

# TOUCHPAD

PLUS Ver. 3.2

4

## 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
Days	Monday							
	Tuesday							
	Wednesday							
	Thursday							
	Friday							
	Saturday							
	Sunday							

Teacher's Time Table		B R E A K						
Periods / Days								
		0	I	II	III	IV	V	VI
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	Saturday							
	Sunday							

# 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.

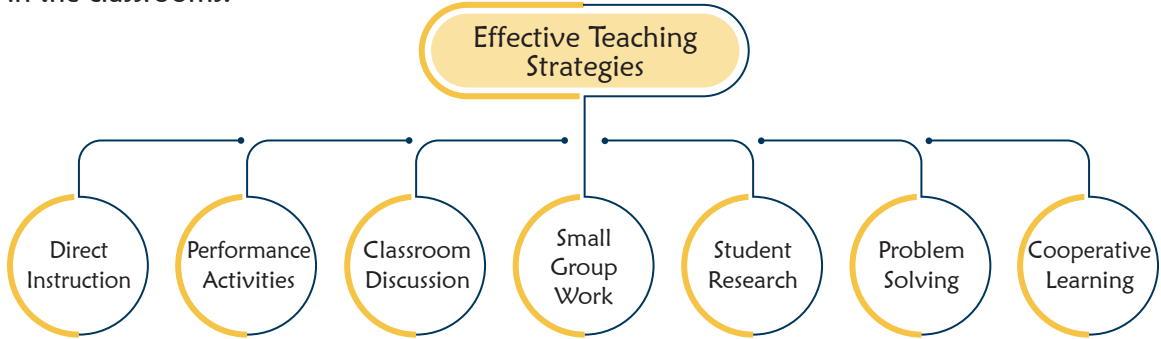
### After the class

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

“Knowing yourself is the beginning of all wisdom.”

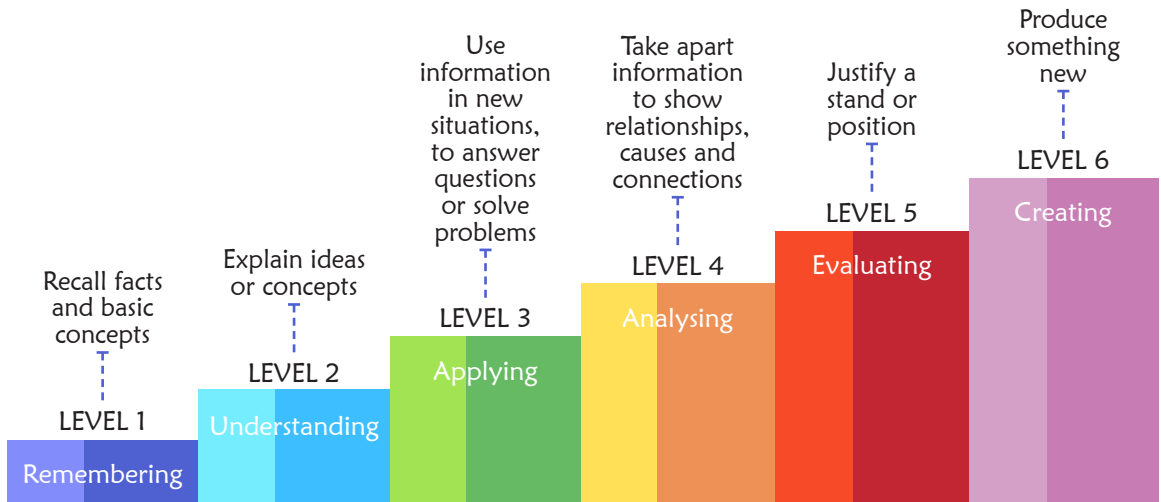
# Teaching Strategies

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. ”

## Personalizing Linux/Ubuntu

### Teaching Objectives

Students will learn about

- ✦ The Ubuntu Environment
- ✦ Components of Ubuntu Desktop
- ✦ Desktop Icons
- ✦ Launcher
- ✦ Show Apps Icon
- ✦ Status Menu

### Teaching Plan

Number of Periods	
Theory	Practical
2	1

While teaching this chapter, tell the students that Ubuntu is a GUI based operating system.

Make the students recall desktop as the first screen on which they can work.

Familiarize the students with the components of Ubuntu desktop covering Start menu, Icons, Launcher and Desktop background.

Share with the students the usefulness of Desktop icons. Also explain the actions that can be performed on the same like:

- Selecting an icon
- De-selecting an icon

Explain briefly about Launcher of Ubuntu and the actions involved in the same like:

- Rearranging the icons of the launcher
- Locking the icons
- Unlocking the icons
- Resizing the icons

Demonstrate to the students the Show Applications Icons and further elements like:

- Search Box
- Search Result

Explain to the students the use of Status menu.

