

CODEPILOT



Ver. 5.0

2



TEACHER'S MANUAL

Extended Support for Teachers



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Teacher's Time Table		B R E A K						
Periods / Days								
		0	I	II	III	IV	V	VI
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
		VII	VIII					

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DEVELOPMENT MILESTONES IN A CHILD

Development milestones are a set of functional skills or age-specific tasks that most children can do at a certain age. These milestones help the teacher identify and understand how children differ in different age groups.



Age
5 - 8 Years

Physical

- First permanent tooth erupts
- Shows mature throwing and catching patterns
- Writing is now smaller and more readable
- Drawings are now more detailed, organised and have a sense of depth

Cognitive

- Attention continues to improve, becomes more selective and adaptable
- Recall, scripted memory, and auto-biographical memory improves
- Counts on and counts down, engaging in simple addition and subtraction
- Thoughts are now more logical

Language

- Vocabulary reaches about 10,000 words
- Vocabulary increases rapidly throughout middle childhood

Emotional/ Social

- Ability to predict and interpret emotional reactions of others enhances
- Relies more on language to express empathy
- Self-conscious emotions of pride and guilt are governed by personal responsibility
- Attends to facial and situational cues in interpreting another's feelings
- Peer interaction is now more prosocial, and physical aggression declines

“ If you cannot do great things, do small things in a great way. ”

Age
9 - 11 Years

Physical

- Motor skills develop resulting in enhanced reflexes

Cognitive

- Applies several memory strategies at once
- Cognitive self-regulation is now improved

Language

- Ability to use complex grammatical constructions enhances
- Conversational strategies are now more refined

Emotional/ Social

- Self-esteem tends to rise
- Peer groups emerge

Age
11 - 20 Years

Physical

- If a girl, reaches peak of growth spurt
- If a girl, motor performance gradually increases and then levels off
- If a boy, reaches peak and then completes growth spurt
- If a boy, motor performance increases dramatically

Cognitive

- Is now more self-conscious and self-focused
- Becomes a better everyday planner and decision maker

Emotional/ Social

- May show increased gender stereotyping of attitudes and behaviour
- May have a conventional moral orientation

Managing the children's learning needs according to their developmental milestones is the key to a successful teaching-learning transaction in the classroom.

“Family is the most important thing in the world.”

TEACHING PEDAGOGIES



Lesson Plans

A lesson plan is the instructor's road map which specifies what students need to learn and how it can be done effectively during the class time. A lesson plan helps teachers in the classroom by providing a detailed outline to follow in each class.

A lesson plan addresses and integrates three key components:

- + Learning objectives
- + Learning activities
- + Assessment to check the student's understanding

A lesson plan provides an outline of the teaching goals:

Before the class

1. Identify the learning objectives.
2. Plan the lesson in an engaging and meaningful manner.
3. Plan to assess student's understanding.
4. Plan for a lesson closure.

During the class

Present the lesson plan.

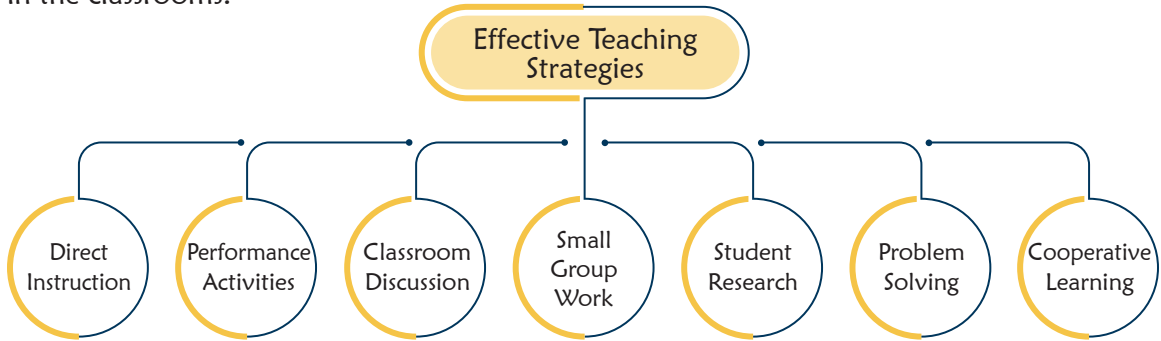
After the class

Reflect on what worked well and why. If needed, revise the lesson plan.

