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TOUCHPAD®

PLAY 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

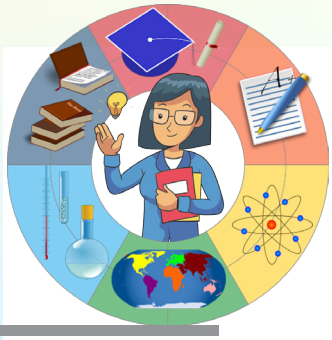
"If you cannot do great things, do small things in a great way."

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.

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After the class:

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

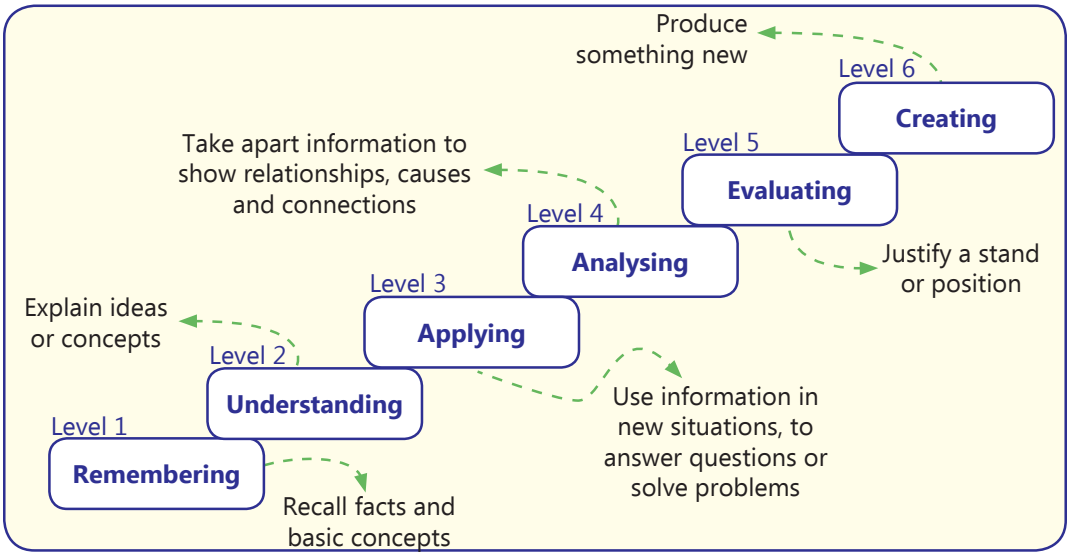
"Knowing yourself is the beginning of all wisdom."

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."

LESSON PLAN

Touchpad PLAY Ver 1.1

Class-3

1. The Computer System

Teaching Objectives

Students will learn about

- How does a Computer Work?
- Types of Computers

Teaching Plan

Number of periods: 2

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 10, 11 and 12 of the main course book as One Touch Learn and Let's Do It.

In Creative Assignment, activities like Fun in Lab given on Page 12 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 Hardware

Teaching Objectives

Students will learn about

- ☞ Input Devices
- ☞ Output Devices
- ☞ Processing Device
- ☞ Storage Devices

Teaching Plan

Number of periods: 2

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.

Introduce the students to the various categories of hardware such as Input devices, Processing device, Output devices and Storage devices.

Tell the students about the functioning of various input devices such as keyboard, mouse, scanner, microphone, touchscreen and webcam.

Tell the students about the processing device and how it works with the help of the block diagram shown in the main course book.

Explain the various parts of the processing device such as the ALU, CU and the MU.

Explain the various uses of the output devices and their working such as Monitor, Printer, Speaker, Headphones and a Projector.

Demonstrate the uses of various storage devices such as CD and DVD, Pen drive, Memory and Hard disk.

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 input devices?

Q. Name the different types of output devices.

Q. What is a processing device?

Q. Give examples of some commonly used output devices.

Q. What is control unit?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 17 and 18 of the main course book as One Touch Learn and Let's Do It.

In Creative Assignment, activities like Fun in Lab given on Page 18 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. Computer Software

Teaching Objectives

Students will learn about

- ☞ Software
- ☞ Types of Software

Teaching Plan

Number of periods: 2

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.

In Creative Assignment, activities 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.

4. More on Keyboard and Mouse

Teaching Objectives

Students will learn about

- Special Keys
- Symbol Keys
- Functions of Mouse
- Combinational Keys
- Mouse Pointer Shapes

Teaching Plan

Number of periods: 2

While teaching this chapter, tell the students that keyboard and mouse are used to perform various functions.