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

### Extension

Ask the students some oral questions based on this chapter.

- Q. What is Ubuntu?
- Q. Name the components of Ubuntu desktop.
- Q. Define Desktop Background.
- Q. What are icons?
- Q. In how many parts is the Status menu divided?
- Q. Can you change the desktop background?

### Evaluation

After explaining the chapter, let the students do the exercises given on Pages 13 to 15 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler and Hands-On given on Pages 15 and 16 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 16 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.

### Suggested Activity

Ask the students to collect information about some more input/output devices and the purpose for which they are used.

## 2

## Know about Computer Viruses

### Teaching Objectives

Students will learn about

- ✦ What is a Computer Virus?
- ✦ How does a Computer get Infected with Virus?
- ✦ How do you know your PC has a Virus?
- ✦ How to Prevent from a Virus?
- ✦ Antivirus Software



Number of Periods	
Theory	Practical
2	1

## Teaching Plan

While teaching this chapter, tell the students that a computer virus can destroy the programs and files saved in a computer.

Introduce computer virus as a program that can infect the system and/or duplicate itself reducing the storage space.

Share examples of some computer viruses with the students.

Tell the students about the harms that may be caused by a computer virus.

Explain to the students the various methods by which a computer system may get infected with virus.

Make the students aware of the symptoms that tell that a computer system is infected by a computer virus.

Explain in detail to the students the various methods by which prevention can be taken from a computer virus.

Introduce the students to the concept of antivirus as a program developed to detect and remove virus from a computer system.

Share the names of some commonly used antivirus programs.

Ensure that the scope of Teacher's Notes 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 computer virus?
- Q. State any two harms caused by a computer virus.
- Q. State any two methods by which a computer may get infected by Computer Virus.
- Q. State any two symptoms that show that a computer system has been infected by a virus.
- Q. State any two ways in which the user can prevent from a computer virus.
- Q. What is antivirus program?
- Q. What is the main purpose of an antivirus program?

## Evaluation

After explaining the chapter, let the students do the exercises given on Pages 20 and 21 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Pages 21 and 22 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 22 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.



## Suggested Activity

Ask the students to collect information about any computer virus and narrate it in the class.

# 3

## Editing Text in LibreOffice Writer

### Teaching Objectives

Students will learn about

- ★ Starting LibreOffice Writer
- ★ Selecting the Text
- ★ Deleting the Text
- ★ Find and Replace
- ★ Spell Check
- ★ Entering the Text
- ★ Copying/Moving and Pasting the Text
- ★ Undo/Redo
- ★ Changing Case
- ★ Thesaurus

### Teaching Plan

Number of Periods	
Theory	Practical
3	1

While teaching this chapter, tell the students that LibreOffice Writer is word processing software in the category of application software.

Demonstrate to the students the steps involved in starting LibreOffice Writer.

Tell the students that "To insert new text, click at the desired position in the document and begin typing."

Tell the students about selecting text with the help of mouse and with the help of keyboard.

Introduce Cutting as moving the text from one place to another and Copying as duplicating text at another place also.

Demonstrate the steps to Cut-Paste and Copy-Paste text in a document.

Explain the student that and difference between copying or moving text.

Demonstrate to the students the different ways in which text can be deleted according to the requirement of the user.

Familiarize the students with the icons and the shortcut keys to Undo and Redo actions.

Introduce Undo as a feature used to cancel the command and Redo as a feature to reverse the action of Undo.

Tell the students about Find and Replace feature of Writer.

Introduce the students to Spell Check feature of Writer.

Tell the student that LibreOffice Writer lets you change text to uppercase, lowercase, or other common capitalizations.

Show to the students the representation of spelling and grammar mistakes with different coloured wavy lines.

Demonstrate to the students the method of using Spelling and Grammar Check feature of Writer.

Introduce the students to Thesaurus feature and the steps involved in using it.

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

### Extension

Ask the students some oral questions based on this chapter.

- Q. How is letter / word / text / paragraph selected using a keyboard?
- Q. Which key is used to delete a letter?
- Q. What is the use of Undo command?
- Q. When is Redo command used?
- Q. What is the difference between cutting and copying text?
- Q. What is the use of Spelling and Grammar check feature?
- Q. Which button is pressed to skip errors and continue working during Spelling and Grammar check?
- Q. What is the use of Thesaurus?

### Evaluation

After explaining the chapter, let the students do the exercises given on Pages 34 to 36 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Page 36 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 37 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.