“Knowing yourself is the beginning of all wisdom.”

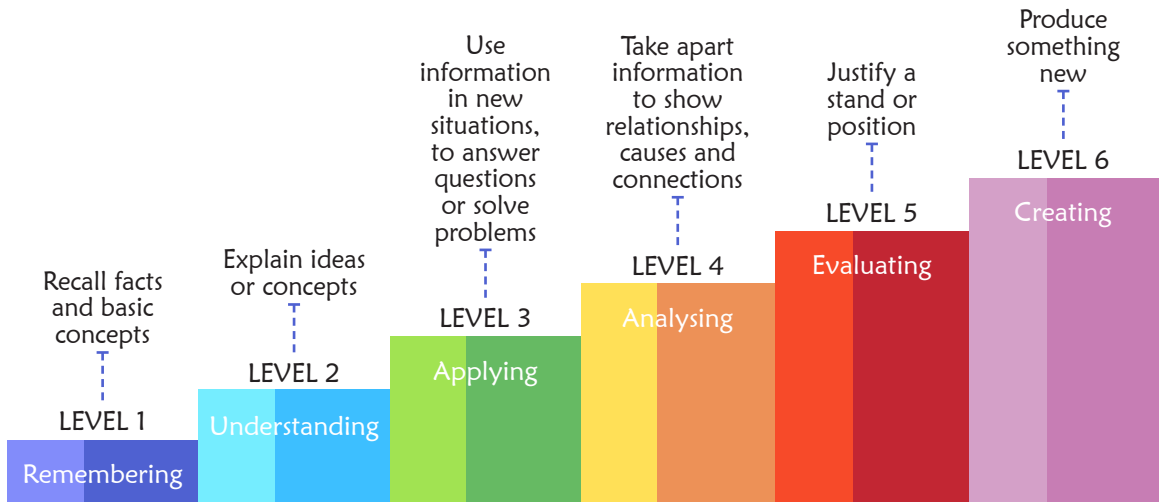
Teaching Strategies

Numerous strategies have evolved over the years to facilitate the teaching-learning process in the classrooms.



Bloom's Taxonomy

Bloom's Taxonomy was created by Dr Benjamin Bloom and several of his colleagues, to promote higher forms of thinking in education instead of rote learning. There are three domains of learning: cognitive (mental), affective (emotional), and psychomotor (physical). However, when we refer to Bloom's Taxonomy we speak of the cognitive domain. Bloom's Taxonomy is a list of cognitive skills that is used by teachers to determine the level of thinking their students have achieved. As a teacher, one should attempt to move students up the taxonomy as they progress in their knowledge.



Teachers should focus on helping students to remember information before expecting them to understand it, helping them understand it before expecting them to apply it to a new situation, and so on.

“ If you have no confidence in self,
you are twice defeated in the race of life. ”

Teaching Objectives

Students will learn about:

- ✦ What is a Computer?
- ✦ Computers: Advantages & Disadvantages
- ✦ Computer Vs Human
- ✦ Types of Computers
- ✦ How Does a Computer Work?

Teaching Plan

Number of Periods	
Theory	Practical
3	1

Before starting the chapter, ask the students to solve the question in **BRIDGE BACK** given on page **8** of the main course book.

Start by introducing the concept of computers and explaining that they are smart machines used to perform a variety of tasks like playing games, helping with learning, and more. Discuss how computers have different forms, such as desktops, laptops, tablets, and smartphones.

Define a computer as an electronic machine that can store, process information, and help humans with a wide range of tasks. Mention that computers need electricity to function, which is one of their primary requirements.

Introduce the advantages of using a computer, such as speed, accuracy, multitasking, and storage. Explain each advantage in simple terms.

Discuss the disadvantages of computers, which include Dependency on electricity, Health problems, Breakdown, Security risks

Introduce Computer vs Human: Compare how computers and humans work differently. While computers are quick and accurate, humans are creative and have emotions, which makes them different.

Explain that computers require instructions (input) to function, and they produce output after

processing. They can't make decisions on their own but rely on humans to provide directions.

Introduce different types of computers as desktop, laptop, tablet and smartphone.

Explain that how a computer works and explain its different parts as input, processing, storage and output devices.

