

LESSON PLAN 5

CLASS : 6 TEACHER'S NAME :

NAME OF THE UNIT	SUB-TOPICS	NO OF PERIODS REQUIRED			Time line for teaching	
		Teaching	Practice	TOTAL	From	To
UNDERSTANDING ELEMENTARY SHAPES	5.1 INTRODUCTION	1	1	2		
	5.2 MEASURING LINE SEGMENTS					
	5.3 ANGLES - RIGHT & STRAIGHT	2	2	4		
	5.4 ANGLES - ACUTE, OBTUSE AND REFLEX					
	5.5 MEASURING ANGLES	2	3	5		
	5.6 PERPENDICULAR LINES					
	5.7 CLASSIFICATION OF TRIANGLES	3	4	7		
	5.8 QUADRILATERALS					
	5.9 POLYGONS					
	TOTAL	8	10	18		
	KEY CONEPTS	KEY VOCABULARY				
PRE-REQUISITES	Every Pupil is expected to have basic knowledge in # different geometrical terms like Point,Line,Line segment,Ray,Angle,Curve, Parallel lines, Perpendicular lines,Polygon,Vertices, Adjacent, Opposite etc., # usage of different Mathematical instruments with finger dextirity # nomenclature of different objects of mathematical instrument box	# Line Segment,Positioning, Tracing,Length,Comparision,Measure # Right Angle, Straight Angle, Complete Angle,Revolution,Clock&anticlock wise # Acute,Obtuse,Reflex angles # Perpendicular # Classification # Triangles			# Equilateral # Isosceles # Scalen triangles # Quadrilateral # Square # Rectangle # Parallelogram # Trapezium # Polygon	

Learning Outcomes

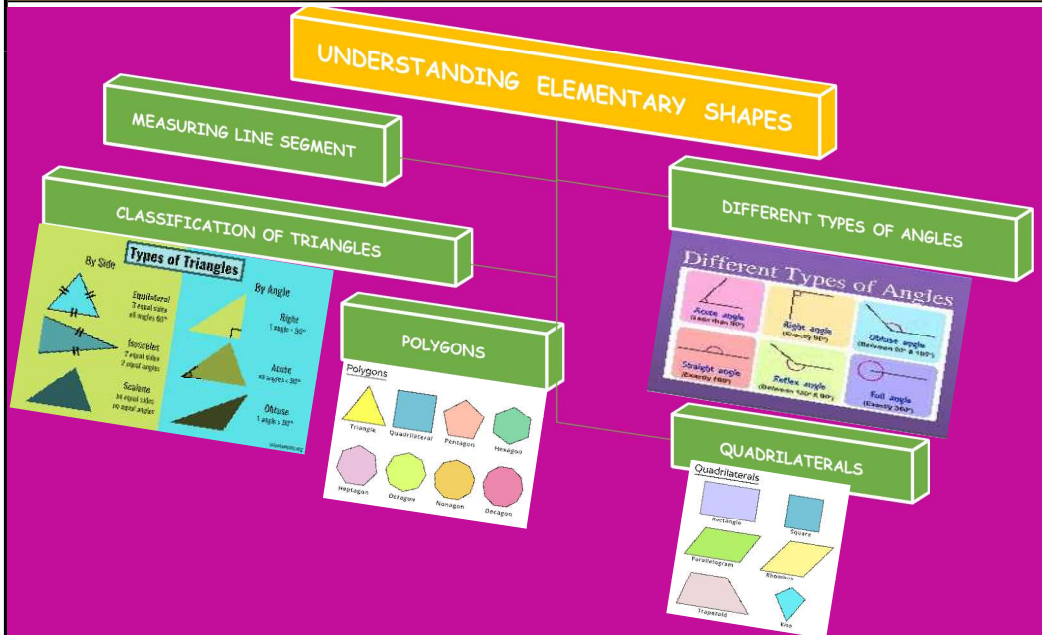
After Completion of this lesson every student will be able to

- # identify the basic geometrical figures and shapes like line, line segment, point, ray, Angle, Curve, Polygon in real life objects
- # draw line segment of any given measure and can compare lengths of two or more line segments
- # recognize Perpendicular lines, Parallel lines, Triangles, quadrilaterals and all polygons in real life sums.
- # discriminate different angles like acute, obtuse and right, straight, complete etc., and can draw them using protractor.
- # classify different types of triangles based on their angles and sides like acute angled triangle, obtuse angled, right angled triangle, equilateral, Isosceles, and Scalen triangle
- # names different polygons basing on the number of sides

