3

TOUCHPAD®

PLUS Ver. 1.1

Teacher's Manual

Extended Support for Teachers

ORANGE®
www.orangeeducation.in
www.thetouchpad.com

Teacher's Time Table

Periods / Days	0	I	II	III	IV		V	VI	VII	VIII
Monday						B				
Tuesday						R				
Wednesday						E				
Thursday						A				
Friday						K				
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 to 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 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 needs 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.

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During the class:

Present the lesson plan.

↓

After the class:

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

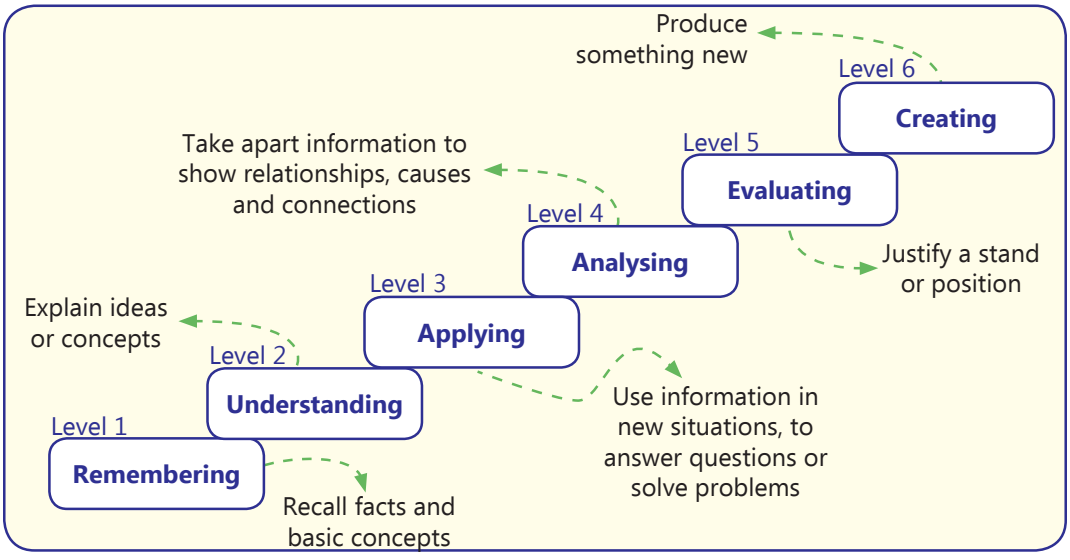
"Knowing yourself is the beginning of all wisdom."

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

Touchpad Ver 1.1

1. The Computer System

Teaching Objectives

Students will learn about

- How does a computer work?
- Storage
- Features of a computer
- Types of computers

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that a computer is an electronic machine made up of various devices that help to enter data, process it and give the results.

Tell them that a computer works through Input-Process-Output (IPO) cycle.

Explain the meaning of the terms input and input devices.

Tell them how keyboard, mouse and scanner are used to input data into a computer.

Explain the meaning of the terms process, processor and processing.

Tell them how CPU processes data with the help of Arithmetic Logic Unit (ALU) – for arithmetic and logical calculations, Memory Unit (MU) – for storing data and instructions and Control Unit (CU) – for coordinating between all parts of the CPU.

Explain the meaning of the terms output and output devices.

Demonstrate to them the difference between hard copy and soft copy.

Make the students understand the meaning of the term Storage.

Tell them examples of some commonly used storage devices and basic features of each of the storage device.

Make the students understand the basic features of a computer that makes it a special machine covering Speed, Accuracy, Diligence, Memory and Multi-tasking.

Explain the features and use of different types of computers covering microcomputers, minicomputers, mainframe computers and supercomputers.

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. Expand IPO.
Q. Define input / output / processing.
Q. Name some input, processing and output devices.
Q. What is storage?
Q. Give examples of some storage devices.
Q. What are microcomputers?
Q. How are minicomputers different from mainframe computers?
Q. Define supercomputers.
Q. Give an example of supercomputer.

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 13, 14 and 15 of the main course book as One Touch Learn and Let's Do It. After solving the course book exercises, tell the students to solve Crack the Code activity given on Pages 15 and 16 of the main coursebook. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Page 16 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to prepare a comparative table on chart paper comparing the features of different types of computers on various parameters with the help of examples and pictures/drawings.

2. 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 components – hardware and software.

Tell the students that the parts of the computer that can be touched are called hardware.

Share some examples of hardware with the students.

Make the students understand that the software refers to step-by-step instructions for the computer.

Share some examples of software with the students.

Introduce the students to the two broad categories of software as System software and Application software.

Tell the students the importance of system software for the functioning of the computer system.

Tell the students about some commonly used system software / operating system and their versions.

Explain the importance of application software to the students.