Extension

Ask the students some questions based on this chapter:

- Q. What is a computer and what can it do?
- Q. What are the advantages and disadvantages of using a computer?
- Q. How are computers different from humans in terms of speed and accuracy?
- Q. What is the role of electricity in a computer's operation?
- Q. How can computers be used to improve work efficiency?
- Q. What are some types of computers, and how are they different from each other?
- Q. What does a computer need to work, and how does it process information?

Evaluation

Ask the students to complete the elements like **ASK AI AGENT** given on page **9**.

Ask the students to complete the elements like **RAPID RECALL** given on pages **12** and **14**.

Encourage the students to complete tasks like **ART INTEGRATION ACTIVITY** given on page **13**.

After explaining the chapter, let the students do the **LEARNING LOGS** on pages **15** to **17** in the main course book. Tell the students to try sections such as **CODE CHECK** given on page **18** in the main course book.

Take the students to the computer lab and let them practice the activity given in the **LAB LEARNING** section on page **17** in the main course book. This will enhance the ability of the students and serve as a **critical thinking** and **information literacy** activity.

Suggested Activity

Ask the students to explore how computers are used in gaming, education, and communication and to make a project in their notebook on this.

2

The Computer Story: In and Out

Teaching Objectives

Students will learn about:

✦ IPO Cycle

✦ Input Devices

- ✦ Processing Device
- ✦ Hybrid Devices

- ✦ Output Devices
- ✦ Storage Devices

Number of Periods	
Theory	Practical
3	1

Teaching Plan

Before starting the chapter, ask the students to solve the question in **BRIDGE BACK** given on page **20** of the main course book.

Start by explaining the IPO Cycle (Input, Process, Output) and how it forms the basic principle behind a computer's operation. The computer follows this cycle to perform tasks by taking input, processing it, and displaying the output.

Explain the steps of the IPO Cycle using the example of making a sandwich:

- Input: The ingredients (bread, vegetables, etc.).
- Process: The cooking (preparing the sandwich).
- Output: The final sandwich, ready to eat.

Explain this simple real-life example to how a computer works by taking input (data or instructions), processing it (using the CPU), and producing an output (displaying results on a screen).

Next, explain that Input Devices (keyboard, mouse, microphone, etc.) allow the user to provide data or commands to the computer. The CPU processes the data, and the Output Devices (monitor, printer, etc.) show the results.

Introduce different types of input devices and their roles:

- Keyboard: Used for typing text.
- Mouse: Used for pointing and clicking.
- Microphone: Used to record audio.
- Scanner: Used to copy documents or images.
- Joystick: Used for controlling games.

Explain Processing Devices: The CPU (Central Processing Unit) is the "brain" of the computer that handles all processing tasks. Discuss how it works to process the instructions and data entered through input devices and then display the results via output devices.

Tell the students about Hybrid Devices that function as both input and output devices. Examples include touchscreens, headsets, and webcams. These devices allow users to interact with the computer and also receive feedback, thus functioning as both input and output devices.

Explain the students about Storage Devices, such as the Hard Disk Drive (HDD) and Pen Drive, which are used to store data for later use. Show how HDD is used inside the computer to store files and Pen Drives allow users to carry files between different computers.

Extension

Ask the students some questions based on this chapter:

- Q. What is the IPO cycle and how does it work in a computer?
- Q. How does a computer process input and give output?
- Q. What are input devices, and can you name some examples?
- Q. What is the role of the CPU in a computer system?
- Q. What are hybrid devices and how do they work as both input and output devices?
- Q. How do storage devices help in saving data?
- Q. What devices are commonly used to store and carry files?

Evaluation

Ask the students to complete the elements like **ASK AI AGENT** given on page **25**.

Ask the students to complete the elements like **RAPID RECALL** given on pages **22** and **24**.

Encourage the students to complete tasks like **EXPERIENTIAL LEARNING** given on page **22**.

After explaining the chapter, let the students do the **LEARNING LOGS** on pages **27** to **29** in the main course book. Tell the students to try sections such as **CODE CHECK** given on page **29** in the main course book.

Take the students to the computer lab and let them practice the activity given in the **LAB LEARNING** section on page **29** in the main course book. This will enhance the ability of the students and serve as a **technology literacy** activity.

Suggested Activity

Students will identify input and output devices around them. They will list at least five devices (e.g., keyboard, monitor, printer) and classify them based on their function. After that, they will discuss the IPO cycle and how these devices work together. The class will also talk about hybrid devices like touchscreens, which serve both input and output functions.