Teaching Learning Process

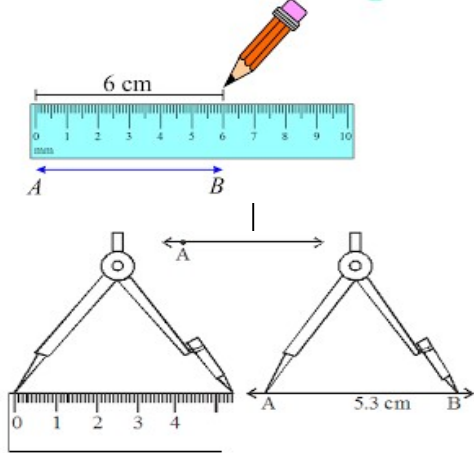
MIND MAPPING

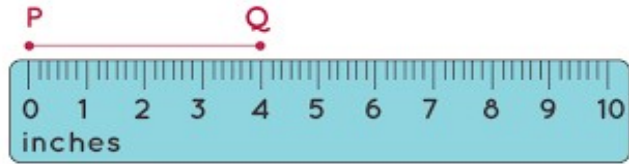
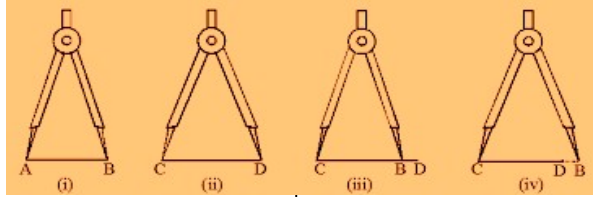
Experience & Reflection




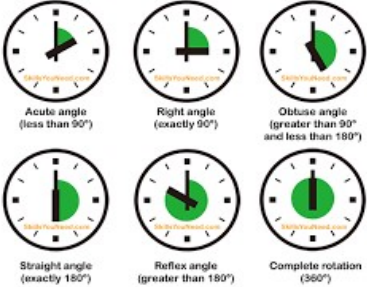
Pupils will recollect their knowledge on basic geometrical shaped objects like edge of a book, tip of a pencil, shape of a field, black board etc., and utilize the knowledge in exploring different basic geometrical shapes

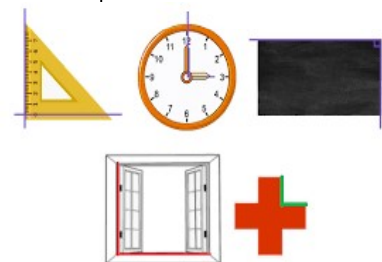
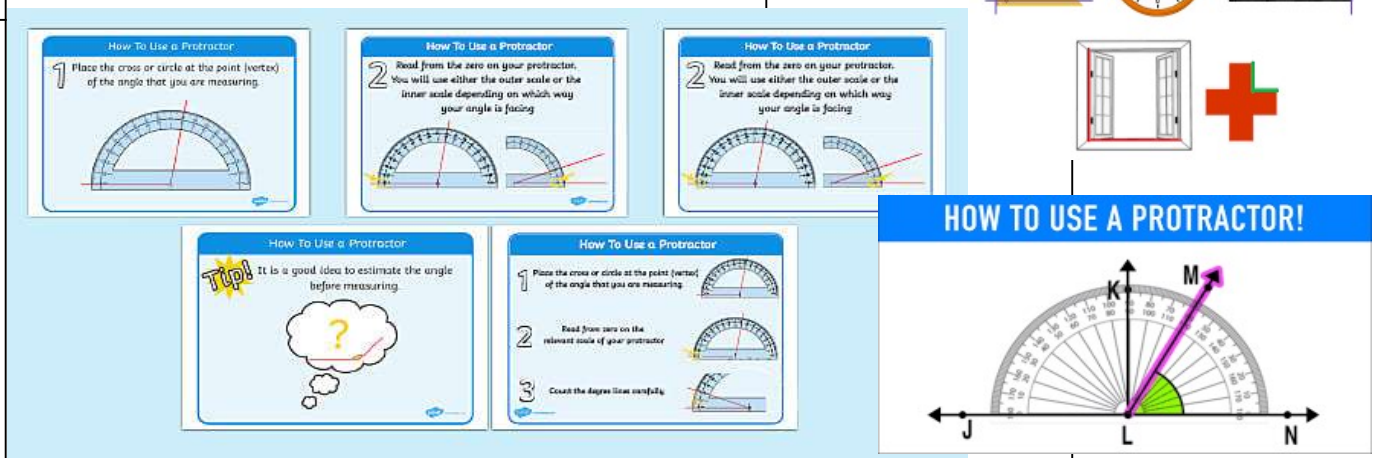
Students will experience the Basic geometrical shapes in real life situations.

