4

TOUCHPAD

iPLUS Ver. 2.0

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 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 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.
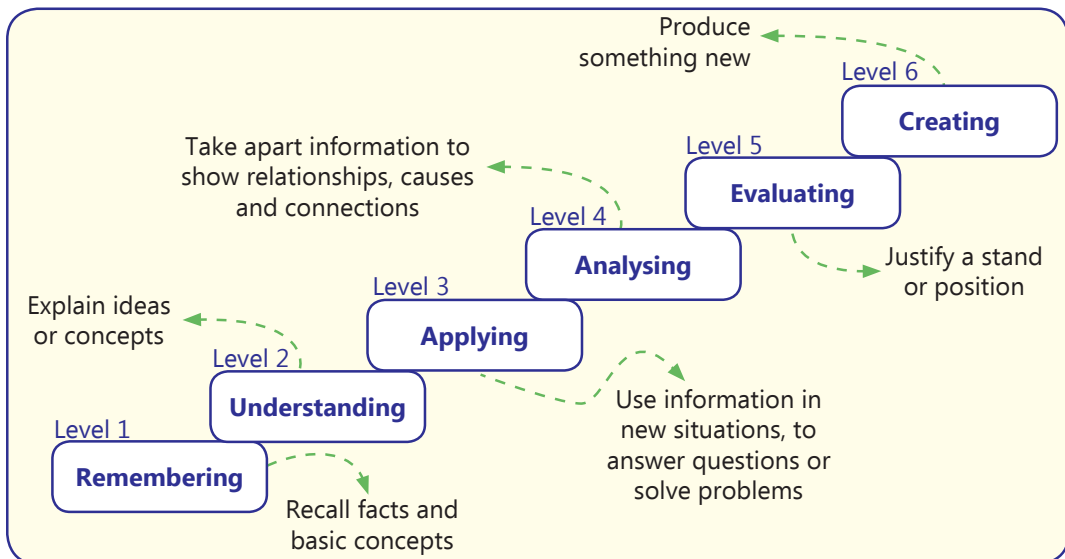
"Knowing yourself is the beginning of all wisdom."

Teaching Strategies

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

```
                    Direct
                  Instruction
   Performance                      Classroom
    Activities                      Discussion
                  Effective
    Student       Teaching          Small
    Research      Strategies      Group Work
      Problem                   Cooperative
      Solving                    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.

Produce something new

Level 6 — **Creating**

Take apart information to show relationships, causes and connections

Level 5 — **Evaluating**

Justify a stand or position

Level 4 — **Analysing**

Explain ideas or concepts

Level 3 — **Applying**

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

Level 2 — **Understanding**

Level 1 — **Remembering**

Recall facts and basic concepts

Teachers should focus on helping students 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."

1. Computers—Storage and Memory Device

Teaching Objectives

Students will learn about

☞ Data and Information

☞ Memory

☞ Measuring the Computer's Memory

Number of Periods

Theory
4

Teaching Plan

While teaching this chapter, tell the students that like human beings, computers also have memory to store all data and instructions for performing various tasks.

Tell the students about the two types of computer memory—primary memory and secondary memory.

Share with the students that the primary memory of the computer is fixed on the motherboard of the computer.

Explain in detail about the types of Primary Memory covering:

• **Random Access Memory (RAM)** – the volatile memory

• **Read Only Memory (ROM)** – the non-volatile memory

Share with the students the meaning and difference between the two types of RAM – Dynamic RAM and Static RAM.

Give a brief introduction about secondary memory or secondary storage devices covering in detail:

• **Magnetic Disk** (Hard Disk – Internal and External)

• **Optical Disk** (CD, DVD, Blue-ray Disk)

• **Flash Drive** (Pen Drive, Memory Card)

Introduce byte as the basic unit of measuring computer memory and nibble as half a byte.

Share with the students the meaning and relationship between higher units of measurement of computer memory – KB, MB, GB, TB, PB, EB, ZB and YB.

Ask the students to solve the activity in LET'S CATCH UP given on page 10 of the main course book to imbibe digital literacy skills.

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 computer memory?

Q.   What is primary memory?

Q.   Name the different types of primary memory.

Q.   Expand RAM/ROM.

Q.   What are the different types of RAM?

Q.   What is the difference between primary and secondary memory?

Q.   Name the categories in which secondary storage devices are divided into.

Q.   What are the different types of CDs?

Q.   Expand CD and DVD.

Q.   Define a pen drive and memory card.

Q.   Define a byte.

Q.   Name any three higher units of measurement of computer memory.

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 11 and 12 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack The Code activity given on page 13 of the main course book to imbibe problem solving and logical reasoning skills in them. Help the students to solve these questions.

