



# TOUCHPAD<sup>®</sup>

iPRIME Ver. 2.1

# Teacher's Manual

*Extended Support for Teachers*



[www.orangeeducation.in](http://www.orangeeducation.in)  
[www.thetouchpad.com](http://www.thetouchpad.com)

# Teacher's Time Table

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

B

R

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A

K



# 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	
<b>Physical</b>	<ul style="list-style-type: none"><li>• First permanent tooth erupts</li><li>• Shows mature throwing and catching patterns</li><li>• Writing is now smaller and more readable</li><li>• Drawings are now more detailed, organised and have a sense of depth</li></ul>
<b>Cognitive</b>	<ul style="list-style-type: none"><li>• Attention continues to improve, becomes more selective and adaptable</li><li>• Recall, scripted memory, and auto-biographical memory improves</li><li>• Counts on and counts down, engaging in simple addition and subtraction</li><li>• Thoughts are now more logical</li></ul>
<b>Language</b>	<ul style="list-style-type: none"><li>• Vocabulary reaches about 10,000 words</li><li>• Vocabulary increases rapidly throughout middle childhood</li></ul>
<b>Emotional/Social</b>	<ul style="list-style-type: none"><li>• Ability to predict and interpret emotional reactions of others enhances</li><li>• Relies more on language to express empathy</li><li>• Self-conscious emotions of pride and guilt are governed by personal responsibility</li><li>• Attends to facial and situational cues in interpreting another's feelings</li><li>• Peer interaction is now more prosocial, and physical aggression declines</li></ul>

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

Age 9 - 11 Years	
<b>Physical</b>	<ul style="list-style-type: none"> <li>• Motor skills develop resulting enhanced reflexes</li> </ul>
<b>Cognitive</b>	<ul style="list-style-type: none"> <li>• Applies several memory strategies at once</li> <li>• Cognitive self-regulation is now improved</li> </ul>
<b>Language</b>	<ul style="list-style-type: none"> <li>• Ability to use complex grammatical constructions enhances</li> <li>• Conversational strategies are now more refined</li> </ul>
<b>Emotional/Social</b>	<ul style="list-style-type: none"> <li>• Self-esteem tends to rise</li> <li>• Peer groups emerge</li> </ul>

Age 11 - 20 Years	
<b>Physical</b>	<ul style="list-style-type: none"> <li>• If a girl, reaches peak of growth spurt</li> <li>• If a girl, motor performance gradually increases and then levels off</li> <li>• If a boy, reaches peak and then completes growth spurt</li> <li>• If a boy, motor performance increases dramatically</li> </ul>
<b>Cognitive</b>	<ul style="list-style-type: none"> <li>• Is now more self-conscious and self-focused</li> <li>• Becomes a better everyday planner and decision maker</li> </ul>
<b>Emotional/Social</b>	<ul style="list-style-type: none"> <li>• May show increased gender stereotyping of attitudes and behaviour</li> <li>• May have a conventional moral orientation</li> </ul>

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."*

# LESSON PLAN

Touchpad iPRIME Ver 2.1

Class-4

## 1. Computers—Storage and Memory Device

### Teaching Objectives

Students will learn about

- ☞ Data and information
- ☞ Memory
- ☞ Measuring the computer's memory

### Teaching Plan

**Number of periods: 2**

While teaching this chapter, tell the students that like human beings, computers also have memory to store all data and instructions for performing various tasks.

Tell the students about the two types of computer memory – primary memory and secondary memory.

Share with the students that the primary memory of the computer is fixed on the motherboard of the computer.

Explain in detail about the types of Primary Memory covering:

**Random Access Memory (RAM)** – the volatile memory

**Read Only Memory (ROM)** – the non-volatile memory

Share with the students the meaning and difference between the two types of RAM – Dynamic RAM and Static RAM.

Give a brief introduction about secondary memory or secondary storage devices covering in detail: Magnetic Disk (Hard Disk – Internal and External)

**Optical Disk** (CD, DVD, Blue-ray Disk – ROM, R and RW)

**Flash Drive** (Pen Drive, Memory Card) (See Suggested Activity also)

Introduce byte as the basic unit of measuring computer memory and nibble as half a byte.

Share with the students the meaning and relationship between higher units of measurement of computer memory – KB, MB, GB, TB, PB, EB, ZB and YB.

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 computer memory?



- Q. What is primary memory?
- Q. Name the different types of primary memory.
- Q. Expand RAM / ROM.
- Q. What are the different types of RAM?
- Q. What is the difference between primary and secondary memory?
- Q. Name the categories in which secondary storage devices are divided into.
- Q. What are the different types of CDs and DVDs?
- Q. Expand CD / DVD.
- Q. What is a pen drive / memory card?
- Q. Define a byte.
- Q. Name any three higher units of measurement of computer memory.

## Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 12 and 13 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 14 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 14 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 and collect information about some secondary storage devices like floppy disks, which have now become obsolete.

# 2. GUI Operating System—Desktop Management

## Teaching Objectives

Students will learn about

- ☞ Components of Windows 10 desktop
- ☞ Desktop background
- ☞ Icons
- ☞ 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 10.

Demonstrate to the students the steps to start Windows 10.

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.

Explain the use of the following to the students:

- Start Button
- Clock
- Quick Launch Bar
- Show Desktop Button
- Changing Volume of the Speaker
- Changing Position of the Taskbar

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 10?
- Q. What is desktop?
- Q. Define icons.
- Q. What is taskbar?

### Evaluation

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

In Creative Assignment, activities like 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


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.









## 3. Editing in Word 2016

### Teaching Objectives

Students will learn about

 Features of Word 2016

 Creating a new document

 Saving a document	 Selecting text
 Deleting text	 Inserting text
 Cutting/copying text	 Undo/redo
 Spell check	 Thesaurus

## Teaching Plan

**Number of periods: 3**

While teaching this chapter, tell the students that editing is the process of making changes in the existing text.

Share with the students that to edit text, first it needs to be selected.

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

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

Show to the students that text can simply be inserted by moving the cursor to the point where text is to be entered and start typing.

Demonstrate to the students the steps involved in:

- Saving a document
- Opening a saved document
- Printing a document
- Closing Word 2016

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

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

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

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

Introduce the students to Spelling and Grammar Check feature of Word 2016.

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

Demonstrate to the students the method of using Spelling and Grammar Check feature of Word 2016. (See Suggested Activity also)

Demonstrate to the students the method of using Thesaurus feature of Word 2016.

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 editing?
- Q. How is letter / word / text / paragraph selected using a keyboard?
- Q. Which key is used to delete a letter?
- Q. What is the use of Undo command?
- Q. When is Redo command used?



- Q. What is the difference between Cutting and Copying text?
- Q. What is the use of Spelling and Grammar check feature?
- Q. Which button is pressed to skip errors and continue working during Spelling and Grammar check?
- Q. What are the shortcut keys to open / save / print a document?

### Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 34, 35 and 36 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 36 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 36 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 paragraph on My Favourite Festival in Word 2016, check for spelling and grammar mistakes and paste a printout in the computer notebook / practical file.

## 4. Formatting in Word 2016

### Teaching Objectives

Students will learn about

- |   |                                |
|---|--------------------------------|
| ✎ Changing Font and Font Size               | ✎ Changing Font Color          |
| ✎ Highlighting text                         | ✎ Bold, italic and underline   |
| ✎ Applying text effects                     | ✎ Aligning the text            |
| ✎ Changing case                             | ✎ Adding bullets and numbering |
| ✎ Line spacing and paragraph spacing        | ✎ Printing a document          |
| ✎ Difference between editing and formatting | ✎ Shortcut keys                |

### Teaching Plan

**Number of periods: 4**

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

Share with the students the default font and font size in a Word 2016 document.

Demonstrate to the students the method of changing font and font size.

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

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

Show to the students the steps involved in highlighting text.

Share with the students about the Bold, Italic and Underline features and the method of applying these features to the text.

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

- Applying text effects
- Changing text alignment
- Applying borders
- Applying artistic borders
- Applying shading

Introduce Change Case feature as changing text to upper, lower and other common capitalizations. Show the students how to change case of the selected text.

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

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

Ensure that the scope of Let's revisit given at the end of the chapter has been covered.

## Extension

Ask the students some oral questions based on this chapter.

- Q. Define formatting a text.
- Q. What is the default font / font size of text in a Word 2016 document?
- Q. What do you mean by highlighting text?
- Q. What is the difference between bold and italic format of the text?
- Q. What are text effects?
- Q. Define text alignment.
- Q. What are the different types of text alignment options?
- Q. Why is shading added to text?
- Q. What does Change Case option do?
- Q. What are bullets?
- Q. When are bullets or numbers added to text?

## Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 47, 48 and 49 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 49 and 50 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 50 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 write a paragraph on My Favourite Sport in Word 2016 applying various formatting features to make the paragraph attractive.



## 5. The Internet—Web Browser

### Teaching Objectives

Students will learn about

- ☞ Uses of Internet
- ☞ Internet terms
- ☞ Search engines
- ☞ Requirements to connect to Internet
- ☞ Internet explorer

### Teaching Plan

**Number of periods: 2**

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

Make the students recall that the internet is a global network of millions of computers and computer networks.

Introduce Uniform Resource Locator (URL) is a unique address or website address used for locating websites.

Explain the various uses of internet covering:

**E-mail** – an online communication system

**Information** – through search engines like Google, Yahoo, etc.

**Online shopping**

**Online chatting**

**Downloading data**

**Uploading data**

**Social Networking** – Facebook, Instagram, Twitter, YouTube, WhatsApp, etc.

Share with the students the various requirements for an internet connection covering computer system, telephone/cable line, modem, web browser and Internet Service Provider (ISP).

