

CLASS – VIII
LESSON PLAN
CHAPTER-5: DATA HANDLING

Unit	DATA HANDLING
Class Transaction	Total: 5 periods (approx. 40 min each)
Pre-requisite for the course	This lesson requires 1. Knowledge of data collection. 2. Knowledge of data related terms like frequency, class intervals.
Assessment of qualifying knowledge	1. Written test 2. Lab activity 3. HW notebook
Objective	Students will be able to perform skills like recording data, organizing, grouping and then interpreting and representing information as bar-graphs ,double bar-graphs, histograms and Pie-charts, also would learn relating chance and probability to real life thereby inculcating competencies like collaboration, critical thinking and creative thinking.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will develop the ability to understand</i> 1. The different methods of plotting the information on graphs. 2. The method of comparing the graphs. SKILLS and COMPETENCIES- <i>Students would be able to</i> 1. Develop the ability to analyze the different types og graphs. 2. Plot the information on graphs and develop critical thinking and collaboration in the process.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Think pair share. Dimensions Of Learning- D1,D3 Transaction would proceed in the following manner- <i>Brain Storming</i>-The class would start with a discussion on what the students have already learnt in the previous classes and hence what is it that they would learn now. They would also be told the significance of the topic that they would be studying. <i>Introduction of the topic</i>- ppt and Digital Content would be shared <i>Guided practice followed by Independent Practice</i>- NCERT questions to be discussed in the classroom. Techniques to be used:

	Quiz Daily Practice Problem MCQ Peer Assessment Case Studies Lab Activities Any Other						
Resources	Text Book: NCERT text book for Mathematics Reference Book 1. CBSE Exemplar						
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks. H.W. notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 marks On time submission.....1 mark Presentation/ Neatness.....1 mark Content.....3 marks It is also advised that the students come to the class with proper background knowledge of the topic under discussion. They can refer to the resources stated above.						
Assessments	Through Pen Paper Test Students will be assessed creatively and critically <table> <tr> <td>4 UNIT TESTS</td> <td>20 Marks each</td> </tr> <tr> <td>HALF YEARLY EXAMINATION</td> <td>80 Marks</td> </tr> <tr> <td>ANNUAL BOARD EXAMINATION</td> <td>80 Marks</td> </tr> </table> INTERNAL ASSESSMENT 10 Marks - Note Book Submission 05 Marks - Lab Practical (Subject Enrichment) 05 Marks Through lab Practical Students are assessed for Collaboration, Character building, Character Building	4 UNIT TESTS	20 Marks each	HALF YEARLY EXAMINATION	80 Marks	ANNUAL BOARD EXAMINATION	80 Marks
4 UNIT TESTS	20 Marks each						
HALF YEARLY EXAMINATION	80 Marks						
ANNUAL BOARD EXAMINATION	80 Marks						
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: <i>For gifted students:</i> - Higher Level questions to be done - Encouragement for referring other resources <i>For weak students:</i> - Basic level to be completed - Buddy help to be provided - Provide grade-up classes						

	<i>For differently abled students:</i> • Ignore spelling mistakes and formulae, if not written • Call parents at regular intervals • Provide grade-up classes • Encourage and motivate them at every level.
Marks	The weightage would be given by CBSE.

Assessment questions

1. The number of students admitted in different faculties of a college are given below.

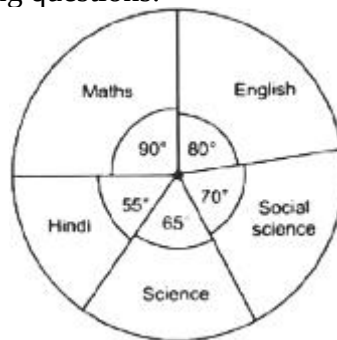
Faculty	Commerce	Arts	Science	Law	Computer	Total
Number of students	450	300	1200	1000	650	3600

Represent the above information by a pie-chart.

2. Draw a pie-chart for the following data of expenditure on various items in a family.

Item	Food	Clothing	Rent	Education	Miscellaneous
Expenditure	15000	5000	14000	20000	6000

3. The following pie-chart represents the marks scored by a students. If he obtained 540 as total marks, answer the following questions:



- In which subject did the student score 120 marks?
 - What is the difference in the marks obtained in Maths and English?
 - In which subject did he get minimum marks?
4. A die is thrown. What is the probability of getting:
- an even number?
 - an odd number?
 - A number between 3 and 6?
5. What is the probability of a number selected from the numbers 1, 2, 3,, 20 such that it is a prime number?

