

TOUCHPAD

Ver. 4.0

1

TEACHER'S MANUAL

Extended Support for Teachers



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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

Pedagogy is often described as the approach to teaching. It is the study of teaching methods including the aims of education and the ways in which such goals can be achieved.



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.

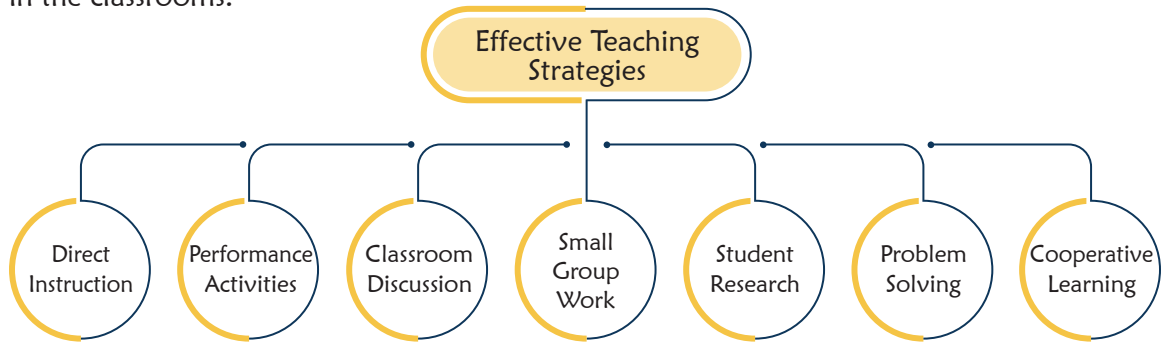
After the class

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

“Knowing yourself is the beginning of all wisdom.”

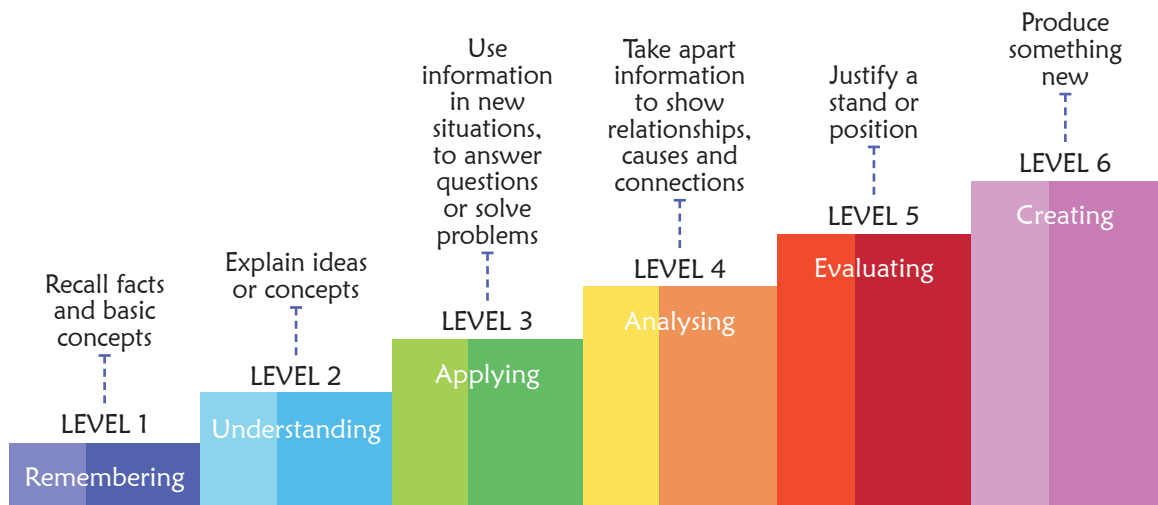
Teaching Strategies

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. ”

CLASS

1

LESSON PLAN

1

Computer—A Wonderful Machine

Teaching Objectives

Students will learn about

- ✦ Natural and Human-Made Things
- ✦ Computer—A Wonderful Machine
- ✦ What are Machines?