Explain the meaning of some common internet terms like URL, Hyperlink, Offline, Online, Surfing, Website and Web page.

Ensure that the scope of let's revisit r 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. What do you understand by Downloading / Uploading data?
- Q. Define URL / Hyperlink / Offline / Online / Surfing / Website / Web Page.

## Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 58 and 59 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 59 and 60 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 60 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 report on some more uses of internet and present the observations to the class.

# 6. Introduction to PowerPoint 2016

## Teaching Objectives

Students will learn about

- |                               |                                      |
|-------------------------------|--------------------------------------|
| ☞ Starting PowerPoint 2016    | ☞ Components of PowerPoint screen    |
| ☞ Creating a new presentation | ☞ Slide layout                       |
| ☞ Entering data on the slide  | ☞ Adding new slide to a presentation |
| ☞ Deleting a placeholder      | ☞ Deleting a slide                   |
| ☞ Viewing slide show          | ☞ Saving a presentation              |
| ☞ Exiting PowerPoint          |                                      |

## Teaching Plan

**Number of periods: 5**

While teaching this chapter, tell the students that PowerPoint 2016 is a part of Microsoft Office 2016 package or suite. Share with the students that it is used to create presentations. Demonstrate to the students the steps to start PowerPoint 2016. Familiarize the students with various components of PowerPoint screen covering Title Bar, Ribbon, Quick Access Toolbar, File Tab, Slide, Placeholder, Slides / Outline Pane and Status Bar. Introduce slide as a single page of a presentation.

Demonstrate the steps to:

- Create a new presentation
- Enter data on a slide in title and subtitle placeholders
- Add new slide to a presentation
- Deleting a placeholder
- Deleting a slide Introduce slide show as full screen view of the presentation.
- Show to the students the method of viewing a slide show.
- Tell the students how to:
  - Save a presentation
  - Exit PowerPoint 2016

Ensure that the scope of let's revisit given at the end of the chapter has been covered.



## Extension

Ask the students some oral questions based on this chapter.

- Q. What is PowerPoint 2016?
- Q. Define Title Bar / Status Bar.
- Q. What do you mean by Ribbon / Placeholder?
- Q. What is a slide in a presentation?
- Q. Which key is pressed to delete a selected placeholder?
- Q. What are the various ways in which a slide show can be started?
- Q. What are the steps to exit PowerPoint 2016?

## Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 69, 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 72 of the main course book. Help the students to solve these questions.

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 create a presentation on 'The Cartoon Character I Like The Most'.

# 7. Stepwise Thinking

## Teaching Objectives

Students will learn about

- ☞ Reasoning and Problem Solving
- ☞ Stepwise Thinking
- ☞ Case Study
- ☞ Programming

## Teaching Plan

**Number of periods: 4**

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.  
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?

### Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 77, 78, 79 and 80 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 80 and 81 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 81 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. Features of File Management

### Teaching Objectives

Students will learn about

- |  |   |
|--|---|
|  File/folder                          |  Organizing file/folder          |
|  Creating a new file/folder           |  Selecting a file/folder         |
|  Copying and moving a file/folder     |  Renaming a file/folder          |
|  Deleting a file/folder               |  Restoring a deleted file/folder |
|  Not tempering with other file/folder |   |

### Teaching Plan

**Number of periods: 4**

While teaching this chapter, tell the students that all the data saved on a hard disk consists of files and folders.

Introduce file as an item that contains a collection of related information, a folder as a collection of files and a sub folder as a folder within a folder.

Introduce to the students the Windows Explorer as a file manager that manages files and folders.

Demonstrate to the students the steps to open Windows Explorer.





Familiarize the students with the various components of Windows Explorer covering Toolbar, Navigation pane, File List pane, Status bar, Address bar, Search, Back and Forward.

Tell the students that Windows 7 has some default folders to organize similar files.

Demonstrate to the students the steps to:

- Open a file and a folder.
- Select a file and a folder (including selecting a single file, selecting multiple files, selecting all files and deselecting a file).
- Copying a file and a folder (using Copy-Paste features).
- Moving a file and a folder (using Cut-Paste features).
- Creating a new file and a folder.
- Renaming a file and a folder.
- Deleting a file and a folder.
- Restoring a file and a folder.

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 file / folder / subfolder?
- Q. Define a computer icon.
- Q. What is Windows Explorer?
- Q. Name the default folders of Windows 10 for organizing data.
- Q. Which key is used to select multiple files?
- Q. Which key is pressed to invert the selection?
- Q. What is the difference between copying a file and moving a file?
- Q. What is Sneak feature of Windows 10?

## Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 89 and 90 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 91 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 91 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 features of Windows 10 other than those discussed in the chapter.