### Suggested Activity

Ask the students to write a paragraph on My Favourite Festival in LibreOffice Writer, check for spelling and grammar mistakes and paste a printout in the computer notebook / practical file.

## 4

## Formatting in LibreOffice Writer

### Teaching Objectives

Students will learn about

- ✦ Changing Font Face, Style and Size
- ✦ Changing the Text Colour
- ✦ Clone Formatting to Different Text
- ✦ Highlighting the Text
- ✦ Applying Superscript and Subscript
- ✦ Applying Drop Cap Effect

- ✦ Applying Border to a Paragraph
- ✦ Applying Bullets and Numbering

- ✦ Inserting Watermark

Number of Periods	
Theory	Practical
2	1

## Teaching Plan

While teaching this chapter, tell the students that formatting the text means changing the appearance and arrangement of the text.

Share with the students the default font face, style font size in a Writer document.

Demonstrate to the students the method of changing font face, style and font size.

Tell the students the steps involved in changing colour of the selected text in the document.

Demonstrate to the students the steps of changing clone formatting to different text.

Introduce highlighting feature of Word as marking important text and placing a coloured rectangle over it.

Show to the students the steps involved in highlighting text.

Share with the students about Superscript and Subscript features and the method of applying these features to the text.

Tell the students about Drop Cap effect and steps involved in applying this feature to the text.

Tell the students that Word has some in-built text styles which can be applied to the selected text.

Demonstrate to the students the method of:

- Applying borders
- Inserting Watermark

Introduce bullets as small symbol used to mark items in a list.

Show to the students the method of adding bullets or numbers to the items in a list.

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

## Extension

Ask the students some oral questions based on this chapter.

- Q. Define formatting a text.
- Q. What is the default font / font size of text in a in LibreOffice Writer document?
- Q. What do you mean by highlighting text?
- Q. What is Subscript and Superscript?
- Q. What is a watermark?
- Q. What are bullets?
- Q. When are bullets or numbers added to text?

## Evaluation

After explaining the chapter, let the students do the exercises given on Pages 47 and 48 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Page 49 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 49 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.

## Suggested Activity

Ask the students to collect write a paragraph on My Favourite Sport in LibreOffice Writer applying various formatting features to make the paragraph attractive.

# 5

## Introduction to LibreOffice Impress

### Teaching Objectives

Students will learn about

- ✦ Opening LibreOffice Impress
- ✦ Create a New Presentation
- ✦ Deleting a Slide
- ✦ Viewing the Slide Show
- ✦ Exiting LibreOffice Impress
- ✦ Components of LibreOffice Impress Window
- ✦ Adding a New Slide
- ✦ Saving a Presentation
- ✦ Opening a Saved Presentation

### Teaching Plan

Number of Periods	
Theory	Practical
3	1

While teaching this chapter, tell the students that LibreOffice Impress is a part of LibreOffice package or suite.

Share with the students that it is used to create presentations.

Demonstrate to the students the steps to opening LibreOffice Impress.

Familiarize the students with various components of LibreOffice Impress screen covering Title Bar, Menu Bar, Standard Toolbar, Side dock, Slides pane, slide, Slide, Placeholder, Drawing Toolbar and Status Bar.

Introduce slide as a single page of a presentation.

Demonstrate the steps to:

- Create a new presentation
- Enter data on a slide in title and subtitle placeholders
- Add new slide to a presentation

- Deleting a slide
- Deleting a placeholder

Tell the students how to:

- Save a presentation
- Viewing the slide show
- Opening a saved presentation
- Existing LibreOffice impress

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

### Extension

Ask the students some oral questions based on this chapter.

- Q. What is LibreOffice Impress?
- Q. Define Title Bar / Status Bar.
- Q. What do you mean by Ribbon / Placeholder?
- Q. What is a slide in a presentation?
- Q. Which key is pressed to delete a selected placeholder?
- Q. What are the various ways in which a slide show can be started?
- Q. What are the steps to exit LibreOffice Impress?

### Evaluation

After explaining the chapter, let the students do the exercises given on Pages 61 and 62 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Page 62 and 63 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 63 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.

### Suggested Activity

Ask the students to create a presentation on 'The Cartoon Character I Like The Most'.

## 6

## More on Internet

### Teaching Objectives

Students will learn about

- ★ Internet
- ★ Uses of internet

- ✦ Requirements for an internet connection
- ✦ Common Terms

Number of Periods	
Theory	Practical
2	1

## Teaching Plan

While teaching this chapter, tell the students that a computers connected to a network can share data and files efficiently without any delay.

Introduce Internet as a network in which millions of computers are connected to each other to share information and in an abbreviation of International Network.

Explain to the students the various uses of internet.

Share with the students the various requirements for an internet connection covering computer, telephone/cable line, modem/network card, web browser, ISP, software and company providing the connection.

