LESSON PLAN

1. Evolution of Computers

Teaching Objectives

Students will learn about

☞ Early counting tools

☞ Abacus – First calculating device

☞ Pascaline Adding Machine

☞ Leibniz Step Reckoner

☞ Charles Babbage's Analytical Engine

☞ Lady Ada Lovelace's programs

☞ Herman Hollerith's Tabulating Machine

☞ Computer generations

Teaching Plan   **Number of periods: 2**

While teaching this chapter, tell the students that the computer is an outcome of labour of a number of minds.

Tell the students about the early counting tools like knots tied on a rope, marks carved in clay, fingers, pebbles, etc.

Explain to the students about invention of Abacus – the first calculating device.

Share with the students the importance and usefulness of Abacus even today and is being taught in schools also.

Give a brief account of these calculating machines:

• Pascaline Adding Machine

• Leibniz Step Reckoner

Tell the students about Charles Babbage, the father of computers, and his invention of Difference Engine which was later improved by him into Analytical Engine, the first working model of a mechanical computer.

Inform the students about Lady Ada Lovelace, accredited as the first computer programmer as the programmer to the Analytical Engine of Charles Babbage.

Share with the students about Herman Hollerith who built Tabulating Machine and later his company became a part of IBM.

Explain to the students about the concept of generations of computers and need for classification on this basis.

Share with the students the characteristic features of the different generations of computers covering:

- First Generation (1940-1955) – MARK-I, ENIAC, UNIVAC
- Second Generation (1956-1964)
- Third Generation (1965-1975)
- Fourth Generation (1976-1985)
- Fifth Generation (1986-Present)   (See Suggested Activity also)

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

Ask the students some oral questions based on this chapter.

Q.   Name some early counting tools.

Q.   What is Abacus?

Q.   Who invented Adding Machine?

Q.   Which is the first mechanical calculator?

Q.   Which is the first mechanical computer?

Q.   Who is called the Father of Computers?

Q.   Why is Lady Ada Lovelace famous?

Q.   How many generations of computers are there?

Q.   What was the technology used in First / Second / Third / Fourth / Fifth generation of computers?

Q.   Give three characteristic features of First / Second / Third / Fourth / Fifth generation of computers.

Evaluation

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

In Creative Assignment, activities like Fun in 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 prepare a collage of different models of computers depicting its evolution over the generations.

2.   Personalizing Windows 7

Teaching Objectives

Students will learn about

☞   Getting started with Windows 7

☞   Components of Windows 7 desktop

☞   Changing desktop background

☞   Setting the screen saver

☞   Changing the color scheme

☞   Gadgets

Teaching Plan   **Number of periods: 3**

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

Introduce booting as the loading of computer's memory and Windows 7 when the computer is switched on.

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

Familiarize the students with the components of Windows 7 desktop covering Start button, Icons, Taskbar, Clock and Desktop background.

Explain briefly about each of these components of Windows 7.

Demonstrate to the students the further classification of Taskbar into Start button, Opened program icons and Show Desktop button.

Explain to the students the use of Start button and Start menu.

Share with the students the usefulness of Show Desktop button.

Demonstrate to the students the steps to:

•   Update system date and time through Clock.

•   Change desktop background.

Introduce the students to the concept and benefit of a screen saver.

Show to the students the steps involved in setting the screen saver.

Explain to the students how the color scheme of the windows can be changed according to the choice of the user.

Introduce Gadgets as mini tools provided by Windows 7 for quick access to various applications.

Demonstrate to the students the method of setting up, personalizing and removing gadgets like Calendar, Clock, Weather, CPU Meter, etc. (See Suggested activity also).

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

Ask the students some oral questions based on this chapter.

Q.   What is Windows 7?

Q.   Name the components of Windows 7 desktop.

Q.   What is meant by booting?

Q.   Define Desktop Background.

Q.   What are icons?

Q.   In how many parts is the Start menu divided?

Q.   Can you change the desktop background?

Q.   What is a screen saver?

Q.   Define Gadgets.

Q.   Name some gadgets provided by Windows 7.

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 26 and 27 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 28 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 28 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.

3. Know About Computer Viruses

Teaching Objectives

Students will learn about

☞   What is a computer virus?

☞   How does a computer get infected with virus?

☞   How do you know your PC has a virus?

☞   How to prevent from a virus?

☞   Antivirus software

Teaching Plan   Number of periods: 2

While teaching this chapter, tell the students that a computer virus can destroy the programs and files saved in a computer.

Introduce computer virus as a program that can infect the system and/or duplicate itself reducing the storage space.

Share examples of some computer viruses with the students.

Tell the students about the harms that may be caused by a computer virus.

Explain to the students the various methods by which a computer system may get infected with virus.

Make the students aware of the symptoms that tell that a computer system is infected by a computer virus.

Explain in detail to the students the various methods by which prevention can be taken from a computer virus.

Introduce the students to the concept of antivirus as a program developed to detect and remove virus from a computer system.

