LESSON PLAN

Subject: Mathematics
Unit: Polygon
Topic: How to find the sum of the interior angle of nth polygon ?
Class: 9th

1. Learning points.

   How to find the sum of the interior angle of nth polygon ?

2. Learning outcomes,
   To facilitate the students,
   1. To recall the definition of polygon
   2. To recognize the different types of polygon.
   3. To recognize how the polygon is divided into geometrical figures when they draw the diagonal.
   4. To recognize to find the sum of the interior angle of nth polygon.

3. Management of learners.
   Group learning
   Group type: learning together

4. Instructional strategies:
   Indo detective method

5. Resources required
   Powerpoint presentation, geogebra, image of different types of polygon .
6. Evidence for learning
   Test.

What teacher does	What students will do
Engage • Teacher greets students • Today we will learn some interesting topic in mathematics .i will ask questions and there will be a activity also. shall we start the class today. • Give me some examples for	Students greets teacher. Ok mam

plane figures. • Ok students oberseve the figure carefully and note down the geometrical shapes of the figures on them . • What is the common thing you observed here? • If the geometrical figures has three sides and three angles what it is called as? • If the geometrical figures has four sides and four angles what it is called as? • If the geometrical figures has more than four sides and four angles what it is called as? • Now tell me what is polygon? • Ok what is the sum of the interior angle of triangle ? • And what is the sum of the interior angle of quadilateral ? • Ok now tell me what is the sum of the interior angle of the nth polygon is ?	triangle,square,quadrilateral and so on. Ok mam No response. Triangle. Quadrilateral. Polygon. It is a closed geometrical figure bounded by three or more line segment. 180. 360. No response.

Statement of aim: in todays class we will study " how to find the sum of the interior angle of nth polygon?"

What teacher does	What students will do
We shall learn this answer through an activity. Now make a group of 4 to 5 members. Now, listen students, I will show pictures on screen observe it, note	Ok Students will make group. Ok mam

down in books then I will give time discuss in group and answer to my question. **Explore:** in geogebra Observe each stage **Express:** Each one of you have observed each stage start discuss in group what you have observed. After few minutes teacher ask each group to tell what they have observed? Answer will be elicited from each group. • What type of figure it was ? • Then what happened ? • What figures you identified inside the polygon after drawing diagonal?	Observes each stage Students starts discussion. In ex:1,ex:2, ex:3 1st it is pentagon after drawing the diagonal we got three triangles. 2nd it is hexagon after drawing the diagonal we got four triangles. 3rd it is heptagon after drawing the diagonal we got five triangles.

(Answers are shown in table constructed in geogebra)

ex	Type of figure	Number of sides	Number of diagonals	Number of triangles	ICT Used
1	pentagon	5	2	3	geogebra
2	Hexagon	6	3	4	geogebra
3	Heptagon	7	4	5	geogebra

What teacher does	What students will do
Explain now students observe only number of sides and triangle column and tell me what is the difference you observed. How did you got the difference of two?	There is a difference of two. 5 - 3 =2, 6 - 4 = 2 , 7 – 5 = 2.

Ok if a polygon has n sides and if all possible diagonals are drawn from any fixed vertex what we will get? What is the sum of the interior angle of triangle is ?	(n – 2) triangles 180
Ok now tell me what is the sum of the interior angle of nth polygon ?	(n – 2) x 180.
Excellent In this group activity we learnt " how to find the sum of the interior angle of nth polygon?"	
Expand : How many triangles we will get in the decagon ?	8.
How will you find the sum of the interior angle of this polygon .	By using Angle Sum Property of a polygon.
Evaluate: Now the group activity ended here. To test you people individually, I will give outline figure, find the sum of the interior angle of the given polygon.	
Find the sum of the interior angle of nangon ?	(9 – 2) x 180 = 7 x 180 = 1240.