TOUCHPAD

PLUS Ver. 3.2

3

Teacher's Manual

Extended Support for Teachers

ORANGE
www.orangeeducation.in

Teacher's Time Table

Periods / Days	0	I	II	III	IV	BREAK	V	VI	VII	VIII
Monday										
Tuesday										
Wednesday										
Thursday										
Friday										
Saturday										

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

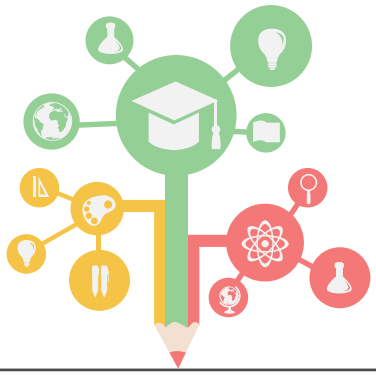
Age 11 - 20 Years

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.

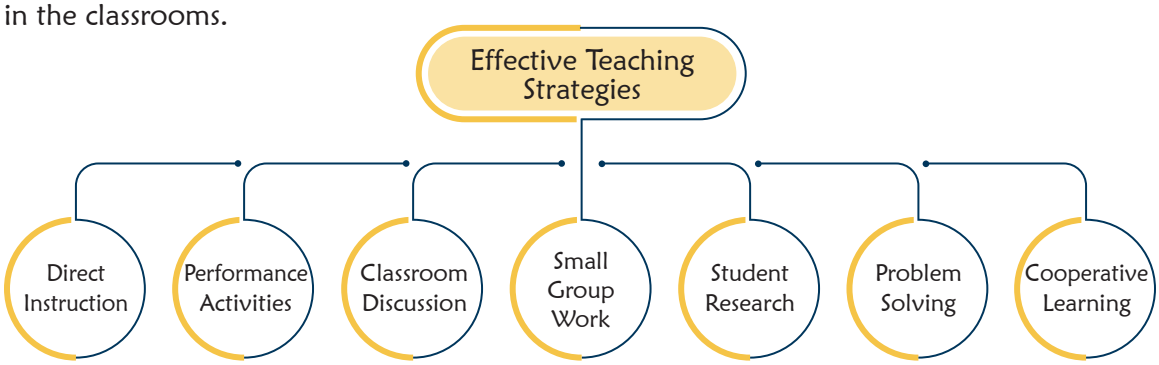
After the class

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

"Knowing yourself is the beginning of all wisdom."

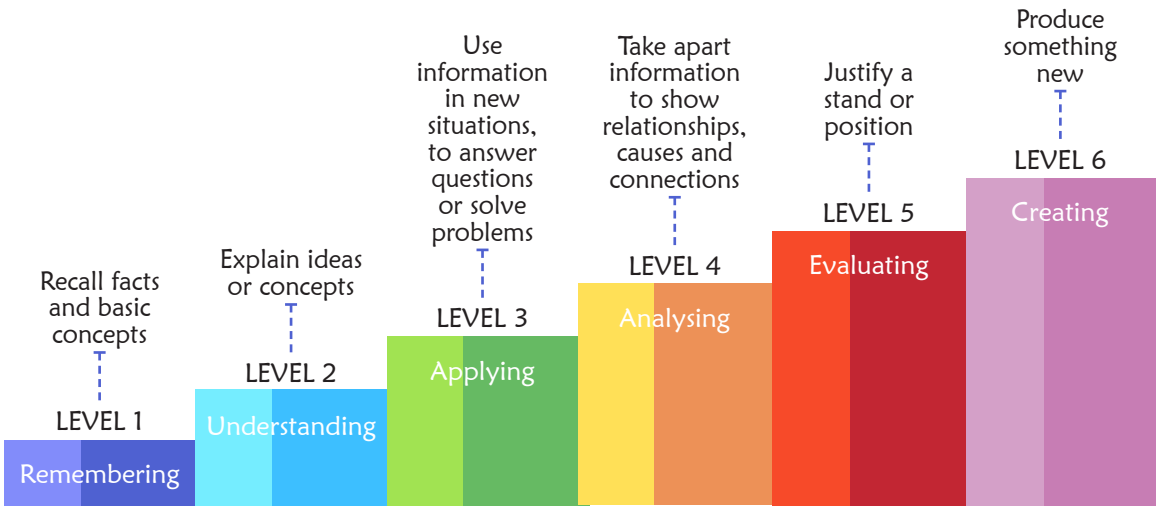
Teaching Strategies

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 3

LESSON PLAN

1 Computer Software

Teaching Objectives

Students will learn about

- Hardware
- Software

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that a computer system consists of two main components- **hardware** and **software**.

Tell the students that the parts of the computer that can be touched are called hardware. Also tell examples of some devices like, such as **keyboard**, **mouse**, **monitor**, **speakers**, **printer**, **scanner**, **DVD**, **pen drive**, etc.

Explain the students that hardware cannot work itself. A program that is used to work on step-by-step instructions is called software.

Tell the students about computer software and its types.

