

# Essentials of **INFORMATION TECHNOLOGY**

*Based on LibreOffice*

**PREETI ARORA**



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*Based on LibreOffice*

**PREETI ARORA**

DOEACC 'A' level, M.Sc-IT, M.Tech-IT  
Sr. Computer Science Teacher



SCS

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Educational Publishers

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## PREFACE

It is difficult to comprehend how much Information Technology (IT) pervades and influences our daily lives, more specifically its practical application in desktops, laptops, tablets and smartphones that we use. Rapid advancements in Information and Communications Technology (ICT) have created unprecedented opportunities in the field of education, school education in particular. Mastering ICT skills and utilizing them is of utmost importance for teachers and learners for creating a new learning culture.

Information Technology is stated to have motivational power. It enables students to enjoy learning as active participants by bringing the outside world into the classroom and by enhancing one-to-one, one-to-many and many-to-many interactions among peers, teachers, experts and others. Furthermore, ICT has also helped students in learning new skills such as searching and locating appropriate information, making informed choices, recognizing the authenticity of sources and collaborating with other learners.

The book, **Essentials of Information Technology (402) for CBSE Class X**, based on the Skill Subject approved by CBSE's Department of Skill Education, aims at upgrading the skills and proficiency of the young learners in the field of Information Technology.

The course has been divided into two parts—Employability Skills and Subject-specific Skills—details of which are as under:

- **Employability Skills** incorporates five important skill sets, viz. Communication Skills, Self-Management Skills, ICT Skills, Entrepreneurial Skills and Green Skills. Each of these skills has been covered in detail as a separate unit as per the CBSE syllabus.
- **Subject-Specific Skills** covers advanced topics and features of LibreOffice Writer, Electronic Spreadsheet (Calc), Database Management System (SQL and Base) along with Maintaining Health, Safety and Secure Working Environment. It consists of four units. Unit 1 focuses on the advanced concepts of Digital Documentation like Styles, Table of Contents and Templates. Unit 2 comprises advanced Electronic Spreadsheet, covering concepts of Subtotals, Data Consolidation, Working with Scenarios, Goal Seek and handling Macros along with Sharing Workbooks—Spreadsheets and Hyperlinks. Unit 3 is based on Database Concepts and their implementation using SQL Commands while Unit 4 is about Managing Health and Safety at Workplace.

The book includes all the latest changes made by the CBSE in the IT-402 curriculum and question paper pattern, with focus on **Competency-based/Application-based/Case Study-based Questions, Objective Type Questions and Subjective Type Questions** (both **Solved & Unsolved**). Besides, a **Model Test Paper** (with **Solutions**) and a **Practice Paper** have also been included in the book.

It is hoped that the simple and lucid style of the book and ample practical examples provided will be of immense help to teachers and students in handling difficult topics.

Your feedback is important and will be highly appreciated and duly acknowledged.

Last but not the least, I express my deep sense of gratitude towards my esteemed publishers, **Sultan Chand & Sons (P) Ltd**, for their patience, guidance and support.

**AUTHOR**



# SYLLABUS

## INFORMATION TECHNOLOGY CLASS X Code No. 402

	Units	No. of Hours for Theory and Practical		Max. Marks for Theory and Practical	
<b>Part A</b>	<b>EMPLOYABILITY SKILLS</b>				
	Unit 1: Communication Skills–II	10		2	
	Unit 2: Self-Management Skills–II	10		3	
	Unit 3: ICT Skills–II	10		1	
	Unit 4: Entrepreneurial Skills–II	15		3	
	Unit 5: Green Skills–II	05		1	
	<b>Total</b>	<b>50</b>		<b>10</b>	
<b>Part B</b>	<b>SUBJECT-SPECIFIC SKILLS</b>		<b>Theory (in Hours)</b>	<b>Practical (in Hours)</b>	<b>Marks</b>
	Unit 1: Digital Documentation (Advanced)		12	18	8
	Unit 2: Electronic Spreadsheet (Advanced)		15	23	10
	Unit 3: Database Management System		18	27	12
	Unit 4: Maintain Health, Safety and Secure Working Environment		15	22	10
	<b>Total</b>		<b>60</b>	<b>90</b>	<b>40</b>
<b>Part C</b>	<b>PRACTICAL WORK</b>				
	<b>Practical Examination</b>				
	• Advanced Documentation		5 Marks		20
	• Advanced Spreadsheets		5 Marks		
	• Databases		10 Marks		
	• Viva Voce		10 Marks		10
<b>Total</b>				<b>30</b>	
<b>Part D</b>	<b>PROJECT WORK/FIELD VISIT</b> Any Interdisciplinary Real World Case Study to be taken. Summarized data reports of same can be presented in base. Input should be taken using forms and output should be done using reports using base. Documentation of the case study should be presented using Writer.				10
	<b>PORTFOLIO/PRACTICAL FILE</b> (Portfolio should contain printouts of the practical done using Writer, Calc and Base with minimum 5 problems of each)				10
<b>Total</b>				<b>20</b>	
<b>GRAND TOTAL</b>		<b>200</b>		<b>100</b>	

