

LESSON Plan

CLASS 6TH

2026-27

Month- April

Lesson – Computer Languages and Types

Topics:

- Introduction to Computer Languages
- Machine Language
- Assembly Language
- High-Level Language
- Types of Programming Languages
- Language Translators (Assembler, Compiler, Interpreter)
- Advantages and Disadvantages of Different Languages

Learning Objectives:

- Understand the meaning and importance of computer languages.
- Differentiate between Machine, Assembly, and High-Level Languages.
- Identify various types of programming languages.
- Learn the role of language translators such as assembler, compiler, and interpreter.
- Develop an understanding of how computers execute programs.
- Build logical thinking by comparing different computer languages.

Art & Integrated Activity / Project / Practical:

- Prepare a chart showing the evolution of computer languages.
- Create a comparison table of Machine, Assembly, and High-Level Languages.
- Draw a flowchart illustrating how a program is converted into machine code.
- Group discussion on why high-level languages are widely used today.
- Role-play activity representing the functions of Programmer, Compiler, and Computer.
- Practical activity: Identify popular programming languages (Python, C, Java, Scratch) and write one real-life application of each.
- Project work on "**Evolution of Programming Languages**" with pictures and examples.

Expected Learning Outcomes:

Students will:

- Understand the need for computer languages.
- Differentiate between Machine, Assembly, and High-Level Languages.
- Explain the role of language translators.
- Identify commonly used programming languages and their applications.
- Appreciate the evolution of programming languages.
- Apply their knowledge through classroom activities and project work.

Assignment and Assessments/Test:

- Assignments based on types of computer languages.
- Worksheets comparing Machine, Assembly, and High-Level Languages.
- Quizzes on programming language concepts and translators.
- Activity-based assessment through charts and presentations.
- Project evaluation on the evolution and applications of programming languages.

Remedial Measures:

- Extra practice sessions using simplified notes on computer languages.
- Video demonstrations explaining machine language, assembly language, and high-level languages.
- Classroom discussions using real-life examples of programming languages.
- One-to-one guidance and additional worksheets for students requiring extra support.
- Revision quizzes and interactive activities to strengthen understanding of computer languages and translators.
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Month –MAY

Lesson – AI (Exploring the Domains of AI)

Topics:

- Introduction to Artificial Intelligence
- Domains of AI
- Data Domain
- Computer Vision (CV)
- Natural Language Processing (NLP)
- Interconnection of AI Domains
- Real-life Applications of AI Domains

Learning Objectives:

- Understand the concept of Artificial Intelligence and its major domains.
- Identify the three primary domains of AI: Data, Computer Vision, and Natural Language Processing.
- Differentiate between the functions of each AI domain.
- Explore real-life applications of AI in different domains.
- Develop logical and analytical thinking by relating AI domains to everyday life.
- Recognize the importance of AI in solving real-world problems.

Art & Integrated Activity / Project / Practical:

- Prepare a poster illustrating the three domains of AI with examples.
- Create a chart comparing Data, Computer Vision, and Natural Language Processing.
- Group discussion on AI applications used in daily life.
- Role-play activity demonstrating AI systems such as voice assistants, face recognition, and recommendation systems.
- Practical activity: Identify AI-enabled applications on mobile phones and classify them according to their AI domain.
- Project work on "**Exploring AI Around Us**" by collecting examples of AI from home, school, and society.
- Design a mind map showing how different AI domains work together in a smart application.

Expected Learning Outcomes:

Students will:

- Understand the three major domains of Artificial Intelligence.
- Differentiate between Data, Computer Vision, and Natural Language Processing.
- Identify AI applications based on their domains.
- Explain how AI domains work together to perform intelligent tasks.
- Develop awareness of AI technologies used in everyday life.
- Apply AI concepts through classroom activities, discussions, and project work.

Assignment and Assessments/Test:

- Assignments on the domains of Artificial Intelligence.
- Worksheets based on Data, Computer Vision, and Natural Language Processing.
- Quizzes on AI concepts, domains, and real-life applications.
- Activity-based assessments through charts, presentations, and role-play.
- Project evaluation on identifying AI applications and their respective domains.

Remedial Measures:

- Extra practice sessions using simplified notes on AI domains.
- Video demonstrations explaining Data, Computer Vision, and Natural Language Processing.
- Classroom discussions using real-life AI examples such as Google Assistant, Face Unlock, Google Lens, and Chatbots.
- One-to-one guidance and additional worksheets for students requiring extra support.
- Revision quizzes and interactive classroom activities to strengthen understanding of AI domains.

