LESSON PLAN

Touchpad PLUS Ver 1.0

Class-6

1. Computer Software

Teaching Objectives

Students will learn about

- ☞ Software
- ☞ Types of Software

Teaching Plan

Number of periods: 3

While teaching this chapter, tell the students that a computer is an electronic device that performs diverse operations with the help of instructions to process the data in order to achieve desired results.

Tell the students that a computer system is made up of hardware (physical components) and software (set of instructions that make the computer perform tasks).

Make them understand the different types of software as System Software (comprising of Operating System, Programming Software and Utility Software) and Application Software (comprising of General Purpose Software and Customised Software).

Tell the students about different types of General Purpose Software like word processors, spreadsheets, presentation software, DBMS, DTP software, image processing software and multimedia processors (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 a computer?

Q. What is software?

Q. What are the different types of software?

Q. How is system software different from application software?

Q. What is the benefit of using customized software?

Q. Give examples each of:

- Utility software
- Word processor
- Operating system
- Spreadsheets

- Presentation software
- DBMS, etc.
- DTP software

Evaluation

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

In Creative Assignment, activities like Fun in Lab given on Page 14 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to collect pictures of interfaces of various types of application software and paste them on a chart paper in a hierarchical chart as shown on Page 9 of the course book.

2. Windows 7

Teaching Objectives

Students will learn about

- ☞ Windows 7 features
- ☞ Date and Time settings
- ☞ Mouse settings
- ☞ Components of an open window
- ☞ Control Panel
- ☞ Taskbar and Start Menu settings
- ☞ Sound settings
- ☞ Disk Cleanup

Teaching Plan

Number of periods: 4

While teaching this chapter, tell the students that Windows 7 is an operating system.

Tell the students about some unique and new features introduced in Windows 7 – Sneak, Aero Flip, Shake, Snap and Jump Lists (refer Suggested Activity also).

Explain to the students about the usefulness and settings provided in Control Panel for covering

- System and Security
- Hardware and Sound
- Programs
- Appearance
- Clock, Language and Region

Demonstrate to the students the steps needed to change date and time of the computer system.

Explain the meanings and use of Taskbar, Notification Area and Start Menu.

Show the students about various settings that can be made in Taskbar and Start Menu.

Explain to the students the various settings that can be made for mouse pointer under Buttons, Pointers and Pointer Options tabs of Mouse Properties dialog box.

Demonstrate the various ways in which sound settings of the speakers attached to the computer can be controlled.

Open a window of MS Word and explain the various components of the window covering title bar, control buttons, ribbon, work area, scroll bars, status bar and border.

Tell the students about the importance of Disk Cleanup utility and steps to run this utility on the computer system.

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 an operating system?

Q. What is Windows 7?

Q. What is the use of these features of Windows 7?

- Sneak
- Aero flip
- Jump list

Q. What is Control Panel?

Q. What is the difference between Taskbar and Notification Area?

Q. Can we change date and time of the computer system?

Q. What are the various tabs in Mouse Properties dialog box?

Q. Name some components of an open window.

Q. What is the use of Disk Cleanup utility?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 25 and 26 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 26. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 27 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to collect information from the Internet about earlier versions of Windows like Windows XP and Windows Vista. Tell them to make a comparative table about the various features available in these earlier versions and Windows 7.

3. More on MS PowerPoint 2010

Teaching Objectives

Students will learn about

- ☞ Applying Themes
- ☞ Adding Video
- ☞ Custom Animation
- ☞ Adding Sound
- ☞ Slide Transition
- ☞ Running a Slide Show

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 36, 37 and 38 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 38 and 39. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 39 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.

4. More on MS Word 2010

Teaching Objectives

Students will learn about

- Find and Replace
- Page Margin
- Watermark
- Inserting mathematical equations
- Mail Merge
- Line and Paragraph Spacing
- Page Orientation
- Header and Footer
- Inserting SmartArt

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 from 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 51 and 52 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 53. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Pages 54 and 55 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. Learning MS Excel 2010

Teaching Objectives

Students will learn about

- Starting MS Excel 2010
- Creating a new workbook
- Modifying data
- Inserting rows / columns
- Formatting spreadsheets
- AutoFill
- Components of MS Excel 2010
- Entering data in a worksheet
- Column width and Row height
- Merging cells
- Customize Worksheet tab

Teaching Plan

Number of periods: 4

While teaching this chapter, tell the students that MS Excel is an application software that helps us to store and analyse data.

Demonstrate the steps to start MS Excel 2010.

Show an active window of MS Excel 2010 and explain the meaning and use of the various components of MS Excel 2010 covering title bar, file tab, quick access toolbar, ribbon, formula bar, name box, worksheet window, status bar, row, column, cell, row and column headings, active cell, mouse pointer, worksheet tab and workbook.

Show to the students how to create a new workbook in Excel.

Tell the students that to enter data in a cell, simply click on the cell and enter data.

Tell the students the methods of modifying data by cut, copy and paste.

Explain to the students the steps involved in changing row height and column width – both manually and automatically.

Tell the students that Excel allows inserting blank rows and columns at the required place in the worksheet.

