

# LESSON PLAN

Touchpad iPRIME Ver 1.1

Class-6

## 1. Categories of Computers and Computer Languages

### Teaching Objectives

Students will learn about

- ☞ Categories of Computers
- ☞ Computer Languages
- ☞ Working of Language Translators
- ☞ Some others Special Computers
- ☞ Language Translator

### Teaching Plan

**Number of periods: 2**

While teaching this chapter, tell the students that how computers are classified on basis of their

- Type
- Purpose
- Size, speed, processing power and price

Tell the students about classification of computers on basis of their type or functioning:

- Analog Computers
- Digital computers
- Hybrid computers.

Explain to the students about classification of computers on basis of their purpose:

- General purpose computers
- Special purpose computers

Tell the students about classification of computers on basis of their size, speed and processing power:

- Microcomputers – a. Desktop, b. Laptop, c. Tablet
- Minicomputer
- Mainframe computer
- Supercomputers

Share with the students the importance and usefulness of some other special computers:

- Embedded computers – a. Digital camera, b. ATM, c. Microwave
- Handheld computers – a. Smartphone, b. PDA, c. Smart watch, d. Gaming consoles.

Give a brief account of different computer languages:

- Low level languages – a. Machine language, b. Assembly language



- High level language – a. 3GL, b. 4GL, c. 5GL

Tell the students about advantages and disadvantages of HLL.

Explain to the students about the concept of language translator and its working

### Extension

Ask the students some oral questions based on this chapter.

- Q. Name some ways in which computers are classified
- Q. What is a minicomputer?
- Q. what is a microcomputer?
- Q. differentiate between analog and digital computers?
- Q. what are mainframe computers? What are they used for?
- Q. How many generations of computers languages are there?
- Q. Give three characteristic features of Third / Fourth / Fifth generation of computer languages.

### 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 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 16 and 17 of the main course book. 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

Ask the students to prepare a collage of different models of computers classified on the basis of size, speed and processing power

## 2. File Management—Organisation of Data

### Teaching Objectives

Students will learn about

- ☞ Copying files /folders from one drive to another drive
- ☞ Moving files /folders from one drive to another drive
- ☞ Copying files/folders from one device to another device
- ☞ Copying file or folder from a pen drive to computer
- ☞ Sorting of files
- ☞ Searching of files or folders
- ☞ Using multiple applications
- ☞ Different file formats



## Teaching Plan

**Number of periods: 4**

While teaching this chapter, tell the students that how computers work on data and how data in a computer can be arranged in the form of files or folders.

- Copying files /folders from one drive to another drive
- Moving files /folders from one drive to another drive
- Copying files/folders from one device to another device
- Copying file or folder from a pen drive to computer

Tell the students about sorting of files and different ways in which files and folders can be arranged in a computer.

- Sorting of files – Sorting by name, Sorting by size, Sorting by type, Sorting by date of creation or modification.

Explain to the students about searching of files or folders

- Searching of files using windows explorer
- Searching for a file using wildcard characters – Searching of files using asterisk(\*), Searching of files using question mark (?)

Tell the students about using multiple applications in windows

Explain to the students about different file formats used in windows

- JPEG      • MP4      • MP3      • DOCX      • XLSX      • PPTX

## Extension

Ask the students some oral questions based on this chapter.

- Q. Explain how data can be arranged in a computer
- Q. What is the procedure to copy files from one drive to another drive
- Q. what is the difference between copying and moving a file/folder
- Q. What is the procedure to copy file/folder using a pen drive to computer?
- Q. What do you mean by sorting of files? What are some ways in which data can be sorted?
- Q. How many ways are there to search a file or folder using wildcard characters?
- Q. Explain following file formats:

- JPEG      ■ MP4      ■ DOCX      ■ XLSX      ■ PPTX

## Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 27, 28 and 29 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 29 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 29 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 explore different drives in their computers (under teachers or parents supervision) and sort files according to

- File type      • Date      • name



### 3. Word Processor—Tabular Representation

#### Teaching Objectives

Students will learn about

- |                            |   |
|----------------------------|---|
| ✎ Inserting a table        | ✎ Selecting cells, rows, columns and tables |
| ✎ Adding and deleting rows | ✎ Adding and deleting columns               |
| ✎ Changing column width    | ✎ Merging cells                             |
| ✎ Splitting cells          | ✎ Moving and resizing tables                |
| ✎ Border and Shading       | ✎ Table styles                              |

#### Teaching Plan

**Number of periods: 3**

While teaching this chapter, 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
- Delete rows from a table
- Add more columns to a table
- Delete columns from a table
- Change width of a column

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. What is a table?