Introduce the students to common terms like URL(Uniform Resource Locater), Hyperlink, Offline, Online, Surfing, Website, and Webpage.

## Extension

Ask the students some oral questions based on this chapter.

- Q. What is a computer network?
- Q. What is internet?
- Q. What are the uses of internet?
- Q. What are the requirements for an internet connection?
- Q. Define Website / Web Page.

## Evaluation

After explaining the chapter, let the students do the exercises given on Pages 69 to 71 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on page 71 and 72 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 72 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy and Information Literacy activity.

## Suggested Activity

Ask the students to paste a picture of Mozilla Firefox in their computer notebook / practical file and label its components and tools discussed in the chapter.



### Teaching Objectives

Students will learn about

- ✦ Picture Puzzle
- ✦ Directions and Maps

Number of Periods	
Theory	Practical
1	1

### Teaching Plan

Introduce Picture Puzzle to the students in details with the help of proper examples for better understanding.

Tell the students about is a puzzle. Also, tell them how solve by giving some examples which will improve their understanding of the topic.

Tell the types of picture puzzle to the students which are:

- Odd One Out
- Find the Differences

Show the students what is direction and how to identify it with the help of analysis.

Explain the meaning of maps to the students and tell them how to use them with the help of directions.

Show examples for all the topics for better clarity of the lesson at the end.

Ensure that the scope of Teacher's Notes 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 puzzle?

Q. What is a picture puzzle?

Q. How many types of picture puzzle are there?

Q. What is a direction?

Q. What is a map?

### Evaluation

After explaining the chapter, let the students do the exercises given on Pages 77 to 79 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Pages 79 and 80 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 80 in the main course book. This will enhance the ability of the students and serve as a Creativity activity.



## Suggested Activity

Ask the students to practice to find out more types of picture puzzles.

# 8

## Programming in Scratch

### Teaching Objectives

Students will learn about

- ★ Sprite's Direction
- ★ Pen Block
- ★ Use of loop Blocks
- ★ Drawing a Square in Scratch
- ★ Drawing Patterns
- ★ Drawing Polygons in Scratch
- ★ Drawing a Circle in Scratch

### Teaching Plan

Number of Periods	
Theory	Practical
2	1

While teaching this chapter, tell the students that Scratch has a stage for animations and a sprite you control with blocks to draw shapes.

Make the students understand the Pen blocks (green) create trails as the sprite moves, and you can customize their colour in Scratch 3.0 by adding them to the block category.

Explain the student that Pen blocks in Scratch control drawing, including erasing, stamping, changing colours, and adjusting effects.

Explain the student uses of loop blocks.

Tell the student that how to draw the shapes:

- Drawing polygons
- Drawing a square
- Drawing a circle

Demonstrate the student steps to draw the shapes.

Explain the student draw patterns and it's steps.

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

### Extension

Ask the students some oral questions based on this chapter.

- Q. How to draw polygon in scratch?
- Q. What is the use of Pen blocks?
- Q. What is the use of loop Blocks.

- Q. How to draw square in scratch?
- Q. How to draw circle in scratch?
- Q. How to draw patterns in scratch?

### Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 87 to 89 of the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Pages 90 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 90 in the main course book. This will enhance the ability of the students and serve as a Critical Thinking activity.

### Suggested Activity

Explore sprite direction, pen blocks, loop blocks, and create shapes like squares, circles, and patterns.

## 9

## Evolution of AI

### Teaching Objectives

Students will learn about

- ✦ 1950s
- ✦ 1960s
- ✦ 1970 to 1990s
- ✦ 2000 to 2010
- ✦ 2010 to present

### Teaching Plan

While teaching this chapter, make sure that students are well aware about AI and related topics taught in previous classes.

Tell the students what is AI which around us and what is the purpose of this in real life in simple words.

Explain the evolution of AI to the students along with their details:

- 1950s
- 1960s
- 1970 to 1990s

Number of Periods	
Theory	Practical
2	1

- 2000 to 2010
- 2010 to Present

Define the inventions of all these years along with their inventor to the students and how it changes out lives.

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

### Extension

Ask the students some oral questions based on this chapter.

Q. Define the evolution of AI in the following years:

- 1950s
- 1960s
- 1970 to 1990s
- 2000 to 2010
- 2010 to Present

### Evaluation

After explaining the chapter, let the students do the exercises given on Pages 96 and 97 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler and Hands-on given on Pages 97 and 98 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 98 in the main course book. This will enhance the ability of the students and serve as a Media Literacy and Technology Literacy activity.

### Suggested Activity

Ask the students to practice more in Mystery Animal and search similar games.

