TOUCHPAD

PLUS Ver. 3.2

5

Teacher's Manual

Extended Support for Teachers

ORANGE
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Teacher's Time Table

Periods / Days	0	I	II	III	IV	BREAK	V	VI	VII	VIII
Monday										
Tuesday										
Wednesday										
Thursday										
Friday										
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

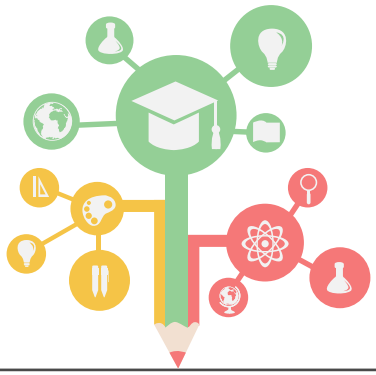
Age 11 - 20 Years

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.

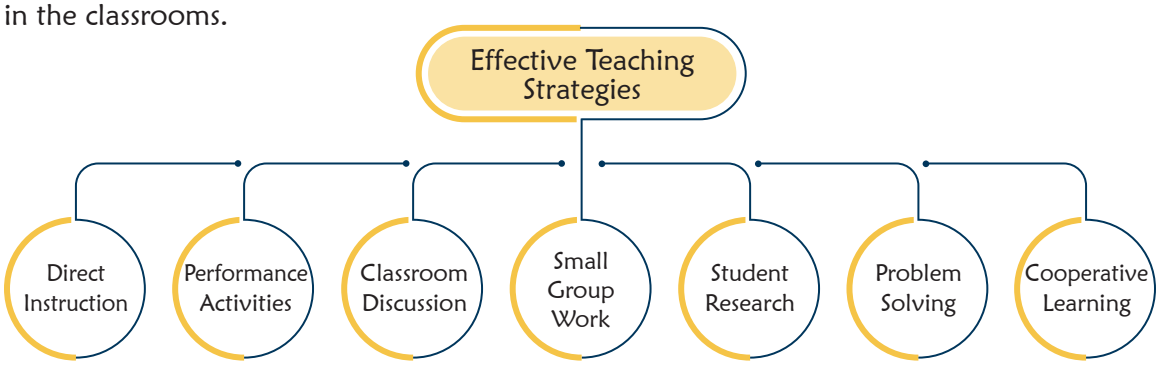
After the class

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

"Knowing yourself is the beginning of all wisdom."

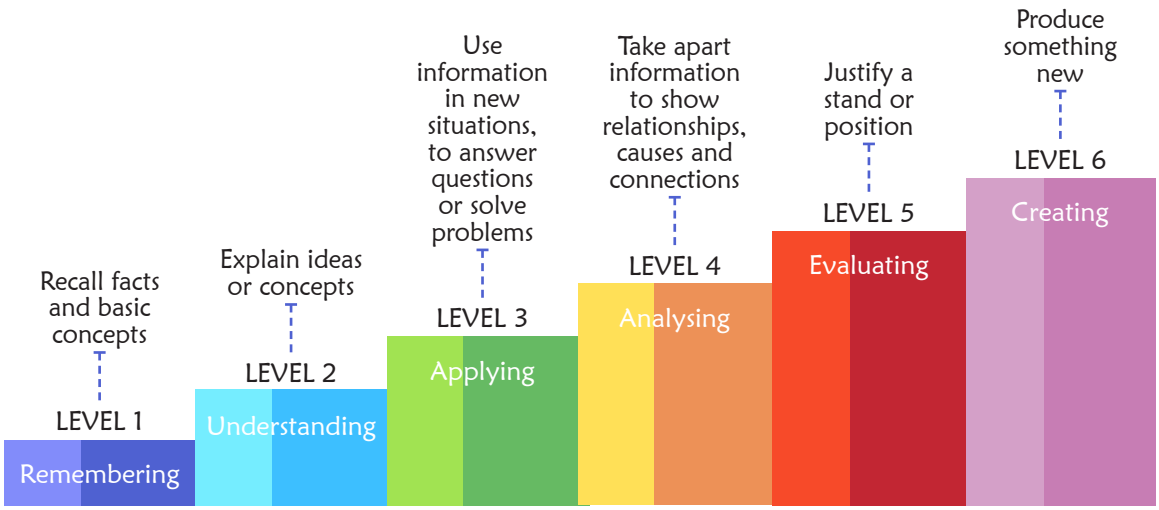
Teaching Strategies

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 5

LESSON PLAN

1 Managing Files or Folders in Ubuntu

Teaching Objectives

Students will learn about

- Home Directory
- File or Folder
- Creating a Folder
- Selecting File or Folder
- Moving a File or Folder
- Deleting a File or Folder
- Status Menu
- Managing Files or Folders
- Creating a File
- Copying a File or Folder
- Renaming a File or Folder
- Restoring a File or Folder

Number of Periods	
Theory	Practical
2	1

Teaching Plan

Make them familiar about Home Directory and its purpose.

