




UNDERSTANDING QUADRILATERALS

TIME [160 minutes]

OVERVIEW

Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs."

Students will use the Google Earth Voyager Stories to see how a particular shape affects in minimizing threats to the environment by replacing non –renewable energy by renewable energy (solar power).

SUBJECT/TOPIC: Mathematics / Quadrilaterals	GRADE LEVEL Grade VIII
<p>Learning Objectives</p>  <ol style="list-style-type: none"> 1. Students will list the properties of a polygon in order to classify the given figures as a polygon and analyse the properties of different types of polygons in order to classify them as regular or irregular, concave or convex. 2. Student will recall the angle sum property of triangle in order to extend it for quadrilateral and extend it for an n-sided polygon.  3. Student will apply angle sum property of a quadrilateral & exterior angle property of a polygon in order to find the measure of the unknown angle in a given figure. 4. Discuss the properties of a parallelogram in order to describe the relation between its opposite sides, angles and diagonals. 5. Discuss the properties of a rhombus in order to classify it as special case of kite and parallelogram. 6. Discuss the properties of a square in order to show it as special case of parallelogram, rhombus and rectangle 7. Discuss the properties of a rectangle in order to show that it is a special case of parallelogram and identify how this shape helps in reducing our dependence on non –renewable resources so as to have sustainable development and encourage others to support it. 	<p> Inquiry</p> <p>How do you think a particular shape will lead to cost cutting in electricity in school and home ?</p>



Materials Needed

- Warm up problems for PK testing.
- Text Book- NCERT text book for Mathematics Class VIII
- Access to [Google Earth](#)
- Student internet access.
- Geo gebra App.



Lesson Summary

- **Engage:**
The teacher will begin by drawing a set of examples and non-examples of polygons on the blackboard. A sample for the same has been given below.
The teacher will tell that the figures in the first set are polygons whereas the figures in set 2 are not polygons.
- **Explore:** The students will be given time to observe and analyse two sets and note down any similarities within the polygons set and any differences between the two sets and come up with their own definition of a polygon.
They will be taken on a virtual tour through google earth story .
- **Explain:**
Use angle sum property of triangle and extend it to find the interior angles of n – sided polygon. How this relation can be extended to a variety of parallelograms.
- **Revise:** Discuss findings in small groups.
- **Apply:** Identify the best strategy for reducing the environmental impact of non renewable energy and replace it with renewable resources in the school and at home.

Sustainable Development Goals

Access to affordable and clean energy

In India demand for electricity is more than supply.

As the population continues to grow, so will the demand for cheap energy, and an economy reliant on fossil fuels is creating drastic changes to our climate.

Investing in solar, improving energy productivity, and ensuring energy for all is vital if we are to achieve SDG 7 by 2030.

Expanding infrastructure and upgrading technology to provide clean and more efficient energy in all countries will encourage growth and help the environment.

Culminating Task/Assessment

Students will be asked to create their own voyager stories using wind Power.



Textbook Chapter

The chapter of ‘Understanding Quadrilaterals’ is covered here.

In this the main focus is on quadrilateral and its types along with their properties.

Google Earth Link :

<https://earth.google.com/earth/rpc/cc/drive?state=%7B%22ids%22%3A%5B%221wwozC9jA-MlqbP3TwTQwUXZuqL-v6e3I%22%5D%2C%22action%22%3A%22open%22%2C%22userId%22%3A%22110643560703468812184%22%7D&usp=sharing>