In creative assignment, activities like Let's Explore and Practical Time given on page 13 of the main course book will enhance the ability of the students and serve as experiential learning and digital literacy activities.

Suggested Activity

Ask the students to research and collect information about some secondary storage devices like floppy disks, which have now become obsolete.

2. GUI Operating System—Desktop Management

Teaching Objectives

Students will learn about

☞   Components of Windows 10 desktop

☞   Icons

☞   Desktop Background

☞   Taskbar

Teaching Plan

While teaching this chapter, tell the students that operating system is one of the most important software as without this software we cannot use our computer at all.

Give a brief introduction of Microsoft Windows.

Make the students aware of the concept of desktop and components of Windows 10 desktop.

Introduce students with desktop background. Show them how to change desktop background and how to change colour scheme.

Familiarise the students with some important icons on the desktop like This PC, Recycle Bin and Folder.

Demonstrate to the students the steps to sort icons on the desktop. Show to the students how to use This PC icon.

Introduce the students to the taskbar and its components covering Start button, Quick launch bar and clock.

Explain the use of the following to the students:

- Start Button
- Clock
- Quick Launch Bar
- Changing Volume of the Speaker
- Changing Position of the Taskbar

Ask the students to solve the activity in LET'S CATCH UP given on page 21 of the main course book to imbibe digital literacy skills.

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.   Windows is provided by which company?

Q.   Name the components of Windows 10 desktop.

Q.   What is the use of Start button?

Q.   How can we change position of taskbar?

Q.   What is desktop?

Q.   Define icons.

Q.   What is taskbar?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 22, 23 and 24 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack The Code activity given on page 24 of the main course book to imbibe problem solving and logical reasoning skills in them. Help the students to solve these questions.

In creative assignment, activities like Let's Explore and Practical Time given on page 24 of the main course book will enhance the ability of the students and serve as collaborative & teamwork, experiential learning, and digital literacy activities.

Suggested Activity

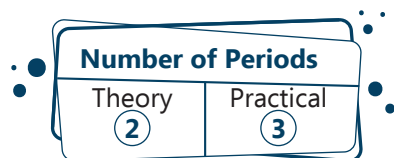Ask the students to change the volume of the speaker of the computer.

3. Editing in Word 2016

Teaching Objectives

Students will learn about

- ☞ Features of Word 2016
- ☞ Saving a Document
- ☞ Deleting Text
- ☞ Cutting/Copying Text
- ☞ Spell Check

- ☞ Creating a New Document
- ☞ Selecting Text
- ☞ Inserting Text
- ☞ Undo/Redo
- ☞ Thesaurus

Number of Periods

Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students that editing is the process of making changes in the existing text.

Explain the uses of Word 2016 to the students.

Demonstrate to the students the steps involved in:

- Creating a new document
- Saving a document

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.

Ask the students to solve the activity in LET'S CATCH UP given on page 28 of the main course book to imbibe digital literacy skills.

Show to the students that text can simply be inserted by moving the cursor to the point where text is to be entered.

Familiarise 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 the use of undo and redo feature of Word 2016.

Show to the students the representation of spelling and grammar mistakes with different coloured wavy lines.

Demonstrate to the students the method of using Spelling and Grammar Check feature of Word 2016.

Demonstrate to the students the method of using Thesaurus feature of Word 2016.

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 editing?

Q. How are letter, word, text and 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. What are the uses of Word 2016?

Q. How can you use Thesaurus tool in Word 2016?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 32 and 33 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack The Code activity given on page 34 of the main course book to imbibe problem solving and logical reasoning skills in them. Help the students to solve these questions.

In creative assignment, activities like Let's Explore and Practical Time given on page 34 of the main course book will enhance the ability of the students and serve as interdisciplinary, creativity & innovativeness, and experiential learning activities.

Suggested Activity

Ask the students to write a paragraph on My Favourite Festival in Word 2016, check for spelling and grammar mistakes and paste a printout in the computer notebook/practical file.

