

TECHIE TOTS TECHER'S HANDBOOK STD





Dear Sir / Madam,

Welcome to the Teacher's Handbook for "Techie Tots" – an innovative IT textbook designed to equip students from Grades 1 to 8 with essential digital literacy skills. This handbook is designed to support teachers in delivering engaging and effective IT instruction by providing:

- Clear learning objectives for each grade level.
- Curriculum-aligned lesson plans and activities.
- Assessment strategies to measure student progress.
- Tips for integrating technology into classroom instruction.
- Access to our Learning Management System (LMS) platform.

We understand that each classroom is unique, and the resources provided in this handbook can be adapted to meet the specific needs of your students and school environment. By fostering curiosity, creativity, and critical thinking skills, we aim to empower students to become confident users and creators of technology.

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INDEX				
S. NO	PARTICULARS	PAGE NO		
1	SCHEME OF EXAMINATION	4		
2	TECHIE TOTS 3	5		

TECHIE TOTS

SCHEME OF EXAMINATION

TWO TERM SCHEME

BOOKS	TERM I	TERM II
	LESSONS	LESSONS
BOOK 3	1, 2, 3,4	5, 6, 7

THREE TERM SCHEME

TERM I	TERM II	TERM III
LESSONS	LESSONS	LESSONS
1, 2	3, 4, 5	6, 7
	LESSONS	LESSONS LESSONS

Note: Questions for each terminal examination cover only the portions prescribed for it.

SOFTWARE AND HARDWARE

TT-III 1

General Objectives:

- To familiarize students with computer hardware components.
- To introduce students to software and its types.
- To familiarize students with the basic features and functionalities of Windows 11.
- To teach students how to work with applications and manage multiple programs simultaneously.

Learning Outcomes:

- Students can identify and describe various computer hardware components.
- Students can define software and differentiate between application and system software.
- Students can identify and explain the components of the Windows 11 desktop, including icons, taskbar, and start menu.
- Students can demonstrate the ability to open, navigate, and close applications in Windows 11.
- Students can utilize basic features of specific applications such as Calculator and Windows Media Player.

Methodology:

Aim: To provide students with a comprehensive understanding of computer hardware and software, to introduce students to the Windows 11 operating system and familiarize them with its basic functionalities.

Strategy: Begin the lesson with a discussion on the importance of computer hardware and software in everyday life. Present each hardware component with visual aids to aid understanding. Engage students in interactive activities such as identifying hardware components on a computer system diagram. Discuss the importance of operating systems and introduce Windows 11. Demonstrate the key features of Windows 11, including the Start Menu, Taskbar, Desktop, and icons, using a multimedia presentation.

Expected Skills achieved by the learners: Critical Thinking Skills and Technological Literacy.

Lesson Activities:

A Fill in the blanks

1. Maximize 2. Operating System 3. Windows Key 4. Application

5. Taskbar 6. Instruction

B Write T for True and F for False

1T 2T 3T 4F 5F

C Identify the Following

1. Recycle Bin 2. This PC 3. Paint 4. Network 5. Close button

- D Multiple choice questions
 - 1. Task View
- 2. Center or Left
- 3. Desktop
- 4. Bottom
- 5.Restore

- **E** Match the following
 - 1.
- 2. [-
- 3 5
- 4.×

- F Fill the crossword
 - 1. Taskbar
- 2. Close
- 3. Desktop
- 4. Restore
- 5. Desktop

- **G** Match the following
 - 1.
- 2.
- 3.
- 4.

H Answer the following

- 1. An Application Software is used to perform specific work for user such as play games, draw pictures, write notes etc.
- 2. Minimize button is used to minimize the windows to the taskbar. Maximize button is used to enlarge the window to its full size.
- 3. Click on the Search icon located on the taskbar. in the search bar, type Calculator and press Enter key. click on the calculator app in the Search result to open it.
- 4. Desktop contains a number of small pictures called Icons.
- $5.\,Operating\,System\,acts\,as\,a\,mediator\,between\,user\,and\,computer.$
- I Find out the Odd one
 - 1. Monitor
- 2. Keyboard
- 3. Windows

TT-III

2

MICROSOFT WORD 2019

General Objectives:

- To introduce students to Microsoft Word 2019 and its significance as a word processing application.
- To enable students to create, edit, format and print documents using Microsoft Word 2019.
- To familiarize students with the various tools and features available in Microsoft Word 2019.

