

LESSON PLAN
COMPUTER - A WONDER MACHINE
Class : VI

Chapter 1: COMPUTER SYSTEM

LEARNING OBJECTIVES

After studying this chapter, students will be able to:

- Understand what a computer is and its importance in daily life, and identify the different generations of computers and their characteristics.
 - Explain the categorization of a computer system and their basic features.
 - Understand different types of computer languages.
 - Distinguish between first-generation, second-generation, third-generation and fourth-generation languages, and also understand structured programming and modern high-level languages.
 - Identify translators and differentiate between compiler and interpreter.
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PERIOD 1: INTRODUCTION TO COMPUTERS, GENERATIONS OF COMPUTERS

Time: 45 minutes

Previous Knowledge Testing (2.5 min)

- What machines do you use at home or school?
- Can a computer think like humans?
- Have computers always looked the same?

Content Explanation (25 min)

- Meaning of computer
- Uses of computers in daily life (school, home, hospitals, banks)
- Advantages of computers (speed, accuracy, storage)
- First to Fifth Generation of Computers
- Key Features: Technology used, size, speed

Activity (10 min)

- Perform 'Do It Yourself' activity—List all the devices that have computer inside them.
- Students to list places where computers are used.

Visual Aid: (5 min)

- Show to students the images provided in the chapter.
- Also show the components used in each generation of computers.

Recapitulation (2.5 min)

- Questions based on uses of computers and generations of computers.
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PERIOD 2: COMPUTER SYSTEM AND ITS BASIC FEATURES

Time: 45 minutes

Previous Knowledge Testing (2.5 min)

- What factors make computer systems different from each other?

Content Explanation (30 min)

- Categorization of computer systems based on their size, cost and performance
- Mobile computers, Mini computer, Mainframe, Game Consoles, Embedded computers
- Features: Speed, accuracy, utility, cost
- Examples

Activity (5 min)

- Perform 'Do It Yourself' activity to identify things or appliances or toys that have embedded computers.

Visual Aid: (2.5 min)

- Show students the images provided in the chapter.

Recapitulation (5 min)

- Oral questions based on different categories of computers.
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PERIOD 3: TYPES OF COMPUTER LANGUAGES

Time: 45 minutes

Previous Knowledge Testing (5 min)

- How do humans communicate?

Content Explanation (30 min)

- Machine language: Features, Advantages, Limitations
- Assembly language: Features, Advantages, Limitations
- High-level language: Features, Advantages, Limitations, Examples, Application
- Object-Oriented Programming Languages: Features, Modularity

Activity (5 min)

- Perform 'Do It Yourself': Programming Language Research.

Recapitulation (5 min)

- Name the types of computer languages
-

PERIOD 4: TRANSLATORS – COMPILER AND INTERPRETER

Time: 45 minutes

Previous Knowledge Testing (5 min)

- Can computers understand English?

Content Explanation (25 min)

- Meaning of translators
- Types of translators
- Compiler vs Interpreter

Activity (5 min)

- Perform 'Do It Yourself': Let us play a game! and Recipe Compiler, Interpreter.

Visual Aid: (5 min)

- Show students the images provided in the chapter.

Recapitulation (5 min)

- Difference between Compiler and Interpreter

LESSON PLAN
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Chapter 2: WORKING WITH WINDOWS

LEARNING OBJECTIVES

After studying this chapter, students will be able to:

- Understand the concept of an Operating System and its objectives; identify popular operating systems with special focus on Windows 11 and explain the features of Windows 11.
 - Use Control Panel to manage basic system settings and different views.
 - Understand applets of Control Panel.
 - Use Settings app to change display and personalization settings.
 - Understand the role of utility software.
 - Identify antivirus, backup and disk utility tools.
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PERIOD 1: INTRODUCTION TO OPERATING SYSTEM, ITS OBJECTIVES AND WINDOWS 11

Time: 45 minutes

Previous Knowledge Testing (2.5 min)

- Can a computer work without software?
- What happens when we switch on a computer?

