

CLASS 8TH

LESSON PLAN

2026-27

MONTH-APRIL

Lesson – Computer Networks

Topics:

- Introduction to Computer Networks
- Need and Importance of Computer Networks
- Types of Networks (LAN, MAN, WAN)
- Network Devices (Modem, Hub, Switch, Router)
- Wired and Wireless Networks
- Internet and World Wide Web (WWW)
- Advantages and Disadvantages of Computer Networks

Learning Objectives:

- Understand the concept of a computer network.
- Identify the need and importance of connecting computers.
- Differentiate between LAN, MAN, and WAN.
- Recognize the functions of common networking devices such as modem, hub, switch, and router.
- Understand the difference between wired and wireless networks.
- Learn the role of the Internet and the World Wide Web in communication and information sharing.
- Develop awareness of the advantages and limitations of computer networks.

Art & Integrated Activity / Project / Practical:

- Prepare a chart showing the different types of computer networks (LAN, MAN, WAN).
- Draw and label a simple computer network connecting computers, a switch, and a router.
- Create a comparison table between wired and wireless networks.
- Practical activity: Identify networking devices available in the school computer lab.
- Group discussion on how the Internet helps in education, communication, and entertainment.
- Project work on "**How Computer Networks Connect the World**" using pictures and real-life examples.
- Design a colourful infographic showing the journey of data from one computer to another through the Internet.

Expected Learning Outcomes:

Students will:

- Understand the concept and importance of computer networks.
- Differentiate between LAN, MAN, and WAN.
- Identify common networking devices and explain their functions.
- Explain the difference between wired and wireless networks.
- Understand the role of the Internet and the World Wide Web.
- Apply networking concepts through classroom activities and practical demonstrations.

Assignment and Assessments/Test:

- Assignments on computer network concepts and types of networks.
- Worksheets based on LAN, MAN, WAN, and networking devices.
- Practical exercises to identify networking hardware in the computer lab.
- Quizzes on networking terminology, Internet, and [WWW](http://www.).
- Activity-based assessment through charts, diagrams, classroom discussions, and project presentations.

Remedial Measures:

- Extra practice sessions using simplified notes on computer networks.
- Demonstration videos explaining network types and networking devices.
- Classroom demonstrations of wired and wireless network connections.
- One-to-one guidance and additional worksheets for students requiring extra support.
- Revision quizzes, flashcards, and interactive classroom activities to strengthen understanding of networking concepts.

MONTH-MAY

- Introduction to AI Applications
- Steps to Build an AI Application
- Problem Identification
- Data Collection and Data Preparation
- Training and Testing an AI Model
- AI Project Cycle (Problem Scoping, Data Acquisition, Data Exploration, Modelling, Evaluation)
- Real-life AI Applications

Learning Objectives:

- Understand the concept of an AI application.
- Learn the stages involved in building an AI application.
- Identify real-life problems that can be solved using AI.
- Understand the importance of data collection and data preparation.
- Learn the basic steps of training and testing an AI model.
- Develop logical thinking and problem-solving skills through AI project development.
- Promote responsible and ethical use of Artificial Intelligence.

Art & Integrated Activity / Project / Practical:

- Prepare a flowchart showing the steps involved in building an AI application.
- Design a poster illustrating the AI Project Cycle.
- Practical activity: Create a simple AI project using **Machine Learning for Kids**, **Teachable Machine**, or **Scratch with AI Extensions**.
- Group activity: Identify a real-life problem in school or the community and propose an AI-based solution.
- Project work on "**Building an AI Application to Solve Everyday Problems**" with diagrams and examples.
- Create a presentation on AI applications used in healthcare, education, agriculture, banking, or transportation.
- Demonstrate a simple image or sound recognition model using an AI tool.

Expected Learning Outcomes:

Students will:

- Understand the process of building an AI application.
- Explain the stages of the AI Project Cycle.
- Identify problems that can be solved using Artificial Intelligence.
- Collect and organize data required for AI applications.
- Build and test a basic AI model using beginner-friendly tools.
- Develop creativity, collaboration, and problem-solving skills through AI projects.
- Demonstrate awareness of ethical and responsible AI practices.

