7

TOUCHPAD®

PLUS Ver. 1.1

Teacher's Manual

Extended Support for Teachers

ORANGE®
www.orangeeducation.in
www.thetouchpad.com

Teacher's Time Table

Periods / Days	0	I	II	III	IV		V	VI	VII	VIII
Monday						B				
Tuesday						R				
Wednesday						E				
Thursday						A				
Friday						K				
Saturday										

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	• 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	• 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	• Vocabulary reaches about 10,000 words • Vocabulary increases rapidly throughout middle childhood
Emotional/Social	• 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	• Motor skills develop resulting enhanced reflexes
Cognitive	• Applies several memory strategies at once • Cognitive self-regulation is now improved
Language	• Ability to use complex grammatical constructions enhances • Conversational strategies are now more refined
Emotional/Social	• Self-esteem tends to rise • Peer groups emerge

Age 11 - 20 Years	
Physical	• 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	• Is now more self-conscious and self-focused • Becomes a better everyday planner and decision maker
Emotional/Social	• 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 needs 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.

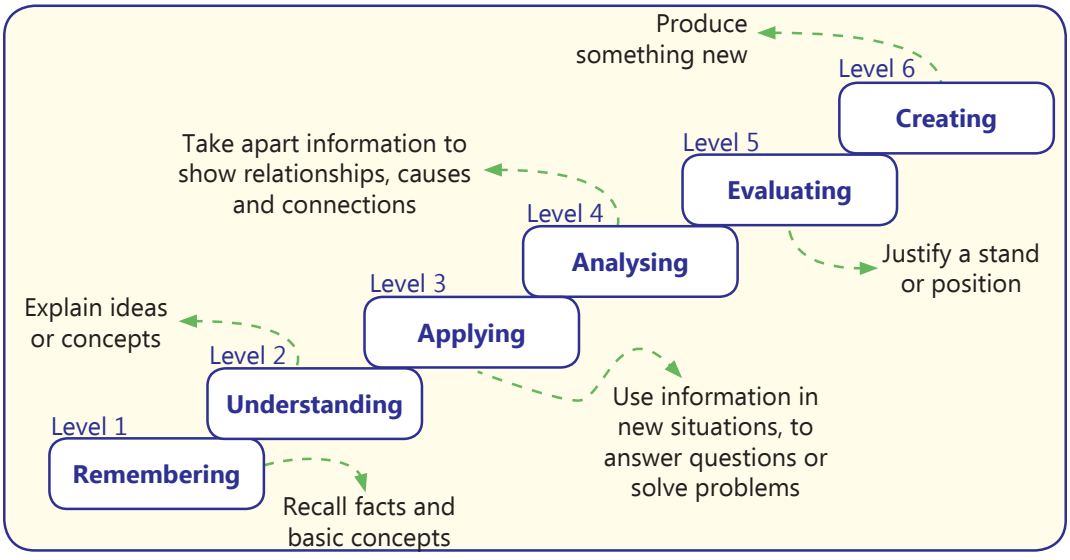
"Knowing yourself is the beginning of all wisdom."

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."

Class 7

LESSON PLAN

Touchpad Ver 1.1

1. Number System

Teaching Objectives

Students will learn about

- Number system
- Decimal to Binary conversion
- Binary to Decimal conversion
- Operations on Binary numbers

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that a number system is simply a method of counting.

Introduce base or radix as the total number of digits used in a number system.

Inform them that there are four important types of number systems – Decimal (base 10), Binary (base 2), Octal (base 8) and Hexadecimal (base 16).

Make the students recall the method of writing expanded form of a number under Decimal number system.

Inform them that just like decimal number system:

- Add one more bullet In decimal number system, the numbers are expressed using ten digits, 0 to 9 and expanded with base 10.
- In octal number system, the numbers are expressed using eight digits, 0 to 7 and expanded with base 8.
- In hexadecimal number system, the numbers are expressed using fifteen digits, 0 to 9 and A to F, and expanded with base 16.

Show to the students the method of converting:

- Decimal number to Binary number by successive division by 2 and arranging the remainders in reverse order (Refer Suggested Activity 1 also).

- Binary number to Decimal number by multiplying digits with 2 raise to the power of place of that digit starting from 0 on the left (Refer Suggested Activity 2 also).