Content Explanation (30 min)

- Meaning of Operating System
- Booting process
- Objectives of an Operating System
- Popular operating systems: MS-DOS, UNIX, LINUX, Microsoft Windows
- Introduction to Windows 11
- Features of Windows 11

Activity (5 min)

- Explain 'Do It Yourself' activity to explore Windows 11 features. Later, perform it during the practical session in the computer lab.

Visual Aid (5 min)

- Show to the students the images provided in the chapter.

Recapitulation (2.5 min)

- Oral questions based on Operating System and Windows 11.
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PERIOD 2: CONTROL PANEL – INTRODUCTION AND VIEWS

Time: 45 minutes

Previous Knowledge Testing (2.5 min)

- Where do we change system settings?

Content Explanation (20 min)

- Meaning of Control Panel
- Steps to open Control Panel
- Control Panel views:
 - Category
 - Large Icons
 - Small Icons

Activity (15 min)

- Explain ‘Do It Yourself’ activity to find treasures in the Control Panel. Later, perform it during the practical session in the computer lab.

Visual Aid (5 min)

- Show screenshots of Control Panel views.

Recapitulation (2.5 min)

- Name the default view of Control Panel.
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PERIOD 3: IMPORTANT CONTROL PANEL APPLETS

Time: 45 minutes

Previous Knowledge Testing (2.5 min)

- Can we change mouse pointer shape?

Content Explanation (25 min)

- Mouse Properties
- Devices and Printers
- Programs and Features
- Date and Time

Activity (10 min)

- Explain ‘Do It Yourself’ – Mouse Makeover Challenge and World Clock Poster. Later, perform it during the practical session in the computer lab.

Visual Aid (5 min)

- Show to the students the images provided in the chapter.

Recapitulation (2.5 min)

- Oral questions based on Control Panel.
-

PERIOD 4: WINDOW SETTINGS—DISPLAY AND PERSONALIZATION

Time: 45 minutes

Previous Knowledge Testing (2.5 min)

- How do we change desktop background?

Content Explanation (25 min)

- Introduction to Windows Settings
- Ways to open Settings
- Display Settings
- Personalization and themes

Activity (10 min)

- Explain 'Do It Yourself'—Dream Desktop. Later, Design Your Dream Desktop during the practical session in the computer lab.

Visual Aid (5 min)

- Show to the students the images provided in the chapter.

Recapitulation (2.5 min)

- Difference between Control Panel and Settings
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PERIOD 5: UTILITY SOFTWARE

Time: 45 minutes

Previous Knowledge Testing (2.5 min)

- What keeps our computer safe?

Content Explanation (30 min)

- Meaning of utility software
- Antivirus software
- Backup software
- Disk tools

Activity (5 min)

- Explain 'Do It Yourself' – Backup Battle Plan. Later, perform it during the practical session in the computer lab.

Visual Aid (5 min)

- Show to the students the images provided in the chapter.

Recapitulation (2.5 min)

- Name two utility software.
-

PERIOD 6: DISK TOOLS – DISK CLEANUP AND DISK DEFRAGMENTER

Time: 45 minutes

Previous Knowledge Testing (2.5 min)

- Why does a computer become slow?

Content Explanation (30 min)

- Disk Cleanup: Purpose and steps
- Disk Defragmenter: Fragmentation and benefits

Activity (5 min)

- Explain 'Do It Yourself'—Check disk space before and after cleaning the disk. Later, perform it during the practical session in the computer lab.

Visual Aid (5 min)

- Present to the students the images provided in the chapter.

