Windows 10, Lesson 3: Operating Systems

Northstar Digital Literacy Standards *This lesson aligns with the following standard/s.*	Vocabulary *This lesson focuses on the following digital literacy terms.*
1. Identify the operating system used by a computer. 2. Identify the parts of the Windows 10 interface (desktop, taskbar, etc.).	**hardware** **software** **Mac OS** **Windows** **operating system**

Technology Concepts
Important lesson background and teaching tips for instructors

In this lesson, learners will become familiar with the distinction between **hardware** and **software**. They will also learn identifying features of the two major computer **operating systems** - **Windows** and **Mac OS** - in order to distinguish between the two.

Teaching Tips:
- If most of your learners have smartphones, consider adding an activity where learners compare different smartphone **operating systems**. For example, learners who own iPhones can pair with Android users and compare the similarities and differences.
- If you have access to a **Mac** computer, consider projecting and sharing the desktop with learners as a visual example to compare to **Windows**.

Teacher Prep Guide
Follow these steps to prepare for teaching this lesson

General Prep	❏ **Prepare to project [Reference A](#) for Warm Up and Model & Explain 2.** ❏ **Prepare to project [Reference B](#) for Model & Explain 1 and Do It Together 1.** ❏ **Prepare to project [Reference C](#) for Model & Explain 2 and Task.** ❏ **Prepare to project [Reference D](#) for Do It Together 2.**
Pair Explore	❏ **Copy [Handout A](#) for each learner.**
Task	❏ **Copy [Handout B](#) for each learner.**
Vocabulary Work	❏ **Copy [Handout C](#) for each learner.**

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

➔ Project **Reference A**.
➔ Ask learners the following questions. Learners discuss in pairs before sharing answers as a class:
   ◆ "These two desks are similar, but they do have differences. How are they similar? How are they different?"
   ◆ "What kinds of work can you do at these desks?"

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:

explain the difference between computer **hardware** and **software.**

recognize the **operating system** of a computer.

list identifying features of two common computer **operating systems: Windows** and **Mac OS**.

list tasks you can complete using both **operating systems**.

MODEL & EXPLAIN 1
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.

Hardware and Software
➔ Project the top half of **Reference B**.
➔ Say to learners:
   ◆ "Computers need two things to work: **hardware** and **software**."
   ◆ "**Hardware** is like the computer's body: **Hardware** is the keyboard, the screen, the mouse, and the hard drive."
   ◆ "**Software** is like the computer's brain: Programs are **software**. Apps on your phone are **software** too."
   ◆ "There are two important kinds of **software**: 1) programs/applications and 2) **operating systems**."
   ◆ "We can imagine the computer like a desk. The **operating system** is how the desk is built. The programs are the office supplies: pens, calculator, tape, stapler, etc."

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DO IT TOGETHER 1

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

➔ On the board, write **Hardware** and **Software**.
➔ Project the bottom half of **Reference B**.
➔ For each item pictured, ask learners:
   ◆ "Is it **hardware** or **software**?"
➔ Learners discuss in pairs, before sharing answers as a class.
➔ Write answers on the board under the correct heading.
➔ Objects:
   ◆ Mouse (**hardware**)
   ◆ Program/application (**software**)
   ◆ Keyboard (**hardware**)
   ◆ **Operating System** (**software**)
   ◆ Screen **(hardware)**
   ◆ Flash Drive (**hardware**)
   ◆ Laptop (**hardware**)
   ◆ Email (**software**)
➔ Consider adding/removing items based on learner familiarity.

MODEL & EXPLAIN 2

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.

Operating Systems

➔ Project **Reference A**.
➔ Say to learners:
   ◆ "These two desks are similar. They both have a desktop, drawers, pens, and pencils. They are also different. Desk 1 has three drawers and Desk 2 has one drawer. Desk 1 has a computer and Desk 2 has a telephone. The people that work at these desks have different ways of organizing their work spaces, but they can still do similar work."
   ◆ "Computers also have different ways of organizing work spaces called **operating systems**. An **operating system** is the way your computer is organized and built."
   ◆ "For computers, the two most common **operating systems** are **Windows** and **Mac OS**. For smartphones, the two most common **operating systems** are iOS (iPhone) and Android (Google)."
   ◆ "**Windows** and **Mac OS** are like different desks. They can help you do the same tasks, but the organization is different."
➔ Ask learners:
   ◆ "What are the two most popular **operating systems** for computers?"

