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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.

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After the class:

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

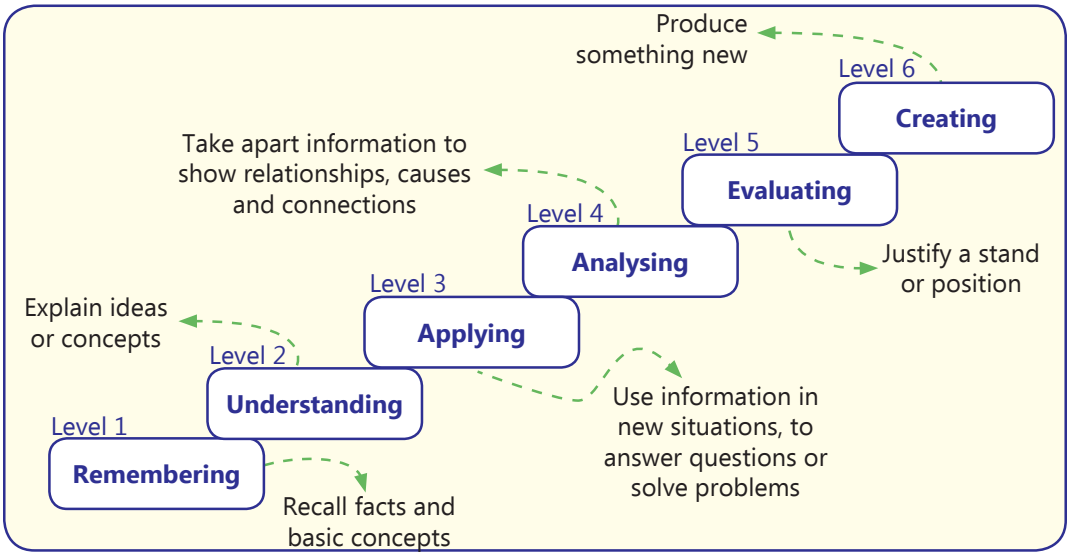
"Knowing yourself is the beginning of all wisdom."

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."

Class 2

LESSON PLAN

Touchpad Ver 1.1

1. Know Your Computer

Teaching Objectives

Students will learn about

- ☞ Uses of a compute
- ☞ Features of a computer
- ☞ Different Places Where Computers are Used

Number of Periods	
Theory	Practical
1	1

Teaching Plan

While teaching this chapter, tell the students that a computer is an electronic machine which helps us to solve many problems.

Share with the students the various uses of a computer covering drawing, painting, doing homework, doing sums, watching movies, listening to music, playing games, writing letters and stories, etc.

Tell them that the word 'computer' has been derived from the word 'compute' which means 'to calculate'.

Share with the students the features of a computer covering:

- **Accuracy** – does not make mistake
- **Storage** – stores information and does not forget it
- **Work Process** – does not get tired and work for long hours
- **Speed** – works at a very high speed

Make the students understand that there are certain things which man can do better than computers covering:

- **Feelings** – computer does not have feelings and does not understand emotions
- **Instruction** – computer cannot work without our instructions
- **Decision** – computer cannot take its own decisions

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?

Q. How has the word 'computer' been derived?

Q. State any two features of a computer.
Q. Name two things which man can do better than computers.
Q. Name some smart machines.
Q. Why are some machines smart?
Q. State any two uses of computers at home / railway station / airport.
Q. State any two uses of computers in a school / bank / shop / office / hospital.

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 14, 15 and 16 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 16 and 17 of the main coursebook. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 17 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Show the pictures of different types of computers to the students and ask the name of each type of computer.

2. Working of a Computer

Teaching Objectives

Students will learn about

- ☞ Working of machines
- ☞ Input Devices
- ☞ Process Devices
- ☞ Output Devices

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that a computer works according to the commands or instructions given by us.

Tell the students about the working of some machines like:

'Juicer' will come first then 'washing machine'

Share with the students that in both these cases, the first step is input, the second step is process and the third step is output.

Tell the students that similarly computer takes instructions (2, 3, +), adds them (2+3) and gives the result (5).

Share with the students that this cycle of working of machines is called Input-Process-Output cycle or IPO cycle.

Introduce the term Input as giving instructions to the computer.

Tell the students that keyboard and mouse are used as input devices in a computer.

Introduce input devices as the parts that are used to give commands or instructions to the computer or tell the computer what to do.

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

- **Keyboard** – used for typing text and numbers through keys
- **Mouse** – used for drawing pictures and selecting objects through click
- **Scanner** – used to send document or images from paper to computer
- **Microphone** – used to record voice, music and sounds.

Introduce the term Process as action performed by computer on the instructions given by us.

Tell the students that Central Processing Unit (CPU) is processing device of a computer and is called Brain of the computer.

Introduce the term Output as result given by the computer after processing.

Tell the students that monitor and printer are used as output devices in a computer.

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

- Monitor or Visual Display Unit (VDU) – used to show the data that is input and its result after computer process through its front portion, screen.
- Printer – used to print the work done by computer on paper

  Tell the students about the types of printers as Inkjet printers and Laser printers
- Speakers – used to listening to music, sound and voice on a computer
- Headphones – work as small speaker and used to hear sound without disturbing others.
- Headset – used as a combination of microphone and headphones

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

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 does IPO stand for?

Q. What is Input-Process-Output cycle?

Q. Define Input / Process/ Output.

Q. Name two input / output devices.

Q. Which part of the computer is called Brain of the computer?

Q. Why is CPU called brain of the computer?

Q. What are the parts of a computer?

Q. What are input / output / storage devices?

Q. Give two examples of input / output / storage devices.

Q. What is a USB port used for?

Q. What is the name given to the combination of microphone and headphones?

Q. Expand CD / DVD.

Q. Which has more storage capacity: CD or DVD?

Q. Arrange in increasing order of storage capacity:

CD DVD Pen Drive Hard Disk

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 22, 23 and 24 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 24 and 25 of the main coursebook. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 26 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Show some more machines with input and output to the students and ask the students to arrange these in correct order of the IPO cycle.