Learning Outcomes:

- Students can navigate the Microsoft Word 2019 interface effectively.
- Students can create new documents using Microsoft Word 2019.
- Students can open existing documents and save new ones in Microsoft Word 2019.
- Students can utilize basic formatting tools such as font styles, sizes and alignments in Microsoft Word 2019.
- Students can preview and print documents using Microsoft Word 2019.

Methodology:

Aim: To equip students with the necessary skills to utilize Microsoft Word 2019 for word.

processing tasks efficiently.

Strategy: Begin by discussing the importance of word processing applications and introduce Microsoft Word 2019 as a widely used tool. Demonstrate the key features and tools of Microsoft Word 2019 using visual aids and examples. Provide students with computers equipped with Microsoft Word 2019 and guide them through practical exercises to create, edit and format documents.

Expected Skills achieved by the learners: Digital Literacy and Communication Skills.

Lesson Activities:

A Fill in the blanks

- 1. Print preview appears on the side of backstage view. ans) Right
- 2. Start 3. Documents 4. .docx 5. Pin a document button

B State whether True or False

1. False 2. True 3. True 4. False

C Multiple choice questions

1. Ctrl+N 2. Save 3. Template 4. Ctrl+P

D Identify the icons



E Match the following

- 1. Create a new document 2. Save the document
- 3. Open a file 4.Print the document

F Write the various parts of MS Word 2019 window

- 1. Ribbon 2. Tell Me 3. Title Bar 4. Share Button 5. Ruler Bar
- 6. Workspace 7. Scroll Bar 8. Status Bar 9. Zoom Control

G Answer the following

- 1. click on the file tab. Then click on the close button. Now the screen will disappear.
- 2. Word Processor is an application software used for Writing, Editing, Formating and Printing documents.
- 3. To create a new document follow the given steps. Click on the File tab on the Title bar. Click on the new option from the Backstage view. Select a Blank document.
- 4. Template is a pre-designed document style to create a new document quickly.

Assessment - 1

(Based on chapters 1 and 2)

A Fill in the blanks

- 1. Maximize 2. Operating system 3. Document 4. Ctrl+P
- B Write T for True and F for False

1.T 2.T 3.T 4.T

- C Multiple choice questions
 - 1. Task View 2. Template
- D Answer the following
 - 1. An Application Software is used to perform specific work for user such as play games, draw pictures, write notes etc.
 - 2. Word Processor is an application software used for Writing, Editing, Formatting and Printing documents.
 - 3. Desktop contains a number of small pictures called Icons.

General Objectives:

- To introduce students to the fundamentals of Paint 3D software.
- To familiarize students with the various uses and applications of Paint 3D.
- To enable students to understand and utilize important features within Paint 3D effectively.

Learning Outcomes:

- Students can navigate and operate Paint 3D software proficiently.
- Students can identify and explain various uses of Paint 3D in digital art and design.
- Students can demonstrate competence in utilizing important features of Paint 3D to

TT-III

3

WORKING WITH PAINT 3D

create and manipulate 3D models and artwork.

Methodology:

Aim: To equip students with foundational skills in using Paint 3D for digital art and design.

Strategy: Begin the lesson with an introduction to Paint 3D, explaining its purpose and significance in digital art and design. Provide a demonstration of how to access and navigate Paint 3D interface, including tools, menus, and workspace. Present various use cases and applications of Paint 3D, such as creating 3D models, designing digital artwork, and enhancing presentations.

