

ITL PUBLIC SCHOOL

COMPUTER APPLICATIONS · CLASS III

REVISION POINTER — How a Computer Works | Input, Output & Storage Devices

Chapter 1: How a Computer Works

1. The IPO Cycle

- A computer always works in 3 easy steps, called the IPO Cycle.
- **I:** Input
 - We give data or instructions to the computer. (e.g. typing numbers)
- **P:** Process
 - The computer thinks / calculates using the data given to it.
- **O:** Output
 - The computer shows us the result.

★ **Remember:** IPO = Input → Process → Output. This cycle is followed by the computer to do ANY task.

2. Data and Instruction

- Data are the numbers or facts we give to the computer.
- Instruction tells the computer what to do with the data.
- Example: In " $4 + 8$ " → 4 and 8 are Data, and + (add) is the Instruction.
- Example: In " 1×99 " → 1 and 99 are Data, and $\times$ (multiply) is the Instruction.
- **Data are processed as the instructions are input.**

★ **Remember:** If the input is wrong, the output will also be wrong!

3. Hardware vs Software

Term	Meaning	Examples
Hardware	Parts of the computer we can SEE and TOUCH	Monitor, Keyboard, Mouse, CPU
Software	Programs inside the computer we CANNOT touch	MS Paint, Tux Paint

★ **Remember:** All programs on the computer are SOFTWARE, not hardware.

4. The CPU — Brain of the Computer

- CPU stands for Central Processing Unit.
- The CPU is the processing device — it is the "brain" of the computer.
- The CPU processes the data we give as input.

★ **Remember:** The Monitor is NOT the brain of the computer — the CPU is!

Book's back exercise work

- ▶ Processing device is the CPU or processor.
- ▶ Common output devices are monitor, printer, speaker, etc.
- ▶ All computer devices are hardware.
- ▶ All programs on the computer are software.



Hot Links

- 🔍 www.printlearncenter.com/class-3-ipo-cycle-worksheet
- 🔍 wordwall.net/en-ae/community/ipo-cycle



Flash Lab



Q1. Answer the following questions.

- (1) In computer we enter the Input.
(a) Output (b) ☒ Input (c) Processing (d) File
- (2) The computer processes the data as we give the instructions.
(a) ☒ Instructions (b) Input (c) Order (d) Numbers
- (3) In $7 + 2$, the data are 7 and 2.
(a) 7 (b) 2 (c) ☒ Both a) and b) (d) +
- (4) In $7 + 2$, the instruction is +.
(a) 7 (b) 2 (c) Both a) and b) (d) ☒ +
- (5) We cannot touch the Software but we can touch the Hardware.
(a) Hardware, software (b) ☒ Software, hardware
(c) CPU, Keyboard (d) Drawing program, hardware

Q2. Mark the following statements as T for True or F for False:

- (1) Computer can process the data without instructions.
- (2) If the input is wrong, the output will be wrong.

F

T

(3) In IPO, the letter P stands for Printer.

F

(4) Instructions tell the computer how to process data.

T

(5) Hardware cannot be touched.

F

Q3. Fill in the blanks.

(1) We think or calculate in our mind - this is Processing.

(2) The IPO cycle is followed by the computer to do any task.

(3) Data are processed as the instructions are input.

(4) We cannot touch the Software but we can touch the Hardware.

Q4. Answer the following questions:

(1) What does the term I-P-O stand for?

Ans: Input - Process - Output

(2) Give 2 examples of hardware and software.

Ans: Hardware examples are Monitor and CPU

Software examples are - Whatsapp and Calculator

(3) Give 2 examples of input.

Ans: Singing on mic

Add → 7 and 4

(4) Give one example each of:

Input device: Keyboard and Mouse

Output device: Monitor and Printer

(5) Write one feature of:

Hardware: We can touch and see hardware.

Software: We can use software but cannot touch it.

