TOUCHPAD

PLus Ver. 4.0

5

TEACHER'S MANUAL

Extended Support for Teachers

ORANGE

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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 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 in 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 need to learn and how it can be done effectively during the class time. A lesson plan helps teachers in the classroom by providing a detailed outline to follow in each class.

A lesson plan addresses and integrates three key components:

✦ Learning objectives

✦ Learning activities

✦ Assessment to check the student's understanding

A lesson plan provides an outline of the teaching goals:

Before the class

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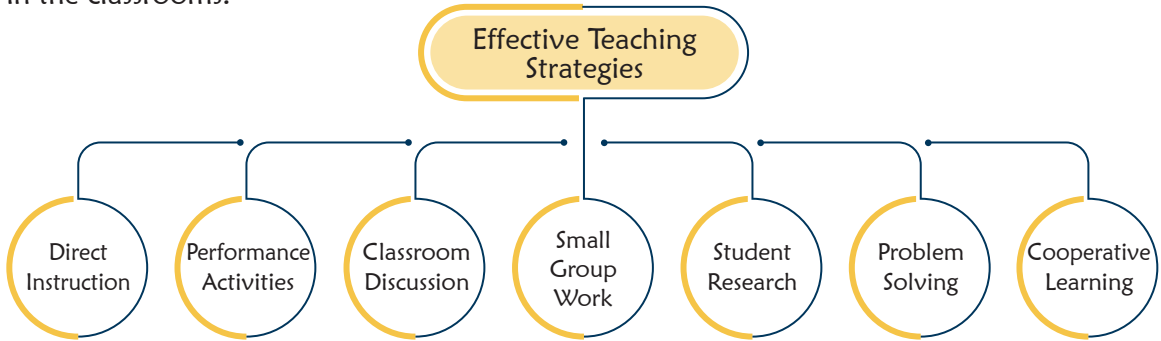
During the class

Present the lesson plan.

After the class

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

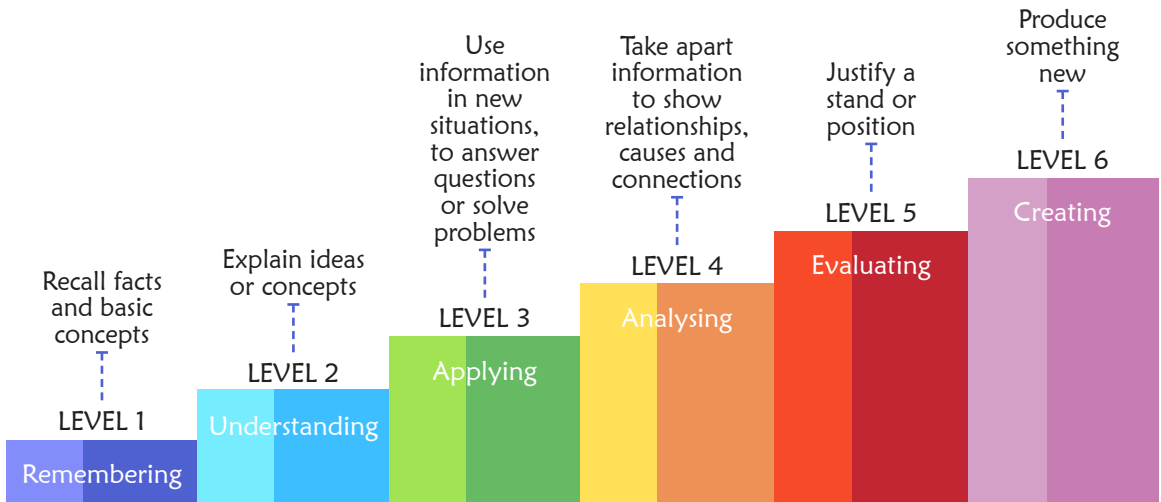> Knowing yourself is the beginning of all wisdom.

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

Effective Teaching Strategies

- Direct Instruction
- Performance Activities
- Classroom Discussion
- Small Group Work
- Student Research
- Problem Solving
- Cooperative Learning

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.

Recall facts and basic concepts
LEVEL 1
Remembering

Explain ideas or concepts
LEVEL 2
Understanding

Use information in new situations, to answer questions or solve problems
LEVEL 3
Applying

Take apart information to show relationships, causes and connections
LEVEL 4
Analysing

Justify a stand or position
LEVEL 5
Evaluating

Produce something new
LEVEL 6
Creating

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

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

LESSON PLAN
PLUS Ver. 4.0

1. Windows Photo Editor & Video Editor

Teaching Objectives

Students will learn about

☞ Photo Editing

☞ Video Editing

Number of Periods	
Theory	Practical
1	1

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Take Off' given on page 11 of the main course book.

