



TOUCHPAD[®]

MODULAR Ver 1.0

Teacher's Manual

Extended Support for Teachers



www.orangeeducation.in
www.thetouchpad.com

Teacher's Time Table

Periods \ Days	0	I	II	III	IV	V	VI	VII	VIII
Monday									
Tuesday						B			
Wednesday						R			
Thursday						E			
Friday						A			
Saturday						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	
Physical	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Vocabulary reaches about 10,000 words• Vocabulary increases rapidly throughout middle childhood
Emotional/Social	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none"> • Motor skills develop resulting enhanced reflexes
Cognitive	<ul style="list-style-type: none"> • Applies several memory strategies at once • Cognitive self-regulation is now improved
Language	<ul style="list-style-type: none"> • Ability to use complex grammatical constructions enhances • Conversational strategies are now more refined
Emotional/Social	<ul style="list-style-type: none"> • Self-esteem tends to rise • Peer groups emerge

Age 11 - 20 Years	
Physical	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Is now more self-conscious and self-focused • Becomes a better everyday planner and decision maker
Emotional/Social	<ul style="list-style-type: none"> • May show increased gender stereotyping of attitudes and behaviour • May have a conventional moral orientation

Managing the children's learning needs according to their developmental milestones is the key to a successful teaching-learning transaction in the classroom.



“Family is the most important thing in the world.”



TEACHING PEDAGOGIES

Pedagogy is often described as the approach to teaching. It is the study of teaching methods including the aims of education and the ways in which such goals can be achieved.

Lesson Plans

A lesson plan is the instructor's road map which specifies what students need to learn and how it can be done effectively during the class time. A lesson plan helps teachers in the classroom by providing a detailed outline to follow in each class.

A lesson plan addresses and integrates three key components:

- Learning objectives
- Learning activities
- Assessment to check the student's understanding

A lesson plan provides an outline of the teaching goals:

Before the class:

1. Identify the learning objectives.
2. Plan the lesson in an engaging and meaningful manner.
3. Plan to assess student's understanding.
4. Plan for a lesson closure.



During the class:

Present the lesson plan.



After the class:

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

"Knowing yourself is the beginning of all wisdom."

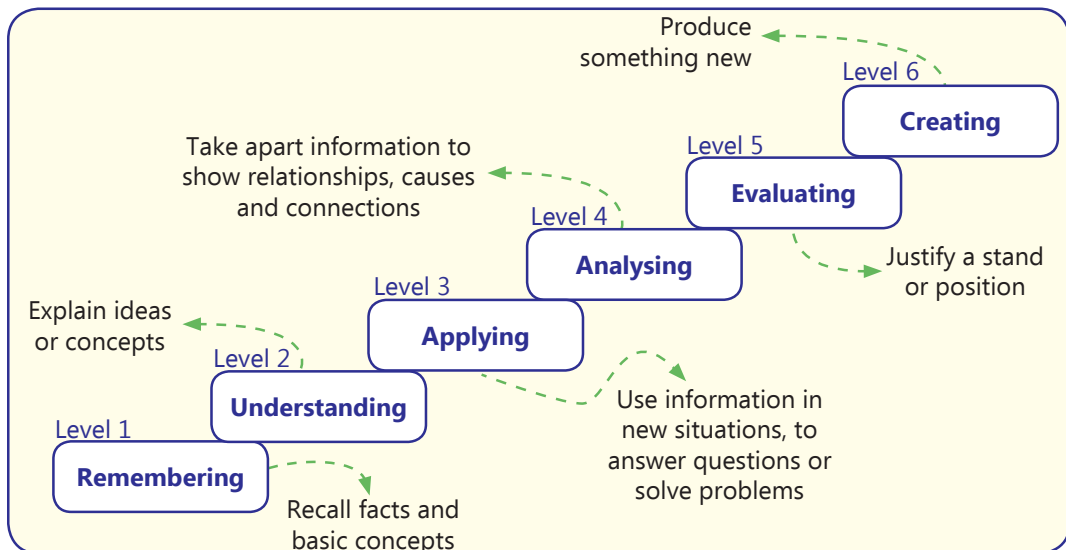
Teaching Strategies

Numerous strategies have evolved over the years to facilitate the teaching-learning process in the classrooms.



Bloom's Taxonomy

Bloom's Taxonomy was created by **Dr Benjamin Bloom** and several of his colleagues, to promote higher forms of thinking in education instead of rote learning. There are three domains of learning: cognitive (mental), affective (emotional), and psychomotor (physical). However, when we refer to Bloom's Taxonomy we speak of the cognitive domain. Bloom's Taxonomy is a list of cognitive skills that is used by teachers to determine the level of thinking their students have achieved. As a teacher, one should attempt to move students up the taxonomy as they progress in their knowledge.



Teachers should focus on helping students to remember information before expecting them to understand it, helping them understand it before expecting them to apply it to a new situation, and so on.