Share the names of some commonly used antivirus programs. (See Suggested Activity also).

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

Ask the students some oral questions based on this chapter.

Q.   What is a computer virus?

Q.   State any two harms caused by a computer virus.

Q.   State any two methods by which a computer may get infected by Computer Virus.

Q.   State any two symptoms that show that a computer system has been infected by a virus.

Q.   State any two ways in which the user can prevent from a computer virus.

Q.   What is antivirus program?

Q.   What is the main purpose of an antivirus program?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 33 and 34 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 34 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 34 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 any computer virus and narrate it in the class.

4.   Editing in MS Word 2010

Teaching Objectives

Students will learn about

☞   Selecting text

☞   Deleting text

☞   Inserting text

☞   Undo / Redo

☞   Cutting or Copying text

☞   Spell check

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.

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 MS Word.

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 MS Word. (See Suggested Activity also)

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

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?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 39, 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 Page 41 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in 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 write a paragraph on My Favourite Festival in MS Word 2010, check for spelling and grammar mistakes and paste a printout in the computer notebook / practical file.

5. Formatting in MS Word 2010

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

☞ Applying borders

☞ Applying shading

☞ Changing case

☞ Adding bullets and numbering

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.

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 50 and 51 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 52 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 52 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. Introduction to MS PowerPoint 2010

Teaching Objectives

Students will learn about

☞ Starting MS PowerPoint 2010

☞ Components of PowerPoint screen

☞ Creating a new presentation

☞ 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 Microsoft PowerPoint 2010 is a part of Microsoft Office 2010 package or suite.

Share with the students that it is used to create presentations.

Demonstrate to the students the steps to start MS PowerPoint 2010.

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 MS PowerPoint 2010

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

Ask the students some oral questions based on this chapter.

Q.   What is MS PowerPoint 2010?

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 MS PowerPoint 2010?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 63, 64 and 65 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 65 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 66 of the main course book will enhance the ability of the students and serve as a Subject Enrichment activity.

Ask the students to create a presentation on 'The Cartoon Character I Like The Most'.

7. LOGO Commands

Teaching Objectives

Students will learn about

☞ Repeat command

☞ Polygons

☞ Pen Commands – PU, PD, PE and PPT

☞ Maths with LOGO

Teaching Plan   **Number of periods: 3**

While teaching this chapter, tell the students that LOGO is a programming language used to draw shapes and figures.

Show them that the turtle moves according to commands given.

Demonstrate the steps to draw a square using FD and RT commands.

Explain to them that same result can be obtained by using REPEAT command.

Familiarize the students with the concept and types of polygons.

Demonstrate drawing of regular (equal sided) polygons with the help of REPEAT command.

Show them that curves and circles can also be made in LOGO using REPEAT command.

Write the syntax and use of PEN commands like:

• PENUP (PU)

• PENDOWN (PD)

• PENERASE (PE)

• PENPAINT (PPT)

Demonstrate how different drawings can be made by combining the use of various PEN commands.

Explain how mathematical operations of addition, subtraction, multiplication and division can be used in LOGO and result obtained with the help of PRINT command.

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

Ask the students some oral questions based on this chapter.

Q. What is the use of LOGO?

Q. What is turtle?

Q. What acts like pen of LOGO?

Q. Why and when do we need to use REPEAT command?

Q. What are Polygons?

Q. Name some common types of polygons along with the number of sides they have.

Q. What is the formula for calculating how much should the turtle turn while drawing a polygon?

Q. What are the various PEN commands used in LOGO?

Q. What is the syntax and use of these commands?

- PENUP
- PENDOWN
- PENPAINT
- PENERASE

Q. What are the various mathematical operations that can be done in LOGO?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 73 and 74 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 75 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 75 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 given on Page 102 of the main course book.

Suggested Activity

Ask the students to draw these shapes in LOGO.
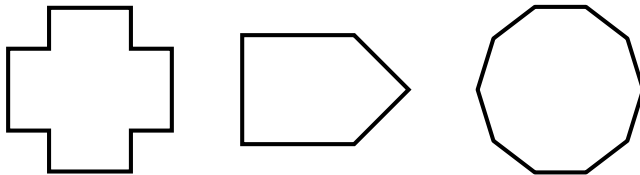
8. Introduction to Internet

Teaching Objectives

Students will learn about

☞ Uses of internet

☞ Requirements for an internet connection

☞ Internet terms

☞ 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.

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 80, 81 and 82 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 82 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 82 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.

9. Introduction to Scratch

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
☞ Saving the project
☞ Quitting the project

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.

Help the students in developing My Second Script (refer Page 90 of the main course book).

Make the students aware about the full screen mode available in Scratch.

Show to the students the steps to:

- Save a Scratch project
- Quitting the project

Ensure that the scope of Teacher's Corner given at the end of the chapter has been covered.

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.   What are the steps to save a project in Scratch?

Evaluation

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

In Creative Assignment, activities like Fun in Lab given on Page 94 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 thirsty crow in Scratch.