Identifying Common Operating Systems

➔ Say to learners:
  ◆ "Though you can do the same things in either **operating system, Mac OS** or **Windows,** the way the computer looks will be a little different."
➔ Project **Reference C**. Point out the following details for learners:
  ◆ Volume: "On both computers you can change the volume."
    ● **Windows**: lower right corner.
    ● **Mac**: upper right corner (depending on user settings).
  ◆ Programs: "Both have programs. Programs are computer tools you can use to type documents, use the internet, or listen to music."
    ● **Windows**: on the taskbar.
    ● **Mac**: on the dock.
  ◆ Sign out: "You can sign out of both computers."
    ● **Windows:** in the Start Menu.
    ● **Mac:** in the Apple Menu.
  ◆ Files: "Both computers have files. Files are items on your computer like documents, papers, schedules, and songs."
    ● **Windows**: in the File Explorer.
    ● **Mac:** in the Finder.
  ◆ Brand icons: "To tell the difference between the two **operating systems**, look for the brand icons (small picture)."
    ● **Windows**: **Windows** icon in the bottom left.
    ● **Mac**: Apple icon in the top left.
➔ Ask learners:
  ◆ "What are three things you can do using either **operating system**?"

DO IT TOGETHER 2

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:
  ◆ "What small icon (picture) can you see in the corner of a **Windows** computer?" (a window)
  ◆ "What small icon (picture) can you see in the corner of a **Mac** computer?" (an apple)
➔ Project **Reference D**.
➔ For each picture, ask learners:
  ◆ "Which **operating system** is this - **Windows** or **Mac**? How do you know?"
➔ Learners discuss each answer with a partner before sharing with the class.

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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.*

- ➔ Give pairs **Handout A**, and move learners into pairs sharing one computer.
- ➔ In pairs, learners examine their **Windows** computer desktop and try to locate the following things:
  - ◆ Time
  - ◆ WiFi
  - ◆ Volume
  - ◆ Search
- ➔ Then, learners examine the picture of a **Mac OS** desktop in **Handout A** and circle the same objects.
- ➔ Review similarities and differences observed as a class.

Task

Learners practice skills by completing an authentic task/s.

- ➔ Project **Reference C** as a visual guide.
- ➔ Give learners **Handout B**.
- ➔ Learners organize the items in the table based on whether they are found in **Windows**, **Mac**, or both.
- ➔ Check answers as a class.
- ➔ Answers:

Windows	Both	Mac
Start Menu Taskbar File Explorer	Files Programs WiFi Volume Time Search	Dock Apple Menu Finder

Vocabulary Work

Learners practice vocabulary presented within the lesson.

- ➔ Give learners **Handout C**.
- ➔ First, learners sort the words in the table into **hardware** and **software** categories.
- ➔ Then, learners label the icons of the two major **operating systems**.
- ➔ Check answers together as a class.

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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:
  ◆ "What are the two most popular **operating systems**?" (**Windows** and **Mac OS**)
  ◆ "Is an **operating system hardware** or **software**?" (**software**)

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Comparing Desks

Directions: Compare the two pictures below. How are the desks similar? How are they different?

Desk 1

Desk 2
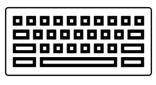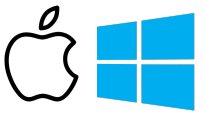
Hardware and Software

Hardware	Software

Hardware vs Software - Practice

Directions: Examine each item below. Decide: Is it hardware or software?

Mouse	Program/Application	Keyboard	Operating System
Screen	Flash Drive	Laptop	Email

