

SUBJECT : MATHEMATICS

CLASS : VI

TOPIC : BASIC GEOMETRICAL IDEAS

Pre-Content / Content / Post-Content	Learning Outcomes / Objectives	
	General	Specific
<u>PRE-CONTENT</u> - Definitions of point, line, line segment, ray and the parts of circle <u>CONTENT</u> - Point - Different types of lines - Curves and Polygons - Angles - Triangles - Quadrilaterals - Circles <u>POST-CONTENT</u> - Construction of geometrical shapes	Students will be able to ✓ recall and define various basic geometrical concepts ✓ define and differentiate between different types of points ✓ define and differentiate between different types of lines ✓ define, identify and differentiate between curves and Polygons. ✓ define, visualize and draw parts of an angle ✓ define, draw and distinguish between different regions of a triangle ✓ define and visualize all the parts of a quadrilateral ✓ define, identify all the parts of a circle and draw a circle showing all its parts ✓ construct different geometrical shapes	Students will be able to ✓ recall basic concepts of geometry, define different terms and visualize by drawing figures ✓ define points and differentiate between collinear points and non collinear points ✓ define, visualize lines and differentiate between parallel lines and intersecting lines ✓ define, identify, draw curves and polygons and differentiate between open and closed curves ✓ define, draw angle and visualize all parts of an angle ✓ define, draw triangles and distinguish between interior and exterior of a triangular region ✓ define, visualize all the parts of a quadrilateral and identify and draw different quadrilaterals ✓ define, identify a circle and its parts and draw a circle showing all its parts ✓ draw angles and all the geometrical figures

Home Work /Assignments:

1. NCERT exercise/solved examples given as home task.
2. Extra practice questions.

MONTH : APRIL '20
TIME : PRE-MID TERM

Teacher's Activity	Student's Activity	Teacher's Observations and Remedial
Teacher will ask questions based on their previous knowledge to recall various geometrical concepts. draw and explain types of points. take the examples from the surroundings to explain the concept of lines. differentiate between curves and polygons. measure and draw angles of different measures. draw different types of triangles using geo board and instruct them to perform the activity on rigidity of triangles. (Annexure-4) use geo board to explain all the parts of a quadrilateral. show all the parts of a circle. give the students application based problems.	Students will answer the questions and define and draw the given basic geometrical shapes. give examples from real life. draw parallel and intersecting lines by paper folding. draw open and closed curves and different types of polygons. measure and draw angles of different measures and label them. identify interior and exterior of a triangular region and perform the activity as per the instructions given, to show rigidity of triangles and write their observations. (Annexure-4) make different types of quadrilaterals using geo board and identify its parts. show all the parts of a circle in a given figure by paper folding. solve various application based problems.	Teacher will write his/her observations after the completion of the topic.

Teaching Aids: Smart Board, ICR, Geometrical figures from surroundings.

Methodology/Innovative Methods: Deductive Activity Method, Brainstorming.

Interdisciplinary Links: Linked with Art, Real Life.

Annexure-4

Subject	MATHEMATICS
Class	VI
Chapter/Unit	Basic Geometrical Ideas
Topic	Triangles
Time	30 minutes
Nature of Activity	Individual

What will I learn (Learning outcome)?

To establish the fact that triangle is the most rigid figure.

Skills:- Psychomotor Coordination, Differentiating, Assimilating, Identifying, Examining

What I have to do?

To establish the fact that triangle is the most rigid figure by activity method.

What do I require?

Toothpicks and straws.

What do I need to know?

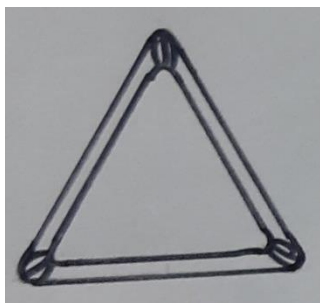
Meaning of rigidity

➤ **Teacher's Activity**

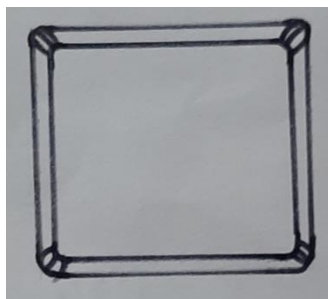
Teacher will discuss about rigidity and will explain the steps of the activity.

How will I proceed?➤ **Student's Activity**

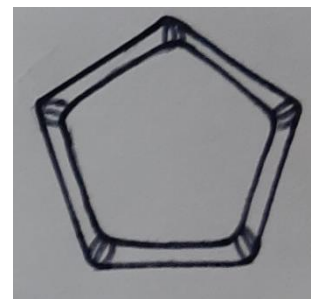
- Take a sufficient number of toothpicks of any convenient length.
- Cut straws into several pieces each of length, say 3 cm.
- Now, join the toothpicks with the help of straw pieces to make different shapes such as triangle, quadrilateral and pentagon as shown in Fig.1.



Triangle



Quadrilateral



Pentagon

Fig.1

- Press any vertex or any side of each shape made of toothpicks and examine its shape.

What have I observed?

Complete the following table:

Number of sticks used	Shape formed	Change shape after pushing at a vertex (Yes/No)
3	Triangle	
4	Quadrilateral	
5	Pentagon	

What have I learnt?

To establish the fact that _____ is the most rigid figure among all other polygons.

What am I curious to know?

Show the above activity for a 6-sided polygon and examine its shape.

Let me evaluate myself

1. Which figure shows property of rigidity: a rhombus or an equilateral triangle?

2. Is there any shape other than triangle which shows property of rigidity?

3. Why the triangle is the strongest shape?

4. Write the names of any five objects from your surroundings which show property of rigidity of triangles.

(a) _____
(b) _____
(c) _____
(d) _____
(e) _____

5. Write any three real life applications for the property of rigidity of triangles.

(a) _____
(b) _____
(c) _____