Q. Define a cell.



- Q. What is the shape of the mouse pointer 0 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 40 and 41 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 41 and 42 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 42 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Encourage the students to do Project Work B given at end of the main course book.

### Suggested Activity

Ask the students to create a comparative mark sheet for your marks in different subjects for last three classes.

## 4. Word Processor—Mail Merge

### Teaching Objectives

Students will learn about

- ☞ Mail Merge
- ☞ Creating mail merge

### Teaching Plan

**Number of periods: 4**

While teaching this chapter, tell the students introduce to the students Mail Merge as the feature used to create personalized letters to be sent to many persons.

Explain the advantages of mail merge and how it helpful in creating personalized letters to be sent to many persons

Explain the components of mail merge. 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 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 47 and 48 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 48 and 49. Help the students to solve these question.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 49 will enhance the ability of the students and serve as Subject Enrichment activities.

## 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.

# 5. Presentation—Visual Effects

## Teaching Objectives

Students will learn about

- ☞ Slide views
- ☞ Animation
- ☞ Adding sound
- ☞ Importing data from other applications
- ☞ Slide transition
- ☞ Uses of media clips and action buttons
- ☞ Adding action button

## Teaching Plan

**Number of periods: 3**

While teaching this chapter, tell the students that MS PowerPoint 2010 is used to create electronic presentations.

Tell the students that a theme is a set of predefined layouts that can be used to add a professional touch to the presentations.

Demonstrate the steps to choose a theme, change theme colours, fonts and backgrounds.

Show to the students how sound and audio files can be inserted into a presentation.

Demonstrate the steps involved in inserting a video file into a presentation. (refer Suggested Activity also).

Explain to the students that transitions are used to determine how the presentation moves from one slide to the next.

Tell the students about the various categories of slide transitions available in MS PowerPoint.

Demonstrate the application of transitions to slides in a presentation.

Introduce animation as the feature that gives a moving effect to text and other objects on the slide.

Show to the students the steps involved in applying custom animation to various objects on a slide.

Tell the students the animation effects applied to different objects on a slide can be reordered.

Share with the students that running a presentation is called Slide Show.

Demonstrate to the students the various steps involved in running a slide show.

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 theme?
- Q. What do you mean by customizing a theme?
- Q. Can you change background, colour, fonts, etc. of a theme?
- Q. What type of audio files can be inserted into a presentation?
- Q. Can we add video files on a slide?
- Q. Define transition.
- Q. How many transitions can be applied to a slide?
- Q. What happens if more than one slide transitions are added to a slide?
- Q. What is meant by animation in MS PowerPoint?
- Q. Can we reorder the animations applied to different objects on a slide?
- Q. What is a Slide Show?

## Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 60, 61 and 62 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 61. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 62 will enhance the ability of the students and serve as Subject Enrichment activities.

## Suggested Activity

Divide the class into two teams. Ask one team to prepare charts on various types of pollution. Ask the other team to prepare a PowerPoint presentation on the same topic. Make the students share the benefits enjoyed and limitations faced by each team while working on their project.

# 6. Scratch Programming—Game Creation

## Teaching Objectives

Students will learn about

- |  |                                     |
|--|-------------------------------------|
| ☞ Starting Scratch                       | ☞ Choosing a sprite                 |
| ☞ Deleting a sprite                      | ☞ Resizing the sprite               |
| ☞ Choosing a backdrop                    | ☞ Scratch blocks                    |
| ☞ Full screen mode                       | ☞ The pen block                     |
| ☞ Drawing a square                       | ☞ Drawing a polygon                 |
| ☞ Drawing patterns                       | ☞ Use of conditional control blocks |
| ☞ Use of forever and forever – If blocks |                                     |

## 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.

Tell the students that Scratch allows changing the appearance of the selected sprite.

Share with the students the various blocks present under Looks category.

Demonstrate to the students the steps to change appearance of a selected sprite.