Expected Skills achieved by the learners: Creativity skills, Fine motor skills

Lesson Activities:

A Fill in the blanks

1. Fill 2. Text 3. Brushes 4. Plus(+)

B Write T for True and F for False

1. F 2. T 3. F 4. T

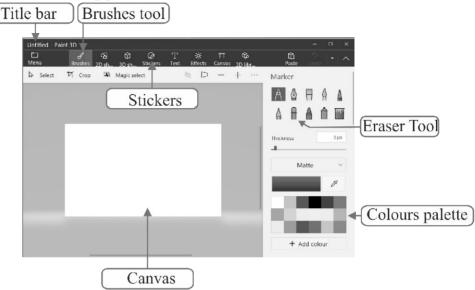
C Multiple choice questions

1. Title bar 2. 3D 3. Brushes 4. Canvas

D Match the following

- 1.
- 2.
- 3 T
- 4 @

E Write the following part of the Paint 3D Window



F Answer the following

- 1. To create colourful pictures, To improve various images, To insert stickers, textures and shapes, and To change the canvas scene.
- 2. A dotted boundary around the shape can be seen which are called Grab Points.
- 3. Brushes tool is used for freehand drawing.



INTRODUCTION TO INTERNET

General Objectives:

- To introduce students to the concept and uses of the Internet.
- To familiarize students with basic Internet terminology.
- To teach students about email and email addresses.
- To instruct students on how to conduct Internet searches effectively.

Learning Outcomes:

- Students can explain the various uses of the Internet in modern society.
- Students can define and differentiate between various Internet-related terms such as website, email, URL, etc.
- Students can describe the purpose and structure of an email address.
- Students can demonstrate the ability to conduct basic Internet searches using a web browser.

Methodology:

Aim: To provide students with a foundational understanding of the Internet, its uses, and basic Internet skills.

Strategy: The lesson will utilize a combination of lecture-based instruction, interactive discussions, hands-on activities, and multimedia presentations to engage students and facilitate learning.

Expected Skills achieved by the learners: Communication and Digital Literacy Skills.

Lesson Activities:

- A Fill in the blanks
 - 1.Internet 2. URL 3. Web browser 4. Search Engine 5. Home page
- **B** Write T for True and F for False
 - 1. T 2. T 3. F 4. F 5. T
- C Match the following
 - 1. BSNL 2. gmail.com 3.Google 4.Web Browser 5. Website 6. ARPANET
- D Multiple choice questions
 - 1. Internet 2. E-mail 3. Edge 4. Hyperlink
- E Answer the following
 - 1. A website is a collection of web pages. It provides information about persons, businesses, organisation, institutes etc.
 - 2. Microsoft edge is a web browsing software for using internet.
 - 3. World wide web is a collection of inter connected pages that contains text, pictures, audio and movies. it contains millions of websites with interlinked documents of information.
 - 4. Email is the most popular feature of the internet. It is used to send documents, pictures and videos. It is a very fast, easy and economical media for sending or receiving messages around the world.
 - 5. Search engine is a computer program used to search information on the web. Search engine helps us to search website, images, audios and videos. It is also used to find information about people, places, businesses, organizations, institutes etc.
 - 6. Web browser is an application software used to open websites. It helps you to view web pages containing information, document, images, audios and videos, animation movies.
- F Identify the icons
 - 1. Edge 2. Google chrome 3. Gmail 4. Mozilla firefox

SEMESTER - 1

(Based on chapters 1,2,3 and 4)

- A Fill in the blanks
 - 1. .docx 2. Instruction 3. Home page 4. Stamp 5. Document
- B Write T for True and F for False
- 1. F 2. F 3. T 4.T 5. F

C Match the following

- 1. gmail.com 2. To open a document
- 3. Google
- 4. To save a document

- 5. BSNL
- 6. To create a new document

D Multiple choice questions

- 1. Task View
- 2. Brushes
- 3. Template
- 4. Internet

E Answer the following

- 1. Operating System acts as a mediator between user and computer.
- 2. Template is a pre-designed document style to create a new document quickly.
- 3. Search engine is a computer program used to search information on the web. Search engine helps us to search website, images, audios and videos. It is also used to find information about people, places, businesses, organizations, institutes etc.
- 4. A dotted boundary around the shape can be seen which are called Grab Points.
- 5. Minimize button is used to minimize the windows to the taskbar. Maximize button is used to enlarge the window to its full size.