TEACHING PERIOD : 1	INTRODUCTION, MEASURING LINE SEGMENTS		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS & PRE REQUISITES	Brain storming session involving children with pre-requisites vocabulary and concepts related to previous knowledge. Introduction of new vocabulary and key words associated with the concept # Line Segment # Line # Point # Tip # Positioning # Tracing # Length # Comparison # Measurement	* Students read the pre-requisites and answer the questions to the teacher (whole class activity)	Every Pupil will read and write the key words in their note books
MIND MAPPING	Teacher writes the key word " UNDERSTANDING ELEMENTARY SHAPES" on the black board and will elicit its other related words through questioning and will draw pupils' attention towards key concepts in the lesson	Heterogeneous groups are created. One group will read the words and other will explain the meaning	Pupils individually read the keywords associated with knowing our numbers
CONCEPTUAL UNDERSTANDING	Teacher once recalls the various geometrical shapes that they have learnt in previous chapter and now will introduce the process of measuring a line segment through different ways and comparing two line segments through an activity involving pupils. Teacher divides children into heterogeneous groups and asks them to draw different line segments as per their wish in their note books. Later teacher engages the groups in measuring the length of the line segment in different ways using Ruler and by using a divider from mathematical instrument box. Teacher also demonstrates the procedure of measuring a line segment in different ways, as well as drawing a line segment of given length using Black Board Geometry Instrument Box and ascertains that every child in all groups learns the process.	Whole class participates in the activity and ascertains learning of the concept	every child learns the concept through the learning activity.
LEARNING ACTIVITY	During the process of demonstration teacher explains how to utilize the Mathematical Instruments with out any parallax error		
SUMMARY	Teacher writes the summary of the concept and procedure of measuring the length of a line segment and asks children to read write and note	pupils will note down and read in groups	every individual reads the summary and notes it down
ASSESSMENT	Teacher gives some questions under Try these section and exercise 5.1 and asks children to solve	every group will do the sums by discussion among each other	every individual solves the sums on their own

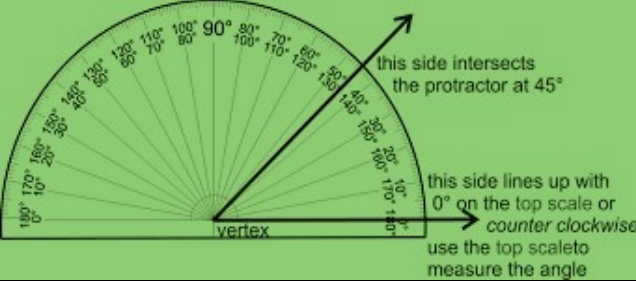
PRACTICE PERIOD: 1	INTRODUCTION, MEASURING LINE SEGMENTS		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS READING	Teacher writes the key words from previous class's teaching period and asks children to read and write them in note books # Line Segment # Line # Point # Tip # Positioning # Tracing # Length # Comparison # Measurement	Whole class activity : one child comes to the board and reads the key words loudly and the remaining class follows.	Every child comes to the board and reads the key words and notes them down in their note books
SIMILAR LINES READING	Teacher measures the lengths of some line segments using ruler and divider and compares their lengths using divider and asks children to measure the lengths of some more by watching similar lines 	Each group will observe the similar lines and will measure some more by discussion 	Every Individual measures some more using similar lines
SUMMARY/ SYNOPSIS	Teacher once again writes important key words and procedures and asks children to spell, read, note down and practice.	pupils will note down and read the summary in groups	every individual spells and reads the summary and notes it down
WRITING/ EDITING	Teacher gives some sums related to try these section and asks children to write them and checks the writings of children	One group will check the writings of the other and vice versa	Slow learners are focused and teacher will ascertain that every individual learns the concept