4. Formatting in Word 2016

Teaching Objectives

Students will learn about

☞ Changing Font and Font Size

☞ Highlighting Text

☞ Changing Font Color

☞ Bold, Italic and Underline

☞ Applying Text Effects	☞ Aligning the Text
☞ Changing Case	☞ Adding Bullets and Numbering
☞ Line Spacing and Paragraph Spacing	☞ Printing a Document
☞ Difference Between Editing and Formatting	☞ Shortcut Keys

Number of Periods

Theory	Practical
2	3

Teaching Plan

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 Word 2016 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 coloured 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

Introduce Change Case feature as changing text to upper, lower and other common capitalisations.

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.

Tell the students how to change line spacing and paragraph spacing.

Show the students the way to print a Word document.

Explain the difference between editing and formatting to the students.

Share with the students the use of different shortcut keys in Word.

Ask the students to solve the activity in LET'S CATCH UP given on page 44 of the main course book to imbibe digital literacy skills.

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 formatting a text.

Q. What is the default font/font size of text in a Word 2016 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. What do you mean by line spacing?

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 45 and 46 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack The Code activity given on page 46 of the main course book to imbibe problem solving and logical reasoning skills in them. Help the students to solve these questions.

In creative assignment, activities like Let's Explore, Be Creative and Practical Time given on page 47 of the main course book will enhance the ability of the students and serve as creativity & innovativeness, interdisciplinary, experiential learning and digital literacy activities.

Suggested Activity

Ask the students to write a paragraph on My Favourite Sport in Word 2016 applying various formatting features to make the paragraph attractive.

5. The Internet—Web Browser

Teaching Objectives

Students will learn about

☞ Uses of the Internet

☞ Internet Terms

☞ Search Engines

☞ Requirements to Connect to the Internet

☞ Microsoft Edge

Number of Periods

Theory	Practical
2	1

Teaching Plan

While teaching this chapter, tell the students that computers connected to a network can share data and files efficiently without any delay.

Make the students recall that the Internet is a global network of millions of computers and computer networks.

Introduce Uniform Resource Locator (URL) is a unique address or website address used for locating websites.

Explain the various uses of the Internet to the students.

Share with the students the various requirements for an Internet connection covering computer system, telephone/cable line, modem, web browser and Internet Service Provider (ISP).

Explain the meaning of some common Internet terms like URL, net surfing, world wide web, online, offline, website, webpage, home page and hyperlink.

Introduce students with the Microsoft Edge as the default web browser in the Windows 10.

Demonstrate the way of opening and using Microsoft Edge.

Explain the main parts of Microsoft Edge window to the students.

Ask the students to solve the activity in LET'S CATCH UP given on page 54 of the main course book to imbibe digital literacy skills.

Introduce search engine to the students and the way to use it.

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 Internet?

Q. What are the uses of Internet?

Q. What are the requirements for an Internet connection?

Q. Define URL/Hyperlink/Offline/Online/Net Surfing/Website/Web Page.

Q. What are the main parts of Microsoft Edge window?

Q. What is search engine?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 55, 56 and 57 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack The Code activity given on page 57 of the main course book to imbibe problem solving and logical reasoning skills in them. Help the students to solve these questions.

In creative assignment, activities like Let's Explore, Be Creative and Practical Time given on pages 57 and 58 of the main course book will enhance the ability of the students and serve as creativity & innovativeness, experiential learning, and digital literacy activities.

Suggested Activity

Ask the students to prepare a report on some more uses of Internet and present the observations to the class.

6. Introduction to PowerPoint 2016

Teaching Objectives

Students will learn about

- ☞ Starting PowerPoint 2016
- ☞ Creating a New Presentation
- ☞ Slide Layout
- ☞ Deleting a Placeholder
- ☞ Viewing Slide Show
- ☞ Open a Saved Presentation
- ☞ Delivering a Presentation

- ☞ Components of PowerPoint Screen
- ☞ Entering Data on the Slide
- ☞ Adding New Slide to a Presentation
- ☞ Deleting a Slide
- ☞ Saving a Presentation
- ☞ Exiting PowerPoint

Number of Periods

Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students that PowerPoint 2016 is a part of Microsoft Office 2016 package or suite.

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

Demonstrate to the students the steps to start PowerPoint 2016.

Familiarise 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:
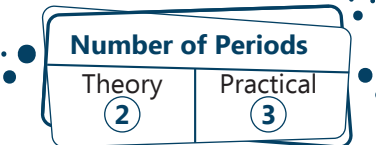
- Create a new presentation
- Enter data on a slide in title and subtitle placeholders
- Changing the slide layout
- Add new slide to a presentation
- Deleting a placeholder
- Deleting a slide
- Introduce slide show as full screen view of the presentation.

