# UNIT 20
# PERIPHERALS

**Objectives:** at the end of the lesson, students will be able to:

1. describe the basic function of each peripheral in simple terms;
2. use peripheral-related vocabulary and concepts in more complex contexts, such as giving instructions or explaining processes;
3. Use conditional sentences to discuss troubleshooting steps and solutions based on different conditions.

**Lead-in:** Watch a video about peripheral devices and name them as many as you remember.

https://youtu.be/baF68IG-YU8?si=JaU09A4wwmqm40Qv

## Vocabulary Building
## Key Terms

**DPI –** (Dots Per Inch) is the number of dots used per inch to create an image

***Example:*** *In computers, dots per inch is a measure of the sharpness (that is, the density of illuminated points) on a display screen.*

**Transparency adapter** – is a device that is used with a scanner to capture see-through documents like slides

***Example:*** *Use a transparency adapter for scanning slides.*

**Calibration –** is the act of adjusting printers and scanners to display colors correctly

***Example:*** *Our high-end models have calibration settings for professional-grade photo prints.*

**Automatic document feeder –** (ADF) is a device that feeds multiple pages into a scanner

*Example: An Automatic Document Feeder (ADF) is an important component of a copier machine. Its task is to feed a document to the scanner automatically, one sheet at a time.*

**Inkjet printer –** is a device that uses ink to produce documents and images on paper

*Example: If you are planning on using your inkjet printer for printing digital images, look for an inkjet printer that produces sharp and clear output.*

**Megapixel –** is a measurement of image size

*Example: The maximum resolution for photos can be set up to 16 megapixels. The front-facing camera has a resolution of 1.3 megapixels.*

**Laser printer –** is a device that produces documents and images on paper with a laser beam

*Example: More recently, many do-it-yourself brides are printing on their home computers using a laser printer or inkjet printer.*

**CCD –** (Charge-Coupled Device) is a light-sensitive chip that is used when capturing digital images

*Example: The camera further uses an imaging CCD with over 1,000,000 pixels giving a high image resolution.*

**Optical zoom –** is the use of the camera lens to make an image appear larger, retaining image quality

*Example: Optical and digital zoom are the two types used in embedded cameras. Optical zoom offers greater clarity and detail than digital zoom but is limited by the physical optics of the camera lens.*

**Digital zoom –** is how a digital camera increases the display size of an image subject, reducing image quality

*Example: Digital zoom can magnify an image beyond what optical lenses can support, but this comes at the cost of reduced image quality. While both offer advantages that make them suitable for certain image-capturing applications, it's vital to consider their strengths and weaknesses before the selection.*

**Activity:** Match the words

| | |
|---|---|
| A. a device that scans see-through objects | 1. DPI |
| B. a device that uses a beam of light to create an image | 2. Transparency adapter |
| C. a device that uses ink to create an image | 3. calibration |
| D. the number of dots used to create an image | 4. automatic document |

| | |
|---|---|
| E. a device used to store pictures on cameras | 5. inkjet printer |
| F. a measurement of image size | 6. digital camera |
| G. the adjustment of devices to correctly display colors | 7. flash memory |
| H. a device that records images for the computer | 8. megapixel |
| I. a device that loads papers to be scanned | 9. laser printer |

**Reading**

**Understanding Computer Peripherals**

A computer peripheral is an external device that connects to a computer to add functionality. Common peripherals include keyboards, mice, printers, and monitors.

Key Peripherals:

Keyboard: A keyboard is used to type letters, numbers, and symbols into a computer. It has keys for each letter and number, as well as special keys like Shift and Enter.

Mouse: The mouse is a pointing device used to control the cursor on the screen. It has two main buttons (left and right) and sometimes a scroll wheel. By moving the mouse, you can move the cursor and click on items.

Printer: A printer is used to produce physical copies of documents and images from a computer. There are different types of printers, such as inkjet and laser printers. Inkjet printers use liquid ink, while laser printers use toner.

Monitor: The monitor is the screen that displays information from the computer. It shows the operating system, applications, and any other visual content. Monitors can come in different sizes and resolutions.

Connecting Peripherals:

Most peripherals connect to a computer via USB ports. Some devices, like mice and keyboards, might use wireless technology, requiring batteries and a wireless receiver.