The detailed curriculum/topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

UNIT 1: Digital Documentation (Advanced)			
S.No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Apply Styles in the document	<ul style="list-style-type: none"> <li>• Styles/categories in Writer</li> <li>• Styles and Formatting window</li> <li>• Using Fill Format</li> <li>• Creating and updating new style from selection</li> <li>• Load style from template or another document</li> <li>• Creating a new style using drag-and-drop</li> <li>• Applying styles</li> </ul>	<ul style="list-style-type: none"> <li>• List style categories in Writer. Select the style from the Styles and Formatting window.</li> <li>• Use Fill Format to apply a style to many different areas quickly.</li> <li>• Create and update a new style from a selection.</li> <li>• Load a style from a template or another document.</li> <li>• Create a new style using drag-and-drop.</li> </ul>

2.	Insert and use images in document	<ul style="list-style-type: none"> <li>Options to insert image to document from various sources</li> <li>Options to modify, resize, crop and delete an image</li> <li>Creating drawing objects, setting or changing its properties. Resizing and grouping drawing objects</li> <li>Positioning image in the text</li> </ul>	<ul style="list-style-type: none"> <li>Insert an image to document from various sources</li> <li>Modify, resize, crop and delete an image</li> <li>Create drawing objects</li> <li>Set or change the properties of a drawing object</li> <li>Resize and group drawing objects</li> <li>Position the image in the text</li> </ul>
3.	Create and use template	<ul style="list-style-type: none"> <li>Templates in Writer</li> <li>Using predefined templates</li> <li>Creating a template</li> <li>Set up a custom template</li> <li>Using a template</li> <li>Changing to a different template</li> <li>Updating a Document</li> </ul>	<ul style="list-style-type: none"> <li>Create a template</li> <li>Use predefined templates</li> <li>Set up a custom default template</li> <li>Update a document</li> <li>Change to a different template</li> <li>Use the Template</li> <li>Update the document</li> </ul>
4.	Create table of contents	<ul style="list-style-type: none"> <li>Table of contents. Hierarchy of headings. Customization of table of contents.</li> <li>Character styles. Maintaining a table of contents.</li> </ul>	<ul style="list-style-type: none"> <li>Create a table of contents.</li> <li>Define a hierarchy of headings.</li> <li>Customize a table of contents</li> <li>Apply character styles.</li> <li>Maintain a table of contents.</li> </ul>

### UNIT 2: Electronic Spreadsheet (Advanced)

S.No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Analyze data using scenarios and goal seek	<ul style="list-style-type: none"> <li>Using consolidating data. Creating subtotals</li> <li>Using “what if” scenarios. Using “what if” tools</li> <li>Using goal seek and solver</li> </ul>	<ul style="list-style-type: none"> <li>Use consolidating data.</li> <li>Create subtotals.</li> <li>Use “what if” scenarios. Use “what if” tools.</li> <li>Use goal seek and solver</li> </ul>
2.	Link spreadsheets data	<ul style="list-style-type: none"> <li>Setting up multiple sheets. Creating reference to other sheets by using keyboard and mouse.</li> <li>Creating reference to other documents by using keyboard and mouse</li> <li>Relative and absolute hyperlinks</li> <li>Hyperlinks to the sheet <ul style="list-style-type: none"> <li>Linking to external data</li> <li>Linking to registered data sources</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Set up multiple sheets by inserting new sheets</li> <li>Create reference to other sheets by using keyboard and mouse</li> <li>Create references to other documents by using keyboard and mouse</li> <li>Create, Edit and Remove hyperlinks to the sheet</li> <li>Link to external data</li> <li>Link to registered data source</li> </ul>
3.	Share and review a spreadsheet	<ul style="list-style-type: none"> <li>Setting up a spreadsheet for sharing</li> <li>Opening and saving a shared spreadsheet</li> <li>Recording changes</li> <li>Add, Edit and Format the comments</li> <li>Reviewing changes—view, accept or reject changes. Merging and comparing</li> </ul>	<ul style="list-style-type: none"> <li>Set up a spreadsheet for sharing</li> <li>Open and save a shared spreadsheet.</li> <li>Record changes</li> <li>Add, Edit and Format the comments.</li> <li>Review changes—view, accept or reject changes</li> <li>Merge and compare sheets</li> </ul>
4.	Use Macros in spreadsheet	<ul style="list-style-type: none"> <li>Using the macro recorder</li> <li>Creating a simple macro</li> <li>Using a macro as a function</li> <li>Passing arguments to a macro</li> <li>Passing the arguments as values</li> <li>Macros to work like built-in functions</li> <li>Accessing cells directly</li> <li>Sorting the columns using macro</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate the use of a macro recorder</li> <li>Create a simple macro</li> <li>Use a macro</li> <li>Pass arguments to a macro</li> <li>Pass the arguments as values</li> <li>Write the macros that act like built-in functions</li> <li>Access cells directly</li> <li>Sort the columns using macro.</li> </ul>

### UNIT 3: Database Management System

S.No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Appreciate the concept of Database Management System	<ul style="list-style-type: none"> <li>Concept and examples of data and information</li> <li>Concept of database</li> <li>Advantages of database</li> <li>Features of database</li> <li>Concept and examples of Relational Database</li> <li>Concept and examples of field, record, table, database</li> <li>Concept and examples of Primary key, composite primary key, foreign key</li> <li>Database management system (DBMS) software</li> <li>Relational Database Management System (RDBMS) software</li> </ul>	<ul style="list-style-type: none"> <li>Identify the data and information</li> <li>Identify the field, record, table in the database</li> <li>Prepare the sample table with some standard fields</li> <li>Assign the primary key to the field</li> <li>Identify the primary key, composite primary key, foreign key</li> </ul>

