

TOUCHPAD

Information Technology
(OpenOffice)

Teacher's Manual

Extended Support for Teachers



ORANGE
www.orangeeducation.in
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Teacher's Time Table

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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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• Vocabulary reaches about 10,000 words• Vocabulary increases rapidly throughout middle childhood
Emotional/Social	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none"> • Motor skills develop resulting in enhanced reflexes
Cognitive	<ul style="list-style-type: none"> • Applies several memory strategies at once • Cognitive self-regulation is now improved
Language	<ul style="list-style-type: none"> • Ability to use complex grammatical constructions enhances • Conversational strategies are now more refined
Emotional/Social	<ul style="list-style-type: none"> • Self-esteem tends to rise • Peer groups emerge

Age 11 - 20 Years	
Physical	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Is now more self-conscious and self-focused • Becomes a better everyday planner and decision maker
Emotional/Social	<ul style="list-style-type: none"> • 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 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."

Part-A: Employability Skills

1. Communication Skills

Teaching Objectives

Students will learn about

- | | |
|---|---|
| ☞ Communication | ☞ Types of Communication |
| ☞ Communication Cycle | ☞ Barriers in Effective Communication |
| ☞ Principles of Effective Communication | ☞ Principles of Effective Communication |
| ☞ Sentence and its Kinds | ☞ Phrase |
| ☞ Parts of Sentence | ☞ Parts of Speech |
| ☞ Articles | ☞ Construction of a Paragraph |

Number of Hours

Theory

10

Teaching Plan

While teaching this chapter, tell the students that the word 'Communication' comes from the Latin word 'Communicare', which means 'to share'.

Show the students the Methods and Types of Communication along with its advantages and disadvantages:

- Verbal Communication
- Non-Verbal Communication
- Visual Communication

Explain the communication cycle to the students and the phases it involves:

- | | | |
|------------|------------|------------|
| ● Sender | ● Encoding | ● Channel |
| ● Decoding | ● Receiver | ● Feedback |

Tell the students about the importance of feedback in effective communication.

Let the students know about the types of barriers and measures to overcome barriers in easy language for better understanding.

The types of barriers are as follows:

- Physical
- Psychological
- Cultural
- Mechanical
- Linguistic

Measure to overcome barriers are as follows:

- Eliminating Differences in Perception
- Use of Simple Language
- Reduction and Elimination of Noise Level
- Active Listening
- Face to Face Interaction
- Proper Media Selection

Show the students the principles of effective communication and also explain the 7Cs of communication with their aspects like:

- Concise
- Concrete
- Correct
- Clarity
- Coherent
- Complete
- Courteous

Explain the following to the students with their proper purpose in detail:

- Sentence and Its Kind
- Phrase
- Parts of Sentence
- Parts of Speech
- Articles
- Construction of a Paragraph

Extension

Ask the students some oral questions based on this chapter.

- Q. What is communication?
- Q. What are the methods of communication?
- Q. Explain communication cycle.
- Q. Write about the importance of feedback.
- Q. Explain the barriers in effective communication.
- Q. Explain the 7Cs of communication.
- Q. Define:

- a. Sentence and its Kind
- b. Phrase
- c. Parts of Sentence
- d. Parts of Speech
- e. Articles
- f. Construction of a Paragraph



Evaluation

After explaining the chapter, let the students do the exercises given on pages 28 to 33 in the main course book under Exercise.

Ask the students to try Application-based questions given on pages 31 and 33 to imbibe elements like life skills & values, and art integration in them.

2. Self-Management

Teaching Objectives

Students will learn about

- | | |
|----------------------------------|------------------------------------|
| ☞ Skills of Self Management | ☞ Stress |
| ☞ Self-Awareness | ☞ Self-Motivation |
| ☞ Self -Regulation: Goal Setting | ☞ Self-Regulation: Time Management |

Number of Hours

Theory

10

Teaching Plan

While teaching this chapter, tell the students that self-management is the modus of applying and using one's self characteristics in a righteous and responsible way.

Introduce the students to Stress and also explain them how to manage stress & work independently.

Tell the students what measure are to be followed to reduce stress:

- | | |
|---------------------|----------------|
| ● Physical Exercise | ● Yoga |
| ● Meditation | ● Enjoyment |
| ● Vacation | ● Nature Walks |

Share the information about self-awareness to the students which are further divided into external and internal.

Tell the students about self-motivation and how to get motivated while using real-life examples.

Explain the meaning of self-regulation to the students.

Extension

Ask the students some oral questions based on this chapter.

- Q. What is self-management?
- Q. What is stress?
- Q. What measures can be taken to reduce stress?
- Q. What is self-awareness?

Q. What is self-motivation?

Q. What is self-regulation?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 42 to 45 in the main course book under Exercise.

Ask the students to perform the activity given on page 41 to enhance communication skills.