Month- JULY

Lesson – Introduction to MS Excel

Topics:

- Introduction to Microsoft Excel
- Features and Uses of MS Excel
- Workbook and Worksheet
- Rows, Columns, and Cells
- Cell Address and Active Cell
- Entering, Editing, and Deleting Data
- Saving and Opening an Excel Workbook

Learning Objectives:

- Understand the purpose and importance of Microsoft Excel.
- Identify the main components of the Excel window.
- Differentiate between a workbook and a worksheet.
- Recognize rows, columns, cells, and cell addresses.
- Learn how to enter, edit, delete, save, and open data in Excel.
- Develop basic spreadsheet skills for organizing and managing information.

Art & Integrated Activity / Project / Practical:

- Label the parts of the MS Excel window on a printed worksheet.
- Prepare a simple student marks sheet using MS Excel.
- Create a table showing monthly expenses or daily attendance.
- Practical activity: Enter, edit, and format data in an Excel worksheet.
- Group activity: Design a timetable or class schedule using Excel.
- Project work on "**Uses of MS Excel in Daily Life**" with real-life examples.
- Prepare a colourful worksheet using different fonts, borders, and cell colours.

Expected Learning Outcomes:

Students will:

- Understand the importance and applications of MS Excel.
- Identify workbooks, worksheets, rows, columns, cells, and cell addresses.
- Create and save a simple Excel workbook.
- Enter, edit, and organize data accurately.
- Apply basic spreadsheet skills in classroom activities and projects.
- Develop confidence in using Excel for everyday tasks.

Assignment and Assessments/Test:

- Assignments on MS Excel terminology and concepts.
- Worksheets based on workbook, worksheet, rows, columns, and cells.
- Practical exercises on data entry, editing, and saving files.

- Quizzes on Excel features and basic operations.
- Activity-based assessment through spreadsheet creation and project presentation.

Remedial Measures:

- Extra practice sessions on identifying Excel components.
- Demonstration videos explaining workbook, worksheet, rows, columns, and cells.
- One-to-one guidance during practical sessions for students requiring extra support.
- Additional worksheets for practice on cell addressing and data entry.
- Revision quizzes and hands-on activities to strengthen understanding of basic MS Excel concepts.

Month- August

Lesson–AI (Basic Data Concepts)

Topics: □

- Introduction to Data
- Importance of Data in Daily Life
- Types of Data (Numerical, Text, Image, Video, Sound)
- Data Collection and Sources of Data Organising Data
- Data Representation using Tables, Bar Charts, and Pictograms
- Real-life Applications of Data

Learning Objectives:

- Understand the meaning and importance of data in everyday life.
- Identify different types of data and their real-life examples.
- Learn various methods and sources of data collection.
- Understand how to organize data systematically.
- Represent data using tables, bar charts, and pictograms.
- Develop analytical and decision-making skills through data interpretation.

Art & Integrated Activity / Project / Practical:

- Prepare charts showing different types of data with real-life examples.
- Collect data from classmates (e.g., favourite fruits, hobbies, or sports) and organize it into a table.
- Create bar charts and pictograms using collected classroom data.
- Group discussion on the importance of data in daily life.
- Practical activity on organizing computer files and folders systematically.
- Project work on collecting, organizing, and representing data from the school environment.

Expected Learning Outcomes:

- Students will:
- Understand the concept and significance of data in daily life.
- Differentiate between various types of data.
- Collect and organize data using appropriate methods.
- Represent information effectively through tables, bar charts, and pictograms.
- Interpret simple data for comparison and decision-making.
- Develop logical thinking and data-handling skills through practical activities.

Assignment and Assessments/Test:

- Assignments on the meaning, importance, and types of data.
- Worksheets on data collection and organization.
- Practical exercises on preparing tables, bar charts, and pictograms.
- Quizzes on data concepts and representation techniques.
- Activity-based and project assessments using real-life data collection and analysis.

Remedial Measures:

- Extra practice sessions on identifying and classifying different types of data.
- Simplified notes and visual aids for data organization and representation.
- Demonstration of creating tables, bar charts, and pictograms using simple examples.
- One-to-one guidance and additional worksheets for students needing extra support.
- Revision activities and interactive classroom discussions to strengthen data-handling concepts.

Month- October**Lesson – 6: Introduction to Python****Topics:**

- What is Python?
- Features and applications of Python
- Getting started with Python
- Python IDLE and Python programming environment
- Python syntax and basic rules
- Python keywords and identifiers
- Variables and basic data types
- Input and output statements
- Writing and executing simple Python programs

Learning Objectives:

- Understand the meaning and importance of Python programming language.
- Learn about the features and applications of Python.

- Understand how to start and work with Python.
- Become familiar with the Python IDLE and programming environment.
- Learn the basic syntax and rules of Python programming.
- Understand variables, keywords, identifiers, and basic data types.
- Learn to use input and output statements in Python.
- Develop logical thinking and problem-solving skills through simple programs.