"If you have no confidence in self, you are twice defeated in the race of life."

LESSON PLAN

Touchpad MODULAR Ver 1.0
Class-4

1. The Computer—An Overview

Teaching Objectives

Students will learn about

- ☞ Working of a Computer
- ☞ Processing Device

- ☞ Input Devices
- ☞ Output Devices

Teaching Plan

Number of periods: 3

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:

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

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 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.

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?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 11 and 12 of the main course book as Exercise.

In Creative Assignment, activities like Hands-On and In The 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

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.

2. Computer Memory

Teaching Objectives

Students will learn about

- ☞ 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 15 and 16 of the main course book as Exercise.

In Creative Assignment, activities like Hands-On and In The 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 research and collect information about some secondary storage devices like floppy disks, which have now become obsolete.

3. Personalizing Windows 7

Teaching Objectives

Students will learn about

- | | |
|----------------------------------|---------------------------|
| ☞ Getting Started with Windows 7 | ☞ Using the Computer Icon |
| ☞ File/Folder | ☞ Creating a New Folder |
| ☞ Creating a New File | ☞ Opening a File/Folder |
| ☞ Shortcut Menu | |

Teaching Plan

Number of periods: 3

Before starting the chapter, ask the students to solve the question in Let's Plug-In given on Page 14 of the main course book.

While teaching this chapter, tell the students that Windows is a GUI based operating system developed by Microsoft.

Make the students recall desktop as the first screen on which they can work.

Familiarize the students with the components of Windows 10 desktop covering Start button, Icons, Taskbar, and Desktop background.

Explain briefly about each of these components of Windows 10.

Share with the students the usefulness of Show Desktop button.

Tell the students about the Live Tiles and Taskbar.

Demonstrate the steps to resize, move and add tile.

Tell the students about File and Folder.

Demonstrate to the students the steps to:

- Selecting a file/folder.
- Renaming a file/folder.
- Moving a file/folder.
- Creating a file/folder.
- Copying a file/folder.
- Deleting a file/folder.

Tell the students about Recycle Bin and its use.

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 Windows 10?
- Q. Name the components of Windows 10 desktop.
- Q. Define Desktop Background.
- Q. What are icons?
- Q. In how many parts is the Start menu divided?
- Q. What are Live Tiles?
- Q. What is a file?
- Q. What is a folder?
- Q. What is Recycle Bin?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 22 and 23 of the main course book as Exercise.

In Creative Assignment, activities like Hands-On and In The 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 prepare a note on any one Gadget provided by Windows 7 on an A4 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
- ☞ Opening, saving, printing and closing a document

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 30 and 31 of the main course book as Exercise.

In Creative Assignment, activities like Hands-On and In The Lab given on Page 31 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. Formatting in MS Word 2010

Teaching Objectives

Students will learn about

- | | |
|---|--|
| ☞ Changing Font, Font Size and Font Color | ☞ Highlighting Text Bold, Italic and Underline |
| ☞ Applying Text Effects | ☞ Format Painter |
| ☞ Changing Alignment | ☞ Applying Border and Shading |
| ☞ Changing Case | ☞ Find and Replace |
| ☞ Adding Bullets and Numbering | ☞ Applying Drop Cap Effect |

Teaching Plan

Number of periods: 5

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 MS Word 2010 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 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 formatting a text.
- Q. What is the default font / font size of text in a MS Word 2010 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 40 and 41 of the main course book as Exercise.

In Creative Assignment, activities like Hands-On and In The Lab given on Page 41 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 MS Word 2010 applying various formatting features to make the paragraph attractive.

6. Graphics and Tables in MS Word

Teaching Objectives

Students will learn about

- | | |
|-----------|-----------------------|
| ☞ Shapes | ☞ WordArt |
| ☞ ClipArt | ☞ Symbol |
| ☞ Table | ☞ Working with Tables |

Teaching Plan

Number of periods: 4

While teaching this chapter, tell the students that although MS Word is a word processor, yet it allows three types of graphics to work upon – Shapes, WordArt and Pictures.

Familiarize the students with various categories of Shapes under Illustrations group of Home tab explaining use of Lines, Basic Shapes, Flowchart, Stars and Banners and Callouts.

Demonstrate to the students the steps involved in the process of:

- Drawing a shape
- Adding text to the shape

Tell the students the various types of modifications that can be done on the inserted shape – changing outline color, changing fill colour, adding shape effects like 3-D rotation and bevel.

Introduce WordArt as application to create text effects which are not possible through text formatting.

Demonstrate to the students the steps to:

- Insert WordArt in a document
- Insert ClipArt (pre-designed pictures of MS Word 2010)
- Insert Pictures (from a file) (See Suggested Activity also)
- Insert Symbols (punctuations or special characters not found on keyboard)

Tell the students that a table is an arrangement of text in the form of columns and rows.

