

LESSON PLAN 3

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
CO-ORDINATE GEOMETRY	3.1 INTRODUCTION	3	2	5		
	3.2 CARTESIAN SYSTEM	3	6	9		
	TOTAL	6	8	14		
PRE-REQUISITES & SKILLS	Every Pupil is expected to have basic knowledge and skills in # mapping skills and addressing # number line, representing integers and rationals on number line # plotting on graphs					

Learning Outcomes

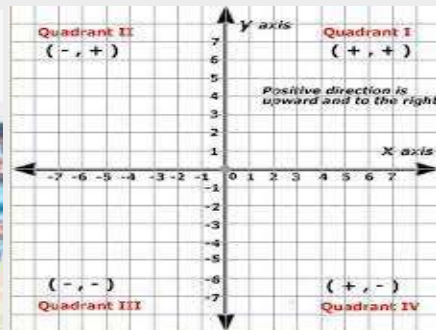
After Completion of this lesson every student will be able to

- # express what a cartesian plane is? and its history
- # distinguish which point belongs to which quadrant
- # plot any point on the cartesian plane
- # name any point on the cartesian plane
- # utilize the concept of co-ordinate geometry in real life situations and appreciate its significance

Teaching Learning Process

INTRODUCTION /INDUCTION


Teacher introduces the chapter of Co-ordinate geometry by drawing their attention towards the seating position of the children in the class room. Here children will sit in rows and columns. Each row is named as a,b,c..... And each column is numbered as 1,2,3,... etc. Questions will be posed by the teacher in such a way that teacher calls upon a combination say C5 or D3 to stand. By this each student can easily understand the concept of Co-ordinate geometry.

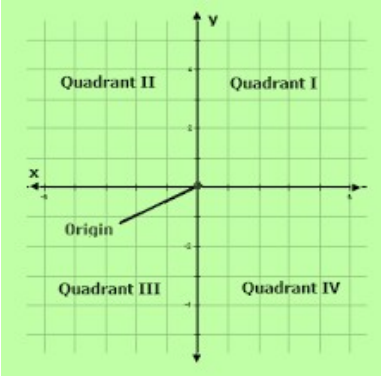
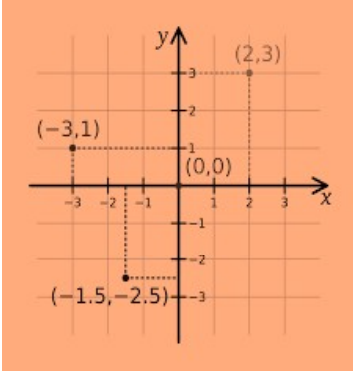
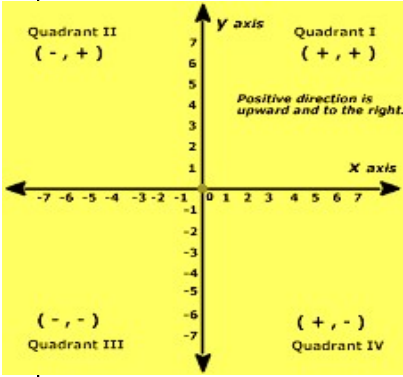


Experience & Reflection

Pupils will recollect their knowledge on mapping skills, plotting of a number on a number line and with the help of those they apply the same concept here and will learn the cartesian system.

Students will experience the usage of Co - ordinate geometry in real life situations.

EXPLICIT TEACHING/TEACHER MODELLING	GROUP WORK (WE DO)	INDEPENDENT WORK (YOU DO)	NOTES
<p>3.1. INTRODUCTION</p> <p>Teacher introduces the concept by focussing children's attention towards the seating position of themselves in the classroom. Teacher names each row with an english alphabet say a,b,c,... and each column with a number say 1,2,3.. . Now teacher asks say some b3 to stand or will call upon a child with his name and asks him in which position he is sitting. In this fashion teacher introduces addressing. Later explains the importance of Cartesian system and its history of emerging.</p>	<p>Pupil groups will be asked different real life examples where it is needed to co ordinate to identify a particular place or point. For example in a village if we want to tell the address of bank to a stranger who wishes to go to that bank we simply say go to the 3rd line 4th building like that. This is the way we represent a point or a place with two specifications which are called co-ordinates</p>	<p>Students will be focused towards the history of Cartesian plane and are asked to know the names of the mathematicians who worked in existence of Co ordinate geometry and Cartesian System along with doing sums of exercise 3.1</p>	<p>Rene Descartes</p> 

EXPLICIT TEACHING/TEACHER MODELLING	GROUP WORK (WE DO)	INDEPENDENT WORK (YOU DO)	NOTES
<p>3.2 CARTESIAN SYSTEM</p> <p>Teacher recalls the concept of number line and with the help of that, demonstrates the concept of cartesian system with X-Axis and Y-Axis , Quadrants, Writing Co-Ordinates, Plotting points on the Cartesian Plane, naming a point on the cartesian plane with co-ordinates and will be briefed with what is the nature of each point on the cartesian plane, where Origin (0,0) lies, What type of points will be in Q1, Q2,Q3 and Q4</p>	<p>Children are engaged in activity involving plotting different points on the cartesian plane and naming them with Co-ordinates. They will be posed with questions like (-,-) belongs which quadrant? (+,-) belongs which quadrant?</p> <p>Teacher ascertains that each group of children does the activity with proper understanding.</p> 	<p>Students will participate in the activity and will solve the example sums as well as sums of exercise 3.2 on their own under the guidance of teacher</p>	 

(x, y)
 ↑ ↑
Abscissa Ordinate

CHECK FOR UNDERSTANDING QUESTIONS

1. Factual	1) The no. of axii present in a cartesian plane are 2) in a point the First Co-ordinate calledand the Second Co-ordinate is called
2. Open Ended/Critical Thinking	1) Plot the points in Cartesian Plane i) (0,2) ii) (-4,0) iii) (5,-5) iv) (-4,-8) 2. Do (-2,2) and (2,-2) represent same point? Justify your answer
3. Student Practice questions & Activities	1. Plot these points on the graph and identify which shape appears on the plane (0,0) , (4,0), (0,4), (4,4) 2. Plot any set of points on the cartesian plane to represent a rectangle shape on the plane
4. Assessment	Exercise sums and worksheet on Co-ordinate geometry