Windows and Mac

*Directions: Windows computers have a small **window**. Mac computers have a small **apple**. Can you find them?*
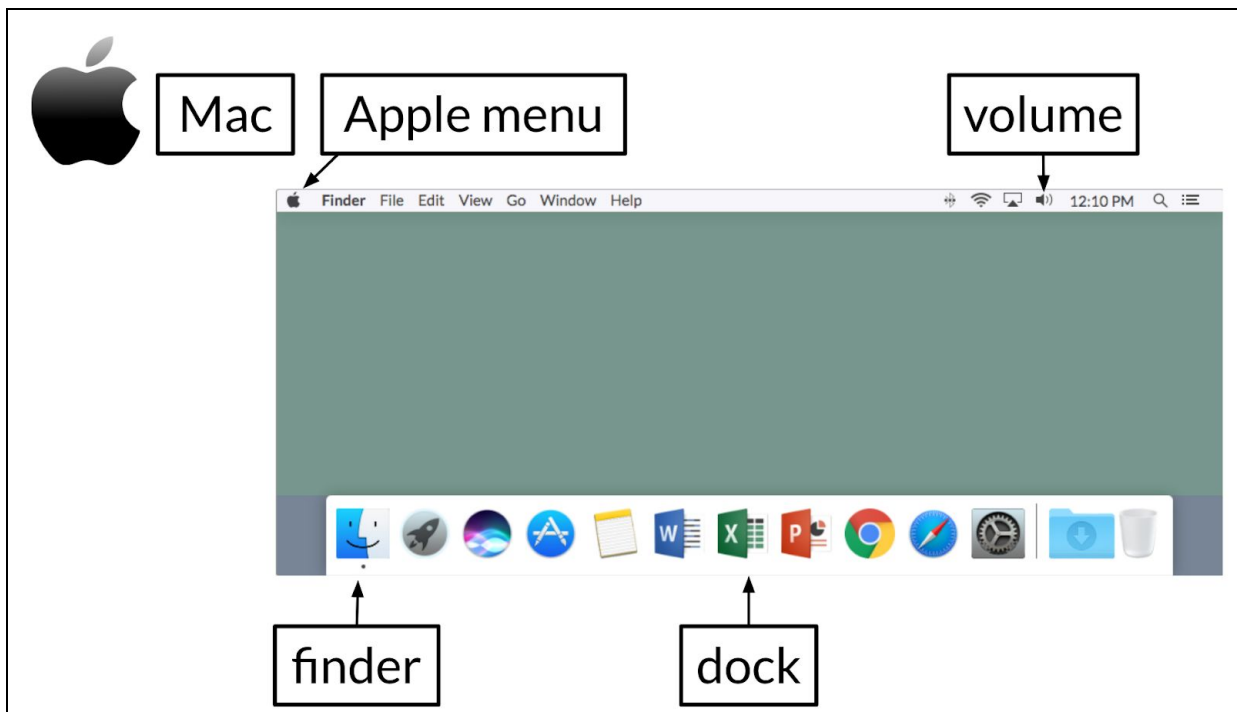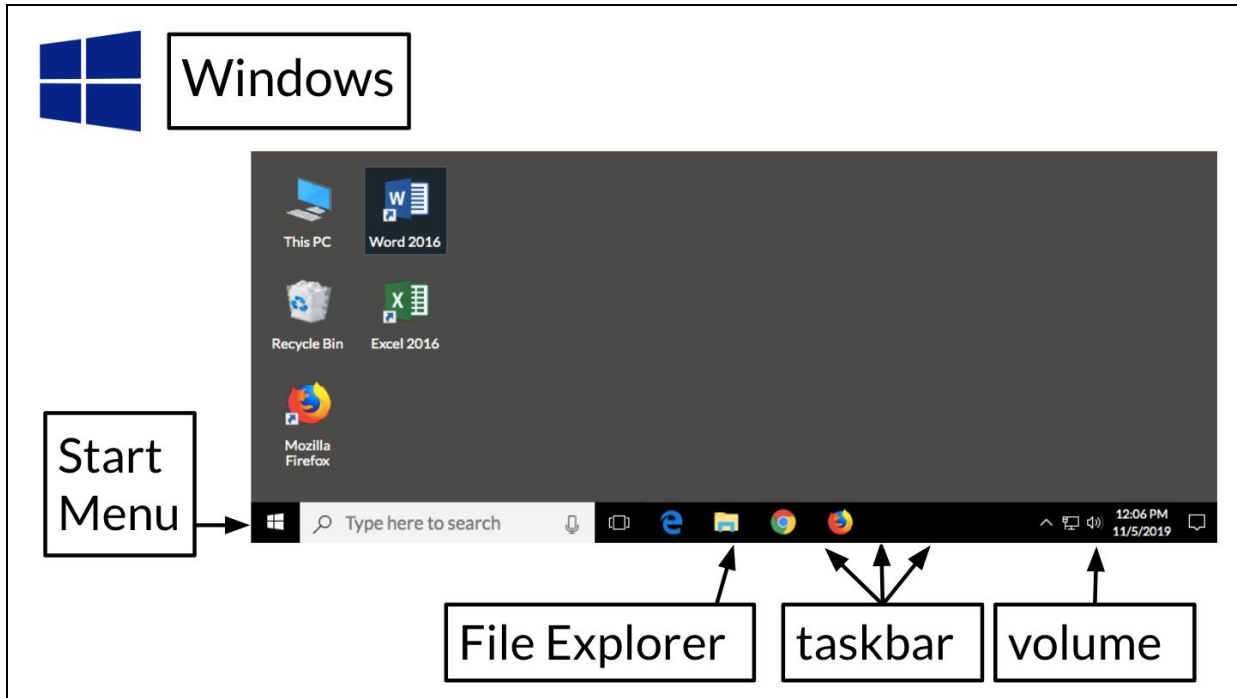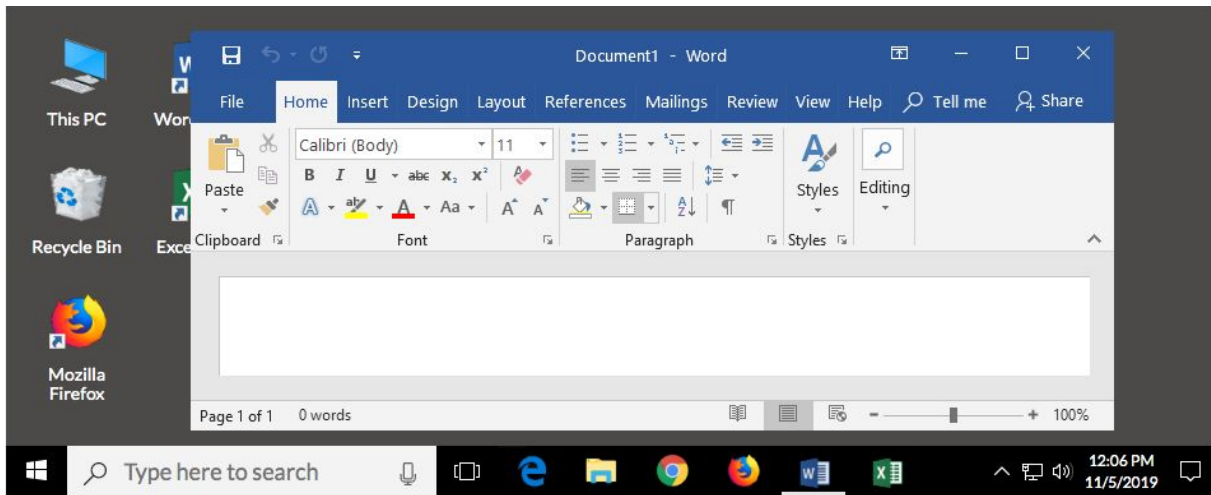
Windows or Mac?