Chapter 2: Input, Output & Storage Devices

1. Input Devices — used to give data/instructions to the computer

Input Device	What it does
Keyboard	Used for typing letters and numbers. Its keys are divided into different sections.
Mouse	Used to point, click and draw items on the monitor by moving it.
Scanner	Scans documents/pictures and converts them into digital format.
Web Camera	Captures images and videos; used for video calling with family and friends.
Touch Screen	Lets us select items on the screen by touching the screen surface.
Sensor	Collects data by detecting it, e.g. detecting temperature.
Joystick	Used for controlling the movement of characters while playing games.

2. Output Devices — used to show/present the result from the computer

Output Device	What it does
Monitor	Displays whatever is happening in the computer.
Printer	Uses ink to print characters, numbers, symbols and pictures on paper.
Plotter	Used by engineers to take prints of big drawings, like building plans and maps.
Projector	Used to show presentations, advertisements and movies to a large audience on a big screen.

★ **Remember:** A Printer gives paper printouts — it does NOT transfer files from one computer to another (that is done by storage devices).

3. Storage Devices — used to save data for future use

Storage Device	What it does
Pen Drive (Flash Drive)	A small, portable, removable device used to save and carry data.
CD (Compact Disk)	A removable and rewritable storage device.
Hard Disk	Made up of layers/platters of metal; stores a large amount of data inside the computer.

★ **Remember:** Pen Drive, CD and Hard Disk are all examples of Storage Devices — they help us SAVE data.

Quick Recap — Don't Get Confused!

- Input devices GIVE data to the computer → Keyboard, Mouse, Scanner, Web Camera, Touch Screen, Sensor, Joystick
- Output devices SHOW/PRESENT the result → Monitor, Printer, Plotter, Projector
- Storage devices SAVE data → Pen Drive, CD, Hard Disk
- Hardware = can touch | Software = cannot touch (it's a program)
- CPU = processing device = brain of the computer
- IPO Cycle = Input → Process → Output (followed for every task)

Book's back exercise work



Q1. Answer the following questions in one sentence.

- (1) Neha wants to chat face-to-face with her friend. Which device should she use so that her friend can see her while talking to her?

Ans: Neha should use a webcam

- (2) Rohan's father is an architect. He has stored a plan for a building on a computer. Which device should he use to take a printout of his plan?

Ans: He should use a printer/plotter.

- (3) Varun wants to transfer files from one computer to another. Which storage device should he use?

Ans: He should use a pendrive.

	Group A		Group B
(1)	Joystick	(a)	Used to give presentations to a large audience.
(2)	Touch screen	(b)	They are faster and produce more attractive documents.
(3)	Multimedia projector	(c)	They are used by architects, engineers and map-makers.
(4)	Laser Printer	(d)	Used in mobile phones for selecting options.
(5)	Plotter	(e)	Controlling movements in a computer game.
(6)	Dot matrix printer	(f)	These printers are generally considered outdated.

Ans: (1) (e) (2) (d) (3) (a)
 (4) (b) (5) (c) (6) (f)

Q3. Answer the following questions in 2-3 sentences:

- (1) What are the components of a computer system?

Ans: 1) Input devices
2) Processing devices (CPU)
3) Output devices
4) Storage devices.

- (2) Write the functions of the following devices:

(a) Web camera

Ans: A web camera is used to capture photos and videos. Also used for video calls and online meetings.

(b) Plotter

Ans: A plotter is an output device. It prints big drawings and maps.

(c) Multimedia projector

Ans: It is an output device. It shows pictures and videos on a big screen.

(d) Sensor

Ans: It is an input device. It detects things like light, heat, or movement.

(e) Pen drive

Ans: A pen drive is a storage device. It stores and carries data from one computer to another.

(3) What is a storage device?

Ans: A storage device is used to save data and information.

(4) What is a hard disk used for?

Ans: A hard disk is used to store data, files, pictures, videos and programs in a computer.

(5) List any two examples of the following:

(a) Input devices

Ans: 1) Keyboard
2) Mouse.

(b) Output devices

Ans: 1) Monitor
2) Printer

(c) Storage devices

Ans: 1) Hard disk
2) Pen drive

All the best for your test! ❁