

LESSON TITLE: Mapping Space Around Us


TIME: 40 minutes

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

Google Earth tool “My Maps” will be used to enable the students to relate to the spatial understanding, perspective and orientation to view a particular space in relation to places around, and understanding the distances on map in proportion to actual distances. Through this contextual experience, the students will collaboratively deduce and understand the meaning of mapping, reading and comprehending maps. This will further be applied in comprehending daily life and textbook related problems.

SUBJECT/TOPIC: Mathematics, Mapping Space Around Us

AGE LEVEL: 13-14 years

 **Learning Objectives** [Content specific learning objectives addressed in this lesson plan.]

Students will be able to:


- develop a perspective of mapping a particular route or space through “My Maps”.
- understand the relationship between actual distances and proportionate distances as they are depicted on map.
- depict the location of a particular object/place in relation to other objects/places.
- to understand the change in directions and orientations as one moves through the route.
- 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 mapping space.

1. How to make a map of a route?
2. What is the importance of marking/plotting important landmarks on a map?
3. How are the distances between places represented on a map?
4. How is the location of the places and direction of the route depicted in relation to other objects?



 **Materials Needed** [List of all the materials and resources needed for the lesson.]


- Google Earth Tool “My Maps”
<https://www.google.com/maps/d/edit?mid=1aXCevUFRALameWWRD8swncwZAXmdqkj&usp=sharing>



Lesson Summary [Brief description of each part of the lesson.]

- Engage: The students will engage in describing their understanding about mapping spaces around them.
- Explore: The students will explore and understand the location, orientation, distances, directions of places in relation to other places on a route through “My Maps”.
- Explain: The teacher will discuss and collaboratively the students will be motivated to analyze their observations/ findings in relation to mapping spaces, reading and comprehending maps.
- Revise: The pre-concepts related to mapping will be revised and students will further develop the meaning of

	<p>concepts by spatial exploration, observation focusing on important aspects of mapping.</p> <ul style="list-style-type: none"> • Apply: The students will further apply this knowledge gained in creating their own maps, understanding their peer's maps and in solving textbook and daily life related problems.
 <p>Sustainable Development Goals [One or more Sustainable Development Goals addressed in this lesson.]</p> <p>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 understand the abstractness behind forming route maps as a paper pencil task. This practical understanding will give them an experience of visualizing the location, orientation, directions, distances easily by virtually moving along with the maps. This knowledge will help them in exploring and visiting places in the real world. Understanding mapping, reading, and comprehending maps in the long run may help in developing eco-friendly surroundings and better use of resources of a particular area. Thus, they will move towards the accomplishment of education for sustainable development.</p>	 <p>Culminating Task/Assessment [One sentence describing how student mastery of learning objectives will be assessed.]</p> <p>Each group will find out a problem from their own experiences/surroundings that can be easily resolved by applying understanding of mapping to the proper utilization of resources.</p>

 <p>Textbook Chapter [How is this lesson plan related to the student's textbook? Which chapter and which lesson is covered here?]</p> <p>NCERT Math Textbook, Class VIII: Ch 10 – Visualising Solid Shapes (Sub-topic: Mapping Space Around Us)</p>
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Engage (5 minutes)
<ol style="list-style-type: none"> 1. The students will engage in describing their understanding about mapping spaces 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)
<ol style="list-style-type: none"> 1. Teachers introduce the concept of mapping through google earth tool “My Maps” by tracing the routes. 2. The students explore and understand the location, orientation, distances, directions of places in relation to other places on a route. 3. Students record their observations through “My Maps”. 4. The students explore, deduce, and identify the meaning of mapping spaces around through “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. The teachers discuss and collaboratively the students will be motivated to analyze their observations/findings in relation to mapping spaces, reading, and comprehending maps.
4. Students analyze their conceptions and come out with conclusions regarding mapping spaces.

Revise (10 minutes)

1. Students build upon their preconceptions, based on information gained in discussion or their findings related to mapping.
2. Students further develop the meaning of concepts by spatial exploration, observation focusing on important aspects of mapping.

Credits

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