Directions: Examine the following operating systems.
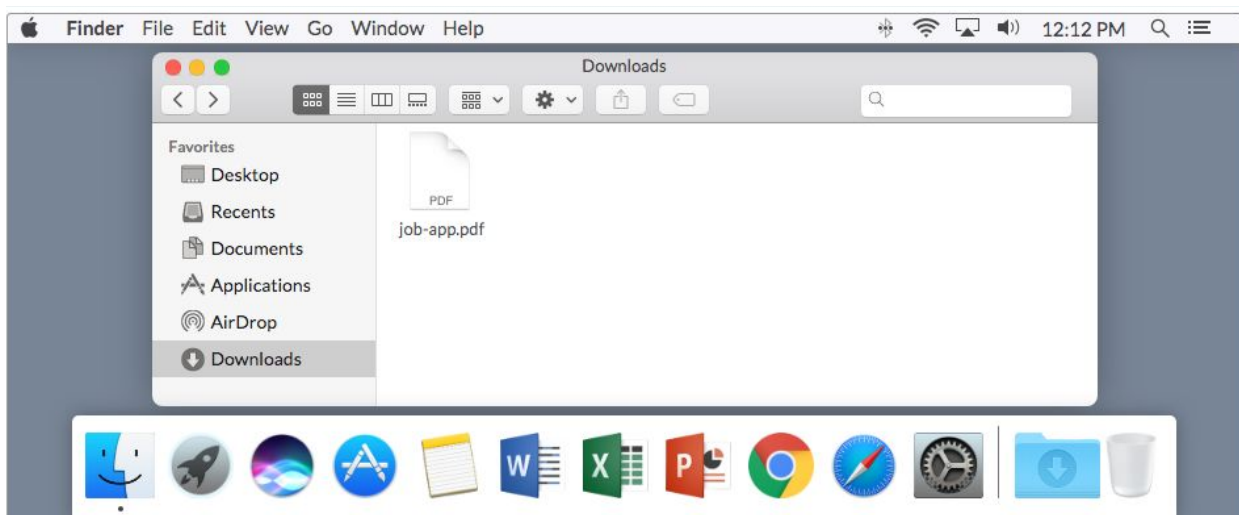*Decide: Is the computer using a **Windows** or a **Mac Operating System**? How do you know?*