Show to the students the method of viewing a presentation.

Tell the students how to:

- Save a presentation
- Open a saved presentation
- Exiting PowerPoint

Ask the students to solve the activity in LET'S CATCH UP given on page 65 of the main course book to imbibe digital literacy skills.

Demonstrate the correct ways to deliver a presentation.

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 PowerPoint 2016?

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.   How can you start a slide show?

Q.   What are the various ways to view a presentation?

Q.   What are the steps to exit PowerPoint 2016?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 66, 67 and 68 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack The Code activity given on page 68 of the main course book to imbibe problem solving and logical reasoning skills in them. Help the students to solve these questions.

In creative assignment, activities like Let's Explore and Practical Time given on pages 69 and 70 of the main course book will enhance the ability of the students and serve as experiential leaning, interdisciplinary, and environmental awareness activities.

Suggested Activity

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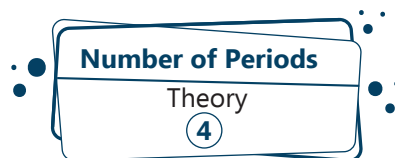
7. Stepwise Thinking

Teaching Objectives

☞   Students will learn about

☞   Stepwise Thinking

☞   Programming

☞   Reasoning and Problem Solving

☞   Case Study

Number of Periods
Theory
4

Teaching Plan

Tell the students about the following in detail using appropriate examples:

•   Reasoning

•   Problem Solving

Explain the Stepwise Thinking to the students with the steps involved in the process using suitable examples.

Share some Case Study with the students to explain the above taught factors in problem solving approach.

Ask the students to solve the activity in LET'S CATCH UP given on page 74 of the main course book to imbibe digital literacy skills.

Tell the students about Programming and give a brief introduction about it.

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 reasoning?

Q.   What is problem solving?

Q.   What is stepwise thinking?

Q.   What is case study?

Q.   What is programming?

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 75, 76 and 77 of the main course book as Exercise. After solving the course book exercises, tell the students to solve Crack The Code activity given on page 77 of the main course book to imbibe problem solving and logical reasoning skills in them. Help the students to solve these questions.

In creative assignment, activities like Let's Explore and Practical Time given on page 78 of the main course book will enhance the ability of the students and serve as experiential learning and digital literacy activities.

Suggested Activity

Ask the students to write a case study to plan and organise a friend's birthday party.

8. Features of File Management

Teaching Objectives

Students will learn about

- ☞ File/Folder
- ☞ Creating a New File/Folder
- ☞ Copying and Moving a File/Folder
- ☞ Deleting a File/Folder
- ☞ Not Tempering with Other's File/Folder
- ☞ Organising File/Folder
- ☞ Selecting a File/Folder
- ☞ Renaming a File/Folder
- ☞ Restoring a Deleted File/Folder

Teaching Plan

While teaching this chapter, tell the students that all the data saved on a hard disk consists of files and folders.

Introduce file as an item that contains a collection of related information, a folder as a collection of files and a sub folder as a folder within a folder.

Tell the students that Windows 10 has some default folders to organise similar files.

Demonstrate to the students the steps to:

• Creating a new file and a folder.

• Select a file and a folder.

• Copying a file and a folder (using Copy-Paste features).

• Moving a file and a folder (using Cut-Paste features).

• Renaming a file and a folder.

• Deleting a file and a folder.

• Restoring a file and a folder.

Ask the students to solve the activity in LET'S CATCH UP given on page 81 of the main course book to imbibe digital literacy skills.

Tell the students not to temper with other's files and folders.

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 file/folder/subfolder?

Q. What is the need to organise a file?

Q. What is the use of Pictures folder?

Q. How can you select a folder?

Q. What is the meaning of copying a file?

Q. What is the default name given to a new folder in Windows?

Q. How can you restore a deleted file?

Q. Tell some points that you should keep in mind while using a computer.

Evaluation

After explaining the chapter, let the students do the course book exercises given on pages 87 and 88 of the main course book as Exercise. After solving the course book exercises, tell the students

to solve Crack The Code activity given on page 89 of the main course book to imbibe problem solving and logical reasoning skills in them. Help the students to solve these questions.

In creative assignment, activities like Let's Explore and Practical Time given on page 89 of the main course book will enhance the ability of the students and serve as experiential learning and digital literacy activities.

Suggested Activity

Ask the students to collect information about some more features of Windows 10 other than those discussed in the chapter.