Recapitulation (2.5 min)

- Difference between Disk Cleanup and Disk Defragmenter

LESSON PLAN
COMPUTER - A WONDER MACHINE
Class : VI

Chapter 3: FILE MANAGEMENT—ORGANIZATION OF DATA

LEARNING OBJECTIVES

After studying this chapter, students will be able to:

- Understand the meaning and importance of File Management; identify files and folders and their uses, and explain the role and features of File Explorer.
 - Perform copy, move and drag-and-drop operations, and also understand Data Migration and its need.
 - Identify external storage devices and cloud storage; explain multitasking in computers and recognize file formats and file extensions.
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PERIOD 1: INTRODUCTION TO FILE MANAGEMENT AND FILE EXPLORER

Time: 45 minutes

Previous Knowledge Testing (5 min)

- How do you arrange your books and toys at home?
- Where do you save your drawings or documents on a computer?
- Have you heard the words *file* or *folder*?
- How do you open saved files on your computer?

Content Explanation (25 min)

- Meaning of File Management
- Importance of organizing data
- Concept of Files and Folders
- Meaning of File Explorer
- How to open File Explorer
- Three Panes: Folders Pane, Contents Pane, Preview Pane

Activity (10 min)

- Explain 'Do It Yourself'—Organization Challenge, Explore File Explorer. Later, students will perform it in the computer lab during the practical session.

Visual Aid (2 min)

- Show students the images provided in the chapter.

Recapitulation (3 min)

- Questions based on File Management and File Explorer
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PERIOD 2: COPYING, MOVING AND DATA MIGRATION

Time: 45 minutes

Previous Knowledge Testing (5 min)

- Have you ever copied photos from one phone to another?

Content Explanation (25 min)

- Meaning of Data Migration
- Difference between Copy and Move
- Keyboard shortcuts: Ctrl+C, Ctrl+V
- Drag-and-Drop method
- Reasons for migration (backup, space, safety)

Activity (10 min)

- Explain 'Do It Yourself' – Copying files, practise drag and drop. Later, students will perform it in the computer lab during the practical session.

Visual Aid (3 min)

- Show to the students the images provided in the chapter.

Recapitulation (2 min)

- What is the difference between Copy and Move?
-

PERIOD 3: STORAGE DEVICES, CLOUD STORAGE, MULTITASKING AND FILE FORMATS

Time: 45 minutes

Previous Knowledge Testing (5 min)

- Where do you store photos or songs?
- Have you heard of Google Drive?

Content Explanation (25 min)

- External Storage Devices: Pen Drive, External Hard Disk, Memory Card, Compact Disc
- Cloud Storage: Meaning and benefits, examples: Google Drive, OneDrive
- Multitasking
- Working with multiple applications at the same time
- File Formats & Extensions: .docx, .pptx, .jpg, .mp3, .mp4, .xlsx
- Meaning of File Extension/File Suffix

Activity (10 min)

- Discuss 'Do It Yourself'—Multitasking Challenge. Identify file formats from sample file names. Later, students will perform it in the computer lab during the practical session.

Visual Aid (3 min)

- Show icons of file types and cloud storage logos.

Recapitulation (2 min)

- What is cloud storage?
- What is multitasking?
- What is a file extension?

LESSON PLAN
COMPUTER - A WONDER MACHINE
Class : VI

Chapter 4: PRESENTATION–VISUAL EFFECTS

LEARNING OBJECTIVES

After studying this chapter, students will be able to:

- Recall the basics of PowerPoint and understand what a presentation and slide are. Identify different panes and views of PowerPoint.
 - Explain the use of Slide Master, Header and Footer and Themes in a presentation.
 - Apply transitions, animations, audio and video in slides. Also understand slide show, action buttons and printing of presentations.
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PERIOD 1: INTRODUCTION TO POWERPOINT AND PANES

Time: 45 minutes

Previous Knowledge Testing (5 min)

- Have you ever seen a slideshow?
- Where have you seen presentations?
- What is PowerPoint used for?

Content Explanation (25 min)

- Explain PowerPoint, Slide and Presentation
- How to start PowerPoint
- PowerPoint Start Screen
- Normal View
- Three Panes – Design Pane, Slides Pane, Notes Pane

Activity (10 min)

Explain 'Do It Yourself'–Start PowerPoint; identify the three panes. Later, students will perform it in the computer lab during the practical session.