Operating System 1
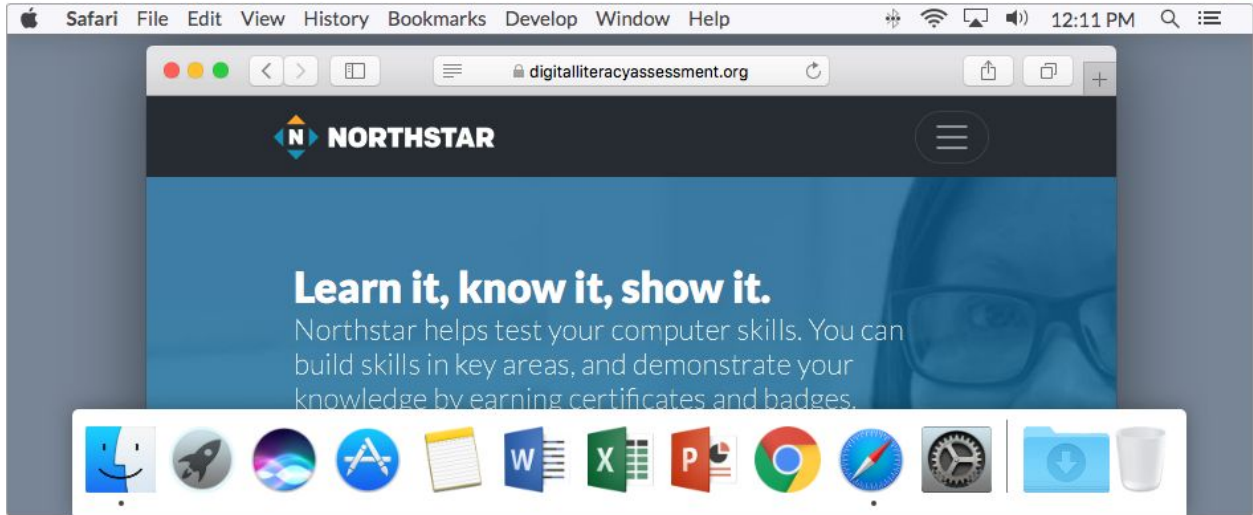
Windows or Mac?
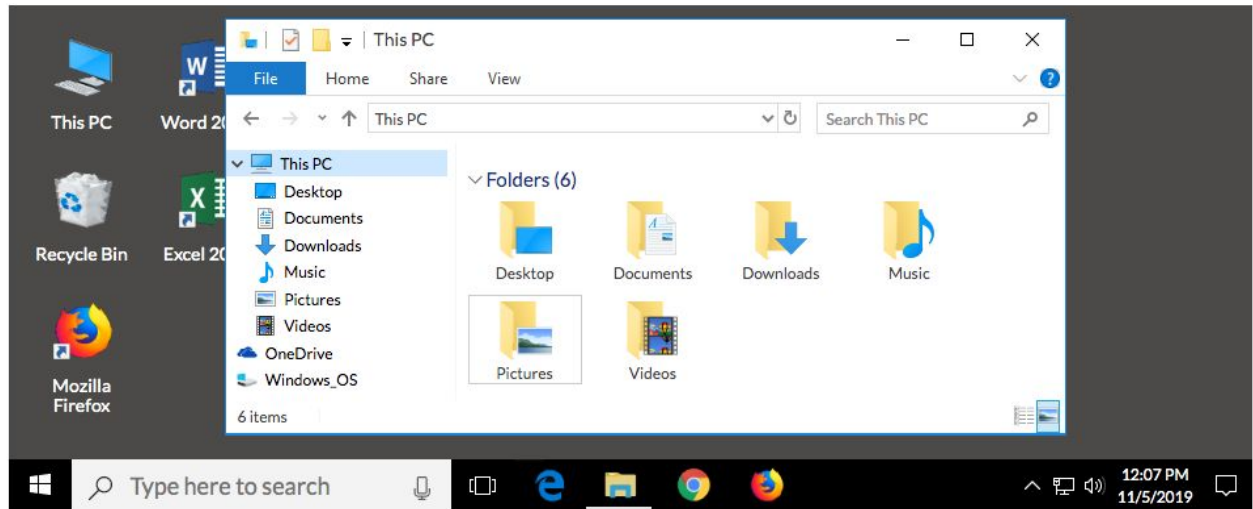