Share with students some examples of application software (covering Paint, Windows Media Player, MS Word, MS PowerPoint and Adobe Photoshop) and the purposes for which these software are mainly used.

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. Define hardware.

Q. Name some hardware devices.

Q. What do you understand by software?

Q. Name the different types of software.

Q. What is system software?

Q. Give examples of some commonly used operating systems.

Q. What is application software?

Q. Name some application software and their use.

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 21, 22 and 23 of the main course book as One Touch Learn and Let's Do It. After solving the course book exercises, tell the students to solve Crack the Code activity given on Page 23 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Page 23 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to collect information about some more application software and the purpose for which they are used.

3. Let's Know About Windows 7

Teaching Objectives

Students will learn about

- Windows 7
- Desktop

- Taskbar
- Using Computer icon
- Mouse pointer shapes
- How to change desktop background
- How to shut down Windows 7

Number of Periods	
Theory	Practical
3	2

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 Microsoft Windows.

Tell the students the about the useful features of Windows 7.

Demonstrate to the students the steps to start Windows 7.

Make the students aware about the concept of desktop.

Familiarize the students with some important icons on the desktop like Computer, Recycle Bin and Network.

Demonstrate to the students the steps to sort icons on the desktop.

Show to the students that how some or all of the icons on the desktop can be hidden.

Introduce the students to the taskbar and its components covering Start button, Opened program icons and Notification Area.

Demonstrate to the students the steps involved in changing the position of the taskbar.

Explain to the students the use of the 'Computer' icon.

Tell the students that the mouse pointer changes its shape on the basis of our actions performed.

Show to the students some commonly taken shapes by the mouse pointer.

Demonstrate to the students the steps to change desktop background.

Show the students the correct method of shutting down Windows 7.

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 importance of an operating system?
Q. Give examples of some popular operating systems.
Q. Which company developed Windows operating system?
Q. What are the important features of Windows 7?
Q. What is desktop?
Q. Define icons.
Q. What is taskbar?
Q. Can the position of the taskbar be changed?
Q. When does the mouse pointer change to Double-headed Arrow / I Beam / Four-headed Arrow?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 31 and 32 of the main course book as One Touch Learn and Let's Do It. After solving the course book exercises, tell the students to solve Crack the Code activity given on pages 32 and 33 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Page 33 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to draw the various shapes of a mouse pointer and the action being performed at that time on an A3 sheet of paper.

4. Introduction to MS Word 2010

Teaching Objectives

Students will learn about

- Uses of MS Word 2010
- Starting MS Word 2010
- Parts of MS Word 2010
- Working with MS Word 2010
- Saving a Document
- Opening a Saved Document
- Printing a Document
- Closing MS Word

Number of Periods	
Theory	Practical
3	3

Teaching Plan

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

Make the students aware of the various uses of MS Word 2010.

Demonstrate to the students the steps involved in starting MS Word 2010.

Show the students the various components of MS Word 2010 window covering Title Bar, Quick Access Toolbar, Ribbon, Rulers, Horizontal and Vertical Scroll Bars, Text / Document Area and Status Bar.

Familiarize the students that while working on MS Word, some frequently used keys other than alphabet and number keys are Spacebar, Enter, Delete and Backspace.

Demonstrate to the students the steps involved in:

- Creating a new Word file
- Typing text

- ☞ Saving a document
- ☞ Opening a saved document
- ☞ Printing a document
- ☞ Closing MS Word

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 MS Word?

Q. What are the various uses of MS Word 2010?

Q. Name some important components of MS Word 2010 window.

Q. Which company developed MS Word?

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 MS Word 2010?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 41 and 42 of the main course book as One Touch Learn and Let's Do It. After solving the course book exercises, tell the students to solve Crack the Code activity given on Page 43 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on page 43 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

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

5. Fun with Paint

Teaching Objectives

Students will learn about

- ☞ Starting Paint
- ☞ Resizing an Image
- ☞ Skewing an Image
- ☞ Flipping an Image
- ☞ Rotating an Image
- ☞ Zooming an Image
- ☞ Cropping an Image
- ☞ Copying and Pasting

- ☞ Cutting and Pasting
- ☞ Saving the Drawing
- ☞ Opening an old Drawing
- ☞ Setting a drawing as Desktop Background

Number of Periods	
Theory	Practical
3	4

Teaching Plan

While teaching this chapter, tell the students that Paint is a simple program for painting on computer.

Make the students recall the steps to start Paint.

Ensure that the students are able to recall the components of Paint window.

Discuss with the students the basic Paint tools covering Pencil Tool, Eraser Tool, Fill with Color Tool, Text Tool and Brushes Tool

Make them recall the use of Line Shape, Rectangle Shape, Oval Shape, Rounded Rectangle Shape, Polygon Shape and Curve Shape.