Visual Aid (2 min)

Show to the students the images provided in the chapter.

Recapitulation (3 min)

- Questions based on PowerPoint and panes.
-

PERIOD 2: DIFFERENT VIEWS IN POWERPOINT

Time: 45 minutes

Previous Knowledge Testing (2 min)

- How do you view pictures in full screen?
- Have you rearranged photos in an album?

Content Explanation (30 min)

- Explain Different Views
- Types of Views – Normal View, Outline View, Slide Sorter View, Notes Page View, Reading View, Slide Show View
- Uses of different views (editing, presenting, printing, reading notes)

Activity (9 min)

Explain 'Do It Yourself' – Create slides and switch between views, rearrange slides in Slide Sorter View. Later, students will perform it in the computer lab during the practical session.

Visual Aid (2 min)

Show to the students the icons of different views from the chapter.

Recapitulation (2 min)

Which view is used to present slides?

Which view shows thumbnails?

PERIOD 3: SLIDE MASTER, HEADER AND FOOTER

Time: 45 minutes

Previous Knowledge Testing (5 min)

- Have you seen the same logo on all slides of a presentation?

Content Explanation (30 min)

- Meaning of Slide Master
- Uses of Slide Master
- Header and Footer – Date, Slide Number, Footer Text

Activity (5 min)

Explain 'Do It Yourself' – Add school name using Header & Footer, apply different themes. Later, students will perform it in the computer lab during the practical session.

Visual Aid (3 min)

Show to the students the images provided in the chapter.

Recapitulation (2 min)

Questions based on Slide Master, Header and Footer.

PERIOD 4: TRANSITIONS, ANIMATIONS, MEDIA AND SLIDE SHOW

Time: 45 minutes

Previous Knowledge Testing (1 min)

- Have you seen text flying or bouncing on slides?

Content Explanation (35 min)

- Meaning of Transition
- Steps to apply Transition
- Timing Options—On Mouse Click, After
- Meaning of Animation
- Applying Animation to text and objects
- Inserting Audio and Video
- Slide Show—Start and Stop (F5, Esc Key)
- Themes
- Action Buttons—Home, Next, Previous
- Printing Presentation

Activity (5 min)

Explain 'Do It Yourself'—Apply transitions, animations, themes, insert audio and start slide show. Later, students will perform it in the computer lab during the practical session.

Visual Aid (2 min)

Show to the students the images provided in the chapter.

Recapitulation (2 min)

- Difference between animation and transition.
- Which key starts the slide show?

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Class : VI

Chapter 5: SPREADSHEET—AN INTRODUCTION

LEARNING OBJECTIVES

After studying this chapter, students will be able to:

- Understand the meaning and uses of a Spreadsheet.
 - Identify features of Spreadsheet software.
 - Start Spreadsheet software and recognize components of its window.
 - Understand the Components of Excel Window in detail.
 - Understand Rows, Columns, Cells and Cell Address.
 - Enter, edit and delete data in a worksheet.
 - Apply basic formatting to data.
 - Perform simple calculations using formulas.
-

PERIOD 1: INTRODUCTION TO SPREADSHEET

Time: 45 minutes

Previous Knowledge Testing (5 min)

- Have you seen marksheets prepared on a computer?
- Where do teachers prepare result sheets?
- Have you heard the word Spreadsheet?

Content Explanation (25 min)

- Meaning of Spreadsheet
- Uses of Spreadsheet
- Examples of Spreadsheet Software: MS Excel, LibreOffice Calc
- How to start Spreadsheet Software—Excel 365
- Meaning of Workbook and Worksheet

Activity (10 min)

- Explain 'Do It Yourself'—Grid Game and Create blank workbook. Later, students will perform it in the computer lab during the practical session.

Visual Aid (2 min)

- Present to the students the images provided in the chapter.