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, ask the students to look around themselves to identify things.

Encourage the students to name some things which they see around themselves.

Make them understand some of these things are natural like sun, moon, star, mountains, cat, dog, tree, boy, girl, etc. The other things are Human-made like chair, table, TV, fan, pencil, eraser, board, building, washing machine, mobile, etc.

Explain to the students that machines are made by human.

Give examples of some machines around us like refrigerator, Washing machine, television, mobile, car, etc. and their use.

Share with them that computer is also a machine.

Tell them the various things we can do with the computer like doing sums, drawing, listening to music, watching movies, learning, etc.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

- Q. Is computer a machine?
- Q. Name some natural things.
- Q. Name some Human-made things.
- Q. Who makes machines?

- Q. Are machines natural?
- Q. What is the use of air conditioner / refrigerator / washing machine / television / mobile / car?
- Q. What does a computer need to run?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 10 to 12 of the main course book as **Exercise**.

In Creative Assignment, activities like **HANDS ON** and **In the Lab** given on Page 12 of the main course book will enhance the ability of the students and serve as a Creativity and Information Literacy activity.

Suggested Activity

Show pictures of some machines (calculator, fan, sewing machine, set top box, cycle, clock, microwave, stapler, electronic toy, etc.) and ask the students what they are used for?

2 Uses of a Computer

Teaching Objectives

Students will learn about

- ✦ Home
- ✦ Offices and Banks
- ✦ Railway Stations and Airports
- ✦ Schools
- ✦ Hospitals

Teaching Plan

Number of Periods	
Theory	Practical
2	3

While teaching this chapter, tell the students that computers are used in different places for different kinds of works.

Tell the students why computer is used:

- At home (watch movies, play games, make school projects, online shopping, and listen to music)
- In schools (store student records, library books record)
- In offices and banks (maintain records of employees and keep records of money in banks)
- In hospitals (make medical reports, controlling machines while doing surgeries)
- At railway stations and airports (book tickets)

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

- Q. Are computers used only in schools and at homes?



- Q. Name two places other than home and school where computers are used.
- Q. Why do we use computers at home / in schools / at railway stations / in offices / in hospitals?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 14 to 16 of the main course book as **Exercise**.

In Creative Assignment, activities like **HANDS ON** and **In the Lab** given on Pages 16 and 17 of the main course book will enhance the ability of the students and serve as a Creativity and Information Literacy activity.

Suggested Activity

Ask the students to discuss with their parents the use of computers for:

- Weather forecasting
- Making robots
- Booking tickets for movies
- Video game parlours

3 Parts of a Computer

Teaching Objectives

Students will learn about

- ★ Monitor
- ★ Mouse
- ★ CPU
- ★ Keyboard

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students that just as our body has different parts like hands, eyes, brain, etc. similarly, a computer also has various parts.

Tell the students that a computer has four main parts:

- Monitor – also called Visual Display Unit (VDU), looks like a television, used to see pictures, games, cartoons, alphabet, numbers and words.
- CPU – stands for Central Processing Unit, fixed inside CPU box, called brain of the computer, most important part of the computer.
- Mouse – device with long wire, two buttons and scroll wheel, used to draw pictures.
- Keyboard – has small buttons called keys, used for typing numbers and letters.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

- Q. Name the four main parts of a computer.
- Q. What is the use of Monitor / Mouse / Keyboard /CPU?
- Q. What does CPU stand for?
- Q. What is the other name of a monitor?
- Q. Where is CPU fixed?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 21 to 23 of the main course book as **Exercise**.

In Creative Assignment, activities like **HANDS ON** and **In the Lab** given on Page 23 of the main course book will enhance the ability of the students and serve as a Creativity and Information Literacy activity.

Suggested Activity

Ask the students to paste pictures of different parts of a computer in their computer notebook and write their names.

4 Using the Keyboard

Teaching Objectives

Students will learn about

- ✦ Keys on the keyboard
- ✦ Number keys
- ✦ What is a Cursor?
- ✦ Alphabet keys
- ✦ Special Keys

Teaching Plan

While teaching this chapter, tell the students that keyboard is used to type on computer screen.