TEACHING PERIOD : 2,3		ANGLES - RIGHT & STRAIGHT, ANGLES - ACUTE, OBTUSE AND REFLEX	
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS	Brain storming session involving children with key words # Right Angle # Straight Angle # Reflex angle # Acute Angle # Obtuse Angle # Complete Angle # Revolution # Clock & Anti Clock Wise direction	* Students read the keywords answer the questions to the teacher (whole class activity)	Every Pupil will read and write the key words in their note books
CONCEPTUAL UNDERSTANDING	Teacher illustrates the concept of different angles like acute angle, obtuse angle, Right Angle, Straight Angle, Complete Angle, Revolution, Clock & Anti Clock wise direction etc by displaying different models as well as using a clock	Each group will understand the concept of different types of angles by discussion among themselves	every child learns the concept through the learning activity and observation of TLM
LEARNING ACTIVITY			
SUMMARY	Teacher once again writes important key words and definitions and asks children to note down and adopt.	Pupils will note down and read the summary in groups	Every individual reads the summary and notes it down and adopts the procedure
ASSESSMENT	Teacher gives some questions from Try These sections as well as sums of exercise 5.2 and 5.3 and asks children to solve those sums	Every group will do the sums by discussion among each other	Every individual solves the sums on their own

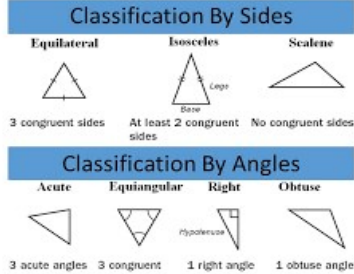
PRACTICE PERIODS: 2,3	ANGLES - RIGHT & STRAIGHT, ANGLES - ACUTE, OBTUSE AND REFLEX		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS READING	Teacher writes the key words from previous class's teaching period and asks children to read and write them in note books # Right Angle # Straight Angle # Reflex angle # Acute Angle # Obtuse Angle # Complete Angle # Revolution # Clock & Anti Clock Wise direction	Whole class activity : one child comes to the board and reads the key words loudly and the remaining class follows.	Every child comes to the board and reads the key words and notes them down in their note books
SIMILAR LINES READING	Teacher arranges a clock with different times and writes the angles at those timings and asks children to write for some more by observing similar lines 	Each group will read the similar lines and will frame some more by discussion	Every Individual will do a few more by watcing similar lines
SUMMARY/ SYNOPSIS	Teacher once again writes important key words and definitions and asks children to note down and adopt.	Pupil groups will read and adopt the procedure	Teacher focuses on every individual so that every child is
WRITING/ EDITING	Teacher gives some questions from Exercise 5.2 & 5.3 and asks children to solve those sums and teacher checks the writings of children	One group will check the writings of the other and vice versa	able to understand different types of angles in successive upcoming practice sessions

TEACHING PERIOD : 4,5		MEASURING ANGLES, PERPENDICULAR LINES	
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS	Brain storming session involving children with key words # Measure # Protractor # Perpendicular # Degree # Revolution # Precise # Bisector # Perpendicular bisector	* Students read the keywords answer the questions to the teacher (whole class activity)	Every Pupil will read and write the key words in their note books
CONCEPTUAL UNDERSTANDING	Teacher demonstrates the concept of measuring an angle using a protractor from Mathematical instrument box and conducts an activity involving individuals to measure different angles drawn on the black board one by one. Here pupils will be asked to find out those angles which make 90° . Then teacher provokes children to recognize and recall different objects which are in the shape of 90° angle and now teacher makes children know the name of those lines making 90° as Perpendicular lines	Each group will learn about the process of measuring angles through discussion	every child learns the concept through the learning activity. 
LEARNING ACTIVITY			
SUMMARY	Teacher writes the key words and the procedure of measuring an angle using protractor and asks children to note down the summary and adopt	Pupils will note down and read the summary in groups	Every individual reads the summary and notes it down and adopts the procedure

ASSESSMENT	Teacher gives some questions from exercise 5.4 & 5.5 and asks children to solve those sums	Every group will do the sums by discussion among each other	Every individual solves the sums on their own
------------	--	---	---