2.	Create and edit tables using wizard and SQL commands	<ul style="list-style-type: none"> <li>• Introduction to LibreOffice Base</li> <li>• Database objects—tables, queries, forms and reports of the database,</li> <li>• Terms in database—table, field, record</li> <li>• Steps to create a table using table wizard</li> <li>• Data types in database</li> <li>• Option to set primary key</li> <li>• Table Data View dialog box</li> </ul>	<ul style="list-style-type: none"> <li>• Start the LibreOffice Base and observe the parts of main window</li> <li>• Identify the database objects</li> <li>• Create the sample table in any category using wizard</li> <li>• Practise to create different tables from the available list and choosing fields from the available fields</li> <li>• Assign data types of fields, Set primary key</li> <li>• Edit the table in design view, Enter the data in the fields</li> </ul>
3.	Perform operations on table	<ul style="list-style-type: none"> <li>• Inserting data in the table</li> <li>• Editing records in the table</li> <li>• Deleting records from the table</li> <li>• Sorting data in the table,</li> <li>• Referential integrity</li> <li>• Creating and editing relationships— one to one, one to many, many to many</li> <li>• Field properties</li> </ul>	<p>Demonstrate to:</p> <ul style="list-style-type: none"> <li>• Insert data in the table, Edit records in the table, Delete records from table, Sort data in the table</li> <li>• Create and edit relationships — one to one, one to many, many to many</li> <li>• Enter various field properties</li> </ul>
4.	Retrieve data using query	<ul style="list-style-type: none"> <li>• Database query</li> <li>• Defining query</li> <li>• Query creation using wizard</li> <li>• Creation of query using design view</li> <li>• Editing a query</li> <li>• Applying criteria in query—single field, multiple fields, using wildcard</li> <li>• Performing calculations</li> <li>• Grouping of data</li> <li>• Structured Query Language (SQL)</li> </ul>	<ul style="list-style-type: none"> <li>• Prepare a query for given criteria</li> <li>• Demonstrate to create query using wizard, and using design view</li> <li>• Edit a query</li> <li>• Demonstrate to apply various criteria in query—single field, multiple fields, using wild card</li> <li>• Performing calculations using query in Base</li> <li>• Demonstrate to group data</li> <li>• Use basic SQL commands</li> </ul>
5.	Create Forms and Reports using wizard	<ul style="list-style-type: none"> <li>• Forms in BASE</li> <li>• Creating form using wizard</li> <li>• Steps to create form using Form Wizard</li> <li>• Options to enter or remove data from forms</li> <li>• Modifying form</li> <li>• Changing label, background</li> <li>• Searching record using Form</li> <li>• Inserting and deleting record using Form</li> <li>• Concept of Report in Base</li> <li>• Creating Report using wizard</li> <li>• Steps to create a Report using Wizard</li> </ul>	<ul style="list-style-type: none"> <li>• Illustrate the various steps to create Form using Form Wizard</li> <li>• Enter or remove data from Forms</li> <li>• Demonstrate to modify Forms</li> <li>• Demonstrate to change label, background</li> <li>• Search record using Form</li> <li>• Insert and delete record using Form View</li> <li>• Illustrate the various steps to create Report using Report Wizard</li> <li>• Demonstrate various examples of Report</li> </ul>

UNIT 4: Managing Health and Safety			
S.No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Maintain workplace safety	<ul style="list-style-type: none"> <li>• Basic safety rules to follow at workplace – Fire safety,</li> <li>• Falls and slips, Electrical safety, Use of first aid</li> <li>• Case Studies of hazardous situations</li> </ul>	<ul style="list-style-type: none"> <li>• Practise to follow basic safety rules at workplace to prevent accidents and protect workers – Fire safety,</li> <li>• Falls and slips, Electrical safety, Use of first aid.</li> </ul>
2.	Prevent Accidents and Emergencies	<ul style="list-style-type: none"> <li>• Accidents and emergency</li> <li>• Types of Accidents</li> <li>• Handling Accidents</li> <li>• Types of Emergencies</li> </ul>	<ul style="list-style-type: none"> <li>• Illustrate to handle accidents at workplace,</li> <li>• Demonstrate to follow evacuation plan and procedure in case of an emergency.</li> </ul>
3.	Protect Health and Safety at work	<ul style="list-style-type: none"> <li>• Hazards and sources of hazards</li> <li>• General evacuation procedures</li> <li>• Healthy living</li> </ul>	<ul style="list-style-type: none"> <li>• Identify hazards and sources of hazards,</li> <li>• Identify the problems at workplace that could cause accidents,</li> <li>• Practise the general evacuation procedures in case of an emergency.</li> </ul>

### ORGANIZATION OF FIELD VISITS

In a year, at least 3 field visits/educational tours should be organized for the students to expose them to the activities in the workplace.

