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GSI: Geo Scene Investigation! Pre-visit, Support Materials: Topographic and Geologic Maps (Grade 7)

Discover Mojave: Forever Earth

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GRADE 7

GSI

Geo Scene Investigation!

PRE-VISIT • SUPPORT MATERIALS

Topographic and Geologic Maps

**Student Worksheet:
READING TOPOGRAPHIC MAPS**

Take a look at the topographic map on page R8 in your text book, and answer the following questions:

1. What city and state is represented on this topographic map?
2. What does each of the following colors on the map represent? How do you know?
(fill in the table)

<i>COLOR</i>	<i>REPRESENTS</i>	<i>HOW DO YOU KNOW? (EVIDENCE)</i>
blue		
green		
black		

3. The thin brown/red lines are called “contour lines” and they represent the elevations of the land. Trace a few of the lines with your finger and notice the numbers that are found on some of the lines. What do these numbers represent?
4. Sometimes the contour lines are very close together (see bottom right of the map) and sometimes these lines are farther apart (see upper half of map). What is the significance of how close these lines are?
5. How can you tell the real-life distance between two places on the map? Explain.
6. Name one feature on the map that is at the highest elevation you can locate.

**Teacher Reference:
KEY TO READING TOPOGRAPHIC MAPS**

Take a look at the topographic map on page R8 in your text book, and answer the following questions:

1. What city and state is represented on this topographic map? *Etna, New York*
2. What does each of the following colors on the map represent, and how do you know? (fill in the table)

<i>COLOR</i>	<i>REPRESENTS</i>	<i>HOW DO YOU KNOW? (EVIDENCE)</i>
blue	<i>water</i>	<i>The creek is labeled; it looks like a waterway that is found on other maps.</i>
green	<i>trees or plants</i>	<i>Green is generally used on maps to show plants or vegetation.</i>
black	<i>roads, other human-made structures</i>	<i>Roads and streets are labeled; black dots are along sides of the roads, which means they are probably buildings or something put there by humans</i>

3. The thin brown/red lines are called “contour lines” and they represent the altitudes of the land. Trace a few of the lines with your finger and notice the numbers that are found on some of the lines. What do these numbers represent?

elevation

4. Sometimes the contour lines are very close together (see bottom right of the map) and sometimes these lines are farther apart (see upper half of map). What is the significance of how close these lines are?

Closely spaced lines represent areas with more drastic changes in elevation, such as steep hillsides and cliffs. More widely spaced lines represent areas with gradual changes in elevation such as plains or wide valley floors.

5. How can you tell the real-life distance between two places on the map? Explain.

The legend at the bottom of the map tells you the scale. You can use that scale to measure distances.

6. Name one feature on the map that is at the highest elevation you can locate.

The highest elevation is 1082. Sheldon road is near that elevation for a short distance. Also, Wood Road crosses that elevation.

Student Worksheet:
REGIONAL GEOLOGIC MAPS

Your teacher has provided you with a geologic map of a local area. Work together to answer the following questions:

1. Identify locations of the following types of rocks on your map. Provide the latitude and longitude coordinates of at least one site where each are found:

<i>TYPE OF ROCK</i>	<i>MAP LOCATION (Latitude and Longitude)</i>
Sedimentary Rock	
Igneous Rock	
Metamorphic Rock	

2. Use the map and the geologic key on the map. Write a paragraph that discusses the relationship between location and types of rocks found. For example, are rocks found at higher elevations generally of one type while rocks found at lower elevations are of a different type? Also, how are the ages of the rocks related to where they are located?

Student Worksheet:
WHERE WE WOULD LIKE TO EXPLORE

LOCATION OUR GROUP WOULD LIKE TO EXPLORE

(Latitude and longitude coordinates, or map grid coordinates):

DESCRIPTION OF THE LOCATION

Include elevations (is it a mountain, a hill, a valley, or what?), type of rocks found in the area, and other key features of the location.

Why would you like to explore this location? Be specific, and include the reasons from all group members.

Do you think you will be able to identify this location when you travel to Lake Mead for the field trip? Explain.