Operating System 2

Windows or Mac?

Operating System 3

Windows or Mac?

Operating System 4

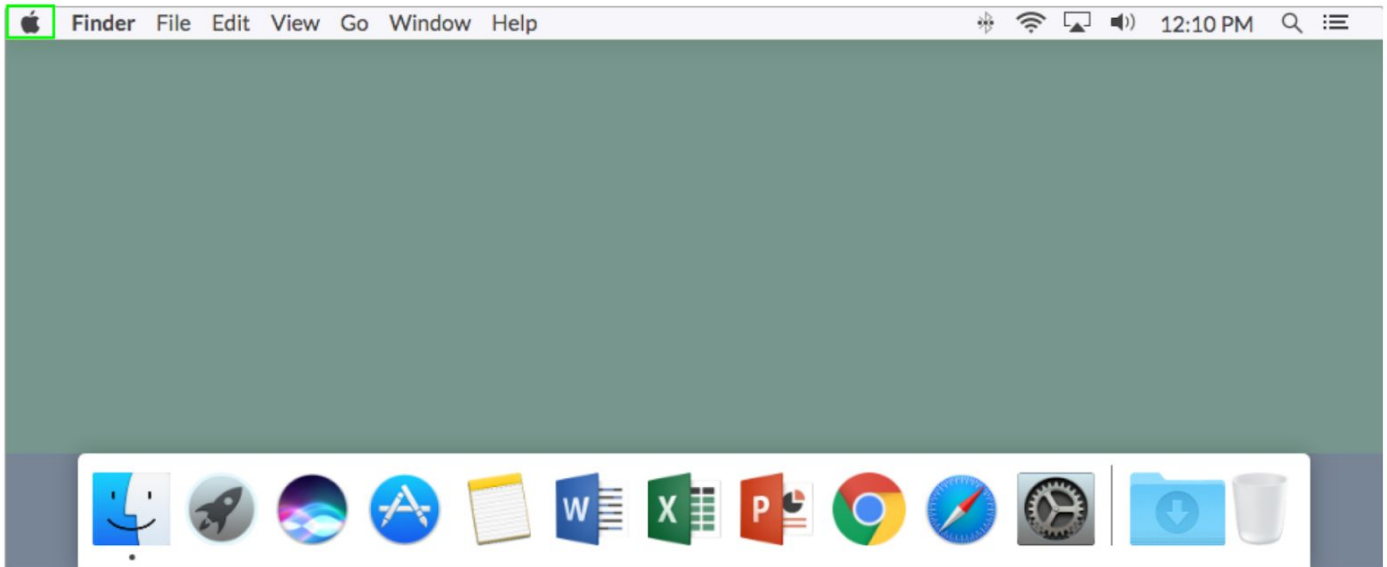*Windows or Mac?*

Windows and Mac

*Directions: With a partner, find each of the following icons (pictures) on your **Windows computer**.*

12:10 PM	🔊	📶	🔍
Time	Volume	WiFi	Search

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*Directions: Now, find and circle each of the above icons in the picture of the **Mac OS computer** below.*

Compare Windows and Mac

*Directions: Organize the following items. Are they found on **Windows**, **Mac**, or **both?***

Apple Menu	Programs	Taskbar	Files
File Explorer	Time	WiFi	Start Menu
Search	Finder	Volume	Dock

Windows	**Both**	**Mac**

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Software, Hardware, and Operating Systems

*Directions: Sort the words in the table below. Is it **hardware** or **software**?*

mouse	keyboard	operating system	program
screen	application	email	laptop

Hardware	Software

*Directions: Label the icons of the two **operating systems** below.*

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