Visit a data entry centre and observe the following: Location, Site, Office building, Computer Systems, Tools and Equipment, Printer, Scanner. During the visit, students should obtain the following information from the owner or the supervisor of the Data Centre:

1. Data Entry Centre
2. Computer Infrastructure
3. Sitting Posture of data entry operators
4. Assistive technology
5. Manpower engaged
6. Total expenditure of Data Entry Centre
7. Total annual income
8. Profit/Loss (Annual)
9. Any other information

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#### **Model Test Paper (Solved) M.1–M.6**

#### **Practice Paper P.1–P.4**



# Communication Skills–II

## LEARNING OBJECTIVES

- Explaining the concept of communication and its significance in various contexts and identifying the types of communication, including verbal, non-verbal and written
- Describing the types of communication, emphasizing its importance in effective interaction
- Analyzing the elements and categories of written communication and discussing the advantages and benefits of utilizing written communication in various settings
- Understanding the basic parts of speech and their roles in constructing sentences
- Identifying and differentiating between various types of sentences, including simple, compound and complex
- Outlining the components of a well-structured paragraph and understanding the process of writing one

## INTRODUCTION

Communication is the process of exchanging information, ideas, thoughts and feelings between individuals or groups. In a society, people need to convey their needs, opinions and beliefs. This sharing of information allows individuals to understand each other and work collectively towards common goals.



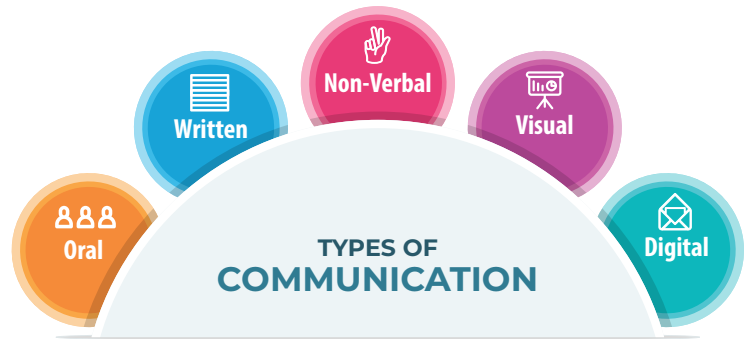
## IMPORTANCE OF COMMUNICATION

Effective communication facilitates the transfer of knowledge and understanding, allowing individuals to collaborate, make decisions and solve problems together. People use communication to convey their needs, share experiences, build relationships and convey emotions.

Moreover, communication is crucial for the transmission of culture and knowledge from one generation to the next. Through spoken and written communication, older members of society can pass down their experiences, wisdom, traditions and values. This passing on of knowledge helps maintain the identity and continuity of a society over time.

## TYPES OF COMMUNICATION

We participate in different types of communication on a daily basis. Different methods serve specific purposes and suit distinct contexts, making communication more efficient and suitable for diverse needs. The most common ways of sharing information include the following:



1. **Oral Communication:** It involves speaking and listening and is used for immediate, face-to-face interactions, conveying emotions, discussing complex ideas and resolving issues in real time.
2. **Written Communication:** It uses words in a written format, such as letters, emails or texts. It helps convey detailed information, providing a record and reaching a broad audience.
3. **Non-Verbal Communication:** It involves expressing messages without words, through body language, facial expressions or gestures.
4. **Visual Communication:** It uses images, graphs, charts or videos to convey a message.
5. **Digital Communication:** It uses technology for communication, including emails, social media and video conferencing.

## Verbal Communication

Verbal communication is the use of spoken words and vocal sounds to convey a message. It is the primary and direct form of communication involving conversations, discussions, presentations and any exchange of information using spoken language.

## Importance of Verbal Communication

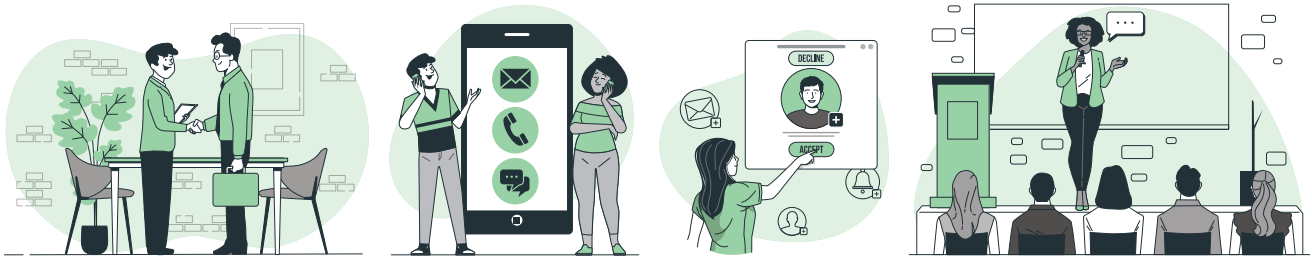
Verbal communication is one of the most essential forms of communication for several reasons:

1. **Clarity and Precision:** Verbal communication allows for clear and precise expression of ideas.
2. **Immediate Feedback:** Through verbal communication, the sender can receive instant feedback from the receiver.
3. **Emotional Expression:** Verbal communication enables the expression of emotions, attitudes and intentions which help convey the sender's feelings and meaning.
4. **Face-to-Face Interaction:** Facial expressions and body language complement spoken words, enhancing understanding and conveying additional layers of meaning.
5. **Conflict Resolution:** Open and honest verbal communication allows people to express their concerns, understand each other's perspectives and work towards a resolution.
6. **Education and Learning:** Teachers use spoken words to impart knowledge, explain concepts and engage students in learning.