3

Keys to Type, Mouse to Guide

Teaching Objectives

Students will learn about:

- ✦ Keyboard
- ✦ Mouse
- ✦ Types of Mouse
- ✦ Different Shapes of Mouse Pointer
- ✦ Special Keys
- ✦ Holding the Mouse
- ✦ Actions of a Mouse

Number of Periods	
Theory	Practical
3	1

Teaching Plan

Before starting the chapter, ask the students to solve the question in **BRIDGE BACK** given on page **33** of the main course book. This will prompt them to recall the mouse surface they use and relate it to the keyboard.

Start by introducing the concept of input devices: the keyboard and the mouse. Explain that both these devices help the computer understand what to do. The keyboard is used for typing letters, numbers, and symbols, while the mouse helps us interact with things on the screen.

Explain the students about the different categories of keys present on the keyboard.

- **Alphabet Keys:** These keys are used to type letters from A to Z.
- **Number Keys:** These are used for typing numbers from 0 to 9.
- **Spacebar Key:** This is the longest key and is used to add space between words.
- **Backspace Key:** This key erases the characters to the left of the cursor.
- **Delete Key:** This key erases the characters to the right of the cursor.
- **Arrow Keys:** These keys are used to move the cursor up, down, left, or right.
- **Enter Key:** This moves the cursor to the next line or executes a command.

Explain the special keys present on the keyboard and their uses such as,

- **Caps Lock Key:** When pressed, this key makes all letters appear in uppercase
- **Num Lock Key:** allows you to use the number pad on the right side of the keyboard.
- **Tab Key:** helps you move the cursor a few spaces forward to the right.
- **Esc Key:** like a cancel button on the keyboard. It helps to quickly exit or stop a task
- **Shift Key:** When held down while typing, it temporarily changes letters to uppercase and lets you type symbols from the number keys.
- **Ctrl and Alt Keys:** These keys are used in combination with others to perform special actions like copy, paste, and open menus.
- **WINDOWS KEY:** A special key on your keyboard. It looks like four squares. It is used to open the Start Menu on your computer.
- **FUNCTION KEYS:** There are 12 function keys, from F1 to F12, at the top of the keyboard. Each function key has a different job to perform
- **SYMBOL KEYS:** These keys have special signs and symbols. Some symbol keys are to the right of the Alphabet keys

Explain the students about the basic parts of a mouse and its uses

- **Left Button:** Used to select items or click on them.
- **Right Button:** Used for opening menus or additional options.



- **Scroll Wheel:** Allows you to scroll up or down through content on the screen.

Explain the students on how to hold the mouse, that the index finger is on the left click button, middle finger on the right click button and that the palm rests on the mouse.

Introduce the students with the different types of mouse, Optical Mouse, Wired Mouse, Wireless Mouse, Finger Mouse

Discuss with the students about the different actions associated with the mouse:

- **Click (Left-Click):** Pressing and releasing the left mouse button once to select items.
- **Right-Click:** Pressing and releasing the right mouse button to open a pop-up menu.
- **Double-Click:** Pressing the left mouse button twice quickly to open or select items.
- **Drag and Drop:** Moving an item by clicking and holding the left mouse button, dragging it, and releasing the button to drop the item in a new location.
- **Scroll:** Rolling the mouse wheel to move up or down on the screen.

Extension

Ask the students some questions based on this chapter:

- Q. What are the different types of keys on the keyboard?
- Q. What does the Caps Lock key do?
- Q. How do Ctrl and Alt keys work in combination with other keys?
- Q. What is the function of the Shift key?
- Q. What are the three main mouse buttons, and what do they do?
- Q. What is the difference between a wired and wireless mouse?
- Q. How does the scroll wheel on a mouse work?
- Q. What mouse action helps you move items around on the screen?

Evaluation

Ask the students to complete the elements like **ASK AI AGENT** given on page **41**.

Ask the students to complete the elements like **RAPID RECALL** given on pages **38** and **41**.

Encourage the students to complete tasks like **LIVE LEARNING** and **EXPERIENTIAL LEARNING** given on page **42** and **35**.

After explaining the chapter, let the students do the **LEARNING LOGS** on pages **43** to **45** in the main course book. Tell the students to try sections such as **CODE CHECK** given on page **46** in the main course book.

