



TOUCHPAD

Artificial Intelligence

Teacher's Manual

Extended Support for Teachers



ORANGE

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Teacher's Time Table

[illegible]



DEVELOPMENT MILESTONES IN A CHILD

Development milestones are a set of functional skills or age-specific tasks that most children can do at a certain age. These milestones help the teacher to identify and understand how children differ in different age groups.

Age 5 - 8 Years	
Physical	<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 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."

1. Communication Skills-III

Teaching Objectives

Students will learn about

- ☞ Communication—An Introduction
- ☞ Factors Affecting Communication
- ☞ Communication Styles
- ☞ Parts of Speech
- ☞ Asking Questions
- ☞ Habits and Routines
- ☞ 7Cs of Communication
- ☞ Methods of Communication
- ☞ Basics of Pronunciation
- ☞ Greetings
- ☞ Discussing Family

Number of Hours

30

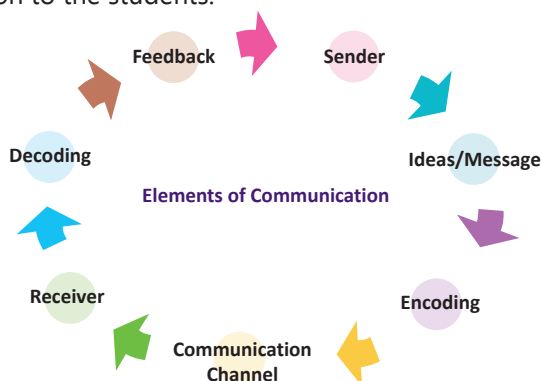
Teaching Plan

Before starting the chapter, give an introduction of Communication to the students.

Tell the students Communication is the 'sharing' of information between two or more people or within a group to achieve a common understanding.

Explain the elements of communication to the students:

- Sender
- Ideas/Message
- Encoding
- Communication Channel
- Receiver
- Decoding
- Feedback

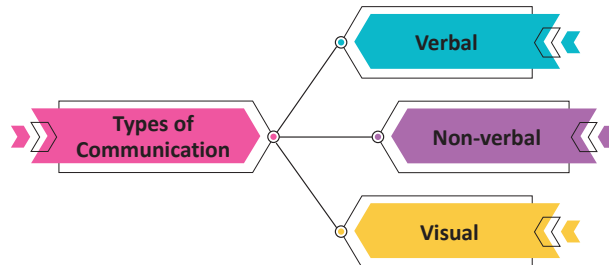


Share to the students that in order to ensure the communication in the most effective and engaging manner we need to have a clear vision of 7 C's:

- Clear
- Concise
- Concrete
- Correct
- Coherent
- Complete
- Courteous

Discuss the factors affecting of communication to the students in brief.

Tell the students about the methods of communication in detail:



Also, discuss about the advantages and disadvantages of different types of communication.

Explain Communication styles and discuss all the four Communication Styles to the students in detail. Those are:

- Passive
- Passive Aggressive
- Aggressive
- Assertive

Tell the students that Pronunciation is how you say a word of a language . Also, discuss the basics of Pronunciation with the students.

Teach the students about the parts of speech and various words used in that with examples.

Tell the students that greetings help us to start a nice conversation. Also introduce them about the types of greetings.

Teach them how to ask right questions which help them to get the correct information they want.

Teach them about the topics given below with examples:

- Discussing Family
- Habits and routines

Show the videos from the link given on pages 21 and 28 as a **Video Session**.

Ask the students to solve the exercise given on page 29 as **AI Reboot**.

Extension

Ask the students some oral questions based on this chapter.

- Q. What is communication?
- Q. What are the elements of communication?
- Q. What is the importance of communication skills?
- Q. What is the perspective of communication?
- Q. What are effective ways of communication?



- Q. Define the types of communication.
- Q. What is verbal communication?
- Q. What is non-verbal communication?
- Q. Define written communication.
- Q. What is a paragraph?
- Q. What is a sentence?
- Q. How we can construct a paragraph?
- Q. Define parts of speech.
- Q. What are the types of greetings?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 34 to 38 in the main course book as **AI Quiz** and **Exercise (Solved and Unsolved Questions)**.

Take the students to the computer lab and let them practice the activity given in **Lab Activity** section given on page 38 in the main course book. This will enhance the ability of the students and serve as a Subject Enrichment Activity.

Suggested Activity

Ask the students to create a PowerPoint Presentation on the topic Types of Communication.