тт-III 5

INTRODUCTION TO SCRATCH 3

General Objectives:

- To introduce students to the Scratch 3 programming environment.
- To familiarize students with the basic components and features of Scratch 3.
- To enable students to create and save simple projects using Scratch 3.

Learning Outcomes:

- To introduce students to the Scratch 3 programming environment.
- To familiarize students with the basic components and features of Scratch 3.
- To enable students to create and save simple projects using Scratch 3.

Methodology:

Aim: To provide students with an introduction to Scratch 3 programming environment and equip them with basic skills to create and save simple projects.

Strategy: Begin the lesson with an overview of Scratch 3, explaining its purpose as a visual programming language for creating interactive stories, games, and animations. Introduce the Scratch window, highlighting its main components such as the stage, sprite area, blocks palette, and scripts area. Demonstrate how to navigate the Scratch interface, including how to select and manipulate sprites, navigate the stage, and access different menus and options. Guide students through the blocks palette, explaining the different categories of blocks available and their respective functions.

Expected skills achieved by the learners: Computational Thinking, Problem-solving & Creativity skills.

• Lesson Activities:

A Fill in the blanks

- 1. Programming language 2. Scratch 3. Sprite 4. Extension button
- 5. Stamp

B Write T for True and F for False

1. F 2. T 3. F 4. T 5. T

C Name the parts of the Scratch window

- 1 Code Area 2
 - 2. Stage
- 3. Start/Stop
- 4. Sprite

- 5. Full screen mode 6. Blocks Palette
- 7. Code/Costume/Sound Tab

D Multiple choice questions

- 1. Stage
- 2. Motion block
- 3.
- p erase all
- 4. Cat

E Match the following



2.



3.







F Answer the following

- 1. Scratch is a multimedia programming language used to create games, animated stories and projects by simply Dragging and Dropping.
- 2. The pen is a feature in Scratch that allows a Sprite to draw shapes, plot colored pixels and so forth on the screen with the Pen Blocks.
- 3. Code Area is the place where you write step-wise instruction for Sprite to do a particular task.

TT-III

6

LOGICAL REASONING

General Objectives:

To enhance students' cognitive abilities and critical thinking skills through activities aimed at improving numerical, visual, and analytical skills, developing problem-solving abilities, and fostering creativity and goal-setting.

Learning Outcomes:

- Students can demonstrate improved numerical, visual, and analytical skills through participation in various activities.
- Students can apply problem-solving strategies to effectively tackle various challenges presented in the activities.
- Students can generate creative ideas and set achievable goals based on the outcomes of the activities.

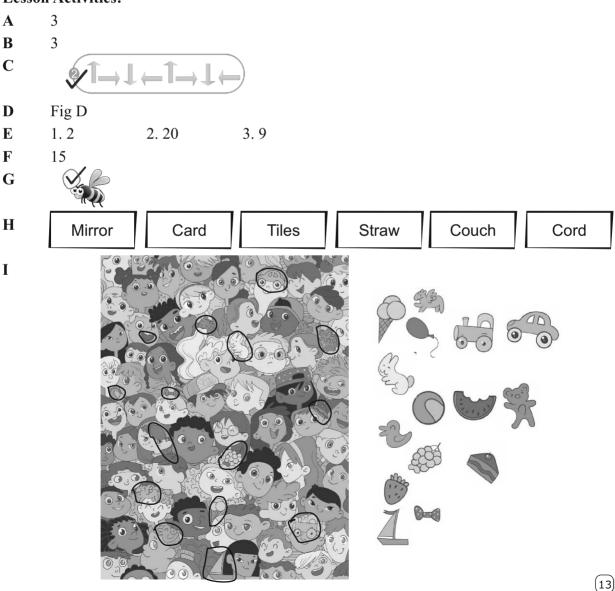
Methodology:

Aim: To engage students in a variety of activities to enhance their logical reasoning skills and foster critical thinking abilities.