Recapitulation (3 min)

- Questions based on Spreadsheet basics.
-

PERIOD 2: COMPONENTS OF EXCEL WINDOW IN DETAIL

Time: 45 minutes

Previous Knowledge Testing (5 min)

- What happens when you open MS Excel?
- Have you seen the various buttons and bars on the screen?

Content Explanation (30 min)

Components of Excel Window:

- Title Bar—Shows the name of the workbook.
- Quick Access Toolbar—Contains Save, Undo, Redo buttons.
- File Tab—Used to open, save, print and close files.
- Ribbon—Contains tabs and groups of commands.
- Name Box—Displays the address of the active cell.
- Formula Bar—Used to enter or edit data/formulas.
- Worksheet Area—Main working area with cells.
- Row Headings—Numbered horizontally (1, 2, 3...).
- Column Headings—Lettered vertically (A, B, C...).
- Scroll Bars—Move worksheet left—right and up—down.
- Status Bar—Shows information about the worksheet.
- Sheet Tabs—Switch between worksheets.

Activity (5 min)

- Explain 'Do It Yourself' activities and later, students will perform it in the computer lab during the practical session.

Visual Aid (3 min)

- Show labelled diagram of Excel Window from the chapter.

Recapitulation (2 min)

- What is Name Box?
 - What is Formula Bar?
-

PERIOD 3: ROWS, COLUMNS, CELLS AND CELL ADDRESS

Time: 45 minutes

Previous Knowledge Testing (5 min)

- Have you seen tables in notebooks or books?
- What are rows and columns?

Content Explanation (25 min)

- Meaning of Worksheet
- Rows–Horizontal lines
- Columns–Vertical lines
- Cell and Active Cell
- Cell Address (A1, B2, C3, etc.)
- Range of Cells

Activity (10 min)

- Explain ‘Do It Yourself’–Identify rows, columns and write cell addresses. Later, students will perform it in the computer lab during the practical session.

Visual Aid (3 min)

- Show students images from the chapter.

Recapitulation (2 min)

- What is a cell?
 - What is a cell address?
-

PERIOD 4: DATA TYPES AND ENTERING DATA

Time: 45 minutes

Previous Knowledge Testing (5 min)

- What type of data do we enter in a marksheet–names or numbers?
- Have you ever typed your name or marks on a computer?

Content Explanation (25 min)

- Data Types in Spreadsheet
- Entering Data in Cells

Activity (10 min)

Explain ‘Do It Yourself’ – Values alignment and Time and Date Practice. Later, students will perform it in the computer lab during the practical session.

Visual Aid (3 min)

Show students the images provided in the chapter.

Recapitulation (2 min)

Question based on Label Data and Value Data.

PERIOD 5: SELECTING, INSERTING AND DELETING DATA

Time: 45 minutes

Previous Knowledge Testing (5 min)

- If you type a wrong number, how will you correct it?

Content Explanation (25 min)

- Selecting Data
- Inserting Data
- Deleting Data

Activity (10 min)

- Explain 'Do It Yourself' activities. Later, students will perform them in the computer lab during the practical session.

Visual Aid (3 min)

- Present the images provided in the chapter.

Recapitulation (2 min)

- How do we select the entire data?
- Which key is used to delete data?

PERIOD 6: COPYING, PASTING, MOVING DATA, DRAGGING AND DROPPING CELLS, AUTOFILL

Time: 45 minutes

Previous Knowledge Testing (5 min)

- Have you ever copied text or pictures on a computer? • What happens when we paste something? Can we move data from one place to another without typing again?

Content Explanation (25 min)

- Copying Data
- Pasting Data
- Moving Data (Cut and Paste)
- Dragging and Dropping Cells
- Difference between Copy and Move using Mouse
- AutoFill
- Fill Handle

Activity (10 min)

Explain 'Do It Yourself' activities. Later, students will perform them in the computer lab during the practical session.

Visual Aid (3 min)

- Show students the images given in the chapter.

Recapitulation (2 min)

- What is the shortcut key for Copy?
- What is AutoFill used for?