Take the students to the computer lab and let them practice the activity given in the **LAB LEARNING** section on page **45** in the main course book. This will enhance the ability of the students and serve as an **information literacy** and **technology literacy** activity.

Suggested Activity

Students will practice using the keyboard by typing a sentence and using the Backspace and Delete keys to edit text. They will also try typing in uppercase with Caps Lock and the Shift key. For the mouse practice, students will click icons, right-click for menus, double-click to open applications, and use the scroll wheel. They will also drag and drop items on the screen. Finally, students will share their experiences and discuss the difference between left-click and right-click.

4

Paint Like a Pro

Teaching Objectives

Students will learn about:

- ★ Starting Paint
- ★ Opening an Existing Drawing
- ★ Polygon Shape
- ★ Text Tool
- ★ Selecting a Drawing
- ★ Color Picker Tool
- ★ Components of Paint
- ★ Brush Tool
- ★ Curve Shape
- ★ Magnifier Tool
- ★ Cropping a Drawing
- ★ Undo and Redo Tool

Teaching Plan

Number of Periods	
Theory	Practical
2	2

Before starting the chapter, ask the students to solve the question in **BRIDGE BACK** given on page **48** of the main course book. This will prompt them to recall the mouse surface they use and relate it to the keyboard.

Introduce Microsoft Paint as a simple drawing and colouring program. Explain how it allows users to create pictures, shapes, and designs on the computer. Discuss the basic steps to open Paint and start a new project.

Explain the students about the key components of the Paint window, including Title Bar, Ribbon, Colors Group, Tools Group, Menu Bar, Drawing Area, Shapes Group

Tell the students about some of the basic drawing tools in Paint such as

- **Brush Tool:** Used for freehand drawing with different shapes and sizes of brushes.
- **Polygon Tool:** Used to draw closed shapes with straight lines, allowing users to create triangles, squares, or more complex shapes.
- **Curve Tool:** Used for drawing smooth, curved lines like rainbows or waves.
- **Text Tool:** Used to add text to drawings, making it easier to label or write messages.

Demonstrate each tool and show students how to select a shape, draw with a brush, and add text to their drawings. Provide examples of simple drawings to reinforce understanding.

Teach the students cropping means to remove the unwanted parts of a image by cutting out the selected area and teach them the steps to crop a drawing.

Tell the students about color picker tool that it is used to select a colour from your drawing to reuse. Teach the steps to use color picker tool

Introduce the undo and redo tools that these are the tools used to fix mistakes and bring back thing removed. Tell the students that clicking on the undo button reverses one step back and redo button restore what you just did.

Extension

Ask the students some questions based on this chapter:

- Q. What are the components of the Paint window?
- Q. How can you start Paint and begin a new drawing?
- Q. What is the function of the Polygon Tool?
- Q. How do you use the Brush Tool in Paint?
- Q. What is the Text Tool used for?
- Q. How do you use the Magnifier Tool in Paint?
- Q. What is the use of crop tool?
- Q. How do you use the color picker tool
- Q. What are the uses of undo and redo buttons?

Evaluation

Ask the students to complete the elements like **ASK AI AGENT** given on page 55.

Ask the students to complete the elements like **RAPID RECALL** given on pages 51 and 53.

Encourage the students to complete tasks like **ART INTEGRATION activity** given on page 55.

Motivate the students to complete activities such as **LIVE LEARNING** on page 53.

After explaining the chapter, let the students do the **LEARNING LOGS** on pages 58 to 60 in the main course book. Tell the students to try sections such as **CODE CHECK** given on page 60 in the main course book.

Take the students to the computer lab and let them practice the activity given in the **LAB LEARNING** section on page 60 in the main course book. This will enhance the ability of the students and serve as an **creativity** and **technology literacy** activity.

Suggested Activity

Ask students to draw a birthday card in Paint.

Students will:

- Open a new drawing in Paint and select a background color.
- Use the Polygon Tool to create shapes for balloons, gift boxes, and other decorations.
- Use the Text Tool to add a birthday message to the card.
- Use the Brush Tool to draw freehand lines and designs for extra decoration.
- Save the drawing and present it to the class.