Ask the students to try Application-based questions given on pages 44 and 45 to imbibe elements like life skills & values in them.

3. Information Technology & Communication

Teaching Objectives

Students will learn about

- | | |
|--------------------------------------|--|
| ☞ Classification of Operating System | ☞ Functions of Operating System |
| ☞ Types of Operating System | ☞ Common Terms of Operating System |
| ☞ Running an Application | ☞ Basic Components of Interface Screen |
| ☞ Device Driver | ☞ File System |
| ☞ File Management | ☞ Computer Care |
| ☞ Malware | ☞ Symptoms of Computer Virus |
| ☞ Ways to prevent a Virus | ☞ Removing Temporary Files |

Number of Hours

Theory

10

Teaching Plan

While teaching this chapter, tell the students that an operating system refers to the set of program that provides an interface to use the resources of computer system effectively and efficiently.

Define the meaning, importance and role of an operating system to the students.

Explain the classification of operating system to the students:

- On the basis of interface
- On the basis of number of users
- On the basis of programming
- Other classifications

Tell the students about the functions of operating system in detail.

Explain the following types of operating system to the students in detail:

- DOS
- UNIX
- Solaris



- Microsoft Windows
- GNU-Linux
- Mobile Operating System

Explain the common terms and their definition with the students:

- Desktop
- Icons
- Panel/Taskbar

Show the students how to run an application in an operating system and define the basic components of interface screen.

Demonstrate the meaning of device driver and file system in an operating system.

Share the steps involved in performing the following function in file management to the students:

- Creating a new file/folder
- Moving a file/folder
- Copying a file/folder
- Renaming a file/folder
- Deleting a file/folder
- Restoring a file/folder
- Viewing properties of a file

Teach about how to take care of a Computer to the students.

Explain what is a malware to the students and define its types:

- Virus
- Worms
- Trojan horse
- Spyware
- Spam

Tell the symptoms of computer virus to the students.

Also, share the ways to prevent the computer from a virus and removing a temporary file.

Extension

Ask the students some oral questions based on this chapter.

- Q. How does operating system act as a messenger between hardware and application program?
- Q. Differentiate between CUI and GUI.
- Q. What is Time Sharing OS?
- Q. Write any four (4) functions of OS.
- Q. List the name of any five (5) operating systems.
- Q. List the name of five (5) Linux distributions.
- Q. What are icons? List some common icons present on the desktop of Linux and Windows.
- Q. What is a file system?
- Q. Write any four (4) points to be kept in mind while cleaning the computer.
- Q. List the ways to prevent virus infection in a computer.

Evaluation

After explaining the chapter, let the students do the exercises given on pages 70 to 76 in the main course book under Exercise.

Ask the students to try Application-based questions given on pages 74 and 76 to imbibe elements like life skills & values in them.

Ask the students to perform the **Lab Assignment Activity** given on page 62 to enhance experiential learning.

4. Entrepreneurship

Teaching Objectives

Students will learn about

- ☞ Entrepreneurship
- ☞ Functions of Entrepreneur
- ☞ Myths about Entrepreneurship
- ☞ Qualities of Entrepreneurs
- ☞ Importance of Entrepreneur
- ☞ Entrepreneurship as a Career Option

Number of Hours

Theory

15

Teaching Plan

While teaching this chapter, tell the students that entrepreneurship is not only about self-employability but it plays a crucial part in completion of life cycle of society.

Explain the qualities of entrepreneurs and functions of entrepreneurs to the students.

Show the importance of an entrepreneur to the students and the myths about entrepreneurship.

Define the entrepreneurship as a career option to students in detail.

Extension

Ask the students some oral questions based on this chapter.

- Q. Explain myths about entrepreneurship.
- Q. Define entrepreneurship as career option.
- Q. When is entrepreneurship successful?
- Q. How does entrepreneurship play an important role in the life cycle of society?
- Q. List the qualities of an entrepreneur.
- Q. Write the function of entrepreneur.

Evaluation

After explaining the chapter, let the students do the exercises given on pages 82 to 87 in the main course book under Exercise.

Ask the students to try Application-based questions given on pages 85 and 87 to imbibe elements like life skills & values in them.



5. Green Skills

Teaching Objectives

Students will learn about

- ☞ Sustainable Development
- ☞ Sustainable Development Goals

Number of Hours

Theory

5

Teaching Plan

While teaching this chapter, tell the students that environment can be classified as natural and artificial. Natural environment consists of all the living and non-living things. It encompasses the interaction of all living beings, climate and natural resources.

Define sustainable development to the students and importance of sustainable development.

Explain the problems related to sustainable development to the students.

Teach all the 17 sustainable development goals to the students.

Extension

Ask the students some oral questions based on this chapter.