Verbal communication encompasses both **oral and written forms** of communication, which are explained further in the next section.

## Oral (Verbal) Communication

Oral (verbal) communication involves spoken words and vocal sounds. It includes face-to-face conversations, phone conversations, presentations, interviews, speeches and any other form of communication where information is exchanged through speech each of which is explained below.



- **Face-to-Face:** Direct conversation between individuals. For example, classroom discussions.
- **Phone Calls:** Verbal interaction over the phone. For example, calling a teacher for clarification.
- **Video Calls:** Real-time visual and verbal communication through platforms like Zoom. For example, virtual study group meetings.
- **Public Speaking:** Addressing a larger audience. For example, delivering a presentation in class.
- **Lectures and Speeches:** Formal talks for sharing information. For example, a teacher giving a lecture.



### DO IT YOURSELF

#### ORAL COMMUNICATION SKILLS

Choose a topic of interest or relevance to your studies. Practise speaking about the topic out loud. Aim for clarity, coherence and fluency. Practise in front of a mirror or record yourself.

**Record Your Practice:** Listen to the recording objectively and assess your performance. Consider the following questions:

- Did I speak clearly and audibly?
- Did I maintain a good pace or rush through my speech?
- Did I use pauses effectively?
- Did I engage the listener with my tone and enthusiasm?
- Did my body language support my words?

**Identify Areas for Improvement:** Note down the specific areas where you can improve, such as articulation, pace or body language. Based on your self-evaluation, set achievable goals for improvement. For example, "I will work on speaking more slowly and clearly."



## Increasing Effectiveness of Verbal Communication

Effective verbal communication comprises several essential components that contribute to clarity, understanding and impactful delivery:

1. **Speech Clarity:** Clear and precise articulation of words ensures that the message is easily comprehensible to the listener.
2. **Vocabulary and Language Skills:** A rich vocabulary enables you to choose the most appropriate words for your message. Understanding grammar, sentence structure and expressions contributes to effective verbal expression.
3. **Pitch and Tone:**
  - **Pitch:** Pitch is the highness or lowness of your voice. Varying pitches can add emphasis, convey emotions and maintain engagement.
  - **Tone:** Tone is the attitude or emotion expressed in your speech. Tone can indicate friendliness, assertiveness, urgency or other feelings, influencing how your message is perceived.
4. **Rhythm and Pace:**
  - **Rhythm:** Rhythm involves the pattern of stressed and unstressed syllables in speech. A steady and pleasing rhythm aids in maintaining the listener's interest.
  - **Pace:** Pace is the speed at which you speak. Appropriate pacing ensures that the listener can follow and process the information without feeling rushed or overwhelmed.
5. **Clarity of Thought and Structure:** Organizing your thoughts logically ensures that your message flows coherently and is easy to follow. A clear beginning, middle and end helps in structuring your communication and ensuring completeness.
6. **Active Listening and Responsiveness:** Actively listening to the other person, showing interest and responding appropriately demonstrates that you value the communication.
7. **Adaptability to the Audience:** Tailoring your communication style to suit the audience's preferences, background and understanding ensures effective transmission of the message.
8. **Empathy and Emotional Intelligence:** Understanding and acknowledging your own emotions and that of the listener enables a more empathetic and authentic exchange.

## Written Communication

Written communication involves conveying messages through written words and symbols. It includes letters, emails, reports, memos, text messages, articles, books and any other form of communication where information is shared in written form.

The origin of written communication dates back to ancient civilizations. The earliest known systems of writing can be traced to Mesopotamia, around 3200 BC, where the Sumerians developed **cuneiform script** on clay tablets. Other ancient writing systems emerged independently in Egypt, the Indus Valley, China and Mesoamerica. These early scripts were pictographic or logographic, using symbols to represent words or concepts.



Written communication involves using written or printed words to convey information. It is formal and can be preserved for future reference. Some commonly used means of written communication include the following:


- **Emails:** Digital messages for formal or informal communication.  
Example: Emailing a teacher about an assignment.
- **Letters:** Traditional written communication for official matters.  
Example: Sending an application letter.
- **Reports:** Structured documents for sharing detailed information.  
Example: Submitting a research report.
- **Text Messages:** Brief electronic messages for quick exchanges.  
Example: Texting a classmate about a group project.
- **Social Media Posts:** Sharing information on platforms like X (earlier Twitter) or Instagram.  
Example: Posting educational content for students by educators.

### ***Benefits of Written Communication***

1. **Clarity and Precision:** Written communication allows us to express our thoughts and ideas clearly and precisely.
2. **Permanent Record:** When we write something down, it becomes a permanent record that we or others can refer to later.
3. **Communication across Distances:** Written communication helps us communicate with letters or emails to friends and family in different cities or countries.
4. **Learning and Education:** It is a crucial part of learning. We write essays and reports to show what we have learned, and we read written materials like textbooks and articles to gain knowledge.
5. **Business and Legal Documents:** Written communication is used for making agreements and contracts, sending memos and creating reports. Written communication helps keep the work organized.