Share the rules of binary addition, subtraction, multiplication and division.

Show to the students the method of carrying out mathematical operations on binary numbers and verifying the results by corresponding conversions to decimal numbers.

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 numbers system?

Q. What is the radix of decimal / binary / octal / hexadecimal number system?

Q. Which digits are used to express a decimal / binary / octal / hexadecimal number?

Q. What is the value of addition of binary digits 1 and 1?

Q. What is the value of subtraction of binary digits 0 and 1?

Q. Which number system is used by computers?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 13 and 14 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 15. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 15 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

1. Convert the last four digits of your parents' mobile numbers into binary number.
2. Ask the students to prepare a comparative chart with four columns, the first one listing the digits used in Hexadecimal number system and in the remaining three columns, their equivalent value under decimal, binary and octal number systems.

2. Formulas, Functions and Charts in Excel

Teaching Objectives

Students will learn about

- ☞ Formula basics
- ☞ Order of Operation
- ☞ Cell referencing in formulas and its types
- ☞ Functions
- ☞ Charts in Excel

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students that MS Excel has some built-in formulas called functions.

Share with the students the basic elements and rules of writing a formula in Excel.

Show to them the different methods of copying and pasting a formula.

Tell them the order of operation followed in Excel.

Introduce cell referencing as use of cell address while writing a formula.

Make them understand the different types of cell referencing and the difference between the three – Absolute, Relative and Mixed.

Tell the students about rules for using Functions and different categories of Functions in Excel.

Demonstrate the use of mathematical functions – SUM, PRODUCT, MOD, SQRT, INT, POWER and COUNT.

Demonstrate the use of text functions – CONCATENATE, LEFT, RIGHT, LEN, UPPER and LOWER.

Demonstrate the use of logical functions – MAX, MIN and AVERAGE.

Demonstrate the use of date functions – TODAY, MONTH, YEAR and DAY (Refer Suggested Activity 1 also).

Show the different components of an Excel chart.

Familiarize the students with the different types of chart options available.

Demonstrate the steps of:

- Creating a chart (Refer Suggested Activity 2 also).
- Modifying a chart by changing its type, layout and design.

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 are Functions in Excel?

Q. Name the different elements of a formula in Excel.

Q. What is the order of operation followed in Excel?

Q. Define cell referencing.

Q. Name some important categories of Functions.

Q. State the purpose of SUM / SQRT / MOD / COUNT / LEN / RIGHT / TODAY / MAX Function.

Q. What is the syntax of PRODUCT / INT / POWER / CONCATENATE / LEFT / UPPER / LOWER / MIN / AVERAGE function?

Q. Define charts in Excel.

Q. What is a legend?

Q. What are gridlines in a chart?

Q. When is a Line / Column / Pie / Bar / Area chart used?

Q. In Excel, can we change the type of an existing chart?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 28 and 29 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 29 and 30. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on Page 30 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

1. Ask the students to enter their last mark sheet in Excel and calculate total marks scored, average marks scored, maximum and minimum marks amongst all the marks and the number of subjects using various Functions used in Excel.
2. From the previous mark sheets of Grade 1 to 6, collect data about your attendance in various Grades. Plot a Line Chart in Excel from the data.

3. More on Excel

Teaching Objectives

Students will learn about

- ☞ Sorting data
- ☞ Filtering data
- ☞ Conditional formatting
- ☞ Printing a worksheet

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students that MS Excel provides easy options for sorting data and highlighting the required information in a worksheet.

Introduce sorting as arranging the data in ascending or descending order.

Demonstrate to the students the various steps involved in sorting of data in an Excel worksheet.

Share with the concept and use of Custom Sort feature (Refer Suggested Activity 1 also).

Introduce filtering as hiding unwanted data from a set of data.

Show to the students the various steps involved in applying Filters in a worksheet.

Share with the students that Filters once applied can be easily removed and tell them the method of removing filters.

Introduce Conditional Formatting as highlighting the required information.

Tell the students about basic difference between Filtering (unwanted information gets hidden) and Conditional Formatting (required information gets highlighted).

Explain the various criteria detailed under Conditional Formatting.