Assignment and Assessments/Test:

- Assignments on the AI Project Cycle and AI application development.
- Worksheets based on problem identification, data collection, and model evaluation.
- Practical assessment by creating a simple AI application.
- Quizzes on AI concepts, project stages, and real-life applications.
- Activity-based assessment through posters, presentations, demonstrations, and project work.

Remedial Measures:

- Provide simplified notes explaining each stage of the AI Project Cycle.
- Show video demonstrations on building beginner-level AI applications.
- Conduct guided hands-on practice using simple AI tools.
- Provide one-to-one support and additional worksheets for students requiring extra help.
- Organize revision quizzes, classroom discussions, and practical demonstrations to reinforce AI application development concepts.
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MONTH-JULY

Lesson – Cyber Threats, Cyber Ethics and Security

Topics:

- Introduction to Cyber Security
- Cyber Threats and Cyber Crimes
- Types of Cyber Threats (Virus, Worm, Trojan Horse, Spyware, Ransomware, Phishing)
- Password Safety and Authentication
- Safe Internet Browsing Practices
- Digital Footprint and Online Privacy
- **Cyber Ethics**
- **Cyber Laws**
- Cyber Safety Tips and Responsible Digital Citizenship

Learning Objectives:

- Understand the importance of cyber security in the digital world.
- Identify common cyber threats and cyber crimes.
- Differentiate between viruses, worms, trojans, spyware, ransomware, and phishing attacks.
- Learn how to create strong passwords and protect online accounts.
- Understand the importance of cyber ethics while using digital devices and the Internet.
- Gain basic knowledge of cyber laws related to online safety and responsible use of technology.
- Develop safe browsing habits and understand the importance of online privacy.
- Build awareness about protecting personal information and becoming responsible digital citizens.

Art & Integrated Activity / Project / Practical:

- Prepare a poster on "**Be a Responsible Digital Citizen**" highlighting cyber ethics and cyber safety rules.
- Create a chart showing different cyber threats, cyber ethics, and preventive measures.
- Practical activity: Identify strong and weak passwords and create secure passwords following best practices.
- Group discussion on real-life examples of cyber fraud, cyberbullying, and ethical online behaviour.
- Role-play activity demonstrating how to respond to phishing emails, fake websites, or cyberbullying situations.
- Project work on "**Cyber Ethics and Safe Internet Usage**" using real-life examples.
- Design an infographic explaining cyber laws, online privacy, and digital citizenship.

Expected Learning Outcomes:

Students will:

- Understand the concept and importance of cyber security.
- Identify different cyber threats and explain preventive measures.
- Create strong passwords and practice safe online behaviour.

- Explain the importance of cyber ethics in everyday digital activities.
- Demonstrate awareness of basic cyber laws and responsible use of technology.
- Protect personal information and maintain online privacy.
- Apply cyber safety practices and become responsible digital citizens.

Assignment and Assessments/Test:

- Assignments on cyber security, cyber ethics, and cyber laws.
- Worksheets based on malware, phishing, passwords, digital citizenship, and online privacy.
- Practical exercises on creating secure passwords and identifying phishing attempts.
- Quizzes on cyber threats, cyber ethics, cyber laws, and safe Internet practices.
- Activity-based assessment through posters, presentations, role-plays, classroom discussions, and project work.

Remedial Measures:

- Provide simplified notes explaining cyber threats, cyber ethics, and cyber laws.
- Show educational videos on cyber safety, ethical online behaviour, and cybercrime prevention.
- Conduct classroom demonstrations on identifying phishing emails, fake websites, and online scams.
- Offer one-to-one guidance and additional worksheets for students requiring extra support.
- Organize revision quizzes, interactive activities, and cyber safety awareness campaigns to reinforce responsible digital behaviour.