## Categories of Written Communication

Written form of verbal communication can be categorized as formal and informal based on the choice of words and the purpose of communication as explained below:

Formal Written Communication		Informal Written Communication
<p>Formal written communication is used for official, professional or serious purposes. It is structured and follows specific conventions. Business letters, official reports, academic essays, legal documents, research papers and job applications are a few examples of formal written communication.</p>		<p>Informal written communication is used for casual, personal or relaxed purposes. It is less structured and follows fewer rules. Informal written communication tends to be more conversational, uses everyday language and may include slang or emoticons. Text messages, emails to friends, social media posts, personal diaries and handwritten notes are a few examples of informal written communication.</p>

### INTRAPERSONAL vs INTERPERSONAL VERBAL COMMUNICATION

There is another classification of verbal communication on the basis of which communication takes place—**Intrapersonal communication** and **Interpersonal communication**.

**Intrapersonal communication** refers to communication that occurs within an individual's own mind. It is the internal dialogue and thoughts a person has with themselves. It involves self-reflection, self-talk and personal contemplation.

**Interpersonal communication**, on the other hand, focuses on the interaction between two or more people. It encompasses all forms of communication, including spoken, written and non-verbal, that occur in social interactions. This can be both formal and informal, depending on the context of the interaction.

## Oral vs Written Communication



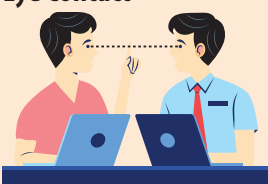



Both oral and written forms of verbal communication are important and are used in different situations depending on the context and requirements. Some differences between oral and written communication are presented below.

	Oral Communication	Written Communication
<b>Definition</b>	Involves spoken words to convey information, ideas and emotions	Involves written or printed words to convey messages
<b>Dynamics</b>	Dynamic and immediate interaction	Static and provides a permanent record
<b>Modes</b>	Face-to-face conversations, phone calls, video calls, presentations, etc.	Emails, letters, reports, essays, social media posts, etc.
<b>Feedback and Clarification</b>	Allows real-time feedback and clarification	Feedback is delayed and might not be immediate
<b>Emotional Connection</b>	Allows emotional connection	Lacks immediate emotional impact

## Non-Verbal Communication

Non-Verbal communication refers to the transmission of messages and information through means other than words. It involves using various non-verbal cues, such as facial expressions, gestures, body language, posture, eye contact, touch and vocal cues like pitch, tone and rhythm, in addition to proxemics (use of space).

These cues can convey emotions, attitudes, intentions and other information without the need for explicit verbal expression. In simple words, **non-verbal communication** is a way of communicating without using words. Some essential parts of non-verbal communication include:

<b>Facial Expressions</b> 	Our faces express how we feel. For example, when we smile, it usually means we are happy or friendly. When we frown, it might mean we are sad or upset.
<b>Gestures</b> 	We use hand movements and gestures to express ourselves. For instance, waving 'hello' is a friendly gesture. 'Thumbs up' is a sign of approval while 'pointing' can show you are indicating something specific.
<b>Eye Contact</b> 	When we look someone in the eyes, it usually means we are paying attention to them. It shows we are interested in what they are saying. But if we avoid eye contact, it might mean we are shy or not very interested.
<b>Body Language</b> 	How we stand or sit can say a lot. For instance, if we stand up straight and look confident, it shows we are self-assured. But if we slouch and look down, it might mean we are feeling unsure or sad.
<b>Tone of Voice</b> 	How we say something matters. If we say 'thank you' with a happy and grateful tone, it sounds sincere. But if we say it with an annoyed tone, it might not be as genuine.
<b>Distance</b> 	How close or far we stand from someone can convey a message. If we stand really close, it might show we are comfortable with them. If we keep our distance, it might mean we want some space.

In essence, **non-verbal communication helps us understand each other better**. It **complements oral verbal communication** and adds extra meaning to our words.

### Increasing Effectiveness of Non-Verbal Communication

To have effective non-verbal communication with family, friends and even strangers, consider the following points:

1. **Cultural Differences:** Understand and respect cultural differences. What may be seen as a friendly gesture in one culture could be offensive in another.

2. **Personal Space:** Respect personal space, especially with strangers. Avoid standing or sitting too close, as invading personal space can make people uncomfortable.
3. **Body Language:** Maintain open and welcoming body language by keeping your arms uncrossed, making eye contact (without staring) and smiling when appropriate.
4. **Balance Verbal and Non-Verbal Communication:** Ensure that your non-verbal cues align with your spoken words. Consistency between what you say and how you say it can help prevent misunderstandings.
5. **Observe:** Be attentive to the non-verbal cues of the person you are communicating with. Their body language, facial expressions and tone can provide valuable insights into their feelings and intentions.
6. **Avoid Negative Signals:** Be cautious of negative non-verbal signals, such as crossing your arms, rolling your eyes or displaying impatience. These cues can create barriers to effective communication and should be avoided when possible.
7. **Active Listening:** Actively listen to what the other person is saying and respond accordingly with non-verbal cues, like nodding to show understanding or maintaining eye contact to indicate interest and engagement.
8. **Be Patient and Respectful:** Exercise patience and respect, especially when dealing with strangers. Allow them time to express themselves and avoid interrupting.
9. **Non-Verbal Cues and Body Language:** Facial expressions, gestures and posture complement your spoken words, adding layers of meaning and conveying sincerity. Maintaining appropriate eye contact establishes a connection and shows attentiveness.