Demonstrate the steps involved in applying conditional formatting on a worksheet (Refer Suggested Activity 2 also).

Make the students recall that a printout is a hard copy of the information we see on the monitor.

Show to the students the steps involved in the printing of a worksheet.

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 sorting.

Q. What is the difference between sort and custom sort features?

Q. What are filters?

Q. How can filters be removed in a worksheet?

Q. What do you understand by conditional formatting feature?

Q. How is conditional formatting different from filtering data?

Q. When is the conditional formatting criteria Highlight Cell Rules / Data Bars / Icon Sets used?

Q. What is a printout?

Q. What are the steps to print a worksheet?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 36 and 37 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 37 and 38. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Pages 38 and 39 will enhance the ability of the students and serve as Subject Enrichment activity.

Suggested Activity

1. Ask the students to enter their height and weight along with similar information for their nine friends. Sort the data with primary criteria as heights in ascending order and secondary criteria as weights in descending order.
2. Highlight the cells where the heights are less than the height of the student or weight is more than the weight of the student preparing the worksheet.

4. Animations in Flash

Teaching Objectives

Students will learn about

- Symbols
- Instances
- Converting an object into symbol
- Layers
- Frames and keyframes
- Animations in Flash

Number of Periods	
Theory	Practical
2	2

Teaching Plan

While teaching this chapter, tell the students that Flash is an authoring tool to create games, applications, simple animations, etc.

Introduce the concept of Symbols in Flash CS6.

Tell the students about different types of symbols – graphic, button and movie clip – and explain their uses.

Show to the students the various steps involved in creating a symbol.

Introduce the meaning of the term Instances and the situation where they are used.

Demonstrate the steps involved in converting an object into symbol.

Tell the students about Layers and their importance in Flash.

Make the students understand the meaning of and difference between frames and keyframes.

Explain the concept of animation using tweens.

Show the steps to create various types of tweens covering Shape Tween and Motion Tween.

Tell the students that animation can also be done in Flash through Frame by Frame technique.

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 used for?
Q. What is the meaning of Symbols?
Q. Name the different types of Symbols available in Flash.
Q. Define instances.
Q. What do you understand by Layers?
Q. How are layers useful?
Q. What is the difference between a frame and a keyframe?
Q. Define Tween.
Q. What is the meaning of easing?
Q. What is Motion Guide Tweening?

Evaluation

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

In Creative Assignment, activity like Fun in Lab given on Page 50 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to create an animation where two cars are coming on a road from opposite directions and crash in the center.

5. Introduction to Photoshop

Teaching Objectives

Students will learn about

- Starting Photoshop CS6
- Components of Photoshop CS6
- Features of Photoshop CS6
- Creating a new file
- Saving a file

- ☞ Opening an image for editing
- ☞ Using tools

Number of Periods	
Theory	Practical
2	2

Teaching Plan

While teaching this chapter, tell the students that Adobe Photoshop CS6 is powerful graphics software used for image creation and editing.

Demonstrate to the students the steps to start Adobe Photoshop CS6.

Familiarize the students with the components of Photoshop CS6 covering Menu Bar, Options Bar, Toolbar, Workspace, Color Panel, Adjustments Panel, Layers Panel and Status Bar.

Share with the students the features of Photoshop CS6.

Show to the students the steps involved in creating a new file and the various settings to be made while creating a file.

Tell the students the process to:

- Save a file.
- Open an image for editing

Show the Photoshop toolbar to the students and share with them the various tools present on it.

Tell the students that Adobe Photoshop CS6 has some tools hidden under a main tool.

Explain to the students the steps involved in the use of:

- Rectangle Marquee Tool – covering Elliptical Marquee Tool, Single Row Marquee Tool and Single Column Marquee Tool as hidden tools under it.
- Lasso Tool
- Quick Selection Tool
- Crop Tool
- Brush Tool
- Eraser Tool
- Rectangle Tool – covering Rounded Rectangle Tool, Ellipse Tool, Polygon Tool and Line Tool as hidden tools under it.
- Gradient Tool
- Paint Bucket Tool
- Horizontal Type Tool
- Pencil Tool

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 Photoshop CS6?