Show to the students that a keyboard has small buttons on it called keys.

Make the students count that a computer keyboard has 101 to 104 keys.

Tell the students that the keys on a keyboard are divided into three categories:

- Alphabet keys – 26 in number (A to Z)
- Number keys – 10 in number (0 to 9)
- Special keys – Enter, Spacebar, Backspace, etc.

Show to the students the position of various categories of keys on the keyboard.

Number of Periods	
Theory	Practical
2	3



Make the students understand that the alphabet keys (A to Z) on the keyboard are also used to write in small letters (a to z).

Share with the students that the number keys are used to type numbers and there are two sets of number keys on a keyboard.

Show to the students that there are some special keys also on the computer like:

- Enter key – also called Return key, used to move to the next line.
- Spacebar key – longest key at the bottom, used to give blank space between letters and words.
- Backspace key – used to erase what we have typed.

Show to the students the small blinking line on the screen called cursor.

Make the students understand that the cursor shows the place where the typed letters will appear.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. What are the small buttons on a keyboard called?

Q. How many keys are there on a keyboard?

Q. Name the categories in which the keys on a keyboard are divided into.

Q. What are alphabet / number keys used for?

Q. How many sets of number keys are there on the keyboard?

Q. How many alphabet keys are there on the keyboard?

Q. What is the use of Enter / Spacebar / Backspace key?

Q. Name some special keys.

Q. What is a cursor?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 27 and 28 of the main course book as **Exercise**.

In Creative Assignment, activities like **In the Lab** given on Page 28 of the main course book will enhance the ability of the students and serve as a Information Literacy activity.

Suggested Activity

Ask the students to paste a picture of computer keyboard in the computer notebook and label Number keys, Alphabet keys, Enter keys, Spacebar key, Backspace key on it.

5

Using the Mouse

Teaching Objectives

Students will learn about

- ✦ Buttons of a Mouse
- ✦ Using a Mouse
- ✦ How to Hold a Mouse

Teaching Plan

Number of Periods	
Theory	Practical
2	3

While teaching this chapter, tell the students that a mouse helps us to tell the computer what to do. Share with the students some uses of a computer mouse.

- to draw pictures.
- to play games.
- to give commands to the computer.
- to point to different things with the help of a pointer on the screen.

Make the students understand that a mouse has two buttons (left and right) and a scroll wheel at the center.

Show to the students the correct way of holding the mouse with reference to the position of fingers and palm (shown in the main course book).

Show to the students that a computer mouse can be used for:

- Pointing – by moving the pointer
- Clicking – by pressing mouse buttons
- Single-click or Click – pressing and releasing left button quickly, used to select an icon.
- Double-click – pressing and releasing the left button twice quickly, used to open a program.
- Dragging – moving the mouse while keeping the left button pressed, use to move objects on screen.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

- Q. What is a mouse used for?
- Q. Name the pointing device.
- Q. Which finger must be placed on left button / right button?
- Q. Which finger must be used to scroll the wheel?
- Q. Which fingers must be used to hold the sides of the mouse?

- Q. Define pointing / clicking / dragging.
- Q. What is the meaning of single-click / double-click?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 34 and 35 of the main course book as **Exercise**.

In Creative Assignment, activity like **HANDS ON** and **In the Lab** given on Page 35 of the main course book will enhance the ability of the students and serve as a Creativity and Information Literacy activity.

Suggested Activity

Ask the students to draw a picture of a mouse representing single-click, double click, right-click, drag.

6 Storage Devices

Teaching Objectives

Students will learn about

- ✦ Storing Things
- ✦ Storage Devices of a Computer

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students to look at the pictures in book and ask them to tell what are these things used for?

Introduce different storage objects used in daily life for storing different things.

Introduce storage devices as the parts that are used to store our work in the computer.

