

Google Earth Education

LESSON TITLE: Perimeter and Area

TIME: 40 minutes

OVERVIEW [One sentence describing how teachers will use <u>Google Earth</u> to add engaging, real world connections to an inquiry based lesson.]

Google tool "My Maps" will be used to demonstrate the relationship between spatial understanding and perimeter, area of a space. Through this spatial experience, the students will collaboratively deduce and understand the meaning of area and perimeter in a context. This understanding will help them to differentiate between the meaning of area and perimeter of the same figure and in relation to other figures. This will further be applied in comprehending daily life and textbook related problems.

SUBJECT/TOPIC: Mathematics, Perimeter and Area	AGE LEVEL: 10 -11 years
 Learning Objectives [Content specific learning objectives addressed in this lesson plan.] Students will be able to: observe varied schools through "My Maps". find the area and perimeter of the schools by using features of "My Maps". deduce and understand the relationship between area and the space occupied. deduce and understand the relationship between perimeter and the length of boundary of a given space. observe, compare and analyze the spatial understanding (area, perimeter) of different figures. appreciate the usefulness, power, and beauty of mathematics. 	 Inquiry [The essential question that will guide the lesson.] The lesson will cater to the inquisitiveness of children behind the concept of area and perimeter. 1. What does area in a figure mean spatially? 2. What does perimeter in a figure mean spatially? 3. How is the formula of area and perimeter related to the actual space occupied or outlined? 4. How is the formula of area and perimeter deduced in relation to figures? 5. How to compare area and perimeter in relation to different figures? 6. How to apply the formulas of area and perimeter in relation to a particular context?
 Materials Needed [List of all the materials and resources needed for the lesson.] Google Earth Tool: "My Maps" <u>https://www.google.com/maps/d/edit?mid=1vwS</u> <u>rSodSl671waHLvDRXKXiRP1JQCj9e&usp=sha</u> <u>ring</u> 	 Lesson Summary [Brief description of each part of the lesson.] Engage: The students will engage in describing their understanding about area and perimeter through examples around them. Explore: The students will explore and understand the length-breadth measurement, area and perimeter occupied and outlined by different school buildings through "My Maps". Explain: The teacher will discuss and collaboratively the students will be motivated to analyze their observations/findings of area/perimeter in relation to space. Comparison and analysis of these spatial attributes of different figures will help them to understand the meaning of perimeter and area and apply their formulas, contextually.

	 Revise: The pre-concepts related to area and perimeter will be revised and students will further develop the meaning of concepts by spatial exploration and observation. Apply: The students will further apply this knowledge gained in solving textbook and daily life related problems.
Sustainable Development Goals [One or more Sustainable Development Goals addressed in this lesson.] The children will work upon their foundational knowledge and will integrate it with their exploration of the maps. This critical and creative awareness will empower them to realize and understand that the concept is embedded in varied daily life problems or activities. This practical understanding will help them to solve complex problems based on the proper and effective usage of the space and resources around. Thus, they will move towards the accomplishment of education for sustainable development.	Culminating Task/Assessment [One sentence describing how student mastery of learning objectives will be assessed.] Each group will find out a problem from their own experiences that can be easily resolved by applying understanding of area and perimeter and will make a presentation on it.

Textbook Chapter [How is this lesson plan related to the student's textbook? Which chapter and which lesson is covered here?] NCERT Math Textbook, Class VI: Ch-10 Mensuration

Engage (5 minutes)

- 1. The students will engage in describing their understanding about area and perimeter through examples around them.
- 2. This will activate their prior knowledge and bring upon their inquisitiveness which will further help them to build upon the concepts, skills, and processes.

Explore (15 minutes)

- 1. Teachers introduce the concept of area and perimeter through exploration of different schools, using "My Maps" tool.
- 2. The students will explore and understand the length-breadth measurement, area and perimeter occupied and outlined respectively by different school buildings through "My Maps".
- 3. Students record their observations.
- 4. The students explore, deduce, and identify the meaning of area and perimeter through Google Earth tool "My Maps".

Explain (10 minutes)

- 1. Teachers organize students into small groups or partners.
- 2. Students share their observations and their understanding with a small group or a partner.

- 3. Teachers facilitate whole group discussion in which students will be motivated to analyze their observations/ findings in the light of area / perimeter and the space. Comparison and analysis of these spatial attributes of different figures will help them to understand the meaning of perimeter and area and reinvent their formulas, contextually.
- Students analyze their conceptions and deduce conclusions regarding area and perimeter. 4.

Revise (10 minutes)

- Students build upon their preconceptions, based on information gained in discussion or their findings related to area and perimeter. 1. 2.
- The meaning of concepts revised by spatial exploration and observation.

Credits

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