3. Uses of the Keyboard and the Mouse

Teaching Objectives

Students will learn about

- ☞ Keyboard
- ☞ Mouse

Number of Periods	
Theory	Practical
2	2

Teaching Plan

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 34 to 37 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 37 of the main coursebook. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 38 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
- Enter key
- Escape key
- Tab key

- Symbol keys
- Function keys
- Keys to spell the name of the student

4. Operating a Computer

Teaching Objectives

Students will learn about

- ☞ How to start a computer
- ☞ How to shut down a computer

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that we need to follow proper steps to switch on and shut down a computer.

Share with the students the steps to switch on a computer as:

(i) Switch on main power supply button
(ii) Switch on UPS (invertor of the computer) button
(iii) Switch on power supply button of CPU
(iv) Switch on monitor

Explain to the students that:

- The first screen that appears on the monitor is called desktop.
- Small pictures on the desktop are icons.
- Long bar at the bottom of the desktop is called Taskbar.
- Start button is on the left corner of the taskbar and used to open different programs.
- Start menu has Shut Down button which is used to shut down the computer.
- Clock is on the right corner of the taskbar.
- Rectangular box that opens when we start a program is called Window.
- Control buttons on every window include Maximize and Minimize buttons to resize the window and Close button to close the window.

Share with the students the steps to shut down a computer as:

(i) Click on Start button.
(ii) Click on Shut Down button and wait.
(iii) Switch off monitor button.
(iv) Switch off UPS button.
(v) Switch off main power supply button.

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 first step to switch on a computer?
Q. What is the first step to shut down a computer?
Q. What is the last step to shut down a computer?
Q. What are icons?
Q. Where is taskbar located?
Q. Where is Start button / Clock located on the taskbar?
Q. Which part is called invertor of the UPS?
Q. Do we need to switch off the CPU button while shutting down a computer?
Q. Which menu is used to shut down a computer?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 44 and 45 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 46 of the main coursebook. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 47 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 images showing the steps to switch on a computer and to shut down a computer in their computer notebook.

5. Fun with Tux Paint

Teaching Objectives

Students will learn about

- ☞ New tool
- ☞ Open tool
- ☞ Stamp tool
- ☞ Text tool
- ☞ Magic tool

Number of Periods	
Theory	Practical
2	2

Teaching

While teaching this chapter, tell the students that Tux Paint has a lot of tools, animations and effects to enhance your creativity in drawing.

Tell the students that the Tux mascot, that is, a penguin guides you while working in Tux Paint.

Make the students recall the components of the Tux Paint window covering Toolbar, Colors Palette, Help Area, Selector, Up and Down Arrows and Drawing Area or Canvas.

Introduce New tool as the tool used to open a new page for drawing.

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

Make the students understand that Open tool is used to open an existing drawing in Tux Paint.

Show to the students the method to use Open tool.

Introduce Stamp tool as the tool used to insert different stamps or images from the Selector.

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

Tell the students that just like in Paint, Text tool is used in tux Paint to type some text in the drawing area or canvas.

Demonstrate to the students the steps involved in using Text tool in Tux Paint.

Tell the students that Magic tool in Tux Paint is used to add special effects to a drawing.

Show to the students some of the Magic tool effects which can be added to a drawing.

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 Text / Magic / Stamp / New / Open tool?

Q. When is New tool used?

Q. Can Open tool be used to open a drawing which was not saved earlier?

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

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 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 56 of the main coursebook. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Page 57 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 jungle scene in Tux Paint.

6. More on Paint

Teaching Objectives

Students will learn about

☞ Rounded Rectangle shape

- ☞ Curve shape
- ☞ Polygon shape
- ☞ Selecting a part of an image
- ☞ Text tool

Number of Periods	
Theory	Practical
2	2

Teaching Plan

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 63 and 64 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 64 of the main coursebook. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 65 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.

7. Reasoning and Analysis

Teaching Objectives

Students will learn about

- ☞ Number Pyramids
- ☞ Number Grid
- ☞ Directions

Number of Periods	
Theory	Practical
1	0

Teaching Plan

Introduce Number Pyramids to the students in details with the help of pictures or charts.

Tell the students about what Number Grid. Also, tell them how solve by giving some examples which will improve their understanding of the topic.

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

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

Extension

Ask the students some oral questions based on this chapter.

Q. What is a number pyramid?

Q. What is a grid?

Q. What is a number grid?

Q. What is a direction?

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. After solving the course book exercises, tell the students to solve Crack the Code activity given on Page 71 of the main course book. Help the students to solve these questions.

In Creative Assignment, activity 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 practice to identify directions.

8. Artificial Intelligence Around Us

Teaching Objectives

Students will learn about

- ☞ Artificially Intelligent Machines
- ☞ AI Around Us
- ☞ Robots

Number of Periods	
Theory	Practical
2	1

Teaching Plan

Explain the meaning of Artificially Intelligent machines 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:

- Voice Assistant
- Face Detection
- Navigation

Explain the meaning of Robots to the students with their role around us with examples.

Relate all these to their daily life routine.

Extension

Ask the students some oral questions based on this chapter.

Q. Define the following:
   - Voice Assistant
   - Face Detection
   - Navigation

Q. What is a robot?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Page 77 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 78 of the main course book. Help the students to solve these questions.

n Creative Assignment, activities like Hands-On and Fun in Lab given on Page 78 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 practice more in Quick Draw.