Show to the students a keyboard and demonstrate:

- A keyboard has 104 keys
- **Shift key –** used with other keys for different purposes like with alphabet keys to type in capital letters with caps Lock turned off and with number keys and symbol keys to type the symbols in the upper row of that key.
- **Symbol keys –** used to type special signs like @,$, %, *, etc. and punctuation marks like ?, ! :, " ", etc.
- **Function keys –** 12 in number from F1 to F12 and used to perform a different function like F1 for Help, etc.
- **Caps Lock key –** used to type in capital letters
- **Tab key –** used to move cursor several spaces forward at once
- **Escape or Esc key –** used to cancel a task

Show to the students a mouse and demonstrate:

- A mouse has buttons to click and wheel to scroll
- Displays an arrow called pointer on the screen
- **Click or Single-click –** used to select an item
- **Double-click –** used to open the selected item
- **Right-click –** used to display list of properties of the selected item
- **Drag –** used to move an item from one location to another

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 two commonly used input devices.
Q. How many keys are there on a standard keyboard?
Q. State one use of Shift key.
Q. What is Escape / Tab / Caps Lock key used for?
Q. How many Shift / Function keys are there on a keyboard?
Q. What is the use of Function / Symbol keys?
Q. What is a mouse?
Q. What is pointer?
Q. What is single-click / double-click / right-click / drag used for?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 30, 31 and 32 of the main course book as One Touch Learn and Let's Do It.

In Creative Assignment, activities like Fun in Lab given on Page 32 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 a keyboard on an A4 sheet of paper and label these keys:

- Shift keys
- Escape key
- Symbol keys
- Keys to spell the name of the student
- Enter key
- Tab key
- Function keys

5. Let's Know About Windows 7

Teaching Objectives

Students will learn about

- ☞ Windows 7
- ☞ Icons
- ☞ Desktop
- ☞ Taskbar

Teaching Plan

Number of periods: 3

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 38, 39 and 40 of the main course book as One Touch Learn and Let's Do It.

In Creative Assignment, activities like Fun in Lab given on Page 40 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.

6. Introduction to MS Word 2010

Teaching Objectives

Students will learn about

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

Teaching Plan

Number of periods: 4

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 48 and 49 of the main course book as One Touch Learn and Let's Do It.

In Creative Assignment, activities like Fun in Lab given on Page 49 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.

7. Fun with Tux Paint

Teaching Objectives

Students will learn about

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

Teaching Plan

Number of periods: 3

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 tools of Tux Paint.

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

Demonstrate the steps to apply Fill Effect of the 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 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 / 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 course book exercises given on Pages 54 and 55 of the main course book as One Touch Learn and Let's Do It.

In Creative Assignment, activities like Fun in Lab given on Page 55 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 a similar drawing in Tux Paint.

8. More on Paint

Teaching Objectives

Students will learn about

- ☞ Rounded Rectangle Shape
- ☞ Polygon Shape
- ☞ Text Tool
- ☞ Curve Shape
- ☞ Selecting a Part of an Image

Teaching Plan

Number of periods: 3

While teaching this chapter, make the students recall that Paint can be used to draw and paint on computer.

Tell the students that Rounded Rectangle shape is used to draw rectangles and squares with rounded corners.

Demonstrate to the students the steps involved in use of Rounded Rectangle shape.

Share with the students that Curve shape is used to draw curved lines.

Show to the students the steps involved in use of Curve shape.

Explain to the students that Polygon shape is used to draw a polygon or a closed figure.

Demonstrate to the students the steps involved in use of Polygon shape.

Tell the students that Select command is used to select a drawing or part of a drawing.

Show to the students how a drawing or part of a drawing can be selected.

Demonstrate to the students the steps involved in moving the selected part of an image from one place to another using click and drag feature of the mouse.

Tell the students that the Text tool is used to write some text in the drawing area.

Demonstrate to the students the use of Text tool in Paint.

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 Paint?
Q. What is the use of Rounded Rectangle shape?
Q. What is Curve Shape used for?
Q. When is Polygon shape used?
Q. What is the Select command used for?
Q. What do you mean by moving the selected area?
Q. When do we use Text tool in Paint?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 61 and 62 of the main course book as One Touch Learn and Let's Do It.

In Creative Assignment, activities like Fun in Lab given on Page 62 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 a picture of a school with its name written on a board at the top of the school building.

9. Introduction to Scratch

Teaching Objectives

Students will learn about

- ☞ Starting Scratch
- ☞ Deleting a Sprite
- ☞ Choosing a Backdrop
- ☞ My First Script
- ☞ Full Screen Mode
- ☞ Quitting the Project
- ☞ Choosing a Sprite
- ☞ Resizing a Sprite
- ☞ Scratch Blocks
- ☞ My Second Script
- ☞ Saving the Project

Teaching Plan

Number of periods: 5

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 (refer Page 90 of the main course book).

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 70 and 71 of the main course book as One Touch Learn and Let's Do It.

In Creative Assignment, activities like Fun in Lab given on Page 72 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.