2. Self Management Skills-III

Teaching Objectives

Students will learn about

- | | |
|--------------------------------------|---------------------|
| ☞ Knowing Yourself | ☞ Identity |
| ☞ Impressive Appearance and Grooming | ☞ Self-Exploration |
| ☞ Team Work | ☞ Networking Skills |
| ☞ Self-Motivation | ☞ Goal Setting |
| ☞ Time Management | |

Number of Hours

10

Teaching Plan

Before starting the chapter, tell the students to know 'themselves'. Also, tell them It is important to know who you are.

Let them understand some terms that help in knowing ourselves which are as follows:

- Likes



- Dislikes
- Opinions
- Background
- Values
- Beliefs

Tell them that Identity is a set of behavioral or personal characteristics by which an individual is recognized as a member of a group.

Ask them to identify their strengths and weaknesses.

Let them understand the difference between interests and abilities.

Let them know how to give an impressive appearance and how to groom themselves.

Tell them that Self-exploration means to know one's calibre by analysing intellectual and spiritual capacities.

Let them learn about some approaches that may help them to self-explore. which are:

- Learning Formal and Informal/Self-Directed Learning
- Career Counsellor/Computerized Career Information Systems
- Self-reflection/Inquiry
- Feedback

Teach the concept and benefits of Teamwork to the students.

Also give the tips for working in a team to the students.

Explain the networking skills to the students.

Let them know the advantages of networking and how to develop networking skills to the students.

Explain the following topics in detail to the students.

- Self-Motivation
- Goal Setting
- Time Management

Ask the students to solve the questions given on page 43 as AI Reboot.

Make sure to ask the students to scan and watch the videos given on pages 43 and 45.

Extension

Ask the students some oral questions based on this chapter.

- Q. What is self-management?
- Q. What are the positive rules of self-management?
- Q. Why there is a need of self-management skills?
- Q. Explain how to know your strength.
- Q. What are the steps to identify your strengths?



- Q. Explain how to know your weakness.
- Q. What are the steps to identify your weakness?
- Q. How does grooming impact one's overall impression on others?
- Q. What are the benefits of engaging in self-exploration?
- Q. How does effective teamwork contribute to achieving common goals?
- Q. What are the key skills required for successful networking?
- Q. Why is goal setting important for personal growth and success?
- Q. What are some practical strategies for managing time effectively?
- Q. What do you mean by self-exploration?

Evaluation

Encourage the students to walk-through the chapter thoroughly. After explaining the chapter, let the students do the exercises given on pages 48 to 52 in the main course book as **Quiz and Exercise (Solved and Unsolved Questions)**.

Take the students to the computer lab and let them practice the activity given in **Lab Activity** section on page 53 in the main course book. This will enhance the ability of the students and serve as a Subject Enrichment Activity.

Suggested Activity

Ask the students to create a SMART goal for improving their academic performance in the next semester.

3. ICT Skills-III

Teaching Objectives

Students will learn about

- ☞ Benefits of Using a Word Processor
- ☞ Formatting Text
- ☞ Inserting Lists, Tables, Pictures, and Shapes
- ☞ Tracking Changes
- ☞ Getting Started
- ☞ Spell Checking & Grammar
- ☞ Adding Header, Footer and Page Number

Number of Hours

Theory

10

Teaching Plan

Before starting the chapter, define the meaning of ICT to the students in detail along with proper examples.

Tell the students about the benefits of using a Word Processor.

Let them know how to install Open Office, open writer and understand the various options of a document window.

Let them understand how to do text formatting in the document which are:

- Font Style and Size
- Bold/Italic/Underline
- Alignment
- Cut/Copy and Paste
- Find and Replace

Demonstrate the following topics to the students:

- Spell Checking & Grammar
- Inserting Lists, Tables, Pictures, and Shapes
- Adding Header, Footer and Page Number
- Tracking Changes

Extension

Ask the students some oral questions based on this chapter.

- Q. What is ICT?
- Q. What are the benefits of using a word processor?
- Q. How can a word processor help with getting started on a document?
- Q. What features does a word processor offer for formatting text?
- Q. How does a word processor assist with spell checking and grammar?
- Q. What can you do with a word processor in terms of inserting lists, tables, pictures, and shapes?
- Q. How can a word processor help in adding a header, footer, and page number to a document?
- Q. What is the purpose of tracking changes in a word processor?
- Q. What are some commonly used keyboard shortcuts in a word processor?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 63 to 67 in the main course book as **Quiz** and **Exercise (Solved and Unsolved Questions)**.

Take the students to the computer lab and let them practice the activity given in **Lab Activity** section on page 67 in the main course book. This will enhance the ability of the students and serve as a Subject Enrichment Activity.