## DO IT YOURSELF

### UNDERSTANDING NON-VERBAL COMMUNICATION

#### Instructions:

1. Watch video clips of job interviews or any public speaking scenarios. Observe non-verbal cues of interviewees and interviewers.
2. *Mock Job Interviews:* Pair up with your friend for a mock job interview. Respond to common interview questions and record the non-verbal cues you exhibit. For instance, maintaining eye contact, appropriate gestures, etc. Watch the recording and analyze your non-verbal communication. Take notes on what worked well and areas for improvement.

## Visual Communication

There is an apt saying about visuals—‘A picture is worth a thousand words.’

**Visual communication** is a method of conveying information, ideas or messages through visual elements such as images, graphics, charts, diagrams and symbols, rather than through words or text. Visual communication can be highly effective because it appeals to our sense of sight, making complex information more understandable and engaging.

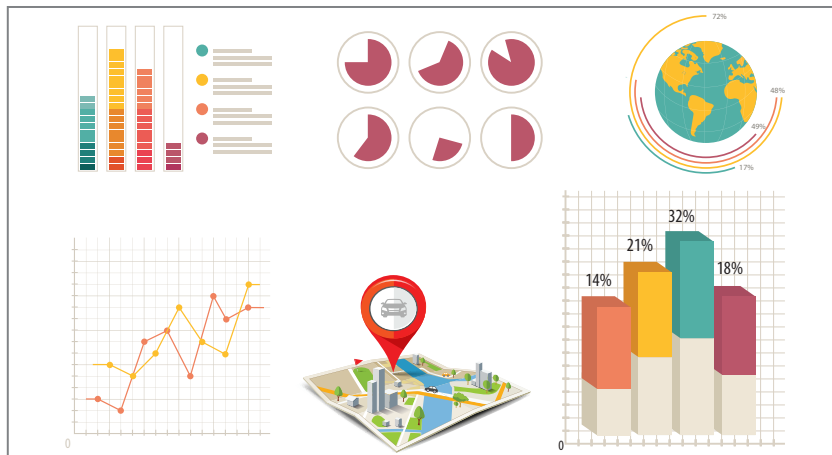
Some commonly used visual communication tools include the following:

1. **Infographics:** Infographics combine text with visuals to present data and information in a visually appealing and easy-to-understand format.





2. **Maps:** Maps are a classic example of visual communication. They provide a clear way to understand geographical locations, routes and landmarks.
3. **Charts and Graphs:** Bar charts, pie charts, line graphs and other visual representations of data make complex information, such as survey results or financial data, easier to interpret and analyze.



4. **Flow Charts:** Flow charts use symbols and arrows to represent processes and workflows. They are valuable for explaining step-by-step procedures, decision-making processes and algorithms.
5. **Photographs:** Images and photographs capture moments, tell stories and convey emotions.
6. **Art and Design:** Visual communication is at the heart of art and design. Paintings, sculptures and digital artwork convey artistic expression, messages and emotions.
7. **Presentations:** In presentations, visuals such as slides with images, diagrams and bullet points enhance the audience's understanding and retention of information.
8. **Social Media:** Visual content, including images and videos, is a dominant form of communication on social media platforms.
9. **Education:** Visual aids, such as educational videos, diagrams on chalkboards or interactive whiteboards, help students grasp concepts, making learning easier.

Visual communication offers several important benefits over verbal and non-verbal communication as listed below.

1. **Universally Understandable:** Visuals can be understood across cultures and languages, making them universally accessible and eliminating language barriers.
2. **Immediate Comprehension:** Visuals are processed quickly by the brain, allowing for rapid understanding of the intended message.
3. **Inclusivity:** Visual communication includes individuals with varying levels of literacy, making information accessible to a broader audience.
4. **Engagement:** Visuals capture attention and keep the audience engaged, enhancing message retention and understanding.
5. **Memorability:** People tend to remember visual information better than text, making it an effective way to convey important information that needs to be retained.
6. **Simplicity and Clarity:** Visuals can simplify complex concepts or instructions, making them easier to comprehend and follow.

7. **Safety and Emergency Situations:** In situations where immediate action is required, visual symbols and signs can convey critical instructions swiftly, potentially preventing accidents or harm.



## CASE STUDY

### THE LOST PUPPY

**Fill in the blanks with appropriate types of communication used in the context. Give reasons to justify your answers in the space provided.**

Once upon a time, in a quiet neighbourhood, there was a little boy named Timmy. Timmy had a beloved puppy named Max, who was always by his side.



One sunny day, Timmy’s mom called him inside the house to remind him about his homework. She said, “Timmy, it is time to do your homework.” This is an example of ..... communication.

Meanwhile, Max was playing in the yard. Suddenly, dark clouds appeared and it started raining heavily. Max ran to the door, whimpering and wagging his tail. His wagging tail and sad whimpers were examples of ..... communication. Max couldn’t use words but his actions clearly communicated that he wanted to come inside to avoid the rain.