Tell the students about some default application software:

- **RhythmBox** – used to play songs.
- **LibreOffice Writer** – used to type letters, articles, applications and essays.
- **LibreOffice Impress** – used to create presentations.
- **GIMP** – used to create and edit photos & designs.

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 many types of components a computer system consists of?

Q. What is hardware?

Q. What is software?

Q. How many types of software are there?

Q. Define the use of the following:

a. RhythmBox

b. LibreOffice Writer

c. LibreOffice Impress

d. GIMP

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 12 to 15 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler 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 Information 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 Let's Know About Linux

Teaching Objectives

Students will learn about

- Linux
- Ubuntu Desktop and Its Components
- Changing the Desktop Background
- Using the Home Icon
- Changing the Position of Launcher
- Mouse Pointer Shapes
- Closing your Computer System

Number of Periods	
Theory	Practical
3	1

Teaching Plan

While teaching this chapter, tell the students that operating system is one of the most important software as without this software we cannot use our computer at all.

Give a brief introduction of Linux.

Tell the students the about the useful features of Linux. Also tell them about Ubuntu.

Make the students aware about the concept of Ubuntu desktop and its components:

- Menu bar
- Icons
- Desktop background
- Launcher
- Show Applications

Demonstrate the steps to change the desktop background.

Tell the students about the use of Home Icon.

Tell the student Changing the position of launcher.

Explain the student Mouse pointer shapes.

Show the step involved in closing your computer system.

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 the importance of an operating system?

Q. Give examples of some popular operating systems.

Q. Which company developed linux operating system?

Q. What are the important features of Linux?

Q. What is desktop?

Q. Define icons.

Q. What are Control Buttons?

Q. What are the steps to change the desktop background?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 23 to 25 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler and Hands-On given on Pages 25 and 26 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 26 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 change desktop background and the position of taskbar.

3 Introduction to LibreOffice Writer

Teaching Objectives

Students will learn about

- Uses of LibreOffice Writer
- Starting LibreOffice Writer
- Components of LibreOffice Writer Window
- Working with LibreOffice Writer
- Saving a Document
- Opening a Saved Document
- Printing a Document
- Closing LibreOffice Writer

Number of Periods	
Theory	Practical
3	2

Teaching Plan

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

Make the students aware of the various uses of LibreOffice Writer.

Demonstrate the steps involved in starting LibreOffice Writer.

Show the various components of LibreOffice Writer window covering Title Bar, Writer Control Button, Menu Bar, Standard Toolbar, Formatting Toolbar, Edit Area, Rulers, Horizontal and Vertical Scroll Bars, Status Bar and Zoom Slider to the students.

Familiarize the students that the working on LibreOffice Writer.

Demonstrate the steps involved in:

- Creating a new document
- Typing the text
- Saving a document
- Opening a saved document
- Printing a document
- Closing LibreOffice Writer

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 Writer?

Q. What are the various uses of LibreOffice Writer?

Q. Name some important components of LibreOffice Writer window.

Q. Which company developed LibreOffice Writer?

Q. What are the shortcut keys to open / save / print a document?

Q. What are the various ways in which the user can exit from LibreOffice Writer?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 35 and 36 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Pages 36 and 37 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 Creativity and Technology Literacy activity.

Suggested Activity

Ask the students to create a Writer document on Myself. The students should take a printout of the document and paste it in their computer notebook / practical file.

4 Effects in Tux Paint

Teaching Objectives

Students will learn about

- Tools of Tux Paint
- Fill Tool
- Magic Tool
- Undo and Redo tool
- Slide Show

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students that there are many more effects present in Magic Tool in Tux Paint.

Recall with the students the use Paint, Shapes, Eraser, Lines, Stamp, Text and Magic of Tux Paint.

Explain to the students the Fill tool (fill colours in closed shapes) of Tool.

Demonstrate the steps to apply Fill tool of the Tool.

Tell the student magic tool.

Tell the students about the Smudge Effect (wipe effect) of Magic Tool.

Demonstrate the steps to apply Smudge Effect of the Magic Tool.

Explain to the students the Real Rainbow Effect (draw a rainbow around a picture) of Magic Tool.

Demonstrate the steps to apply Real Rainbow Effect of the Magic Tool.

Explain to the students the Foam Effect (bubbles effect) of Magic Tool.

Demonstrate the steps to apply Foam Effect of the Magic Tool.

Explain to the students the Mosaic Effect (pattern formation by arranging tiles, glass, etc.) of Magic Tool.

Demonstrate the steps to apply Mosaic Effect of the Magic Tool.

Tell the students about the purpose of Undo and Redo tools as well as the difference between the two.

Introduce slide show as running all scenes of a story or text, one after another.

Show to the students the steps to make a slide show of the drawings.

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 the use of Paint / Shapes / Eraser / Lines / Stamp / Text / Magic tool?