Suggested Activity

Ask the students to describe a situation where you utilized your ICT skills to troubleshoot and fix a technical issue with a computer or software program.



4. Entrepreneurial Skills-III

Teaching Objectives

Students will learn about

- ☞ Definition of Business
- ☞ Introduction to Entrepreneurship
- ☞ Values that Make an Entrepreneur Successful
- ☞ Problem-Solving
- ☞ Customer's Need
- ☞ Understanding the Market
- ☞ Business Planning & Improving Business Growth
- ☞ Types of Business
- ☞ Types of Business Activities
- ☞ Attitude of an Entrepreneur
- ☞ Generating a Business Idea
- ☞ Building Business Ideas

Number of Hours

Theory

15

Teaching Plan

Before starting the chapter, tell the students that Entrepreneurship is the process of developing a business plan, starting and running a business with innovation, meeting customer needs and generating profits.

Share the types of business in detail with the students.

Those are:

- Manufacturing
- Trading
- Services
- Hybrid

Tell the students such values that make an entrepreneur successful. Those are:

- Confidence
- Independence
- Perseverance
- Open-mindedness

Share the following to the students for a better understanding in details:

- Problem-Solving
- Generating a Business Idea
- Customer's Need
- Building Business Ideas
- Understanding the Market
- Business Planning & Improving Business Growth

Make sure to ask the students to scan and watch the videos given on pages 68 and 72.

Ask the students to solve the task given on pages 71 and 74 as **Task**.

Extension

Ask the students some oral questions based on this chapter.

- Q. What is business?
- Q. What are the types of business?
- Q. What are the values that make an entrepreneur successful?
- Q. What is Entrepreneur?
- Q. What is Entrepreneurship?
- Q. What is the difference between Businessman and Entrepreneur?
- Q. Define the attitude of an entrepreneur.
- Q. What is the role of an employee?
- Q. What is the need of a customer?

Evaluation

Encourage the students to walk-through the chapter thoroughly.

After explaining the chapter, let the students do the exercises given on pages 79 to 83 in the main course book as **Quiz** and **Exercise (Solved and Unsolved Questions)**.

Take the students to the computer lab and let them practice the activity given in **Lab Activity** section on page 83 in the main course book. This will enhance the ability of the students and serve as a Subject Enrichment Activity.

Ask the students to practice the activity in class given in **Class Activity** section given on page 119 in the main course book. This will help the students to know the world of Entrepreneurship and how to give a successful interview.

Suggested Activity

Ask the students to create a simple business plan for a small-scale venture, outlining the target market, marketing strategies, and estimated costs and profits.

5. Green Skills-III

Teaching Objectives

Students will learn about

- | | |
|-----------------------------------|---------------------------------------|
| ☞ What is a 'Green Economy'? | ☞ Sectors of a Green Economy |
| ☞ Green Economy Policies | ☞ Stakeholders in Green Economy |
| ☞ Government and Private Agencies | ☞ Examples of Green Projects in India |



Teaching Plan

Before starting the chapter, tell the students that we need new approaches that can protect our environment promote environmentally sustainable economic development.

Explain to the students about green economy and the sectors of it. Also, share the green economy policies and stakeholders.

Introduce the government and private agencies to the students.

Share the examples of green projects in India.

Ask the students to solve the questions given on page 89 as **AI Reboot**.

Make sure to ask the students to scan and watch the videos given on pages 85 and 90.

Extension

Ask the students some oral questions based on this chapter.

- Q. What does the term 'green economy' refer to?
- Q. When was the Green Economy Initiative launched?
- Q. Which sectors are part of a green economy?
- Q. What is the objective of the National Solar Mission?
- Q. Which Union Territory in India switched to 100% solar energy?
- Q. What is the goal of the Swachh Bharat Mission?
- Q. How does the National Green Tribunal function?
- Q. Who needs to actively participate for sustainable development?
- Q. What is the role of governments in sustainable development?
- Q. Who collaborates with the government for fostering a green economy?

Evaluation

After explaining the chapter, let the students do the exercises given on pages 94 to 96 in the main course book as **Quiz** and **Exercise (Solved and Unsolved Questions)**.

Take the students to the computer lab and let them practice the activity given in **Lab Activity** section on page 96 in the main course book. This will enhance the ability of the students and serve as a Subject Enrichment Activity.

Suggested Activity

Ask the students to create a project or prototype that showcases a sustainable solution or innovation, utilizing green skills such as environmental impact assessment or waste management.