Tell students about Status Menu and its option of setting date & time.

Tell the students about File and Folder.

Explain the student Managing files and folders helps keep your computer organised, making it easier to find and use files efficiently.

Demonstrate to the students how to manage files or folders and the steps used to:

- Creating a folder
- Selecting file or folder
- Moving a file or folder
- Deleting a file or folder
- Creating a file
- Copying a file or folder
- Renaming a file or folder
- Restoring a file or folder

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

Extension

Ask the students some oral questions based on this chapter.

Q. Define Home Directory.

Q. What Status Menu?

Q. What is a file?

Q. What is a folder?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 17 and 18 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Page 19 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 19 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.

Suggested Activity

Ask the students to make a folder on desktop and add files in the folder. Rename the files in that folder and copy them to some other folder.

2 Drawing Objects in LibreOffice Writer

Teaching Objectives

Students will learn about

- Opening Drawing Toolbar
- Formatting Shapes
- Applying Fontwork Gallery
- Inserting Image from Gallery
- Deleting an Object or Image
- Inserting Shapes
- Adding Stars and Banners
- Inserting Image from a File
- Adding Text Box

Number of Periods	
Theory	Practical
3	2

Teaching Plan

Explain the student Opening Drawing toobar and it's steps.

Familiarize the students with various categories of Shapes and explaining use of Lines, Basic Shapes, Flowchart, Stars and Banners and Callouts.

Tell the students the various types of Formatting shapes that can be done on the inserted shape –

Changing the border of the shape, changing outline colour of the shape, changing the fill colour of the shape, adding text to the shape, and changing the look of the shape.

Demonstrate to the students the steps to:

- Adding stars and banners
- Applying fontwork gallery
- Inserting image from a file
- Inserting image from gallery
- Adding text box
- Deleting an object or image

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

Extension

Ask the students some oral questions based on this chapter.

Q. Name any three categories of Shapes.

Q. What do you mean by formatting a shape?

Q. What does Add Text option do?

Q. What does Bevel do?

Q. What is FontWork Gallery?

Q. Define Symbols.

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 32 to 34 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler and Hands-On given on Pages 34 and 35 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 35 in the main course book. This will enhance the ability of the students and serve as a SCreativity and Technology Literacy activity.

Suggested Activity

Ask the students to write a paragraph in Writer on 'Festivals of India'. The paragraph must be supported with relevant pictures.

3 Creating Tables in LibreOffice Writer

Teaching Objectives

Students will learn about

- Inserting a Table
- Converting Text into the Table
- Inserting Rows, Columns in the Table
- Changing Column Width or Row Height
- Merging Cells
- Inserting an Image
- Applying Border and Background
- Entering Data in the Table
- Selecting Rows, Columns and Entire Table
- Deleting Row, Column and Table
- Changing the Text Alignment
- Splitting Cells
- Performing Calculations

Number of Periods	
Theory	Practical
2	3

Teaching Plan

While teaching this chapter, tell the students that a table is an arrangement of text in the form of columns and rows.

Also tell them that an intersection of a row and a column is called a cell.

Demonstrate to the students the method of inserting a table in a Writer document.

Show to the students how to select a cell, a group of cells, a row, a column or the whole table.

Demonstrate to the students the steps to:

- Entering data in the table
- Converting Text into the table
- Selecting rows, columns and entire table
- Inserting row, columns in the table
- Deleting row, column and table
- Changing column width or row height
- Changing the text alignment

Introduce merging of cells as combining two or more cells in the same row or the same column into a single cell.

Show to the students the steps to merge two or more cells. Introduce splitting of cells as dividing one cell into two or more cells.

Show to the students the steps to split a cell.

Demonstrate to the student the steps to:

- Inserting an image
- Performing calculation
- Applying border and background

Ensure that the scope of Teacher's Notes 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 table?
Q. Define a cell.
Q. What is the shape of the mouse pointer while selecting a cell / row / column / table?
Q Can more rows or columns be added to a table?
Q. Define merging / splitting of cells.

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 50 and 51 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Page 52 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 52 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.