Strategy: Begin by introducing students the concept of logical reasoning and its importance in everyday life. Explain how logical reasoning skills can be developed through engaging activities. Choose a variety of activities from the provided list that align with the learning objectives. Demonstrate the first activity to the students, providing step-by-step instructions and modelling problem-solving strategies. Guide students in setting personal goals for improving their logical reasoning skills based on their performance in the activities.

Expected skills achieved by the learners: Numerical, Visual & analytical skills and Problemsolving skills.

Lesson Activities:



Assessment - 2

(Based on chapters 5 and 6)

- A Fill in the blanks
 - 1. Programming Language
- 2. Extension button
- 3. Script

- **B** Write T for True and F for False
 - 1. F 2. F 3. T
- C Multiple choice questions
 - 1. Stage 2.Cat
- D Answer the following
 - 1. Code Area is the place where you write step-wise instruction for Sprite to do a particular task.
 - 2. The pen is a feature in Scratch that allows a Sprite to draw shapes, plot colored pixels and so forth on the screen with the Pen Blocks.

3.



TT-III

7

FEATURES OF AI

General Objectives:

- To introduce students to the concept of Artificial Intelligence (AI) and its features.
- To familiarize students with the advantages and disadvantages of AI.
- To stimulate critical thinking about the role of AI in society and its impact on various aspects of human life.

Learning Outcomes:

- Students can define the concept of Artificial Intelligence and explain its key features.
- Students can identify and discuss the advantages and disadvantages of AI in different contexts.
- Students can critically evaluate the implications of AI on society, economy, and employment.

Methodology:

Aim: To provide students with a foundational understanding of Artificial Intelligence, including its features, advantages, and disadvantages, and encourage critical thinking about its impact on society.

Strategy: Begin the lesson by defining Artificial Intelligence and explaining its significance in modern technology. Provide examples of AI applications in everyday life, such as virtual assistants, recommendation systems, and autonomous vehicles. Explain the key features of AI. Discuss the advantages & disadvantages of AI.

Expected skills achieved by the learners: Critical Thinking, Ethical Reasoning & Problemsolving skills.

Expected skills achieved by the learners: Critical Thinking, Ethical Reasoning & Problemsolving skills.

Lesson Activities:

- A Fill in the blanks
 - 1. Repeated 2. Machine Intelligence
- 3. Machine 4. Machines

- 5. Deep blue 6. Adapt
- 7. Google home
- **B** Write T for True and F for False
 - 1. T 2. F 3. T 4. T 5. F 6. T
- C Match the following
 - 1. Chess 2. Reduction of Error 3. No emotions 4. Humanoid Robot 5. Human
- D Find out the following



E Answer the following

- 1 a. Handling repetitive job b. Reduction of errors
- 2 AI can Sense, AI can Act, AI can Reason and AI can Adapt.
- 3 Artificial Intelligence is the intelligence of machine that allows them to perform some tasks which require intelligence.
- 4a. AI-enabled machines incur heavy cost b. AI-enabled machine may kill job employments.

SEMESTER-2

(Based on chapters 5,6 and 7)

- A Fill in the blanks
 - 1. Scratch 2. Stamp
- 3. Adapt
- 4. Machine
- 5. Repeated

- B Multiple choice questions
 - 1. Blocks palette
- 2. Perase a
- 3. Pen down
- 4. Cortana

- C Write T for True and F for False
 - 1.F 2.T 3.F 4.T
- D Ma stamp following
 - 1.
- move 10 steps
- 3. Human
- 4. Reduction of Error

E Answer the following

- 1. AI can Sense, AI can Act, AI can Reason and AI can Adapt.
- 2. The pen is a feature in Scratch that allows a Sprite to draw shapes, plot coloured pixels and so forth on the screen with the Pen Blocks.
- 3. The Stamp Block is used to create duplicate copy of the Sprite.
- 4. Artificial Intelligence is the intelligence of machine that allows them to perform some tasks which require intelligence.

F What come next?

9