5

Word – My Computer Notebook

Teaching Objectives

Students will learn about:

- ★ Uses of Word
- ★ Components of a Word Window
- ★ Entering Text in a Document
- ★ Closing a Document
- ★ Opening an Existing Document
- ★ Starting Word
- ★ Creating a New Document
- ★ Saving a Document
- ★ Exiting Word

Teaching Plan

Number of Periods	
Theory	Practical
2	2

Before starting the chapter, ask the students to solve the question in **BRIDGE BACK** given on page **65**. This will help them recall the uses of Word and its basic components.

Introduce Microsoft Word as an application that allows you to create, edit, and save documents. Explain that Word is commonly used for writing letters, stories, poems, reports, and more. Discuss the various uses of using Word:

- **Typing:** You can type stories, letters, and poems.
- **Editing:** Word makes it easy to correct mistakes.
- **Formatting:** You can change text size, colour, and font.
- **Inserting Pictures:** You can add images to make documents more engaging.
- **Making Tables:** Word allows you to create tables for organising information.
- **Creating Projects:** Word is useful for school projects, charts, and posters.
- **Printing:** You can print documents neatly on paper.

Demonstrate the steps to start Word and how to create a new document.

Tell the students about the components of the Word window in detail such as Title Bar, Quick Access Toolbar, Ribbon, Document Area, Status Bar, Vertical Scroll Bar, Horizontal Scroll Bar

Demonstrate the students the ways a document is created.

Explain the students the steps of entering text in a word document that the text is added where the cursor is present. You have to just click on the keys and the content will appear.

Explain the students the steps to save the document and the saving your document is important because you don't want to lose you work or you may revisit it later to make any changes.

Explain the students the different steps to close a document and exiting word.

Tell the students the steps to open an existing document, if you want to make any changes

Extension

Ask the students some questions based on this chapter:

- Q. What can you create using Microsoft Word?
- Q. What are the benefits of using Word for typing and editing?
- Q. How do you start a new document in Word?
- Q. What is the Ribbon in Word and what does it contain?
- Q. How can you save a document in Word?
- Q. What happens when you close a document without saving it?

Evaluation

Ask the students to complete the elements like **ASK AI AGENT** given on page **70**.

Ask the students to complete the elements like **RAPID RECALL** given on pages **67** and **70**.

Encourage the students to complete tasks like **INTERDISCIPLINARY LEARNING** given on page **70**.

After explaining the chapter, let the students do the **LEARNING LOGS** on pages **72** to **74** in the main course book. Tell the students to try sections such as **CODE CHECK** given on page **74** in the main course book.

Take the students to the computer lab and let them practice the activity given in the **LAB LEARNING** section on page **74** in the main course book. This will enhance the ability of the students and serve as an **communication** and **technology literacy** activity.

Suggested Activity

Ask students to **create a new document** in Microsoft Word.

Students will:

- Write a short paragraph on "My Favourite Animal".

- Save the document with the file name My Favourite Animal.
- Use the Ribbon to change the font size, colour, and style.
- Insert a picture of their favourite animal to make the document more engaging.
- Print the document once it's complete.

6 Smart Thinking with Computers

Teaching Objectives

Students will learn about:

- ★ Patterns
- ★ Step by Step
- ★ Find the Differences
- ★ Get Smart with AI

Teaching Plan

Number of Periods	
Theory	Practical
3	1

Before starting the chapter, ask the students to solve the question in **BRIDGE BACK** given on page **77** of the main course book, which encourages them to explore patterns in pictures.

Start by introducing reasoning and critical thinking, explaining that these skills help us use our brain to think smartly, make good choices, and solve problems carefully. Explain that patterns are a form of smart thinking that help us predict what comes next. Patterns can be seen in nature, buildings, and even in daily activities like school timetables.

Introduce the students to the two main types of patterns:

1. **Number Patterns:** These are sequences of numbers that follow a rule. For example, adding or subtracting the same number repeatedly.
 - o Example: 3, 5, 7, 9 (Here, each number increases by 2.)
2. **Shape Patterns:** These are patterns made up of shapes that follow a specific order. Shapes may repeat, change in size, or change in colour.
 - o Example 1: A red circle, a yellow square, and a green triangle.

Introduce the concept of step-by-step thinking and explain how tasks require multiple steps to be performed in the correct order to achieve a successful outcome.

Discuss with students that every task has steps that need to be followed in sequence to get the right result.