Suggested Activity

Ask the students to create a comparative mark sheet for your marks in different subjects for last three classes.

4 More on LibreOffice Impress

Teaching Objectives

Students will learn about

- Slide Layout
- Inserting Images
- Slide Views
- Applying Animation Effects
- Applying Slide Transition Effects
- Inserting Fontwork Gallery
- Changing Background
- Animations in the slides
- Modifying Animation Effects
- Modifying Slide Transition Effects

Number of Periods	
Theory	Practical
3	2

Teaching Plan

While teaching this chapter, tell the student that an engaging presentation grabs attention with attractive slides and clear content.

Tell the student that Slide layout defines how text, images, and charts are arranged on a slide.

Explain the student components like that(Title placeholder, Text placeholder, Content placeholder, and Content placeholder.

Tell the student that fontwork gallery is a collection of stylish fonts which makes the slide look attractive. Also explain the it's steps.

Show the student inserting an image from file and gallery.

Introduce the student changing the background.

Explain the student that Slide view and different view ways:

- **Normal View:** Default view with a slide pane (thumbnails for navigation) and a working area (large slide for editing).
- **Outline View:** Displays only text, useful for editing content without distractions.
- **Notes View:** Shows speaker notes visible only to the presenter, not the audience.
- **Slide Sorter:** Displays all slides as thumbnails for easy reordering, editing, and organizing.

Tell the student add motion to slide objects using animations and it's component like(Animation effects list, Add effect , Remove effect , Move up & move down, Preview effects, and Effects checker board.

Demonstrate the applying animation effects:

- Entrance effects
- Exit Effects
- Motion paths effects
- Emphasis effects
- Misc Effects

Explain the student that steps of modifying animation effects and it's options that allow to modify the effects like(Category, Start, Direction, Effect, Duration, Delay, and Removing animation effect on LibreOffice impress.

Tell the student slide transitions create smooth effects between slides, making presentations flow like scenes in an animated film. Also explain it's steps.

Introduce the student modifying slide transition effects like(Variant, Duration, and Sound.)

Ensure that the scope of Teacher's Notes 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 slide layout?
Q. How do you insert Fontwork in Impress?
Q. How do you change the background of a slide?
Q. What are the different slide views in Impress?
Q. How do you apply animation effects to objects?
Q. What are slide transition effects?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 63 and 65 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Pages 65 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 66 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.

Suggested Activity

Create a short presentation on your favorite topic using different slide layouts, images, animations, and transitions.

5 Introduction to LibreOffice Calc

Teaching Objectives

Students will learn about

- Features of LibreOffice Calc
- Components of LibreOffice Calc Window
- Entering Data in Spreadsheet
- Performing Simple Calculation
- Saving a Spreadsheet
- Starting LibreOffice Calc
- Data Types in LibreOffice Calc
- Using Auto Fill Feature
- Selecting Items in a Spreadsheet
- Closing the LibreOffice Calc

Number of Periods	
Theory	Practical
3	3

Teaching Plan

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

Explain to the students the features of Calc in detail.

Demonstrate to the students the steps to start Calc.

Familiarize the students with the various components of LibreOfiice Calc window covering Title Bar, Window control buttons, Menu bar, Standard toolbar, Formatting toolbar, Formatting toolbar, Sheet tab, Scroll bar, Status bar, Rows, Columns, Cell, Cell address, and Active cell.

Tell the students that Calc offers various data types to be entered in a cell covering Numbers, Text, Date and Time.

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

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

Tell the students how to perform simple calculations in Calc.

Demonstrate the students and show the steps involved in:

- Selecting cells
- Selecting columns and rows
- Selecting entire spreadsheet

Demonstrate to the students the steps to:

- Save a spreadsheet
- Close LibreOffice Calc

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

Extension

Ask the students some oral questions based on this chapter.

Q. What is LibreOffice Calc?

Q. What are the features of Calc?

Q. Name any five components of Calc.

Q. Define Formula Bar / Row / Column / Cell / Active Cell / Cell Range.

Q. State the situation when Number / Text / Date and Time data type used for.

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

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 79 to 81 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on Pages 81 and 82 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 82 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.

Suggested Activity

Ask the students to design their marksheet in Calc.

6 Internet and E-mail

Teaching Objectives

Students will learn about

- The Internet
- How Does the Web Work?
- Using URLs
- Emoticons, Acronyms and Netiquettes
- World Wide Web
- Using Web Browser
- E-Mail

Number of Periods	
Theory	Practical
2	2

Teaching Plan

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

Give a brief history of the beginning of internet as ARPANET.