While teaching this chapter, tell the students brief description of photo and video.

Introduce the students to Windows Photo Editor.

Show to the students the interface of Windows Photo Editor.

Demonstrate to the students the method of crop, flip and rotate of Windows Photo Editor.

Demonstrate to the students how to apply filters to a photo.

Tell them that Windows Photo Editor can also adjust brightness and contrast by using the Adjustments feature.

Demonstrate the steps to open a video file for editing.

Further tell them that how to trim the videos.

Also demonstrate the steps to add transitions effects in a video.

Activity can be created on the photo editing and take two printouts before and after editing and display them in front of the class to demonstrate the difference between original photo and edited photo.

Tell the students about the difference between brightness and contrast.

Make the students understand how they add effects, filters and adding text in video.

Tell them the various steps involved in editing a photo and video.

Ask the students to solve the exercise 'Double Tap' given on page 14.

Extension

Ask the students some oral questions based on this chapter.

Q. What is editing?

Q. What is the use of editing?

Q. How is photo different from a video?

Q. Name some photo editing apps.

Q. What is the difference between brightness and contrast?

Q. What is the meaning of video editing?

Q. What is cropping?

Q. What is rotating?

Q. What is flipping?

Q. What is a filter?

Q. What is trimming?

Q. What are transition effects?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 21 and 22 in the main course book. Tell the students to try questions under 'Scratch Your Brain' on page 22 in the main course book. Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 22 in the main course book. This will enhance the ability of the students and serve as a creativity and technology literacy activity.

Ask the students to complete the elements like 'Experiential Learning' given on page 16 in the computer lab.

Suggested Activity

Ask the students to prepare a word document on major differences between photo and video editing and take print out on an A4 sheet of paper.

2. Advanced Features of Word 2019

Teaching Objectives

Students will learn about

☞ Spelling and Grammar

☞ Find and Replace Text

☞ Column Formatting

☞ Mail Merge

☞ Thesaurus

☞ Page Formatting

☞ Paragraph Formatting

Number of Periods	
Theory	Practical
2	2

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Take Off' given on page 27 of the main course book.

While teaching this chapter, tell the students that formatting refers to the appearance of a document.

Introduce the students to Spelling and Grammar Check feature of 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 Word.

Tell the students about thesaurus feature.

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

Demonstrate the steps to use Find and Replace features.

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

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

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

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

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

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

Tell the students about different types of orientations.

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

Introduce 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.

Ask the students to solve the exercise 'Double Tap' given on page 30.

Extension

Ask the students some oral questions based on this chapter.

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?

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 do you mean by Mail Merge?

Q. How is Mail Merge helpful?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 36 and 37 in the main course book. Tell the students to try questions under 'Scratch Your Brain' given on page 37 in the main course book.

Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 38 in the main course book. This will enhance the ability of the students and serve as an information and technology literacy activity.

Ask the students to complete the elements like 'Interdisciplinary Learning' and 'Experiential Learning' given on pages 30 and 35 in the computer lab.

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.

3. More on PowerPoint 2019

Teaching Objectives

Students will learn about

☞   Slide Transition

☞   Animation

☞   Inserting Audio and Video Files

☞   Printing the Presentation

Number of Periods	
Theory	Practical
2	3

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Take Off' given on page 40 of the main course book.

While teaching this chapter, tell the students that slide transition determines how your presentation moves from one slide to the next.

Let them know that PowerPoint provides several transition effects.

Introduce the students to the concept of animation.

Make the students aware of the categories of the animation effects in PowerPoint 2019.

Explain how audio and video files are inserted in PowerPoint 2019.

Also let them know the steps to print the presentation.

Ask the students to solve the exercise 'Double Tap' given on page 47.

Extension

Ask the students some oral questions based on this chapter.

Q.   What is slide transition?

Q. What is animation?

Q. How many categories of the animation effects are there in PowerPoint 2019?

Q. How can timing of the animation effects be modified?

Q. How can an animation in PowerPoint 2019 be removed?

Q. How is an audio file inserted in PowerPoint 2019?

Q. How can an online video be inserted in PowerPoint 2019?

Q. What is the method of printing the presentation in PowerPoint 2019?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 49 and 50 in the main course book. Tell the students to try sections such as 'Scratch Your Brain' and 'Go Online' given on page 50 in the main course book.

Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 51 in the main course book. This will enhance the ability of the students and serve as an information and technology literacy activity.