MONTH-AUGUST

Lesson -AI Project Lifecycle

Topics:

- Introduction to Artificial Intelligence (AI)
- AI in Daily Life
- AI Project Lifecycle
- Six Stages of AI Project Lifecycle:
- Define the Problem o Data Collection and Preparation o
- Model Development and Training
- Model Evaluation and Refinement
- Model Deployment
- Monitoring and Maintenance
- Difference between Automation and Artificial Intelligence
- Real-life Applications of AI

Learning Objectives:

- Understand the concept of Artificial Intelligence and its importance in everyday life. Identify real-life applications of AI across different fields.

- Understand the AI Project Lifecycle and its six major stages.
- Differentiate between automation and AI-based systems.
- Recognize the importance of data in developing intelligent AI models.
- Develop logical thinking and problem-solving skills using AI concepts.

Art & Integrated Activity / Project / Practical:

- Prepare charts or flow diagrams illustrating the six stages of the AI Project Lifecycle. Create posters showing real-life applications of Artificial Intelligence.
- Group discussion on the difference between Automation and AI with practical examples. Role-play activity demonstrating the stages of an AI project.
- Case study and project work on identifying AI-based solutions for real-world problems.
- Practical activity: Collect sample data, organize it in a table, and identify patterns for a simple AI prediction task.

Expected Learning Outcomes:

- Students will:
- Understand the fundamentals of Artificial Intelligence and its applications.
- Explain the six stages of the AI Project Lifecycle.
- Differentiate between automation and AI-based systems.
- Appreciate the importance of data collection, preparation, and model training.
- Identify AI solutions for real-life problems and develop awareness of responsible AI usage.
- Build analytical and critical thinking skills through AI-based activities.

Assignment and Assessments/Test:

- Assignments on AI concepts, AI applications, and AI Project Lifecycle.
- Worksheets based on the six stages of AI development.
- Quizzes on Artificial Intelligence, automation, data collection, and model evaluation. Activity-based assessments using real-life AI examples.
- Project evaluation based on AI problem identification and lifecycle presentation.

Remedial Measures:

- Extra practice sessions using simplified notes and flowcharts on AI Project Lifecycle.
- Video demonstrations explaining AI concepts and real-life applications. Hands-on activities for understanding data collection and AI model development.
- One-to-one guidance and doubt-clearing sessions for students requiring additional support.
- Revision quizzes and interactive classroom discussions to reinforce key concepts.

MONTH – October

Lesson – 6: Database

Topics:

- What is Database?
- Components of Database
- Using the Database
- Database Management System (DBMS)
- MySQL
- SQL

Learning Objectives:

- Understand the concept and importance of a database.
- Identify the basic components of a database.
- Understand how databases are used to store and manage information.
- Learn about Database Management Systems (DBMS) and their purpose.
- Understand the basic features and uses of MySQL.
- Introduce SQL and understand its role in managing data in databases.
- Develop logical thinking and basic data-management skills.

Art & Integrated Activity / Project / Practical:

- Prepare a colourful chart explaining "**What is a Database?**" with real-life examples.
- Create a comparison chart showing different components of a database.
- Classroom activity: Identify databases used in everyday life, such as school records, libraries, and online shopping.
- Create a sample database table containing student information such as name, class, roll number, and house.
- Demonstrate the basic structure and working of a DBMS.
- Practical activity: Introduction to MySQL and creation of a simple database and table.
- Practice simple SQL commands for creating, displaying, and retrieving information from a table.
- Project work on "**Database in Our Daily Life**" showing how databases help organisations store and manage information.

Expected Learning Outcomes:

Students will:

- Explain the meaning and importance of a database.
- Identify the basic components of a database.
- Describe how databases are used to store and organise information.
- Explain the purpose of a Database Management System (DBMS).
- Identify MySQL as a popular database management system.
- Understand the basic purpose of SQL.
- Create and work with simple database tables under guidance.
- Develop basic skills in organising and managing digital information.

Assignment and Assessments/Test:

- Assignments on databases, their components, and uses.

- Worksheets on DBMS, MySQL, and SQL.
- Practical exercises involving the creation of simple database tables.
- Practice activities using basic SQL commands.
- Quiz on database concepts and terminology.
- Practical test based on creating a database and performing simple operations.
- Activity-based assessment through charts, classroom discussions, and project presentations.