PRACTICE PERIODS: 4,5,6	MEASURING ANGLES, PERPENDICULAR LINES		
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)
KEY WORDS READING	Teacher writes the key words from previous class's teaching period and asks children to read and write them in note books # Measure # Protractor # Perpendicular # Degree # Revolution # Precise # Bisector # Perpendicular bisector	Whole class activity : one child comes to the board and reads the key words loudly and the remaining class follows.	Every child comes to the board and reads the key words and notes them down in their note books
SIMILAR LINES READING	Teacher will measure some angles on the black board and will ask children to measure some more by observing similar lines 	Each group will read the similar lines and will frame some more by discussion	Every Individual will do a few more by watching similar lines
SUMMARY/ SYNOPSIS	Teacher once again writes important key words and important summary of the concept learnt and asks children to note down and adopt.	Pupil groups will read and adopt the procedure	Teacher focuses on every individual so that each one understands and utilizes the concepts in successive upcoming practice sessions
WRITING/ EDITING	Teacher gives some questions from Exercise 5.4 & 5.5 and asks children to solve those sums and teacher checks the writings of children	One group will check the writings of the other and vice versa	

TEACHING PERIOD : 6,7,8		CLASSIFICATION OF TRIANGLES, QUADRILATERALS,POLYGONS																																							
CONCEPTS/STEPS	TEACHER ACTIVITY (I DO)	GROUP ACTIVITY (WE DO)	INDIVIDUAL ACTIVITY (YOU DO)																																						
KEY WORDS	Brain storming session involving children with key words # Triangle # Equilateral Triangle # Isosceles # Scalen # Acute angled # Right Angled # Obtuse angled # Quadrilateral # Trapezium # Parallelogram # Rectangle # Kite # Rhombus # Square # Polygon # Pentagon # Hexagon # Septagon # Octogan	* Students read the keywords answer the questions to the teacher (whole class activity)	Every Pupil will read and write the key words in their note books																																						
CONCEPTUAL UNDERSTANDING	Teacher demonstrates the concept of different types of triangles, quadrilaterals, and polygons in subsequent teaching periods by showing different models of each and will ascertain pupils' apprehensions in each of those concepts.	Each group will learn about different types of curves, Polygons and Angles through discussion	every child learns the concept through the learning acitivity.																																						
LEARNING ACTIVITY	<p style="text-align: center;">TRIANGLES Classified by Sides</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>EQUILATERAL TRIANGLE</td> <td>ISOSCELES TRIANGLE</td> <td>SCALENE TRIANGLE</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td>3 congruent sides All sides have equal measure</td> <td>2 congruent sides At least 2 sides have equal measure</td> <td>0 congruent sides No sides have equal measure</td> </tr> </table> <p style="text-align: center;">TRIANGLES Classified by Angles</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>ACUTE TRIANGLE</td> <td>EQUIANGULAR TRIANGLE</td> <td>OBTUSE TRIANGLE</td> <td>RIGHT TRIANGLE</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 acute angles All angles measure less than 90°</td> <td>3 congruent angles All angles have equal measure</td> <td>1 obtuse angle One angle measures more than 90°</td> <td>1 right angle One angle measures 90°</td> </tr> </table>	EQUILATERAL TRIANGLE	ISOSCELES TRIANGLE	SCALENE TRIANGLE				3 congruent sides All sides have equal measure	2 congruent sides At least 2 sides have equal measure	0 congruent sides No sides have equal measure	ACUTE TRIANGLE	EQUIANGULAR TRIANGLE	OBTUSE TRIANGLE	RIGHT TRIANGLE					3 acute angles All angles measure less than 90°	3 congruent angles All angles have equal measure	1 obtuse angle One angle measures more than 90°	1 right angle One angle measures 90°	<p style="text-align: center;">Quadrilateral Family</p>	<p style="text-align: center;">Types of Polygons</p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>Triangle - Has 3 sides and 3 vertices - Has no diagonals - Sum of the interior angles is 180°</td> <td></td> <td>Quadrilateral - Has 4 sides and 4 vertices - Has two diagonals - Sum of the interior angles is 360°</td> <td></td> </tr> <tr> <td>Pentagon - Has 5 sides and 5 vertices - Has 5 diagonals - Sum of the interior angles is 540°</td> <td></td> <td>Hexagon - Has 6 sides and 6 vertices - Has 9 diagonals - Sum of the interior angles is 720°</td> <td></td> </tr> <tr> <td>Heptagon - Has 7 sides and 7 vertices - Has 14 diagonals - Sum of the interior angles is 900°</td> <td></td> <td>Octagon - Has 8 sides and 8 vertices - Has 20 diagonals - Sum of the interior angles is 1080°</td> <td></td> </tr> <tr> <td>Nenagon - Has 9 sides and 9 vertices - Has 27 diagonals - Sum of the interior angles is 1260°</td> <td></td> <td>Decagon - Has 10 sides and 10 vertices - Has 35 diagonals - Sum of the interior angles is 1440°</td> <td></td> </tr> </table>		Triangle - Has 3 sides and 3 vertices - Has no diagonals - Sum of the interior angles is 180°		Quadrilateral - Has 4 sides and 4 vertices - Has two diagonals - Sum of the interior angles is 360°		Pentagon - Has 5 sides and 5 vertices - Has 5 diagonals - Sum of the interior angles is 540°		Hexagon - Has 6 sides and 6 vertices - Has 9 diagonals - Sum of the interior angles is 720°		Heptagon - Has 7 sides and 7 vertices - Has 14 diagonals - Sum of the interior angles is 900°		Octagon - Has 8 sides and 8 vertices - Has 20 diagonals - Sum of the interior angles is 1080°		Nenagon - Has 9 sides and 9 vertices - Has 27 diagonals - Sum of the interior angles is 1260°		Decagon - Has 10 sides and 10 vertices - Has 35 diagonals - Sum of the interior angles is 1440°	
EQUILATERAL TRIANGLE	ISOSCELES TRIANGLE	SCALENE TRIANGLE																																							
3 congruent sides All sides have equal measure	2 congruent sides At least 2 sides have equal measure	0 congruent sides No sides have equal measure																																							
ACUTE TRIANGLE	EQUIANGULAR TRIANGLE	OBTUSE TRIANGLE	RIGHT TRIANGLE																																						
3 acute angles All angles measure less than 90°	3 congruent angles All angles have equal measure	1 obtuse angle One angle measures more than 90°	1 right angle One angle measures 90°																																						
Triangle - Has 3 sides and 3 vertices - Has no diagonals - Sum of the interior angles is 180°		Quadrilateral - Has 4 sides and 4 vertices - Has two diagonals - Sum of the interior angles is 360°																																							
Pentagon - Has 5 sides and 5 vertices - Has 5 diagonals - Sum of the interior angles is 540°		Hexagon - Has 6 sides and 6 vertices - Has 9 diagonals - Sum of the interior angles is 720°																																							
Heptagon - Has 7 sides and 7 vertices - Has 14 diagonals - Sum of the interior angles is 900°		Octagon - Has 8 sides and 8 vertices - Has 20 diagonals - Sum of the interior angles is 1080°																																							
Nenagon - Has 9 sides and 9 vertices - Has 27 diagonals - Sum of the interior angles is 1260°		Decagon - Has 10 sides and 10 vertices - Has 35 diagonals - Sum of the interior angles is 1440°																																							
SUMMARY	Teacher writes the key words and classifications and asks children to note down the summary and adopt	Pupils will note down and read the summary in groups	Every individual reads the summary and notes it down and adopts the procedure																																						
ASSESSMENT	Teacher gives some questions from exercise 5.5 & 5.6 and asks children to solve those sums	Every group will do the sums by discussion among each	Every individual solves the sums on their own																																						