Ask the students to complete the elements like 'Interdisciplinary Learning' and 'Art Integration Learning' given on page 48 in the computer lab.

Suggested Activity

Ask the students to insert an online video on the topic 'India: An Emerging Leader of the World' and show it to him/her.

4. Introduction to Excel 2019

Teaching Objectives

Students will learn about

☞ Excel 2019   ☞ Starting Excel

☞ Components of Excel 2019 Window   ☞ Changing the Active Cell

☞ Creating a New Workbook   ☞ Entering Data

☞ Adding/Removing/Renaming a Worksheet   ☞ Saving/Opening a Workbook

☞ Closing a Workbook

Number of Periods	
Theory	Practical
2	3

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Take Off' given on page 54 of the main course book.

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

Let the students know that Excel is also known as an electronic spreadsheet.

Explain several features of Excel 2019.

Make them understand how to start Excel 2019.

Make the students aware of components of Excel 2019 window.

Explain to the students how to change the active cell.

Let them know how to create a workbook.

Make them aware of entering data in a worksheet.

Teach the steps of adding/removing/renaming a worksheet to the students.

Explain how a workbook is saved or opened in Excel 2019.

Finally make them learn to close a workbook in Excel 2019.

Familiarise the students with the various components of MS Excel 2019 window covering.

Ask the students to solve the exercise 'Double Tap' given on page number 56.

Extension

Ask the students some oral questions based on this chapter.

Q.   What is Excel 2019?

Q.   What are the features of Excel 2019?

Q.   Name any five components of Excel 2019.

Q.   Define Formula Bar / Sheet Tab / Row / Column / Cell / Active Cell / Worksheet.

Q.   What are Enter, Insert and Cancel buttons used for?

Q.   State the shortcut key to save an Excel worksheet.

Evaluation

After explaining the chapter, let the students do the exercises given on pages 60 and 61 in the main course book. Tell the students to try sections such as 'Scratch Your Brain' and 'Go Online' given on pages 61 and 62 in the main course book.

Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 62 in the main course book. This will enhance the ability of the students and serve as an information and technology literacy activity.

Ask the students to complete the elements like 'Art Integration Learning' given on page 58 and 'Interdisciplinary Learning' given on page 59 in the computer lab.

Suggested Activity

Ask the students to design their class time-table in Excel 2019.

5. Editing Cell Contents in Excel 2019

Teaching Objectives

Students will learn about

- ☞ Selecting Cells
- ☞ Changing Cell Contents
- ☞ Copying and Moving Data
- ☞ Using AutoFill Feature

- ☞ Entering Date and Time
- ☞ Undo and Redo Commands
- ☞ Deleting Cell Contents

Number of Periods	
Theory	Practical
2	3

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Double Tap' given on page 64 of the main course book.

Begin with description of cells and their address in Excel 2019.

Let them know how to select a cell, row, column, a range of cells, multiple cells, or the the whole worksheet in Excel 2019.

Make the students aware of how to enter date and time in Excel 2019.

Explain to the students how cell contents can be changed in Excel 2019.

Tell the students where Undo and Redo commands are found in Excel 2019 and how they are used.

Explain to the students that copying and moving data in Excel 2019 is similar to the copy and move command in Word 2019.

Let the students know how cell contents can be deleted in Excel 2019.

Let the students know that the AutoFill feature in Excel 2019 is used to automatically fill a series of data in rows and columns based on the values of other cells.

Also teach them the steps to use the AutoFill feature.

Ask the students to solve the exercise 'Double Tap' given on page 66.

Extension

Ask the students some oral questions based on this chapter.

Q. What is to be selected to edit any content in Excel 2019?

Q. What does the Excel 2019 look for when time is entered?

Q. What is Redo command used for?

Q. Define Undo command.

Q. Which key is selected to delete the contents of a cell in Excel 2019?

Q. What is the use of AutoFill feature?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 71 and 72 in the main course book. Tell the students to try sections such as 'Scratch Your Brain', 'Go Online' and 'A Better Me' given on pages 72 and 73 in the main course book.

Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 73 in the main course book. This will enhance the ability of the students and serve as an information and technology literacy activity.

Ask the students to complete the elements like 'Interdisciplinary Learning' given on page 68 and 'Art Integration Learning' given on page 70 in the computer lab.

Suggested Activity

Ask the students to prepare a table in this format for their family members.

S.No.	Name	Relation with Me	Date of Birth	Age

6. Safeguarding Your Computer

Teaching Objectives

Students will learn about

☞   Computer Malware

☞   The most Dangerous Malwares Known

☞   Harms Caused by Computer Malwares

☞   How Does a Computer Get Infected?