Remedial Measures:

- Explain database concepts using familiar examples such as school registers and library records.
- Use diagrams and tables to explain database components.
- Provide step-by-step demonstrations of DBMS and MySQL.
- Give simple SQL exercises before introducing more advanced commands.
- Provide additional worksheets for database terminology and concepts.
- Give one-to-one guidance during practical activities.
- Conduct revision quizzes and hands-on practice to strengthen understanding of database concepts.

MONTH – November

Lesson – 7: Python – Loops and Lists

Topics:

- Variables
- Data Types
- Functions
- Operators
- Control Structures
- Nested Control Structures
- Python Lists

Learning Objectives:

- Understand the concept and use of variables in Python.
- Identify and differentiate between common Python data types.
- Understand the purpose and basic use of functions in Python.
- Learn different types of operators and their applications.
- Understand control structures and their role in controlling program execution.
- Learn how nested control structures are used in Python programs.
- Understand the concept of lists and their importance in storing multiple values.
- Develop logical thinking and problem-solving skills through Python programming.

Art & Integrated Activity / Project / Practical:

- Prepare a colourful chart showing Python data types and examples.
- Create a table explaining different operators with simple examples.
- Practical activity: Write Python programs using variables, data types, and operators.

- Create simple user-defined functions and demonstrate their use in programs.
- Write programs using conditional and looping control structures.
- Create simple examples of nested control structures.
- Practical activity: Create, access, modify, and display elements of a Python list.
- Project work on "**My Python Data Collection**" using a list to store and display information such as subjects, hobbies, or favourite activities.

Expected Learning Outcomes:

Students will:

- Define and use variables appropriately in Python programs.
- Identify common Python data types.
- Use operators to perform different operations.
- Explain and use simple functions in Python.
- Apply control structures to solve programming problems.
- Understand and use nested control structures.
- Create and manipulate Python lists.
- Develop logical, computational, and problem-solving skills through programming.

Assignment and Assessments/Test:

- Assignments on variables, data types, functions, and operators.
- Worksheets on identifying suitable data types and operators.
- Practical exercises based on control structures and nested control structures.
- Programming exercises using Python lists.
- Short quiz on Python concepts and terminology.
- Practical test involving variables, operators, control structures, and lists.
- Activity-based assessment through program writing, classroom discussions, and project presentations.

Remedial Measures:

- Explain Python concepts using simple real-life examples.
- Provide step-by-step demonstrations of variables, data types, and operators.
- Give simple programming exercises before introducing nested control structures.
- Use flowcharts and sample programs to explain the execution of control structures.
- Provide additional practice programs on functions and Python lists.
- Give one-to-one guidance to students requiring additional support.
- Conduct revision exercises and short quizzes to strengthen Python programming concepts.

MONTH – December

A.I Lesson – Data and Fairness in AI

Topics:

- Role of Data in AI
- Importance of Data
- Understanding Bias
- Ensuring Fairness in AI

Learning Objectives:

- Understand the role of data in the development and working of AI systems.
- Explain why data is important for training and improving AI systems.
- Understand the meaning of bias and how it can occur in data.
- Identify simple examples of bias in AI systems.
- Understand the importance of fairness and equal treatment in AI.
- Learn how good-quality and balanced data can help reduce bias.
- Develop responsible and ethical thinking while using AI technologies.

Art & Integrated Activity / Project / Practical:

- Prepare a colourful chart explaining "**The Role of Data in AI**" with simple examples.
- Create a comparison table showing **fair and biased** examples of data.
- Classroom activity: Students examine a simple dataset and identify whether it represents different groups fairly.
- Group discussion on "**Can AI Be Biased?**" using age-appropriate real-life examples.
- Role-play activity where students act as an AI system making decisions from different sets of data.
- Create a poster on "**Fair AI for Everyone**" highlighting equality, inclusion, and responsible use of AI.
- Project work on "**How Data Can Affect AI Decisions**" with examples, illustrations, and simple solutions for reducing bias.