Q. Name the various components of Photoshop CS6 interface.

Q. State the features of Adobe Photoshop CS6.

Q. What does RGB and CMYK color modes stand for?

Q. Name some important tools of Photoshop toolbar.

Q. State the use of Rectangular Marquee Tool / Lasso Tool / Crop Tool / Eraser tool / Rectangle Tool / etc.

Q. What are the different gradient types available in Gradient Tool?

Q. What is the difference between Rectangle Tool and Rectangular Marquee Tool?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 59, 60 and 61 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 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 a Subject Enrichment activity.

Suggested Activity

Ask the students to draw a similar drawing in Adobe Photoshop CS6 using various tools from the toolbar.

6. Internet Services

Teaching Objectives

Students will learn about

- ☞ Communication
- ☞ Newsgroup
- ☞ Blogs
- ☞ E-Greetings
- ☞ E-Banking
- ☞ Cloud Storage

Number of Periods	
Theory	Practical
3	1

Teaching Plan

While teaching this chapter, brief the students about Internet.

Introduce Social Networking the students using examples.

Explain to the students the concept of Facebook in detail and also tell the steps involved in creating account on Facebook.

Demonstrate to the students the function of Twitter in detail and also tell the steps involved in creating account on Twitter.

Demonstrate to the students the steps involved in using Quora and Skype in details.

Explain the Internet services like:

- E-Banking
- Newsgroup
- Blogging
- Cloud Computing
- OneDrive
- RSS
- Podcasting

Tell the students the difference between a blog and a website.

Explain to the students the benefits and risks of using cloud computing.

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 Social network?

Q. What is Facebook?

Q. What is Twitter?

Q. What is Quora?

Q. What is Skype?

Q. What is E-banking?

Q. What is a newsgroup?

Q. What is blogging?

Q. What is cloud computing?

Q. What is OneDrive?

Q. What is RSS?

Q. What is Podcasting?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 76 and 77 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 77 and 78. Help the students to solve these questions.

In Creative Assignment, activities like Fun in Lab given on pages 78 and 79 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to learn how to use the internet services.

7. Computer Safety and Security

Teaching Objectives

Students will learn about

- How to keep your computer physically fit?
- Protecting your computer from illegal access
- How to backup your important files?
- Other maintenance techniques
- Cyber Security
- Cyber Crime
- Hacking and Cracking
- Malware
- Antivirus
- Firewall

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that computer safety refers to the protection of computer-based resources against unauthorized use or physical damage.

Tell the students the method of physically cleaning computer parts like keyboard, mouse and monitor.

Share with the students the method to protect the computer from illegal access by reference to terms like authentication (verifying user's identity) and covering:

- Password protection
- Biometric authentication including face recognition, iris biometrics, retina biometrics and voice recognition
- Encryption (converting data into cypher text)

Explain the need, importance and process of backing up important files using external hard disk drives and online backup services.

Share with the students some information about some other maintenance techniques like deleting files, defragmenting hard disk drive and disk cleanup.

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).

Introduce malware as programs designed to damage or carry out unwanted actions on a computer system.

Explain to the students information about different types of malware like virus, worms, Trojan horses, spyware, zombie, ransomware, rootkits and backdoors.

Explain the importance of antivirus and firewall in maintain computer safety and security.

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 authentication.
Q. Where is elastic graph matching technique used?
Q. What is the difference between encryption and decryption?
Q. What is malware?
Q. Define virus / worm / rootkit / backdoor / ransomware.
Q. What is an anti-virus?
Q. Name some commonly used anti-virus software.
Q. Define Cyber Security / Cyber Crime.
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 88, 89 and 90 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 90. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Page 90 will enhance the ability of the students and serve as a Subject Enrichment activity.

Suggested Activity

Ask the students to prepare a detailed project on any anti-virus software on an A3 sheet.

8. Introduction to HTML5 and CSS3

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

Number of Periods	
Theory	Practical
2	3

Teaching Plan

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 alone 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?