☞   Symptoms of an Infected Computer

☞   How to Protect Your Computer

☞   Antivirus

Number of Periods	
Theory	Practical
2	3

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Take Off' given on page 78 of the main course book.

Let the students know that a computer also falls sick as harmful files and applications damage it.

Explain that a computer malware is a software made to cause harm to your system.

Make the students aware of diffrent types of malware like virus, worm, trojan horse, spyware, adware, etc.

Let them know about the most dangerous malwares known such as Wabbit virus, ILOVEYOU virus, Code Red worm, Mydoom worm, Storm worm, Zeus, Emotet, Pegasus, etc .

Make them aware of the various harms caused by computer malware.

Let the students know about the symptoms of an infected computer.

Make the understand how one can protect one's computer.

Finally, let them know that an antivirus is a set of programs that identify and remove malware. Some of the well-known antivirus programs are Norton, Quick heal, AVG, McAfee, Symantec, Kaspersky, etc.

Ask the students to solve the exercise 'Double Tap' given on page 81.

Extension

Ask the students some oral questions based on this chapter.

Q.   Can computer also fall sick?

Q.   What is a computer malware?

Q.   What is trojan horse?

Q.   Name some most dangerous malwares known.

Q.   What are the harms caused by computer system?

Q.   Name a few sources through which a computer gets infected.

Q.   What are the symptoms of an infected computer?

Q.   How can you protect your computer?

Q.   What is an antivirus?

Name some well-known antivirus programs.

Evaluation

After explaining the chapter, let the students do the exercises given on page 83 in the main course book. Tell the students to try sections such as 'Scratch Your Brain', 'Go Online' and 'A Better Me' given on page 84 in the main course book.

Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 84 in the main course book. This will enhance the ability of the students and serve as an information and technology literacy activity.

Ask the students to complete the elements like 'Interdisciplinary Learning' given on page 81 and 'Experiential Learning' given on page 82 at home and show it to him/her the next day.

Suggested Activity

Ask the students to find more about the computer malware and popular antivirus.

7. Internet and E-mail

Teaching Objectives

Students will learn about

☞ Internet

☞ Using Web Browser

☞ E-mail

☞ Types of Internet Connection

☞ Using URLs

Number of Periods	
Theory	Practical
2	1

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Take Off' given on page 86 of the main course book.

While teaching this chapter, tell the students that the internet is a computer network that connects hosts and end systems throughout the world.

Make the students aware of the types of Internet connection like Dial-up, Broadband, Wi-Fi, Mobile Internet and Hotspots.

Introduce web browser as software application designed to find hypertext documents on the web.

Show to the students the steps involved in the process of launching the web browser.

Tell the students about Uniform Resource Locator or URL (unique internet address) and their use while navigating on internet.

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)

Ask the students to solve the exercise 'Double Tap' given on page number 88.

Extension

Ask the students some oral questions based on this chapter.

Q. What is Internet?

Q. Name the different types of Internet connections.

Q. Define hotspots.

Q. What is a web browser?

Q.   What is a URL?

Q.   What is e-mail?

Q.   What are the advantages of an e-mail?

Q.   What is e-mail address?

Q.   What do you mean by CC in a mail?

Q.   Define BCC.

Evaluation

After explaining the chapter, let the students do the exercises given on pages 93 and 94 in the main course book. Tell the students to try such as 'Scratch Your Brain' and 'Go Online' given on pages 94 and 95 in the main course book.

Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 95 in the main course book. This will enhance the ability of the students and serve as a technology literacy activity.

Ask the students to complete the elements like 'Experiential Learning' given on page 88 in the computer lab and 'Interdisciplinary Learning' given on page 92 at home and show it to him/her the next day.

Suggested Activity

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

8. Data Processing

Teaching Objectives

Students will learn about

☞   Data and Information

☞   Sorting Data

☞   Representing Information

☞   Decoding

Number of Periods	
Theory	Practical
1	1

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Take Off' given on page 98 of the main course book.

Introduce Data and Information to the students in details with the help of proper examples for better understanding.

Tell the students how to sort data and demonstrate the same with proper examples which are easy to understand.

Tell the students about how to represent information with the help of proper charts and tables.

Let them know how to sort data by giving some examples which will improve their understanding of the topic.

Explain the meaning of Decoding to the students and ask them to use the reference given in the book to understand the concept.

Show examples for all the topics for better clarity of the lesson at the end.