- Q. What is environment?
- Q. Differentiate between:
 - a. Renewable resources
 - b. Non-Renewable resources
- Q. What is sustainable development?
- Q. Write the importance of sustainable development.
- Q. Write problems related to sustainable development.

Evaluation

After explaining the chapter, let the students do the exercises given on pages 93 to 96 in the main course book under Exercise.

Ask the students to try Application-based questions given on pages 95 and 96 to imbibe elements like life skills & values in them.



Part-B: Subject Specific Skills

1. Advanced Features of Word Processor

Teaching Objectives

Students will learn about

- ☞ Styles
- ☞ Template
- ☞ Table of Contents
- ☞ Image
- ☞ Defining the Hierarchy of Headings
- ☞ Mail Merge

Number of Hours

Theory

12

Practical

18

Teaching Plan

While teaching this chapter, tell the students that word processing package helps in creating, editing, formatting, modifying, printing and storing the contents of a document.

Tell the students about **Styles** while demonstrating the steps involved in the following:

- Styles
- Format Painter
- Creating New Styles from Selections
- Updating Styles from Selections
- To Create a New Style by Drag-and-Drop

Tell the students about **Image** while demonstrating the steps involved in the following:

- Inserting an image from a file
- Inserting an Excel Chart into a Text Document
- Resize image
- Crop Image
- Arranging Images
- Rotate Image
- Delete Image
- Aligning Image

Tell the students about **Template** with the students along with the steps involved in creating a new template.

Let the students know that a template is a document that contains pre-defined formatting styles, graphics, tables, objects and other information that is commonly used for creating other documents.

Make the students aware the steps of creating a new template.

Let the students know how to define hierarchy of headings.

Explain to the students about Table of Contents and demonstrate the steps involved in:

- Creating a table of contents
- Updating a table of contents

Demonstrate what is Mail Merge to students and explain the components of Mail Merge like:

- Main Document
- Data Source

Extension

Ask the students some oral questions based on this chapter.

- Q. What is style?
- Q. What actions can you perform on a style?
- Q. How can you insert an image in a text document?
- Q. Explain template.
- Q. How can you modify a default template?
- Q. What is mail merge?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 143 to 148 in the main course book under Exercise.

Ask the students to try Application-based questions given on pages 147 and 148 to imbibe elements like life skills & values in them.

2. Advanced Features of Spreadsheet

Teaching Objectives

Students will learn about

- ☞ Consolidating Data
- ☞ What-If Analysis
- ☞ Goal Seek
- ☞ Link Data and Spreadsheets
- ☞ Hyperlink
- ☞ Creating Subtotal
- ☞ Scenario
- ☞ Solver
- ☞ Cell Reference
- ☞ Sharing a Document

Teaching Plan

While teaching this chapter, tell the students that Data is one of the most important sources for analyzing or getting proper information.

Number of Hours	
Theory	Practical
10	15



Explain the **Consolidating Data** to the students and the steps involved in combining cell contents with labelled screenshots.

Discuss with the students about the use of **Subtotal**. Also, share the steps involved in creating the subtotal.

Share with the students the purpose of **What If Analysis**.

Let the students know that Scenario is a tool to test 'what-if' questions. Explain to them that Scenario is a set of values that spreadsheet saves and can substitute automatically in cells on a worksheet.

Make the students understand that Data Table is also a planning for 'what-if' questions. The Data Table tool creates a formula array which is a separate set of cells that give all the alternative results for the formulas used.

Demonstrate to the students about the purpose of using **Goal Seek** and the various components:

- Set Cell
- To Value
- By Changing Cell
- Shrink/ Maximize

Explain the objective of Solver in detail to the students and demonstrate the steps involved in its use.

Demonstrate to the students about the purpose of Link Data and Spreadsheets and steps involved in:

- Setting up Multiple Worksheets
- Inserting New Worksheets
- Renaming Worksheets

Discuss with the students the use of Cell Reference and the steps involved in:

- Creating cell reference to other worksheets
- Cell referencing using mouse
- To reference a cell in another workbook

Share with the students the purpose of using Hyperlink and also explain what is:

- Relative Hyperlink
- Absolute Hyperlink

Also share the working with hyperlink with the students.

Demonstrate to the students how **Sharing a Document** can be done and the functions that can be performed it out.

Extension

Ask the students some oral questions based on this chapter.

- Q. What is the meaning of consolidating the data?
- Q. What is the use of subtotal?
- Q. What is the purpose of What If analysis?
- Q. Define Goal Seek and Solver.
- Q. What is Cell Reference used for?
- Q. What is a Hyperlink?
- Q. Differentiate between relative and absolute hyperlink.

Q. How is a document shared in Excel?

Q. What is the purpose of Spelling and Grammar?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 184 to 193 in the main course book under Exercise.

Ask the students to try Application-based questions given on pages 188 and 190 to imbibe elements like life skills & values in them.

