

LESSON PLAN: 1

School: Class: VIII No. of Students: Average Age: 13+ Time: 40 min	Subject: Mathematics Topic: Types of Graphs Textbook: Mathematics Teachers Name: Date:
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General Objectives:

1. The pupils will be able to recall different Mathematics related terms, formulas, symbols, rules, principles, laws, etc.
2. The pupils will be able to define different Mathematics related terms.
3. The pupils will be able to develop Scientific attitude.
4. The pupils will develop powers of thinking and reasoning.
5. The pupils will develop a scientific and realistic attitude towards life.
6. The pupils will be prepared for elementary as well as higher education in different branches of science, economics, engineering, etc.
7. The pupils will develop an appreciation for the significance of the Scientific truth.

Specific Objectives:

(I) KNOWLEDGE:

- (i) Pupil will be able to define the term graph.
- (ii) Pupil will be able to recall the types of data.

(iii) Pupils will be able to recall data handling in tabular form.

(II) UNDERSTANDING:

(i) Pupils will be able to identify different types of graphs.

(ii) Pupils will be able analyze different graphs to obtain data.

(III) APPLICATION:

(i) Pupil will be able to represent data in bar graph, pie chart and histogram.

(IV) SKILL:

(i) Pupils will be able to draw bar graph, pie chart and histogram.

Teaching Aids:

- ❖ **General Teaching Aids:** Chalk, Duster, Blackboard, Pointer.
- ❖ **Specific Teaching Aids:** A chart showing different types of graphs.

Introduction:

Steps	Teacher's Activities	Pupils' Activities
I N T R O D U C T I O N	Entering the classroom with a smiling face, the teacher will re-arrange the classroom if necessary. To introduce the day's lesson, the teacher will ask the following questions – 1. What are data? 2. How data can be represented for easy understanding? 1. Have you ever seen graphs in the newspaper, television, books etc.?	The pupils will turn on their videos and greet the teacher. Pupils will try to give answers.

Announcement of the Topic:

After getting the expected responses the teacher will say that – The purpose of the graph is to show numerical facts in visual form so that they can be understood quickly, easily and clearly. To learn the representation of data in graphical form we need know different types of graphs. The teacher will announce the topic and write it down the blackboard.

“TYPES OF GRAPHS”

The teacher will ask the students to note down the topic.

Presentation:

Steps	Teaching Point	Teacher's Activities	Pupils' Activities	Learning Outcomes	Microteaching Skill
P R E S E N T A T I O N	1. Definition of Graphs: Graphs are visual representations of data collected.	<p>The teacher will say that – Data can also be presented in the form of a table; however, a graphical presentation is easier to understand. This is true in particular when there is a trend or comparison to be shown. Graphs are visual representations of data collected.</p> <p>Then the teacher will write the definition of Graphs on the blackboard and explain the term.</p> <p><u>Graphs:</u> Graphs are visual representations of data collected.</p> <p>To assess the students learning the teacher will ask the following questions –</p> <p>1. Why graphical representation is important?</p>	<p>Pupils will observe and listen attentively.</p> <p>Pupils will write down the definition</p> <p>Pupils will try to answer</p>	<p>Pupils will be able to define Graphs.</p>	<p>Explaining</p> <p>Blackboard Writing</p> <p>Questioning</p>

	<p>2. Types of Graphs: Some commonly used graphs are –</p> <p>(a) Bar Graph (b) Pie Graph (c) Histogram (d) Line Graph</p>	<p>The teacher will say that – There are many types of graphs to represent data. But we will only discuss some commonly used graphs in this class. Some commonly used graphs are bar graph, pie graph, histogram and line graph.</p> <p>Then the teacher will write the types of graphs on the blackboard.</p> <p>Types of Graphs: Four types of graphs are –</p> <ul style="list-style-type: none"> • Bar Graph • Pie Graph • Histogram • Line Graph <p>Then the teacher will show the chart showing the different types of graphs to the students and ask them to observe.</p> <p>To assess the students learning the teacher will ask the following questions –</p> <p>1. Name Four types of graphs.</p>	<p>Pupils will listen attentively.</p> <p>Pupils will note down the types of graphs.</p> <p>Pupils will try to answer</p> <p>Pupils will listen attentively</p>	<p>Pupils will be able to name the different types of graphs</p> <p>Pupils will be to represent data in bar a graph</p>	<p>Explaining</p> <p>Blackboard Writing</p> <p>Demonstration</p> <p>Questioning</p> <p>Explaining</p>
(a) A Bar Graph		<p>The teacher will say that – A bar graph is used to show comparison among categories. It may consist of two or more parallel vertical (or horizontal) bars (rectangles).</p>			

		After that the teacher will draw a bar graph and explain by taking an example of marks obtain by Ranu in three consecutive terminal examinations.			Blackboard Writing
(b) A Pie Graph or A Pie Chart:		<p>The teacher will say that – A pie-graph is used to compare parts of a whole. The circle represents the whole.</p> <p>Then the teacher will explain the representation of pie chart by taking an example of the percentage of viewers watching different types of TV channels.</p> <p>To assess the students learning the teacher will ask the following questions –</p> <p>1. What does the circle represent in a pie graph?</p>	Pupils listen attentively	Pupils will be able to represent data in pie chart.	Explaining
			Pupils will try to give answer		Blackboard writing
(c) A Histogram:		<p>The teacher will say that – A Histogram is a bar graph that shows data in intervals. It has adjacent bars over the intervals. There are no gaps between bars, because there are no gaps between the intervals.</p> <p>Then the teacher will explain the representation of data in histogram by taking an example of the distribution of weights (in kg) of 40 persons of a locality.</p>	Pupils will listen attentively	Pupils will be able to represent data in histogram.	Questioning
					Explaining
					Blackboard Writing

		<p>To assess the students learning the teacher will ask the following questions –</p> <p>1. What is the difference between a bar graph and a histogram?</p>			
	(d) A Line Graph:	<p>The teacher will say that – A line graph displays data that changes continuously over periods of time.</p> <p>Then, to show the representation of data in line graph the teacher will take an example of record of body temperature of Renu in every hour when she was sick.</p>	<p>Pupils will try to give answer</p> <p>Pupils will listen attentively</p>	<p>Pupils will be able to represent data in line graph.</p>	<p>Questioning</p> <p>Explaining</p>

Conclusions:

Steps	Teacher's Activities	Pupils Activities										
C O N C L U S I O N	The teacher will consolidate the main points with the students and will write the following question on the blackboard as their homework and will ask the students to note it down.	The students will cooperate with the teacher.										
	Homework: Q1. Represent the following data in line graph and bar graph.	Students will write down the homework.										
	The number of days a hill side city received snow in different years.											
	<table><tr><td>Year</td><td>2003</td><td>2004</td><td>2005</td><td>2006</td></tr><tr><td>Days</td><td>8</td><td>10</td><td>5</td><td>12</td></tr></table>		Year	2003	2004	2005	2006	Days	8	10	5	12
	Year		2003	2004	2005	2006						
Days	8	10	5	12								
After students write, the teacher will thank the students and close the virtual class.												

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