Demonstrate to the students the meaning of and steps involved in:

- Resizing an image
- Skewing an image
- Flipping an image
- Rotating an image
- Zooming an image
- Cropping an image

Make the students understand the difference between Copying-Pasting an image and Cutting-Pasting an image.

Demonstrate to the students the steps involved in both these activities (Copy-Paste and Cut-Paste).

Tell the students the method to save a drawing.

Show the students the method of how to open an old drawing.

Share with the students that the drawings of Paint can be setup as Desktop Backgrounds also. Demonstrate to the students the steps involved in setting a drawing as desktop background.

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 can Paint be used for in computers?
Q. State the use of Pencil / Eraser / Fill with color / Text / Brushes Tool.
Q. Define skewing.
Q. What do you understand by the term flipping an image?
Q. What is the meaning of zooming an image?
Q. What is the difference between Cut-Paste and Copy-Paste?
Q. Can drawings made in Paint be set as Desktop Backgrounds?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 54, 55 and 56 of the main course book as One Touch Learn and Let's Do It. After solving the course book exercises, tell the students to solve Crack the Code activity given on Page 57 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Pages 57 and 58 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to create a drawing of a village scene in Paint.

6. Introduction to Internet

Teaching Objectives

Students will learn about

- ☞ Students will learn about
- ☞ Uses of Internet
- ☞ Requirements for an Internet connection
- ☞ Internet terms
- ☞ Internet Explorer

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that a computer network is a connection between two or more computers.

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, 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 web browser, Internet Explorer and its components 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 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 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 / 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 65, 66 and 67 of the main course book as One Touch Learn and Let's Do It. After solving the course book exercises, tell the students to solve Crack the Code activity given on Page 67 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Page 67 of the main course book will enhance the ability of the students and serve as a Subject Enrichment 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.

7. LOGO Commands

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.

Share some Case Study with the students to explain the above taught factors in problem solving approach.

Tell the students about Programming and give a brief introduction about it.

Introduce Looping to the students with simple example.

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 reasoning?

Q. What is problem solving?

Q. What is stepwise thinking?

Q. What is case study?

Q. What is programming?

Q. Define Looping.

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 72 and 73 of the main course book as One Touch Learn and Let's Do It. After solving the course book exercises, tell the students to solve Crack the Code activity given on Page 73 of the main coursebook. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on page 74 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to write a case study to create a greeting card.

8. Introduction to Scratch

Teaching Objectives

Students will learn about

- Starting Scratch
- Features of Scratch
- Scratch Window
- Choosing a sprite
- Painting a New Sprite
- Resizing the sprite
- Deleting a sprite
- Choosing a backdrop

- ☞ Scratch blocks
- ☞ Working with a Script
- ☞ Saving the project
- ☞ Quitting the project

Number of Periods	
Theory	Practical
3	3

Teaching Plan

While teaching this chapter, tell the students that Scratch is a block-based programming language.

Demonstrate to the students the steps to start Scratch 2.0.

Make the students understand the features of Scratch.

Familiarize the students with the various components of Scratch window covering Sprite, Stage, Blocks palette, Scripts Area, Duplicate, Delete, Grow, Shrink, Green Flag, Stop button and Menu bar.

Show to the students the steps to:

- Choose a sprite from the Library
- Delete a sprite
- Resize 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.

Introduce Motion Blocks for changing placement, direction, rotation and movement of sprites.

Tell the students the method of identifying Motion Blocks which are colour coded as blue.

Demonstrate the use of Motion Blocks by developing My First Script (refer Page 88 of the main course book).

Explain the use of Events Blocks as used to sense events that run the script and their identifying colour code as brown.

Share the use of Control Blocks as used to control the scripts and their identifying colour code as gold.

Tell the students about the use of Sound Blocks as used to control sound, its playback and volume and their identifying colour code as pink.

Help the students in developing My Second Script.

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

Show to the students the steps to:

- Save a Scratch project
- Quitting the 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 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. Which buttons icons are used to resize a sprite?
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 course book exercises given on Pages 84, 85 and 86 of the main course book as One Touch Learn and Let's Do It. After solving the course book exercises, tell the students to solve Crack the Code activity given on Page 86 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 87 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

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

9. AI-Enabled Devices

Teaching Objectives

Students will learn about

- ☞ Smartphones
- ☞ Smartwatch
- ☞ Chatbot
- ☞ Smart TV
- ☞ Driverless Car
- ☞ Smart Doorbell
- ☞ Smart Speakers

Number of Periods	
Theory	Practical
2	1

Teaching Plan

Explain the meaning of AI enabled devices to the students with proper and simple examples.

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

Define the following to the students:

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

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 course book exercises given on Pages 91 and 92 of the main course book as One Touch Learn and Let's Do It. After solving the course book exercises, tell the students to solve Crack the Code activity given on Page 92 and 93 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Page 93 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

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