DAY	ONE
Objective	Enhance ability to accurately plot the given information on the appropriate graph.
Assessment of qualifying knowledge	Quiz testing to find out the meaning and usage of different graphical terms.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will know and identify the difference between bar graph and histogram.</i> <u>SKILLS and COMPETENCIES</u> <i>Students would be able to think creatively and plot the collected info on bar graph and histogram.</i>

Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Think pair share. Dimensions Of Learning- D1,D3 Transaction would proceed in the following manner- Anticipatory Set: <u>10 min</u> Facilitator will ask few questions to introduce the topic • What is data? • What is frequency? • What is histogram? Discussion of topic through Collaborative Learning: <u>15 min</u> <u>Inquiry based learning</u> (Critical Thinking and Problem Solving) Class Activity: Collecting information about the student residents of different areas Arranging the information i.e. Data in tabular form using tally marks to find the frequency and representing it as bar graph and histogram . Guided practice: <u>10 min</u> The students, with the help of the facilitator, will solve the questions from NCERT book of Exercise – 5.1 Q3 in their notebook in the class with the help of their teacher. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher’s guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 5.1 in their Math HW notebook. Students who would difficulty in solving the problem would solve with the help of their buddies. Closure: <u>5 min</u> A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book 2. CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks.
Assessments	Oral Test (5 minutes)
DAY	TWO
Objective	Enhance ability to accurately plot the given information on the appropriate graph.
Assessment of qualifying knowledge	Written questions on finding out the frequency of data values and plotting.
Learning Outcomes	<u>KNOWLEDGE</u> - <i>Students will know and identify the difference between bar graph and histogram.</i>

	<u>SKILLS and COMPETENCIES</u> Students would be able to think creatively and plot the collected info on bar graph and histogram.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Think pair share. Dimensions Of Learning- D1,D3 Transaction would proceed in the following manner- Recapitulation: 5 min Brainstorming on the previously taught concept would be done. Discussion of topic through Collaborative Learning: 15 min <u>Inquiry based learning</u> (Critical Thinking and Problem Solving) Further practice and discussion of various questions of bar graph and histogram Guided practice: 10 min The students, with the help of the facilitator, will solve the questions from NCERT book of Exercise – 5.1 Q5 in their notebook in the class with the help of their teacher. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher’s guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 5.1 in their Math HW notebook. Students who would difficulty in solving the problem would solve with the help of their buddies. Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book 3. CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks.
Assessments	Oral quiz (5 minutes)
DAY	THREE
Objective	To solve the questions of Ex- 5.2 based on pie charts.
Assessment of qualifying knowledge	Written questions on finding the information and plotting on pie chart.
Learning Outcomes	<u>KNOWLEDGE-</u> Students will know and identify the information to be plotted on pie chart. <u>SKILLS and COMPETENCIES</u> Students would be able to think creatively and plot the collected info on pie chart and draw conclusions from the same.

Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Muddiest point discussion Dimensions Of Learning- D1,D3 Transaction would proceed in the following manner- Recapitulation: <u>5 min</u> Oral test on the previous concept would be taken up. Discussion of topic through Collaborative Learning: <u>15 min</u> (Critical thinking) Exercise 5.2 Q1 would be discussed and students would solve different questions per group and then the questions would be crosschecked. Digital content would be used. The facilitator would take rounds and help students with their doubts. Guided Practice: <u>15 min</u> The students will solve the questions from NCERT book of Exercise – 5.2 Q2,3 in their notebook in the class with the help of their teacher. The teacher would ensure that each student tries to be independent at the work as well as be under the teacher’s guidance. Independent Practice: Students will complete the remaining HW parts of Exercise 5.2 Q2,3 in their Math HW notebook. Closure: <u>5 min</u> A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book 4. CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks.
Assessments	MCQ (5 minutes)
DAY	FOUR
Objective	To develop a deep understanding of probability
Assessment of qualifying knowledge	Written test on questions related to probability.
Learning Outcomes	KNOWLEDGE- <i>Students will develop the ability to quickly calculate the probability of a given event</i> SKILLS and COMPETENCIES - <i>Students would be able to</i> 1. Critically apply the concepts in given problems and collaboratively solve the related questions.
Transaction Methodology (The teacher can use the mentioned techniques, wherever	Strategies used- Inductive deductive reasoning Dimensions Of Learning- D1,D3 Transaction would proceed in the following manner- Recapitulation: <u>5 min</u> Quick revision on the previous concept would be taken up.

applicable, and can use any other too.)	Discussion of topic through Collaborative Learning: 15 min (Creativity, Collaboration) Taking the examples from day to day life, explanation of the terms chances, outcomes, event and probability Guided Practice: 15 min The students will solve the questions from NCERT book, Ex 5.3 in their notebook in the class with the help of their facilitator. The facilitator would take rounds and help the students in solving the questions. Independent Practice: Students would do the leftover exercise questions in their notebooks. Closure: 5 min Discussion of muddiest point. .
Resources	Text Book: NCERT text book for Mathematics Reference Book 5. CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks.
Assessments	Written test (5 minutes)
DAY	FIVE
Objective	To revise all the concepts done in the chapter using various levels of questions.
Assessment of qualifying knowledge	MCQ on the whole chapter.
Learning Outcomes	KNOWLEDGE- Understand the different ways in which the data given can be organized and analyzed. SKILLS and COMPETENCIES - Students would be able to Comprehend that which graph is to be used for organizing the information depending on the data provided, through collaborative leaning process.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Strategies used- Think pair share. Dimensions Of Learning- D1,D3 Transaction would proceed in the following manner- Recapitulation: 5 min Quick revision on the previous concept would be taken up. Discussion of topic through Collaborative Learning: 15 min basic level questions would be taken up Guided Practice: 15 min The teacher would explain the questions from the basic level . Independent Practice: Students would try higher level questions. Closure: 5 min

	Summarization, preferably by a student, would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Mathematics Reference Book 6. CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebooks.
Assessments	MCQ (5 minutes)