Introduce to the students that the Find the Differences activity, which helps improve focus and sharpens observation skills. In this activity, students will look at two pictures and identify differences between them. This kind of activity boosts both eye coordination and brain power.

Explain the students about AI (Artificial Intelligence) as a smart brain for machines that helps them think, learn, and assist us in tasks. Provide examples of AI in everyday life, such as smartwatches, smartphones, and smart TVs.

Extension

Ask the students some questions based on this chapter:

- Q. What is reasoning and critical thinking, and how does it help us solve problems?
- Q. What are the two types of patterns mentioned in this chapter?
- Q. Can you identify a number pattern and a shape pattern from your surroundings?
- Q. What is the importance of step-by-step thinking?
- Q. How does AI help us in everyday tasks like cleaning or managing information?
- Q. Can you think of other examples of AI being used in your life?

Evaluation

Ask the students to complete the elements like **ASK AI AGENT** given on page **82**.

Ask the students to complete the elements like **RAPID RECALL** given on page **84**.

Encourage the students to complete tasks like **EXPERIENTIAL LEARNING** given on page **84**.

After explaining the chapter, let the students do the **LEARNING LOGS** on pages **85** to **87** in the main course book. Tell the students to try sections such as **CODE CHECK** given on page **88** in the main course book.

Take the students to the computer lab and let them practice the activity given in the **LAB LEARNING** section on page **87** in the main course book. This will enhance the ability of the students and serve as an **information literacy** and **critical thinking** activity.

Suggested Activity

Ask students to perform the following activities:

1. **Pattern Recognition Activity:**
 - o Look around the classroom and identify number and shape patterns.
 - o Create their own patterns using shapes and colours and share them with the class.
2. **AI Identification:**
 - o Identify five devices or applications that use AI.
 - o Discuss how these devices help make tasks easier or more efficient.

Teaching Objectives

Students will learn about:

- ✦ Components of ScratchJr
- ✦ Drawing Your Own Character
- ✦ Using the Camera Tool
- ✦ Adding Sound
- ✦ Story in Action
- ✦ Opening an Existing Project
- ✦ Drawing Your Own Background
- ✦ Making Characters Talk
- ✦ Story Time

Number of Periods	
Theory	Practical
2	2

Teaching Plan

Before starting the chapter, ask the students to solve the question in **BRIDGE BACK** given on page **91** of the main course book, This activity helps students identify the blocks and understand how they work in ScratchJr.

Start by introducing ScratchJr, an app designed for young children to create stories, games, and animations. Explain how ScratchJr uses blocks to create interactive projects. Students will learn to use these blocks to make their characters move, talk, jump, and perform various actions.

Explain the different components of ScratchJr window as Save Button, Change Background Button, Add Text Button, Reset Character Button, Green Flag, Plus Button, Stage, Character or Sprite, Block Categories, Block Palette, Programming Area

Explain the function of each component of the ScratchJr window.

Teach students how to open existing projects in ScratchJr. They can revisit previously created projects for editing or adding new elements. This can be done by selecting the Save Button and then choosing the project they want to open.

Teach the students steps on creating their own character in the ScratchJr. Click on the plus button to create a new character. You can also create your character by drawing in the paint editor window.

Demonstrate the use of the buttons present in the paint editor window for creating your character which are Undo/Redo, Shapes, Line width, Character name, Select tool, Rotate tool, Duplicate tool, Cut tool, Camera tool, Fill tool, Color Palette, Save Button.

Teach the students the steps to create their desired background in ScratchJr. Click on the change background button and select from the pre-existing backgrounds or you can create one in the Paint Editor window.

Demonstrate the students to use the Camera Tool in ScratchJr to add real-life photos to their projects. Students can follow the steps on to take a photo using their device's camera, which can then be used as a character or background in their story.

Teach the students to use the Say block to make their characters talk. The Say block creates a speech bubble with words.

Teach the students to add sound their projects in ScratchJr. Sounds help characters talk, sing, or make exciting noises. Students can choose sounds from the library or record their own voice.

Demonstrate the students to create a story in ScratchJr according to them and to test it in action.

Extension

Ask the students some questions based on this chapter:

- Q. What is ScratchJr used for?
- Q. How can you make characters talk in ScratchJr?
- Q. What are the different components of the ScratchJr window?
- Q. How can you create a custom character in ScratchJr?
- Q. What is the Camera Tool used for?
- Q. How do you add sound to a ScratchJr project?
- Q. What is the Green Flag used for in ScratchJr?
- Q. What mouse action helps you move items around on the screen?