**Activity:** Mark the following statements as True (T) or False (F).

**1. A keyboard is used to control the cursor on the screen.**
A. True
B. False
**2. A mouse has a scroll wheel that can help you move up and down on a webpage.**
A. True
B. False
**3. Inkjet printers use toner to print documents.**
A. True
B. False
**4. A monitor is used to type letters and numbers into a computer.**
A. True
B. False
**5. Wireless peripherals do not need a USB port to connect to the computer.**
A. True
B. False
**6. A printer can produce physical copies of documents from a computer.**
A. True
B. False
**7. The monitor is an input device used to send data to the computer.**
A. True
B. False
**8. Keyboards and mice usually connect to computers through USB ports or wirelessly.**
A. True
B. False

**Grammar Focus:** Conditional Sentences

**First Conditional:** Used for real and possible situations.
Structure: *If + present simple, will + base verb*

Example: *If Bluetooth is turned off on your computer, the keyboard will not be able to connect.*

**Zero Conditional:** Used for general truths or situations where the outcome is always true.

Structure: *If + present simple, present simple*

Example: *If the keyboard is in pairing mode, it connects to the computer.*

**Speaking**

**Activity:** Based on the scenario, use the conditionals to discuss troubleshooting steps and solutions.

**Example: Situation:** Your wireless keyboard is not connecting to your computer, and you need to troubleshoot.

**Instructions:**

**1.Check Batteries:** "First, check if the batteries in the keyboard are dead. Replace them if necessary."

**2.Check Bluetooth Connection:** "Ensure that Bluetooth is enabled on your computer and that the keyboard is in pairing mode."

**3.Reconnect the Device:** "Go to your computer's Bluetooth settings, find the keyboard in the list of devices, and click 'Pair'."

**4.Restart Devices:** "If the keyboard still does not connect, try restarting both your computer and the keyboard."

**5.Test the Keyboard:** "After restarting, test the keyboard to make sure it is working properly."

1. If the keyboard does not connect after replacing the batteries, check if the keyboard is in pairing mode.

**Explanation:** This sentence indicates that if changing the batteries doesn't solve the problem, the next step is to verify the pairing mode.

2. If Bluetooth is turned off on your computer, the keyboard will not be able to connect.

**Explanation:** This sentence explains that turning on Bluetooth is necessary for the keyboard to connect.

3.If the keyboard is in pairing mode but still not connecting, try restarting both the keyboard and your computer.

**Explanation:** This sentence suggests restarting both devices if the initial steps don't work.

4. If you find the keyboard in your computer's Bluetooth settings but it still doesn't pair, remove the keyboard from the list of devices and try pairing it again.

**Explanation:** This sentence gives a solution for when the keyboard appears in settings but fails to connect.

5.If the keyboard connects after you pair it, test it by typing in a document to ensure it's working correctly.

**Explanation:** This sentence instructs to test the keyboard after successful pairing to confirm it functions properly.

6.If the keyboard does not work after you've tried all the above steps, consult the keyboard's manual or contact customer support.

**Explanation:** This sentence suggests seeking further help if previous troubleshooting steps are unsuccessful.

**Scenario:** Setting Up a New Printer

**Situation:** You have purchased a new inkjet printer and need to set it up.

Instructions:

1.Unbox and Position: "Begin by unboxing the printer and placing it on a flat surface near your computer."

2.Connect Power: "Connect the power cable to the printer and plug it into an electrical outlet."

3.Install Cartridges: "Open the printer's ink cartridge compartment and carefully insert the ink cartridges according to the color codes."

4.Load Paper: "Insert paper into the paper tray and adjust the guides so that the paper fits snugly."

5.Install Software: "Insert the installation CD into your computer or download the driver from the manufacturer's website and follow the on-screen instructions."

**Home assignment**

1. Write 3-4 troubleshooting steps using conditional sentences. For example:

*"If the printer is not printing, check if there is paper in the tray."*

*"If the mouse is not working, make sure it is plugged in."*

2. Create a conversation where one person describes the problem and the other offers solutions using conditional sentences.

For example:

Person A: "My keyboard isn’t connecting to my computer. What should I do?"

Person B: "If the keyboard is not in pairing mode, you need to activate pairing. If it’s still not working, check the batteries."