Introduce the concept of World Wide Web (WWW) with reference to basic terms covering web, web servers, posting/uploading, etc.

Explain to the students the process of how the web works.

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.

Show to the students the steps involved in the the process of using Address Bar.

Explain to the students about hyperlink which can be appear as text, an image, or a navigational tool.

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 of e-mail.

Demonstrate in detail the steps involved in:

- Creating an e-mail account (with reference to some common folders of home page like Inbox, Sent, Outbox, Spam, and Trash)
- Reading a received e-mail
- Sign out In to an e-mail account

Introduce the terms emoticons (representation of facial expressions) and acronyms (word formed from initial letters of a multi-word name).

Write some commonly used emoticons and acronyms on the class board to elaborate the concept.

Explain the student Netiquette is the set of rules for respectful and polite behavior when interacting with others online.

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

Extension

Ask the students some oral questions based on this chapter.

Q. What is World Wide Web?
Q. Define web server.
Q. How the web works?
Q. Expand URL.
Q. Define an e-mail.
Q. What do you understand by emoticons?
Q. What is an acronym?
Q. What is Netiquettes?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 93 to 95 of the main course book as Exercise. Tell the students to try different activities under Mind Boggler given on Page 95 and 96 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 96 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy activity.

Suggested Activity

Ask the students to create an e-mail account. Send a birthday invitation to ten friends and/or relatives.

7 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

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 is a puzzle.

Explain the meaning of Decoding to the students and ask them 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.

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

Extension

Ask the students some oral questions based on this chapter.

Q. What is data?

Q. What is information?

Q, What is sorting?

Q. How can you sort data?

Q. How can you represent information?

Q. What is a decoding?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 100 and 101 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler and Hands-On given on Page 101 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 102 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy and Creativity activity.

Suggested Activity

Ask the students to practice to find out more types of picture puzzles.

8 More On Scratch

Teaching Objectives

Students will learn about

- Creating a Simple Game
- Using Operators
- Variables
- Conditions
- Sensing Blocks
- Storing User Input
- Loops

Number of Periods	
Theory	Practical
3	3

Teaching Plan

While teaching this chapter, tell the students that Scratch is one of the programming languages used in robotics.

Tell the students that create a Scratch basketball game with players passing the ball when the green flag is clicked.

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

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

Explain the conditional statements like 'if' and 'if...then...else' are used to make decisions, executing specific code when conditions are true or false.

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

Explain the student storing user input, you can take user input to divide numbers and display or speak the result.

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

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

Extension

Ask the students some oral questions based on this chapter.

Q. How are operators used in Scratch?

Q. What are variables in Scratch?

Q. What are sensing blocks in Scratch?

Q. What are loops in Scratch?

Q. How do you store user input in Scratch?

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 113 and 114 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler given on pages 114 and 115 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 115 in the main course book. This will enhance the ability of the students and serve as a Creativity and Technology Literacy activity.

Suggested Activity

Ask the students to draw a triangle and circle together in a program.

9 Concept of Smart Living

Teaching Objectives

Students will learn about

- Smart Homes
- Devices Used in Smart Homes

Number of Periods	
Theory	Practical
2	1

Teaching Plan

While teaching this chapter, make sure that the students are well aware about AI and related topics taught in previous classes.

Explain the student smart homes use internet-connected devices to control appliances like lighting and heating, making life more convenient and secure.

Tell the student that benefits of smart homes.

Start the chapter with an introduction of variety of gadgets used in our homes to make the life easier.

- Share the devices which are used in smart homes to the students:
- Smart TV
- Video Doorbells
- Smart Cameras
- Smart Smoke Detectors
- Smart Lighting
- Smart Speakers
- Relate all these to their daily life routine.

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

Extension

Ask the students some oral questions based on this chapter.

Q. What are smart devices?

Q. What is the concept of smart home?

Q. What are the benefits of smart home?

Q. Define the following:

- Video Doorbells
- Smart Cameras
- Smart Lighting
- Smart Smoke Detectors
- Smart Speakers

Evaluation

After explaining the chapter, let the students do the exercises given on Pages 119 and 120 in the main course book as Checkpoint. Tell the students to try different activities under Mind Boggler and Hands-On given on Page 120 in the main course book.

Take the students to the computer lab and let them practice the activity given in the Lab Session section on Page 121 in the main course book. This will enhance the ability of the students and serve as a Technology Literacy and Media Literacy activity.

Suggested Activity

Ask the students to search more smart devices in Google and make a list of them.