Evaluation

Ask the students to complete the elements like **ASK AI AGENT** given on page **95**.

Ask the students to complete the elements like **RAPID RECALL** given on pages **95** and **105**.

Encourage the students to complete tasks like **EXPERIENTIAL LEARNING** given on page **105**.

Motivate the students to complete activities such as **LIVE LEARNING** on page **95**.

After explaining the chapter, let the students do the **LEARNING LOGS** on pages **106** to **108** in the main course book. Tell the students to try sections such as **CODE CHECK** given on page **109** in the main course book.

Take the students to the computer lab and let them practice the activity given in the **LAB LEARNING** section on page **108** in the main course book. This will enhance the ability of the students and serve as a **creativity** and **critical** activity.

Suggested Activity

Ask students to create a short story in ScratchJr:

1. Create a new project with characters (e.g., a rabbit and a bird).
2. Add a background for the project, such as a park or a house.
3. Use the Say block to make the characters talk.
4. Add sound effects using the Sound Block.
5. Test the project using the Green Flag and make sure everything works smoothly.

Teaching Objectives

Students will learn about:

- ✦ AI in Everyday Life
- ✦ How Does AI Work?
- ✦ AI Applications
- ✦ Smart Devices at Home

Number of Periods	
Theory	Practical
3	1

Teaching Plan

Before starting the chapter, ask the students to solve the question in **BRIDGE BACK** given on page **111** of the main course book. This will prompt them to recall their previous understanding of AI and smart devices.

Start by introducing the concept of Artificial Intelligence (AI), explaining how it is used to make machines smart. Discuss how AI is present in everyday life, helping devices like smart speakers, smartwatches, and even self-driving cars. AI helps these devices learn and perform tasks by recognizing patterns from data, pictures, or language.

Explain that humans have natural intelligence, enabling them to think, learn, and remember things like songs or puzzles. In contrast, machines use AI to imitate human intelligence, helping them listen, understand, and give responses.

Introduce the AI is around us today making machines helpful in our daily life. Tell the students about different types of AI devices that we use in our daily life such as Voice Assistant Speaker(Alexa or Siri), Smartwatch, Navigation apps like google maps, Intelligent Cameras for security

Explain to the students that AI is like a smart helper that doesn't have a brain, but it learns from patterns in data. For example, if you show AI many pictures of a cat, it learns to recognize and differentiate a cat from other things based on common features.

Explain the different applications of AI such as:

- AI can play games with you
- AI can help doctors
- AI can create music and art
- AI can drive cars

Tell the students about the smart devices that are present at homes such as:

- Smart TV
- Smart Toys

- Smart Thermostat
- Smart Lights
- Smart Refrigerator
- Smart Doorbell
- Smart Lock
- Smart Vacuum cleaner
- Smart security camera

Extension

Ask the students some questions based on this chapter:

- Q. What is AI, and how is it used in daily life?
- Q. What can voice assistants like Alexa or Siri do?
- Q. How does a Smartwatch help you in daily activities?
- Q. How does AI help in navigation apps like Google Maps?
- Q. What is the role of AI in smart devices at home?
- Q. How does AI improve security using smart cameras?
- Q. Can you think of other examples of AI in everyday life?

Evaluation

Ask the students to complete the elements like **ASK AI AGENT** given on page **116**.

Ask the students to complete the elements like **RAPID RECALL** given on page **112** and **114**.

Encourage the students to complete tasks like **INTERDISCIPLINARY LEARNING** given on page **116**.

After explaining the chapter, let the students do the **LEARNING LOGS** on pages **117** and **119** in the main course book. Tell the students to try sections such as **CODE CHECK** given on page **125** in the main course book.

Take the students to the computer lab and let them practice the activity given in the **LAB LEARNING** section on page **120** in the main course book. This will enhance the ability of the students and serve as a **technology literacy** activity.

Suggested Activity

Ask students to explore AI-powered devices in their homes or school.

1. Have them identify smart devices like smart speakers, watches, or TVs.
2. Discuss how AI helps each device perform its tasks.
3. Students will research one AI application and present it to the class, explaining how it benefits daily life.