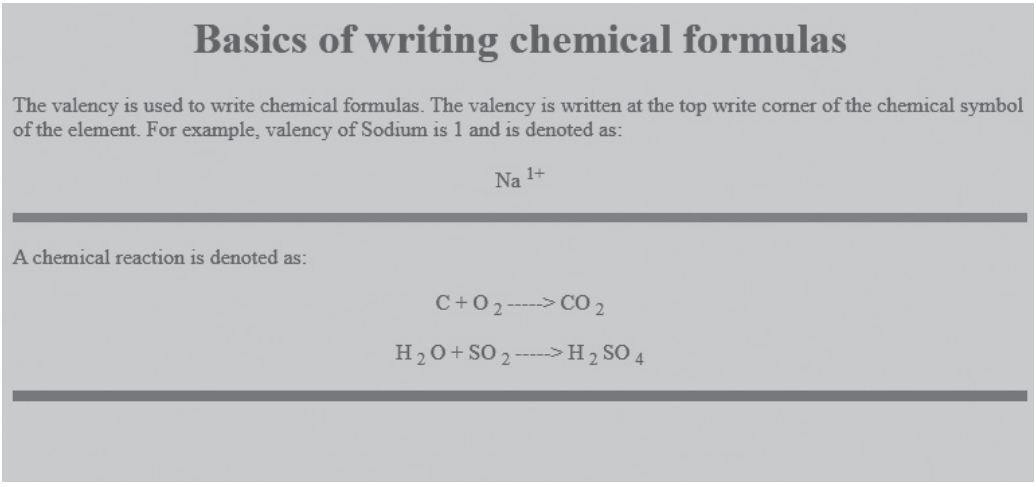
Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 103, 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 105 and 106. Help the students to solve these questions.

In Creative Assignment, activity like Fun in Lab given on Pages 106 and 107 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.



9. Conditional Statements in Python

Teaching Objectives

Students will learn about

- ☞ Variables
- ☞ Keywords
- ☞ Data Types
- ☞ Operators

- ☞ Precedence of Operators
- ☞ Conditional Statements in Python
- ☞ Some More Program

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students about Python has some decision making statements.

Explain to the students about the Decision Making Statements and the options available in Python.

Demonstrate to the students the steps involved in using these statements using programs and syntax are:

- if statement
- Nested if statement
- if...else statement
- if...elif...else ladder

Explain the situation when these statements are used and demonstrate the use of each statement.

Introduce looping statement as the statement that allows repeating a set of instructions a given number of times.

Share with the students the use and syntax of the 'for' loop.

Tell the students that jump statements are used to transfer the control of the program outside the loop even if all the values of the sequence have not been taken.

Share with the students that the jump statements offered by Python are:

- The break statement (used to terminate the loop).
- The continue statement (used to force the next iteration of the loop and skip the current iteration).

Demonstrate the use of the jump statements in Python.

Extension

Ask the students some oral questions based on this chapter.

Q. Write the names of decision making statements.

Q. What is the function of if statement?

Q. What is the function of if...else statement?

Q. What is the function of nested if statement?

Q. What is the function of if...elif...else statement?

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 119 and 120 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 120 and 121 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 121 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 make a program in Python to create a food menu using looping decision making statements.

10. AI for SDGs

Teaching Objectives

Students will learn about

- ☞ Sustainable Development Goals

Number of Periods	
Theory	Practical
2	1

Teaching Plan

Before starting the chapter, ask the students to read the conversation given in page number 123 to understand the recap of the topic.

Start the chapter by giving an introduction of SDGs to the students with the help of using real time examples.

Tell the students about Sustainable Development Goals and answer these queries regarding it:

What are SDGs?

How they are introduced?

Why they are introduced?

Who introduced SDGs?

Briefly explain all the SDGs in detail along with their motives and purpose:

Extension

Ask the students some oral questions based on this chapter.

Q. What are SDGs?

Q. How they are introduced?

Q. Why they are introduced?

Q. Who introduced SDGs?

Q. Define the following:

a) Goal 1 Goal 2 Goal 3 Goal 4 Goal 5 Goal 6
Goal 7 Goal 8 Goal 9 Goal 10 Goal 11 Goal 12
Goal 13 Goal 14 Goal 15 Goal 16

Evaluation

After explaining the chapter, let the students do the course book exercises given on Pages 128 and 129 and 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 129 of the main course book. Help the students to solve these questions.

In Creative Assignment, activities like Hands-On and Fun in Lab given on Page 129 and 128 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 more about SDGs and ask them to create a poster on SDGs.