Tell the students that Scratch allows drawing shapes.

Share with the students the various blocks present under Pen category.

Demonstrate to the students the steps to draw shapes on the stage with the help of a sprite.

Tell the students that decision making can be done by using If...then...Else Control block.

Share with the students that Forever Control block is used to repeat a script continuously.

Make the students understand that Variable blocks are used to store values and strings.

Demonstrate to the students the steps to create variables.

Explain the use and purpose of various Operator blocks under the categories Arithmetic operators (+, -, \*, /), Relational operators (<, >, =) and Logical operators (AND, OR, NOT).

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. Define Sprite / Stage / Scripts Area / Green Flag / Stop button.
- Q. What are Looks blocks?
- Q. What is the use of Pen blocks?
- Q. What is the use of Operators blocks?.

### Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 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 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 develop the story of Rabbit and Tortoise in Scratch.

## 7. HTML—An Introduction

### Teaching Objectives

Students will learn about

- |                                     |                            |
|-------------------------------------|----------------------------|
| ☞ What is HTML?                     | ☞ HTML tags and attributes |
| ☞ Rules for writing HTML codes      | ☞ HTML document structure  |
| ☞ Creating and saving HTML document | ☞ Basic HTML tags          |
| ☞ Designing a web page              | ☞ Editing an exiting HTML  |

### Teaching Plan

**Number of periods: 5**

While teaching this chapter, tell the students that websites consist of millions of pages called web pages which contain text, graphics, audios, videos and links to other pages.

Introduce Hypertext Markup Language (HTML) as language that describes the structure of a web page.

Make the students understand the meaning of the terms like hypertext and markup language.

Tell the students about the tools needed for working with HTML.

Make the students aware about the different types of HTML editors – WYSIWYG editor and Text editor.

Familiarise the students with basic HTML terms like tags, container tags, empty tags, block level tags, text level tags and attributes.

Tell the students about the concept of nesting of tags.

Share with the students the general rules followed for writing HTML codes.

Show to the students a HTML document and make them understand and identify the various sections and structure of the HTML document.

Demonstrate to the students the steps involved in:

- Creating a HTML document
- Saving a HTML document
- Previewing a web page.

Tell the students about the meaning and use of basic HTML tags covering <HTML>, <HEAD>, <TITLE> and <BODY> tags along with their attributes.

Tell the students about some more HTML tags like Heading, Paragraph, Line Break, Horizontal Ruler (and its attributes), Bold, Italic, Underline, Superscript and Subscript tags.

Share with the students about the use of <FONT> tag and its attributes.

Demonstrate to the students the steps involved in designing a web page using the various HTML tags discussed.

Show the students the method of editing an existing HTML document.

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 HTML?
- Q. Define hypertext and Markup language.
- Q. Name the different types of HTML editors.
- Q. What are tags and attributes?
- Q. State the rules followed while writing HTML codes.
- Q. Name the text editor most commonly used to write HTML codes.
- Q. State the use of <HTML> / <HEAD> / <BODY> / <TITLE> tags?
- Q. What is the difference between container tags and empty tags?
- Q. What attributes can be taken by the <FONT> tag?

## Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 92, 93 and 94 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 94. Help the students to solve these questions.



In Creative Assignment, activities like Fun in Lab given on Page 95 will enhance the ability of the students and serve as Subject Enrichment activity.

### Suggested Activity

Ask the students to develop a similar web page in HTML.

## Basics of writing chemical formulas

The valency is used to write chemical formulas. The valency is written at the top right corner of the chemical symbol of the element. For example, valency of Sodium is 1 and is denoted as:

$$\text{Na}^{1+}$$

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A chemical reaction is denoted as:

$$\text{C} + \text{O}_2 \longrightarrow \text{CO}_2$$
$$\text{H}_2\text{O} + \text{SO}_2 \longrightarrow \text{H}_2\text{SO}_4$$

## 8. Internet Services and Cyber Security

### Teaching Objectives

Students will learn about

- ☞ Internet services
- ☞ Cyber security
- ☞ Cyber crime
- ☞ Hacking and Cracking

### Teaching Plan

**Number of periods: 3**

While teaching this chapter, tell the students that internet is used for a wide variety of services including communication, shopping and banking.

Tell the students that internet services allow us to perform different types of operations over the internet.