Later in the day, Timmy decided to make a sign. He wrote, ‘Lost Puppy, Please Call Timmy’ on a piece of paper and placed it on a tree in the neighbourhood. This is an example of ..... communication.

That evening, a kind neighbour named Mrs. Johnson saw the sign. She knocked on Timmy’s door and said, “I saw your sign about the lost puppy. I think I found Max.” This is ..... communication because Mrs. Johnson used spoken words to communicate with Timmy.

.....

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## Choosing a Communication Method

The methods adopted in communication depend on several key factors that influence how individuals choose to convey their messages. These factors include:

1. **Purpose:** If the goal is to provide detailed information, written communication might be preferred. For emotional support, direct verbal communication may be more effective.
2. **Audience:** Communication methods can vary based on factors like age, education level, cultural background and familiarity with the topic.
3. **Complexity of Message:** Complex ideas might be better suited for written communication, while simple instructions could be conveyed through verbal or visual methods.

4. **Urgency:** For immediate matters, verbal or digital communication like phone calls or text messages may be used. Less urgent matters might be communicated through written correspondence.
5. **Privacy and Confidentiality:** Confidential information may be communicated face-to-face or through secure digital channels to ensure privacy.
6. **Cultural Norms:** In some cultures, direct verbal communication is valued, while in others, written communication may be preferred for formal matters.
7. **Accessibility:** In areas with limited technology, face-to-face or traditional methods might be more prevalent.
8. **Emotional Impact:** Face-to-face communication allows for better emotional connection, while written communication may be less emotionally charged.
9. **Feedback Requirement:** If immediate feedback is necessary, methods that allow for real-time interaction, such as phone calls or video chats, may be chosen.

**TEST YOUR  
KNOWLEDGE**



**I. Fill in the blanks with appropriate words:**

1. Communication is the foundation of a society, enabling exchange of ....., ....., and emotions.
2. Verbal communication involves using ..... to convey messages and is crucial for immediate interaction.
3. Written communication employs ..... to convey information and offers a permanent record.
4. Verbal communication can be both ..... and .....
5. Oral communication allows for real-time ....., clarification and emotional connection.
6. Intrapersonal communication involves the way we communicate with ....., often through our thoughts and inner dialogue.
7. Using simple language and organizing thoughts before speaking contribute to ..... in verbal communication.
8. Non-verbal communication, such as ..... and ....., plays a significant role in conveying emotions and attitudes without words.

**II. Match the Columns:**

Communication Methods	Scenarios
1. Verbal Communication	A. Giving a public speech to a large audience
2. Written Communication	B. Nodding your head to show agreement during a conversation
3. Non-Verbal Communication	C. Creating a poster to advertise a school event
	D. Participating in a video conference call with colleagues
	E. Writing a post on social media to share an opinion

## COMMUNICATION CYCLE

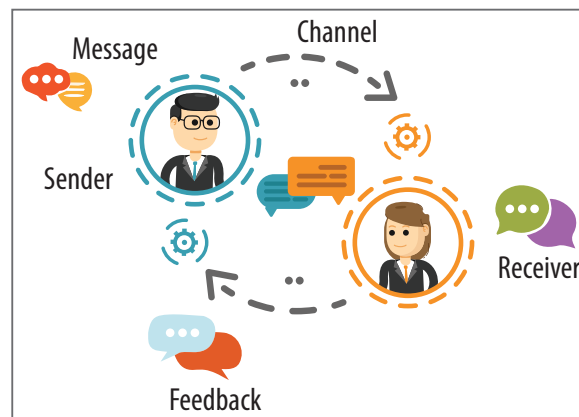
The communication cycle is a model that helps us understand how communication works between individuals or groups. Any exchange of ideas between two or more people can be characterized with the help of a back-and-forth process which allows the exchange to proceed gradually. This back-and-forth exchange is known as the communication cycle.

The term 'cycle' suggests that the sender can adjust future messages based on the feedback received, creating an ongoing, cyclical process of communication.

### Elements of Communication Cycle

Each communication cycle has some essential elements as listed below:

1. **Sender:** The cycle begins with a sender—the person who initiates the communication by encoding a message. Encoding means putting thoughts and ideas into words or symbols that convey meaning.
2. **Message:** The sender formulates a message, which contains information or ideas they want to communicate.
3. **Channel:** The message is transmitted through a communication channel, which could be verbal (speaking, writing) or non-verbal (gestures, body language).
4. **Receiver:** The message reaches the receiver—the person or group for whom the message is intended. The receiver decodes the message, interpreting the words or symbols to understand the intended meaning.
5. **Feedback:** After understanding the message, the receiver provides feedback to the sender. Feedback is a crucial part of the communication cycle as it helps the sender know if the message was understood as intended.



Throughout the process, there may be the possibility of interference or 'noise' that can distort or disrupt the message. Noise can be external (physical distractions) or internal (preconceived ideas, biases).

### The 7 Cs of Effective Communication

Effective communication is essential for conveying ideas, information and understanding between individuals or groups. The **7 Cs of effective communication** are a set of principles that can guide individuals to enhance their communication skills and ensure that messages are clear, coherent and easily understood.