KEY WORDS READING	<p>Teacher writes the key words from previous class's teaching period and asks children to read and write them in note books</p> <p># Triangle # Equilateral Triangle # Isosceles # Scalen # Acute angled # Right Angled # Obtuse angled # Quadrilateral # Trapezium # Parallelogram # Rectangle # Kite # Rhombus # Square # Polygon # Pentagon # Hexagon # Septagon # Octogon</p>	<p>Whole class activity : one child comes to the board and reads the key words loudly and the remaining class follows.</p>	<p>Every child comes to the board and reads the key words and notes them down in their note books</p>
SIMILAR LINES READING	<p>Teacher will classify different triangles depending upon angles as well as sides and asks children to classify quadrilaterals depending upon their nature by watching the similar lines</p> <div style="text-align: center;">  </div>	<p>Each group will read the similar lines and will classify in the case of quadrilaterals by discussion</p>	<p>Every Individual will participate in classifying quadrilaterals and polygons by watching similar lines</p>
SUMMARY/ SYNOPSIS	<p>Teacher once again writes important key words and important summary of the concept learnt and asks children to note down and adopt.</p>	<p>Pupil groups will read and adopt the procedure</p>	<p>Teacher focuses on every individual so that each one understands and utilizes the</p>
WRITING/ EDITING	<p>Teacher gives some questions from Exercise 5.5 & 5.6 and asks children to solve those sums and teacher checks the writings of children</p>	<p>One group will check the writings of the other and vice versa</p>	<p>concepts in successive upcoming practice sessions</p>