Explain how internet plays an important role in communication through e-mails, video conferences, voice-over-internet protocol, chat, social network, newsgroup and blogs.

Demonstrate the steps to use:

- VoIP services
- Blogging

Share with the students how internet is used to:

- Send greetings in the form of e-greetings
- Send and receive money through e-banking
- Store data and information through cloud storage

Introduce Cyber Security as the process of protecting computer resources such as networks, devices, programs and data from unauthorized access, damage or attack.

Share with the students the reasons for increase in cyber-crimes.

Introduce cyber-crime as a criminal activity in which computers are used to do crimes.

Explain the different types of cyber-crimes covering data diddling, phreaking, cloning and carding.

Make the students understand the difference between hacking (practice of modifying computer hardware and software for legal purposes) and cracking (practice of modifying computer hardware and software for illegal purposes).

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 some internet services.
- Q. Define Video Conferencing / VoIP.
- Q. What are the advantages and disadvantages of VoIP?
- Q. Define chatting / social networking / blogging.
- Q. What is meant by cloud storage?
- Q. What are the different types of cyber-crimes?
- Q. Differentiate between hackers and crackers.

### Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 104, 105 and 106 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 106 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 106 and 107 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 different types of major cyber-crimes committed in last one year.

## 9. E-mail an Introduction

### Teaching Objectives

Students will learn about

 E-mail

 Emoticons and Acronyms



## Teaching Plan

**Number of periods: 4**

While teaching this chapter, make the students recall E-mail as the process of exchanging messages electronically through communications network by using a computer.

Share with the students the advantages and disadvantages of e-mail.

Explain the components of an e-mail address to the students.

Demonstrate in detail the steps involved in:

- Creating an e-mail account
- Signing in to an e-mail account
- Sending an e-mail (with reference to fields like To, Cc, Bcc and Subject)
- Attaching files to an e-mail
- Reading a received e-mail
- Signing out from the e-mail account (tell them the importance of this step)

Introduce the terms emoticons (representation of facial expressions), acronyms (word formed from initial letters of a multi-word name) and netiquettes (set of rules to be followed for internet communication).

Write some commonly used emoticons and acronyms on the class board to elaborate the concept.

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 an e-mail.
- Q. What do you understand by emoticons?
- Q. What is an acronym?
- Q. What are netiquettes?
- Q. State any three netiquettes.

## Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 115 and 116 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 116 and 117. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 117 will enhance the ability of the students and serve as a Subject Enrichment activity.

## Suggested Activity

Ask the students to create an e-mail account. Tell them to design a birthday invitation card and send this card as an attachment to ten friends and/or relatives.

# 10. More on Internet

## Teaching Objectives

Students will learn about

- ☞ E-commerce
- ☞ Blogging
- ☞ Podcasting
- ☞ Google drive

## Teaching Plan

**Number of periods: 3**

While teaching this chapter, tell the students about advanced features of internet such as:

- cloud storage
- E commerce
- Blogging
- podcasting

Tell the students about E-commerce and different modes of payment available at different E-commerce platforms

- Debit or credit cards
- Net banking
- E-wallet
- Cash on delivery

Demonstrate the steps to shop online on any e- commerce website

Show to the students what is a blog and explain blogging

Demonstrate the steps to create a blog on blogger.com

Explain to the students what is podcasting

Tell the students about the various cloud storage services

Demonstrate the application of Google drive

Show to the students the steps involved in organizing files and folders in Google drive.

- Creating a folder
- Moving a file to a folder
- Duplicating a file
- Removing a file
- Opening a file to work on it
- Sharing a file or folder

Ask the students some oral questions based on this chapter.

Q. What is e-commerce



- Q. What do you mean by cash on delivery
- Q. What is a blog?
- Q. Who is a blogger?
- Q. What do you mean by a podcast
- Q. Define cloud storage service
- Q. What is Google docs

### **Evaluation**

After explaining the chapter, let the students do the course book exercises given on Pages 133 and 134 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 134 and 135 Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 135 will enhance the ability of the students and serve as Subject Enrichment activities.

### **Suggested Activity**

Divide the class into two teams. Ask one team to prepare charts on various e-commerce websites. Ask the other team to prepare a online blog on the same topic. Make the students share the benefits enjoyed and limitations faced by each team while working on their project.