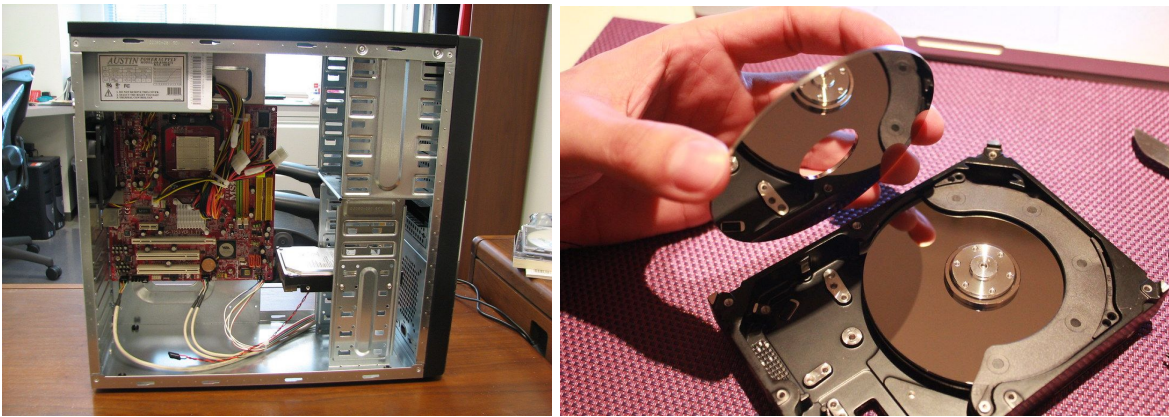
A final check in with learners. An opportunity to review, reflect, or check for understanding.

- Ask learners the following aloud. Learners discuss in pairs before sharing answers as a class:
 - ◆ "Which storage drive is most **portable**?" (**USB flash drive**)
 - ◆ "Which storage drive needs the internet?" (**cloud drive**)
 - ◆ "Which storage drive is inside your computer?" (**hard drive**)

Reference A



Hard Drives



Cloud Drives



Google Drive



OneDrive

Reference B

Storage Drives: Advantages and Disadvantages

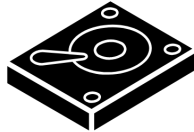
Directions: Below is a list of many advantages and disadvantages of storage drives. Organize the advantages and disadvantages into the tables for **hard drives**, **cloud drives**, and **USB flash drives**.

| | |
|-------------------------|---|
| 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 |
| doesn't break | lots of space |

Storage Drives: Advantages and Disadvantages

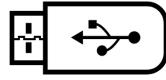
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Hard Drives

| Advantages | Disadvantages |
|------------|---------------|
| | |



USB Flash Drives

| Advantages | Disadvantages |
|------------|---------------|
| | |


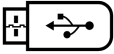



| Advantages | Disadvantages |
|------------|---------------|
| | |

Handout B

What storage drive should they use?

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

| | | |
|---|---|---|
|  |  |  |
| hard drive | USB flash drive | cloud drive |

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? _____

Handout C

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 computer.