Q. What is the Fill / Smudge / Real Rainbow / Foam / Mosaic effect of Magic tool?

Q. What is the difference between the Undo and the Redo tools of Tux Paint?

Q. What is Slide Show?

Q. Which key is pressed to exit the slide show?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 44 to 46 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Page 46 and 47 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 47 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 create a zoo using stamps in Tux Paint.

5 Introduction to Internet

Teaching Objectives

Students will learn about

- Uses of Internet
- Requirements for an Internet Connection
- Internet Terms
- Mozilla Firefox

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that Internet is a network in which millions of computers are connected to each other to share information and is 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, software and company providing the connection.

Introduce the students to common internet terms like Website (collection of related web pages), Web Page (electronic page on a website), Home Page (main or first page of website), World Wide Web (largest collection of websites), and Web Browser (software to open websites).

Familiarize the students with the most common Mozilla firefox and its parts covering Title Bar, Menu Bar, Toolbar and Address Bar.

Make the students understand the use of common tools on the toolbar covering Back, Forward, Refresh and Stop buttons.

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 Internet?

Q. What are the uses of Internet?

Q. What are the requirements for an Internet connection?

Q. Define Website / Web Page / Home Page / World Wide Web / Web Browser.

Q. What does WWW stand for?

Q. Which is the most common Web Browser?

Q. Define Title Bar / Menu Bar / Toolbar / Address Bar.

Q. What is the use of Back / Forward / Stop / Refresh button in a web browser?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 54 to 56 of the main course book as Exercise. Tell the students to try different activities under Mind Boggler given on Page 56 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 57 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy and Media Literacy activity.

Suggested Activity

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

6 Stepwise Thinking

Teaching Objectives

Students will learn about

- Reasoning and Problem Solving
- Stepwise Thinking
- Loops

Number of Periods	
Theory	Practical
2	1

Teaching Plan

Tell the students about the following in detail using appropriate examples:

- Reasoning
- Problem Solving

Explain the Stepwise Thinking to the students with the steps involved in the process using suitable examples.

Tell the student that an act of repeating an action again and again is called lopping.

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 reasoning?

Q. What is problem solving?

Q. What is stepwise thinking?

Q. What is Looping?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 62 and 63 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Page 63 and 64 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 64 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy and Creativity activity.

Suggested Activity

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

7 Introduction to Scratch

Teaching Objectives

Students will learn about

- Starting Scratch
- Choosing a Sprite
- Deleting a Sprite
- Choosing a Backdrop
- Understanding Blocks
- Creating a Script
- Full Screen Mode
- Saving the Project
- Closing the Project

Number of Periods	
Theory	Practical
4	1

Teaching Plan

While teaching this chapter, tell the students that Scratch is a programming language that lets users create and share games, animations, and stories using draggable blocks.

Demonstrate the steps to start Scratch.

Familiarize the students with the various components of Scratch window covering Title bar, Menu bar, Stage area, Sprite, Go button, Stop button, Sprites info pane, Blocks palette, Coding area, Script, Backdrop, and Tabs.

Make the students understand the features of Scratch.

Show to the students the steps to:

- Choose a sprite from the Library and Paint a new sprite
- Delete a sprite

Make the students recall backdrop as background of the stage.

Tell the students the steps to change the backdrop in Scratch.

Introduce Scratch blocks as puzzle-piece shapes that are used to create code in Scratch.

Tell the student that some of the common categories of blocks are: Motion, Looks, Sound, Pen, Variables, Events, Control, Sensing, and Operators.

Demonstrate the that create a scrpit.

Make the students aware about the full screen mode available in Scratch.

Show to the students the steps to:

- Save a Scratch project
- Closing the project

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 Scratch?

Q. What are the features of Scratch?

Q. Name the various components of Scratch window.

Q. Define Sprite / Stage / Scripts Area / Green Flag / Stop button.

Q. What is a backdrop in Scratch?

Q. What are Scratch blocks?

Q. What is the use of Motion / Events / Control / Sound blocks?

Q. What is the colour code for Motion / Events / Control / Sound blocks?

Q. What are the steps to save a project in Scratch?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 75 to 77 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Pages 77 and 78 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 78 in the main course book. This will enhance the ability of the students and serve as a Critical Thinking activity.

Suggested Activity

Ask the students to develop the story of thirsty crow in Scratch.

8 AI-Enabled Devices

Teaching Objectives

Students will learn about

- Smartphones
- Smartwatch
- Chatbot
- Smart TV
- Smart Doorbel
- Driverless Car
- Smart Speakers

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the student that Artificial Intelligence has become an important part of our lives.

Define the following to the students:

- Smartphones
- Smartwatch
- Chatbot
- Smart TV
- Smart doorbell
- Driverless Car
- Smart Speakers
- Relate all these to their daily life routine.

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 following:

- Smartphones
- Smartwatch

- Chatbot
- Smart TV
- Driverless Car
- Smart Doorbell
- Smart Speakers

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 81 and 82 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler and Hands-On given on Pages 82 and 83 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 83 in the main course book. This will enhance the ability of the students and serve as a Media Literacy activity.

Suggested Activity

Ask the students to research about more smart devices around them.