



terrain:

an area of land with a particular geology (rocky terrain, desert terrain)

Mars Rover Model Celebration – Lesson Plan

Introduction:

One of the new vocabulary words for this unit is “terrain”. Terrain means “an area of land with a particular geology.” Remember, last week I defined geology as the study of the rocks and soil that make up the Earth and how they change over time. Examples of different terrains would include rocky terrains, desert terrains, wet terrains and arctic terrains.

Let’s look at some pictures that will help us understand the meaning of “terrain”. The first picture shows a dry Martian terrain with gullies that may have once had water. This terrain is in the Gale Crater where the Mars rover Curiosity landed. The second picture shows a wet terrain on Earth. You can see gullies similar to those in the first picture and how the water of the river carves out the terrain.

(If you have students who speak Spanish, say the following) If you speak Spanish, you might have noticed that “terrain” looks very similar to the word “tierra”, which means land or Earth. Terrain and tierra are cognates. Cognates are words in two languages that look similar and share similar meanings. You can often use what you already know in Spanish to figure out the meanings of new words in English. This is because Spanish and English share many words that come from the ancient language of Latin. The original Latin word is “Terra” and just like tierra and terrain, it means earth.

Example:

Here is another example of how to use the word terrain. Roads are built to make it easier for cars and trucks to cross the terrain. Just think about how much more difficult it would be to travel from place to place if you had to travel directly across a desert terrain or a rocky, hilly terrain without a road.

Reflection:

I am going to show you some pictures. I want you to identify the type of terrain. For example, if I showed you a picture of the moon, you should say “LUNAR TERRAIN” or “MOON TERRAIN”.
(Teachers: Suggested answers are below; accept other reasonable responses.)

- Picture 1: Swamp Terrain
- Picture 2: Arctic Terrain
- Picture 3: Desert Terrain
- Picture 4: Wooded Terrain

Make it personal:

How will the terrain of your landing site impact your Mars rover mission? What features might you have to include in the design of your rover to navigate the terrain near your landing site?
(Teacher: If your students need more guidance, tell them the following: Think about Curiosity. The six independent wheels on Curiosity allow it to navigate the terrain in Gale Crater.) Discuss this with your neighbor. Then I will ask some of you to share your ideas. Be sure to use the word terrain when you share your ideas.