Share with them pictures / models of some storage devices like:

- Compact Disc (CD) – circular in shape and portable storage device
- Digital Versatile Disc (DVD) – circular in shape but with more storage capacity than CD
- Pen Drive – having more storage capacity than DVD but less than Hard Disk
- Memory Card – a storage device which is much smaller than a pen drive or a CD.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

- Q. What are the parts of a computer?
- Q. Which has more storage capacity: CD or DVD?

Q. Arrange in increasing order of storage capacity:

CD DVD Pen Drive

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 38 and 39 of the main course book as **Exercise**.

In Creative Assignment, activity like **HANDS ON** and **In the Lab** given on Page 40 of the main course book will enhance the ability of the students and serve as a Creativity and Technology Literacy activity.

Suggested Activity

Ask the students to collect information about a modern storage device – Blue Ray Disc which looks like a CD/DVD but has much more storage capacity than the two.16.

7 Fun with Tux Paint

Teaching Objectives

Students will learn about

- ✦ Steps to Start Tux Paint
- ✦ Tools of Tux Paint
- ✦ Components of Tux Paint Window

Teaching Plan

Number of Periods	
Theory	Practical
2	3

While teaching this chapter, tell the students that Tux Paint is a free drawing program designed for young children and it provides a blank canvas and a variety of drawing tools for drawing shapes like circle, square, stars, etc.

Tell the students about the Steps to start Tux Paint.

Tell the students about the components of Tux Paint window covering Toolbox, Drawing Canvas, Colors Palette, Selector, Help Area.

Introduce Paint tool as the tool used to draw freehand or previously defined shapes.

Demonstrate to the students the steps involved in use of Paint tool.

Make the students understand that Shapes tool is used to draw different shapes like circle, square, triangle, etc.

Show to the students the steps to use Shapes tool.

Introduce Eraser tool as the tool used to erase the unnecessary part of the drawing from the drawing canvas.

Explain the steps involved in the use of Eraser tool to the students.

Tell the students that just like in Paint, Lines tool helps students to draw straight lines.



Demonstrate to the students the steps involved in using Lines tool in Tux Paint.
 Tell the students that Quit tool in Tux Paint is used to save the file and quit the program.
 Explain to the students the steps involved in the use of Quit tool.
 Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. What is the use of Paint / Shapes / Eraser / Lines / Quit tool?

Q. When is Toolbar in Tux Paint window?

Q. What is the use of Selector in Tux Paint?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 46 and 47 of the main course book as **Exercise**.

In Creative Assignment, activity like **In the Lab** given on Page 47 of the main course book will enhance the ability of the students and serve as a Creativity activity.

Suggested Activity

Ask the students to draw a jungle scene in Tux Paint.

8

ScratchJr

Teaching Objectives

Students will learn about

- ✦ Starting ScratchJr
- ✦ Adding a New Character
- ✦ Creating a ScratchJr Project
- ✦ Components of ScratchJr Window
- ✦ Changing the Background
- ✦ Saving a Project

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students that ScratchJr is a software which is used to create animated stories and games.

Tell the students about the steps involved in Starting ScratchJr.

Explain the Components of ScratchJr Window to the students like:

- Stage
- Change Background
- Green Flag

- Blocks Palette
- Character
- Reset Character Button
- Save Button
- Plus Button
- Block Categories
- Programming Area

Explain the steps involved in the use of Adding a New Character to the students.

Tell them the steps of Changing the Background.

Demonstrate to the students the steps involved in Creating a ScratchJr Project.

Tell them the steps to save a project.

Ensure that the scope of **Teacher's Corner** given at the end of the chapter has been covered.

Extension

Ask the students some oral questions based on this chapter.

Q. What is ScratchJr?

Q. What does Block categories mean?

Q. Name any 4 components of ScratchJr Window.

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 56 and 57 of the main course book as **Exercise**.

In Creative Assignment, activity like **In the Lab** given on Page 57 of the main course book will enhance the ability of the students and serve as a Creativity activity.

Suggested Activity

Ask the students to add a new sprite.