Mathematics

Learning Outcomes	Sources/Resources	Week-wise Suggestive Activities (to be guided by parents with the help of teachers)
The learners • solves puzzles and daily life problems using variables . • solves problems related to angles of a quadrilateral using angle sum property • verifies properties of parallelograms and establishes the relationship between them through reasoning. • constructs different quadrilaterals using compasses and straight edge. • draws and interprets bar charts and pie charts. • makes hypotheses on chances of future events on the basis of its earlier occurrences or available data like , after repeated throws of dice and coins	NCERT Mathematics Textbook for Class VIII **Chapter 2** Linear Equations in One Variable **Chapter 3** Understanding Quadrilaterals **Chapter 4** Practical Geometry **Chapter 5** Data Handling **E-resources** **Chapter 2** Linear Equations in One Variable http://ncert.nic.in/textbook/textbook.htm?hemh1=2-16 **Chapter 3** Understanding Quadrilaterals http://ncert.nic.in/textbook/textbook.htm?hemh1=3-16	**WEEK 5** • A brief recall of equations in one variable can be done by asking students to form equations using different letters and encouraging them to solve those equations. • Applications of equations need to be discussed by giving simple word problems. Setting up an equation after reading the information given in the word problem and solving it step wise needs to be encouraged. Students may be motivated to create word problems on situations around them. For e.g., *Everyday Sarika spends some time on doing yoga . She spends one hour more than double the time spent on yoga. How much time does she spend on yoga?* • Students may be motivated to form and solve the problems using the concepts learnt earlier in geometry, mensuration, number system etc. and send. For example, *if the ratio of length and breadth of a rectangle is 2:3 and its perimeter is 25 cm. What is the length of the rectangle?* **WEEK 6** • Initially equations with variable on one side and number on the other may be discussed. Gradually shift to equations having variables on both sides. • Step by step solution of equations may be encouraged. Equations having more than two operations may then be discussed. For e.g. $(2x + 1)/5 = 3-5x$. • Students may be given a solution, such as, say, x= 2.students may be asked to form as many equations as possible from this. For ex. *3x-5 = 1, x/2 + 3 = 4 etc.*

Chapter 4

Practical Geometry

http://ncert.nic.in/ textbook/textbook. htm?hemh1=4-16

Chapter 5

Data Handling

http://ncert.nic.in/ textbook/textbook. htm?hemh1=5-16

Books published by The Association of Mathematics Teachers of India (AMTI)

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support@amtionline. com

- Different groups of students may be given different solutions for making equations. Equations obtained from one group may be sent to another group for solving.

- More complex equations and their applications can then be switched over to. Puzzles featuring in newspapers and magazines can also be thought of.

WEEK 7

- Different types of polygons may be explored by students initially through observing different objects around them and then drawing them.

- Quadrilaterals and their different forms can then be observed and discussed.

- Paper cutting activities mentioned in the textbook may be done by students and through these they may try to express their ideas of properties of quadrilaterals.

WEEK 8

- Different types of quadrilaterals like, trapezium , parallelograms etc. may be compared through exploration by the students.

- Discussion may be done with the teacher and properties be finalised.

- Activities and questions from exercises of the Class VIII Mathematics textbook and Exemplar problem book may be discussed to deepen the understanding.

WEEK 9

- Activities using small sticks or straws may be done to form quadrilaterals. Students may be encouraged to make a unique quadrilateral of given dimension.

- Conditions may be explored and discussed with the teacher for making a unique quadrilateral.

- Based on these different sets of conditions students may be motivated to draw different quadrilaterals on the paper using ruler and compasses.

		WEEK 10
		• Special types of quadrilaterals may then be discussed and constructed, such as rhombus, square, etc.
		• Activities and exercises given in the mathematics textbook for Class VIII, Exemplar problem book and Laboratory manual for Elementary classes may be referred for innovative work.
		• E-resources available on NROER may be referred for better visualisation and understanding.
		WEEK 11
		• A recall and consolidation of orgainsing data and representing it in different forms such as pictographs, bar graphs etc.may initiated.
		• Students may be encouraged to create situations around them and think of using an appropriate and effective way of representing them. For example, blood groups of family members and neighbours.
		• Students may be motivated to collect data from the available sources such as Newspapers, magazines, Internet, TV, etc. and try to interpret the data given.
		• Situations may be thought of discussed where huge amount of data is required to be organised. For example, marks of Class VIII students scored in all the schools of a city. The need for grouping such a huge data may be thought of and discussed with teacher.
		WEEK 12
		• With a change in the way of organising data the corresponding ways of representing it may now be thought of.
		• Teachers may now motivate students to think of constructing Histogram and pie charts. Different situations may be collected and represented using these ways.
		• Situations for chance in daily life may be collected and further discussion may lead to the concept of Probability.
		• Use of features like 'Think, discuss and Write' from the textbook and exercises from textbook and Exemplar problem book for Class VIII may be exchanged.