Demonstrate to the students how two or more cells can be merged into one and also how a cell can be split up into two or more cells (refer Suggested Activity also).

Explain some worksheet formatting features of Excel like

- Word wrap – displaying multiple lines of text in a cell
- Format numbers – applying various data types to the cells
- Cell borders – boundary around a cell or a series of cells
- Cell styles – Pre-defined cell border, colour and formatting
- Cell fills – adding colours or shades in the cells

Show to the students the steps involved in applying all of these formatting features on a worksheet.

Explain to the students that worksheet tab can be customized by changing its default name and colour.

Introduce to the students AutoFill feature of Excel as automatically filling a series of data in the worksheet and the steps involved in the same.

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 MS Excel software?
Q. Name any five components of an Excel window.
Q. What is the difference between Cut and Copy options?
Q. What does it mean when data in a cell is displayed as #####?
Q. Define merging of cells.
Q. Define splitting of cells.
Q. What is wrap text feature of Excel?
Q. Name any three number formats available in Excel.
Q. What is meant by border of a cell?
Q. What is the use of AutoFill feature?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 68 and 69 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 69 and 70. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Pages 70 and 71 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to design their class time-table in MS Excel 2010.

6. Introduction to Flash CS6

Teaching Objectives

Students will learn about

- ☞ Starting Flash CS6
- ☞ Tools panel
- ☞ Saving a Flash file
- ☞ Exiting Flash
- ☞ The Flash workspace
- ☞ Creating a new Flash document
- ☞ Opening a Flash file

Teaching Plan

Number of periods: 2

While teaching this chapter, tell the students that Flash is an application used in multimedia graphic programs.

Show to the students the steps to be taken to start Adobe Flash CS6.

Start Flash on a computer and familiarize the students with the Flash workspace and its various components covering:

- Menu bar – various options are categorized under menus.
- Stage – the white rectangular area of the workspace.
- Pasteboard – the grey area around the stage.
- Timeline panel – used to control images and sounds.
- Properties panel – used to define properties of various objects and controls.
- Tools panel – used to draw, paint, select and modify artwork and view of stage.

Introduce to the students the concepts of frame (single step of animation), layers (a way to organize elements of a movie) and Options area (at the bottom of the tools panel used to modify tool controls).

Discuss with the students the names of the various tools in the Tools panel and tell them that the name of the tool can be seen by placing the mouse pointer over the tool (refer Suggested Activity also).

Demonstrate the steps to create a new Flash document.

Show to the students the steps involved in saving a file in Flash CS6.

Tell the students that an existing file of Flash can be opened just like any other software as File → Open.

Show to the students the various ways in which Flash software can be closed after saving the work done.

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 Adobe Flash CS6 used for?

Q. What are the various components of the Flash workspace?

Q. Define stage.

Q. What are the various panels in Flash?

Q. What is the use of the Tools panel?

Q. What is the file type selected from New Document dialog box?

Q. What is the extension added to Flash CS6 files?

Q. What is the shortcut to reach Open dialog box?

Q. State any two methods of exiting Flash.

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 81 and 82 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 82 and 83. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 83 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to draw a labeled diagram of the Flash Tools panel in your computer practical file or notebook.

7. Using Tools in Flash CS6

Teaching Objectives

Students will learn about

- Selection Tool
- Pencil Tool
- Rectangle Tool
- PolyStar Tool
- Paint Bucket Tool
- Colour Tools
- Line Tool
- Pen Tool
- Oval Tool
- Eraser Tool
- View Tools

Teaching Plan

Number of periods: 3

While teaching this chapter, tell the students that the various tools present in the Tools panel are quite helpful in creating drawings in Flash.

Demonstrate the use of some important drawing tools along with some of their important properties to be defined in Flash CS6 covering:

- Line Tool – used to draw straight line also mention Selection Tool between two points. The properties to be defined are Stroke Color, Stroke Height, Stroke Style and Cap.
- Pencil Tool – used to draw freehand lines and curves. The properties to be defined are Stroke Color, Stroke Height, Stroke Style and Cap.
- Pen Tool – used to draw straight lines or smooth flowing curves. The properties to be defined are Stroke Color, Stroke Height, Stroke Style and Cap.
- Rectangle Tool – used to draw closed rectangles and squares. The properties to be defined are Stroke Color, Fill Color, Stroke Height and Stroke Style.
- Oval Tool – used to draw closed circular shapes. The properties to be defined are Stroke Color, Fill Color, Stroke Height and Stroke Style.
- PolyStar Tool – used to draw closed shapes like triangles and those having five or more sides. The properties to be defined are Style and Number of Sides.
- Eraser Tool – used to remove unwanted parts or whole objects from the stage. The application of different properties of eraser (Faucet and Drag modes) and different types of modes (Normal, Fills, Behind, Selected Fills and Inside) need to be shown to the students.
- Paint Bucket Tool – used to fill colour in closed shapes. The properties to be defined are Fill Color.
- Text Tool – used to place text blocks on stage. The properties to be defined are Family, Style, Size, Color and Spacing.