Art & Integrated Activity / Project / Practical:

- Prepare a chart showing the **features and applications of Python**.
- Create a comparison chart of Python with other popular programming languages.
- Demonstrate the steps to open Python IDLE and execute a program.
- Prepare a poster showing important **Python syntax rules**.
- Group activity to identify Python keywords, identifiers, and variables.
- Practical activity: Write and execute simple Python programs using `print()` statements.
- Practical activity: Write programs to take input from the user and display the output.
- Project work on "**Python in Our Daily Life**" showing different applications of Python.
- Create a simple Python program displaying the student's **name, class, and school name**.

Expected Learning Outcomes:

Students will:

- Understand what Python is and why it is widely used.
- Identify the major features and applications of Python.
- Start and execute programs using the Python programming environment.
- Understand and apply basic Python syntax rules.
- Differentiate between keywords, identifiers, and variables.
- Use basic input and output statements in Python.
- Write and execute simple Python programs independently.
- Develop logical thinking and basic programming skills.

Assignment and Assessments/Test:

- Assignments based on the introduction and features of Python.
- Worksheets on Python syntax, keywords, identifiers, and variables.
- Short quizzes on Python concepts and terminology.
- Practical assessment based on writing and executing simple Python programs.
- Activity-based assessment through charts, posters, and presentations.
- Class test on basic Python concepts and syntax.
- Evaluation of students' practical work and programming activities.

Remedial Measures:

- Extra practice sessions using simplified notes on Python basics.
- Step-by-step demonstrations of opening Python IDLE and executing programs.
- Video demonstrations explaining Python syntax and basic programming concepts.

- Practice worksheets on keywords, variables, and simple Python statements.
- Classroom discussions using simple real-life examples of programming.
- One-to-one guidance and additional practical exercises for students requiring extra support.
- Pair activities to help students understand and correct basic syntax errors.
- Revision quizzes and interactive activities to strengthen understanding of Python concepts.

Month-November

Python – Variables, Data Types and Functions

Topics:

- Variables in Python
- Rules for naming variables
- Data Types in Python
- Numeric Data Types (Integer, Float, Complex)
- String and Boolean Data Types
- Functions in Python
- Built-in Functions
- Taking Input using `input()`
- Displaying Output using `print()`
- Type Conversion
- Writing Simple Python Programs

Learning Objectives:

- Understand the concept and importance of variables in Python.
- Learn the rules for naming variables.
- Identify and differentiate various data types in Python.
- Understand the use of built-in functions.
- Learn how to take input from the user using `input()`.
- Learn how to display output using `print()`.
- Understand type conversion between different data types.
- Develop logical thinking and programming skills through simple Python programs.

Art & Integrated Activity / Project / Practical:

- Prepare a chart showing different Python data types with examples.
- Create a table comparing Integer, Float, String, and Boolean data types.
- Group activity to identify valid and invalid variable names.
- Practical activity: Write programs to store values in variables and display them.
- Practical activity: Write programs using `input()` and `print()` functions.
- Demonstrate the use of built-in functions such as `type()`, `len()`, and `int()`.
- Create a flowchart showing the process of input, processing, and output.
- Project work on "**Applications of Python Variables and Data Types in Real Life.**"
- Write simple Python programs to calculate the sum, product, and average of numbers.

Expected Learning Outcomes:

Students will:

- Understand the concept of variables and their use in programming.
- Identify and use different data types correctly.
- Apply rules for naming variables.
- Use built-in functions in Python programs.
- Take input from users and display output effectively.
- Perform type conversion where required.
- Write and execute simple Python programs independently.
- Develop problem-solving and logical thinking skills.

Assignment and Assessments/Test:

- Assignments based on variables and data types.
- Worksheets on identifying data types and valid variable names.
- Practical exercises using input and output statements.
- Quizzes on Python functions and data types.
- Activity-based assessment through charts and presentations.
- Class tests on Python concepts and syntax.
- Practical assessment based on writing and executing simple programs.

Remedial Measures:

- Extra practice sessions using simplified notes on variables and data types.
- Step-by-step demonstrations of input and output statements.
- Video demonstrations explaining Python functions and data types.
- Additional worksheets for identifying and using variables correctly.
- Classroom discussions with real-life examples of data representation.
- One-to-one guidance for students requiring extra support.
- Pair programming activities to improve understanding.
- Revision quizzes and interactive activities to strengthen Python concepts.

Month-December

Lesson – Simple Pattern Recognition and Decision Making

Topics:

- What is a Pattern?
- Identifying Patterns
- Types of Simple Patterns
- Recognising Patterns in Daily Life
- Methods of Recognising Repeated Actions or Events
- Identifying Similarities and Differences
- Using Patterns for Simple Decision Making
- Examples of Pattern Recognition in Real Life

Learning Objectives:

- Understand the meaning of a pattern and pattern recognition.
- Identify simple patterns in numbers, shapes, objects, and events.
- Learn how to recognise repeated actions or events.
- Identify similarities, differences, and repetitions in given situations.
- Understand how patterns can help in making simple decisions.
- Develop logical thinking and observation skills.
- Apply pattern recognition to simple real-life situations.