Ask the students to solve the exercise 'Double Tap' given on page number 101.

Extension

Ask the students some oral questions based on this chapter.

Q.   What is data?

Q.   What is information?

Q.   How can you represent information?

Q.   What is sorting?

Q.   How can you sort data?

Q.   What is a decoding?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 101 and 102 in the main course book. Tell the students to try sections such as 'Scratch Your Brain' and 'Go Online' given on page 102 in the main course book.

Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 102 in the main course book. This will enhance the ability of the students and serve as a critical thinking and technology literacy activity.

Ask the students to complete the elements like 'Interdisciplinary Learning' given on page 99 and 'Experiential Learning' given on page 100 at home and show it to him/her the next day.

Suggested Activity

Ask the students to practise to find out more types of methods to represent information.

9. Conditional Blocks in Scratch

Teaching Objectives

Students will learn about

☞   Operators

☞   Variables

☞   Loops

☞   Sensing Blocks

☞   Conditional Blocks

☞   Creating a Game

Number of Periods	
Theory	Practical
2	2

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Take Off' given on page 104 of the main course book.

Begin with introduction of Scratch and move on to to tell about various blocks in Scratch.

Let them know that Operators blocks in Scratch are colour-coded as light-green, and are used to do arithmetic and logical calculations.

Make the students aware of Sensing blocks in Scratch and how they work.

Explain to the students what variables are and how variables can be created in Scratch.

Explain the Conditional Blocks to the students and the steps involved in this in detail.

Let the students know that the automatic running of a set of instructions more than once is called looping.

Tell the students about the blocks related to looping.

Demonstrate how one can create a game in Scratch using appropriate blocks.

Ask the students to solve the exercise 'Double Tap' given on page number 107.

Extension

Ask the students some oral questions based on this chapter.

Q. What is Scratch?

Q. What are operators?

Q. Explain different operators.

Q. What is a sensing block?

Q. What is a variable?

Q. What is a script?

Q. Which sensing block prompts the user to type the input using the keyboard?

Q. Which sensing block checks if the chosen key is pressed by the user?

Q. What are conditional blocks?

Q. Define looping.

Q. Which looping block is used to run a set of instructions for a specified number of times?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 112 and 113 in the main course book. Tell the students to try sections such as 'Scratch Your Brain' given on pages 113 and 114 in the main course book.

Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 114 in the main course book. This will enhance the ability of the students and serve as a critical thinking and technology literacy activity.

Ask the students to complete the elements like 'Experiential Learning' given on page 105 at home and show it to him/her the next day.

Suggested Activity

Ask the students to develop the story of Rabbit and Tortoise in Scratch.

10. Robotics

Teaching Objectives

Students will learn about

☞ What Are Robotics?

☞ Fields Where Robots Are Used

☞ Latest Robots

Number of Periods	
Theory	Practical
2	**1**

Teaching Plan

Before starting the chapter, ask the students to solve the question in 'Take Off' given on page 116 of the main course book.

Let the students know that robots are automatically operated machines that work in place of humans.

Explain that Robotics is a branch of engineering and science that deals with the design, construction and functioning of robots.

Make the students aware of the fields where robots are used like security and surveillance, manufacturing, customer service, cooking, healthcare, space exploration, entertainment and underwater research.

Make the students aware of latest robots like T-HR3, Sophia, Digit, RoboThespian, Nao, Z-Machines, Moley Robotic Kitchen, Paro, Root, Zenbo and Dash and Dot.

Let the students know about the symptoms of an infected computer.

Ask the students to solve the exercise 'Double Tap' given on page 118.

Extension

Ask the students some oral questions based on this chapter.

Q. What are robots?

Q. Define Robotics.

Q. Name some fields where robots are used.

Q. Which was the first robot to to join the assembly line in 1961?

Q. Which robot can recognise people from the database of their previous visits?

Q. What is Sophia?

Q. What is RoboThespian?

Q. What does the robot Nao do?

Q. What is Paro, a talking robot used for?

Q. What is Zenbo?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 122 and 123 in the main course book. Tell the students to try sections such as 'Scratch Your Brain', 'Go Online' given on pages 123 and 124 in the main course book.

Take the students to the computer lab and let them practise the activity given in the DIY In The Lab section on page 124 in the main course book. This will enhance the ability of the students and serve as an information and technology literacy activity.

Ask the students to complete the elements like Art Integration Learning, 'Experiential Learning' and 'Interdisciplinary Learning' given on pages 118 and 121 at home and show it to him/her the next day.

Suggested Activity

Ask the students to gather more information about the latest robots and the areas of their use.