Explain the use of the View tools in Flash CS6 covering:

- Hand Tool – used to move to different parts of the stage without changing the view of the stage.
- Zoom Tool – used to adjust magnification of the stage.

Show to the students the functions of Colour tools in Flash covering:

- Stroke Color – used to change colour of the boundary of a shape.
- Fill Color – used to change the inside shape color.

(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 use of Tools panel?
Q. What is the use of Pen / Pencil / Text / Eraser tools?
Q. What are the different properties that need to be defined for Line / PolyStar / Rectangle / Oval tools?
Q. Which key is pressed to draw a square or a circle?
Q. Under which tool is the Oval / PolyStar tool hidden?
Q. Name three modes in which Eraser tool is used.
Q. What is the use of View tools?
Q. Name the two Colour tools in Flash.

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 91, 92 and 93 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 93. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Pages 93 and 94 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to create a drawing of robot in Flash CS6 using various tools available in the Tools panel.

8. Computer Programming

Teaching Objectives

Students will learn about

- ☞ Computer Program
- ☞ Language Translator
- ☞ Flowcharts
- ☞ Computer Languages
- ☞ Algorithm

Teaching Plan

Number of periods: 3

While teaching this chapter, tell the students that computer needs a special language through which we can communicate with it.

Ask the students to learn some important computer terms like:

- Program – a set of instructions given to CPU in a pre-defined sequence to complete a task.
- Computer language – means by which data and instructions are transmitted to the computer.

- Syntax – the grammar of a computer language.
- Programming – process of writing a program.
- Programmers – people who write computer programs.

Tell the students that computer languages are categorized as low-level languages (machine dependent) and high level languages (machine independent).

Share with the students that low level languages are further classified as machine language (first generation language made up of 0s and 1s) and assembly language (second generation language made up of alphanumeric symbols).

Make the students learn that the high level languages are further classified as third generation languages (examples: BASIC, COBOL, FORTRAN, PASCAL, etc.), fourth generation languages (examples: Visual Basic, Oracle, SQL, JAVA, C++, etc.) and natural language or fifth generation languages (involving artificial intelligence).

Tell the students the advantages and disadvantages of high level languages over low level languages.

Introduce the concept of language translators as software that convert a high level language into a machine language covering:

- Assembler – used to translate assembly language into machine language.
- Compiler – used to convert source program at once into machine language before executing it.
- Interpreter – used to convert source program one line at a time into machine language before executing it.

Introduce algorithms as set of steps in a sequential and ordered manner to solve any problem or to complete a task.

Encourage the students to write algorithms involving some basic tasks like getting ready for school or involving mathematical problems like addition and subtraction of numbers (refer Suggested Activity also).

Introduce flowcharts as diagrammatic representation of an algorithm.

Explain the shapes and usage of flowchart symbols covering Start / Stop box, Process box, Decision box, Input / Output box, Flow lines and Connectors.

Make the students learn the rules for drawing a flowchart.

Encourage the students to draw flowcharts for the algorithms written earlier.

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 program?

Q. Who is a programmer?

Q. What do you mean by computer language?

Q. What is the meaning of syntax?

Q. What are the categories of computer languages?

Q. Define compiler / interpreter/ assembler.

Q. What is the purpose of developing algorithms and flowcharts?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 104 and 105 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 106 and 107. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 107 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to write algorithms and draw corresponding flowcharts to:

- Calculate area of circle, $A = \pi r^2$
- Calculate Volume of cube, $V_{cube} = (side)^3$
- Calculate Volume of cuboid, $V_{cuboid} = length \times breadth \times height$

9. Visual Basic 9

Teaching Objectives

Students will learn about

- ☞ Microsoft Visual Basic
- ☞ Toolbox
- ☞ Developing Sum Calculator Application
- ☞ Starting Visual Basic
- ☞ My First Application

Teaching Plan

Number of periods: 4

While teaching this chapter, tell the students about a brief history of evolution of computer programming.

Introduce Microsoft Visual Basic as a software used to develop Windows based applications and software.

Demonstrate the steps involved in starting Visual Basic.

Tell the students about drag and drop feature of Visual Basic.

Familiarize the students with the Toolbox and some commonly used tools covering Pointer, Label, Button, TextBox, CheckBox, RadioButton, ListBox, ComboBox, PictureBox, Date TimePicker and Month Calendar.

Make the students understand the various situations in which each of these tools is used.

Demonstrate to the students the process of developing a simple Visual Basic application titled as 'My First Application' (refer Pages 106 to 108 of the course book).

Encourage the students to develop Sum Calculator Application closely following the steps detailed on Pages 108 to 110 of the course book.

Help the students in developing the application. (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. Who claims the credit for computer programming?

Q. For which machine was the first computer program developed?

Q. List three benefits of using MS Visual Basic.

Q. What is Toolbox?

Q. What do you mean by drag and drop feature of Visual Basic?

Q. Give use of these tools:

- Pointer
- Label
- Button
- TextBox
- ListBox
- Month Calendar
- PictureBox

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 116, 117 and 118 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 118. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 118 and 119 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to develop a basic application where the teacher enters the marks of the students in five subjects and the application calculates total marks scored, average marks, percentage and highest marks for each student.