Expected Learning Outcomes:

Students will:

- Explain the role of data in AI systems.
- Describe why data is important for training and improving AI.
- Define bias in the context of data and AI.
- Identify simple examples of bias in datasets or AI decisions.
- Explain why fairness is important in AI.
- Suggest simple ways to make AI systems more fair and inclusive.
- Develop awareness of responsible and ethical use of AI.
- Apply critical thinking when evaluating AI-generated decisions or results.

Assignment and Assessments/Test:

- Assignment on the role and importance of data in AI.
- Worksheet on identifying fair and biased examples.
- Short quiz on data, bias, and fairness in AI.
- Case-based questions involving simple AI decision-making situations.
- Group discussion and presentation on "**Fairness in AI**".

- Poster/project-based assessment on responsible and fair AI.
- Activity-based assessment through classroom discussions, role-play, and practical examples.

Remedial Measures:

- Explain the role of data using simple and familiar examples.
- Use pictures, stories, and classroom activities to explain bias and fairness.
- Provide simple examples to help students identify biased and balanced data.
- Conduct step-by-step activities to demonstrate how data can influence AI decisions.
- Provide additional worksheets with easy-to-understand situations related to fairness.
- Give one-to-one guidance to students requiring additional support.
- Conduct revision quizzes, discussions, and interactive activities to reinforce the concepts of data, bias, and fairness in AI.

MONTH – January

A.I Lesson – Ethics and Responsible AI

Topics:

- What is AI Ethics?
- Privacy in the Digital World
- Bias and Fairness in AI
- Accountability and Human Control

Learning Objectives:

- Understand the meaning and importance of AI ethics.
- Identify the ethical responsibilities involved in developing and using AI systems.
- Understand the importance of privacy and protecting personal information in the digital world.
- Recognise how bias can affect AI systems and understand the importance of fairness.
- Understand the concept of accountability in AI-based decisions.
- Explain why human supervision and control are important when using AI.
- Develop responsible, safe, and ethical attitudes towards AI technologies.

Art & Integrated Activity / Project / Practical:

- Prepare a colourful chart explaining "**What is AI Ethics?**" with simple examples.
- Create a poster on "**Protect Your Privacy in the Digital World**" showing safe digital practices.
- Classroom activity: Identify examples of information that should and should not be shared online.
- Group discussion on "**Can AI Always Make Fair Decisions?**" using simple age-appropriate examples.

- Role-play activity where students act as AI developers, users, and human decision-makers to understand accountability and human control.
- Create a comparison chart showing **Responsible vs. Irresponsible Use of AI**.
- Project work on "**Building Responsible AI**" covering privacy, fairness, accountability, and human supervision.

Expected Learning Outcomes:

Students will:

- Explain the meaning of AI ethics.
- Identify the importance of privacy in the digital world.
- Recognise the need to protect personal and sensitive information.
- Explain how bias can affect AI decisions and why fairness is important.
- Understand the concept of accountability in AI systems.
- Explain why humans should maintain appropriate control and supervision over AI.
- Identify responsible and irresponsible uses of AI.
- Develop critical thinking and responsible digital citizenship skills.

Assignment and Assessments/Test:

- Assignment on AI ethics and responsible use of AI.
- Worksheets on privacy, bias, fairness, and accountability.
- Case-based questions on ethical situations involving AI.
- Quiz on AI ethics, digital privacy, and responsible AI.
- Group discussion and presentation on "**Why Humans Should Control AI**".
- Poster/project-based assessment on ethical and responsible AI.
- Activity-based assessment through role-play, classroom discussions, and practical examples.

Remedial Measures:

- Explain AI ethics through simple real-life situations and stories.
- Use pictures, videos, and classroom discussions to explain privacy and responsible digital behaviour.
- Provide simple examples to help students understand bias and fairness.
- Demonstrate appropriate ways of protecting personal information online.
- Conduct step-by-step activities to explain accountability and human control.
- Provide additional worksheets and simplified case studies for students requiring support.
- Give one-to-one guidance and conduct revision quizzes to reinforce key concepts.