Also tell them that an intersection of a row and a column is called a cell.

Demonstrate to the students the method of inserting a table in a Word document.

Show to the students how to select a cell, a group of cells, a row, a column or the whole table.

Demonstrate to the students the steps to:

- Add more rows to a table
- Add more columns to a table
- Change width of a column
- Delete rows from a table
- Delete columns from a table

Introduce merging of cells as combining two or more cells in the same row or the same column into a single cell.

Show to the students the steps to merge two or more cells. Introduce splitting of cells as dividing one cell into two or more cells, Show to the students the steps to split a cell. (See Suggested Activities also)

Demonstrate to the students the steps to move a table and resize a table. Tell the students that MS Word 2010 allows to apply borders to tables and cells as well as to shade the cells and table.

Make the students understand that Word offers some built-in formats as Table Styles to apply to a table.

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 any three categories of Shapes in MS Word 2010.
- Q. What do you mean by formatting a shape?
- Q. What does Add Text option do?
- Q. What does Bevel do?
- Q. What is ClipArt?
- Q. Define Symbols.
- Q. What is a table?
- Q. Define a cell.
- Q. What is the shape of the mouse pointer while selecting a cell / row / column / table?



- Q. Can more rows or columns be added to a table?
- Q. Define merging / splitting of cells.
- Q. What is the difference between moving a table and resizing a table?
- Q. What is the use of Table Styles feature of MS Word?

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 Exercise.

In Creative Assignment, activities like Hands-On and In The 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 write a paragraph in MS Word 2010 on 'Festivals of India'. The paragraph must be supported with relevant pictures.

7. Page Formatting and Mail Merge in MS Word

Teaching Objectives

Students will learn about

- ☞ Header and Footer
- ☞ Page Break and Line Break
- ☞ Indentation
- ☞ Page Orientation
- ☞ Mail Merge
- ☞ Column and Column Break
- ☞ Tabs
- ☞ Page Margin
- ☞ Page Size

Teaching Plan

Number of periods: 4

While teaching this chapter, tell the students that formatting refers to the appearance of a document. Tell the students that a particular word or phrase in a document can be looked for with the help of Find feature.

Tell them that MS Word can go one step ahead and can replace that particular word or phrase by another word or phrase as required by the user using the Replace feature.

Demonstrate the steps to use Find and Replace features.

Explain to the students that line spacing means the blank space between two lines in a paragraph.

Further tell them that the paragraph spacing means the blank space between two consecutive paragraphs in a document.

Activity can be created on the Orientation as Take two printouts in different orientations and display them in front of the class to demonstrate the difference between orientations.

Tell the students that page margin is the white space all around the printed area of the paper.

Make the students understand how they can modify page margin settings for their document.

Introduce to the students the concept of orientation as the side of the paper along which the content of the document will be printed.

Tell the students about different types of orientations.

Show to them the steps involved in changing the page orientation in a document.

Introduce the term watermark as the faded text or image behind the main text of the document.

Demonstrate the steps involved in inserting text and image as watermarks in your document.

Show to the students the main course book where book name and chapter name are appearing at the bottom of each page. Tell the students that this is called Footer of a page.

Make them understand that if the same or some other text appears on top of each page, it is called Header.

Demonstrate the steps involved in adding header and footer to a text document and tell them the various type of information can be shown as header and footer.

Make the students that mathematical equations can be easily inserted in a document.

Show to the students the steps involved in inserting mathematical equations.

Make the students understand the steps involved in inserting a SmartArt in Word are same as those discussed in inserting a SmartArt in PowerPoint.

Introduce to the students Mail Merge as the feature used to create personalized letters to be sent to many persons.

Tell them the various steps involved in creating a mail merge (refer Suggested Activity also).

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 difference between Find and Replace features?
- Q. What is the meaning of Line Spacing?
- Q. What is the meaning of Paragraph Spacing?
- Q. What do you mean by page orientation?
- Q. What are page margins?
- Q. Define a watermark.
- Q. What is the difference between header and footer in a document?
- Q. Which tab is used to add header/footer to a document?
- Q. What do you mean by Mail Merge?
- Q. How is mail merge helpful?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 56 and 57 of the main course book as Exercise.

In Creative Assignment, activities like Hands-On and In The 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 create an electronic invitation (personalized) for inviting middle school teachers to a thank you performance organized by Grade 6-8 students.

8. Introduction to Internet

Teaching Objectives

Students will learn about

- ☞ Uses of internet
- ☞ Internet terms
- ☞ Requirements for an internet connection
- ☞ Internet Explorer

Teaching Plan

Number of periods: 2

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 56 and 57 of the main course book as Exercise.

In Creative Assignment, activities like Hands-On and In The 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 paste a picture of Internet Explorer in their computer notebook / practical file and label its components and tools discussed in the chapter.

