LESSON PLAN 5

CLASS : 9 SUBJECT : MATHEMATICS TEACHER'S NAME :

NAME OF THE UNIT	SUB-TOPICS		NO OF PERIODS REQUIRED			Time line for teaching	
			Teaching	Practice	TOTAL	From	To
INTRODUCTION TO EUCLID'S GEOMETRY	5.1	INTRODUCTION	2	2	4		
	5.2	EUCLID'S DEFINITIONS, AXIOMS AND POSTULATES	3	3	6		
		TOTAL	5	5	10		
PRE-REQUISITES & SKILLS	Every Pupil is expected to have basic knowledge and skills in # basic geometrical terms like point, line, linesegment, ray, distance,Parallel and Perpendicular lines etc., # four basic operations like +,-,x and ÷ # Usage of Mathematical instrument box # Visualization of different geometrical shpaes like polygons, cuboids, cubes, sphere, cylinder, pyramid, prism etc.,						

Learning Outcomes

After Completion of this lesson every student will be able to
  # recognize various geometry related sums in real life are inferences of Euclid's Geometry
  # identify the axioms and postulates which are made use of in geometrical sums.
  # utilize appropriately the axioms and postulates of Euclid in future endeavours of gemoetry.
  # appriciate Euclid and Other Mathematicians who strived through out their life in pursuit of everlasting geometry.
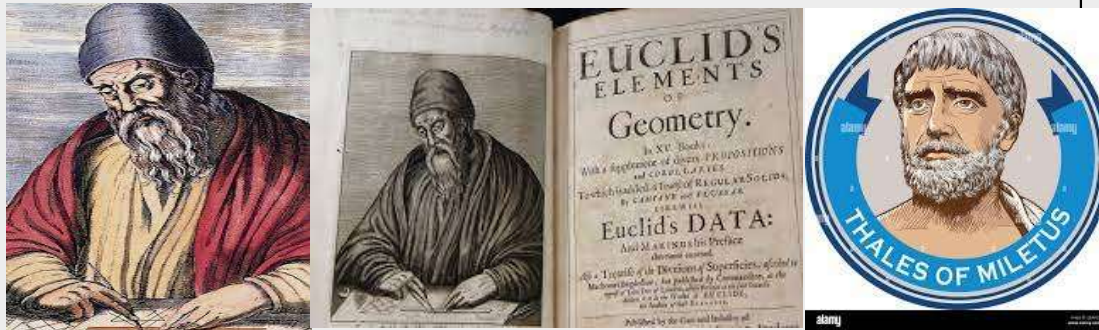
Teaching Learning Process

INTRODUCTION /INDUCTION	Experience & Reflection
Teacher introduces the chapter of Introduction to Euclid's Geometry by drawing pupils's attention towards various real life objects which involve number of geometrical shapes and calculations. Teacher creates curiosity in children by questioning about geometry and the mathematicians who strived throughout their life in buliding the so called geometry which we have been using now with ease there by introduces the concept.	# Pupils will recollect their knowledge on various geometrical terminology and shapes and utilize it here to know deep about how it came into existence and persons who worked on it to bring it into our daily life. Students will experience the usage of geometry in real life situations and appreciate the works of those who brought it into our daily life.

EXPLICIT TEACHING/TEACHER MODELLING (I DO)	GROUP WORK (WE DO)	INDEPENDENT WORK (YOU DO)	NOTES
5.1. INTRODUCTION Teacher makes children know how geometry shaped as a disciplined science and the history behind it. Teacher also explains the history of various mathematicians and Philosophers from all over the world including India who worked in shaping this geometry as a systematic science. Teacher creates enthusiasm in children by telling them the history of geometry. Teacher also emphasizes especially the work of Euclid in his treatise " The Elements"	Pupils will work in groups and try to collect the data of the mathematicians who worked in developing geometry as a systematic science and discuss about the great work done by those great personlaities to the mankind. The sriyantra (given in the Atharvaveda) consists of nine interwoven isosceles triangles. These triangles are arranged in such a way that they produce 43 subsidiary triangles.	Every individual knows about the history of geometry and the credits of various mathematicians in it.	

EXPLICIT TEACHING/TEACHER MODELLING (I DO)	GROUP WORK (WE DO)	INDEPENDENT WORK (YOU DO)	NOTES
5.2 . EUCLID'S DEFINITIONS, AXIOMS AND POSTULATES Teacher first introudes the basic terms of geometry like a Point, a Line, a surface etc., how euclid defined in his book " The elements". Later Teacher lets children know what are axioms and what are postulates. depending on them teacher illustrates some examples and sums and makes children well acquianted with the intro of Euclid's Geometry.	Pupils groups will know from the teacher and apprehend that **Postulate:** the term 'postulate' is used for the assumptions that were specific to geometry. **Axioms:** Common notions on the otherhand, were assumptions used throughout mathematics and not specifically linked to geometry are termed as Axioms	Students will learn about postulates and axioms of Euclid and will solve example sums and sums of exercise 5.1 on their own under the guidance of teacher **Euclid's Postulates (for geometry)** 1. A straight line can be drawn from any point to any point. 2. A finite straight line can be produced continuously in a straight line. 3. A circle may be described with any point as center and any distance as radius. 4. All right angles are equal to one another. 5. If a transversal falls on two lines in such a way that the interior angles on one side of the transversal are less than two right angles, then the lines meet on that side on which the angles are less than two right angles.	

CHECK FOR UNDERSTANDING QUESTIONS	
1. Factual	1) Define an Axiom and a Postulate 2) The Book prepared by Euclid is ---------------- and consists of --------------- books.
2. Open Ended/Critical Thinking	1) Give a brief of Euclid's 5 Postulates 2) If a point C lies between two points A and B such that AC = BC, then prove that AC = 1/2 AB. Explain by drawing the figure
3.Student Practice questions & Activities	1. Consider two 'postulates' given below: (i) Given any two distinct points A and B, there exists a third point C which is in between A and B. (ii) There exist at least three points that are not on the same line. Do these postulates contain any undefined terms? Are these postulates consistent? Do they follow from Euclid's postulates? Explain.
4. Assessment	Exercise sums and worksheet on Introduction to Euclid's Geometry