Art & Integrated Activity / Project / Practical:

- Create a chart showing different types of simple patterns using shapes, colours, and numbers.
- Activity to identify the missing object or number in a given pattern.
- Group activity to find repeated actions or events in everyday life.
- Create patterns using coloured blocks, shapes, or classroom objects.
- Prepare a worksheet containing number, shape, colour, and action-based patterns.
- Practical activity: Observe a sequence of events and identify what happens repeatedly.
- Classroom game where students identify and complete incomplete patterns.
- Project work on "**Patterns Around Us**" using pictures and examples from daily life.

Expected Learning Outcomes:

Students will:

- Understand the concept of patterns and pattern recognition.
- Identify simple repeated patterns in different situations.
- Recognise repeated actions and events.
- Identify similarities and differences between objects and sequences.
- Use logical thinking to complete simple patterns.
- Understand how recognising patterns can support decision making.
- Apply pattern recognition skills to everyday situations.
- Improve observation, reasoning, and problem-solving abilities.

Assignment and Assessments/Test:

- Worksheets based on identifying and completing patterns.
- Assignments on patterns found in daily life.
- Activity-based assessment using number, shape, and colour patterns.
- Quiz on pattern recognition and repeated actions.
- Classroom exercises involving simple decision-making situations.
- Project evaluation based on "**Patterns Around Us.**"
- Observation-based assessment of students' participation in pattern activities.

Remedial Measures:

- Extra practice using simple and familiar patterns.
- Step-by-step demonstrations with objects, pictures, and numbers.
- Use of games and interactive activities to improve pattern recognition.

- Additional worksheets with gradually increasing difficulty.
- Real-life examples to explain repeated actions and events.
- One-to-one guidance for students requiring additional support.
- Pair and group activities to encourage observation and logical thinking.
- Revision quizzes and interactive activities to strengthen pattern recognition and decision-making skills.

Month-January

Lesson – Ethics and Digital Responsibility

Topics:

- What is Ethics?
- Importance of Ethics in Daily Life
- Ethical Use of Technology
- Responsible Use of Digital Devices and Internet
- Plagiarism
- Importance of Original Work
- Digital Footprint
- Positive and Negative Digital Footprints
- Ways to Maintain a Safe and Responsible Digital Presence

Learning Objectives:

- Understand the meaning of ethics and ethical behaviour.
- Learn the importance of using technology responsibly.
- Identify appropriate and inappropriate uses of digital technology.
- Understand the meaning of plagiarism and why it should be avoided.
- Develop the habit of giving credit to original creators.
- Understand the concept of a digital footprint.
- Identify how online activities can create a digital footprint.
- Develop responsible, respectful, and safe digital habits.

Art & Integrated Activity / Project / Practical:

- Prepare a chart showing examples of ethical and unethical use of technology.
- Create a poster on "**Be Responsible Online**".
- Group discussion on the importance of respecting others while using digital technology.
- Activity to identify examples of plagiarism and original work.
- Create a flowchart showing ways to avoid plagiarism.
- Prepare a chart explaining positive and negative digital footprints.
- Role-play activity demonstrating responsible and irresponsible online behaviour.
- Practical activity: Identify information that should and should not be shared online.
- Project work on "**My Digital Responsibility**" highlighting safe, ethical, and responsible technology use.

Expected Learning Outcomes:

Students will:

- Understand the meaning and importance of ethics.
- Explain the importance of ethical use of technology.
- Differentiate between responsible and irresponsible digital behaviour.
- Understand plagiarism and explain why original work is important.
- Recognise the importance of acknowledging the work of others.
- Understand the concept of a digital footprint.
- Identify positive and negative effects of online activities.
- Develop responsible and respectful digital citizenship habits.

Assignment and Assessments/Test:

- Assignments based on ethics and responsible use of technology.
- Worksheets on ethical and unethical digital practices.
- Quiz on plagiarism and digital footprints.
- Activity-based assessment through posters and presentations.
- Case-study questions based on real-life digital situations.
- Class discussion on responsible online behaviour.
- Project evaluation on "**My Digital Responsibility.**"

Remedial Measures:

- Extra practice sessions using simple examples of ethical and unethical behaviour.
- Video demonstrations explaining plagiarism and digital footprints.
- Classroom discussions based on everyday technology use.
- Additional worksheets on responsible digital practices.
- Simple case studies to help students understand ethical decision-making.
- One-to-one guidance for students requiring additional support.
- Pair and group activities to reinforce responsible technology habits.
- Revision quizzes and interactive activities to strengthen understanding of ethics and digital responsibility.