

The Hottest, Driest National Park

Short Performance Assessment



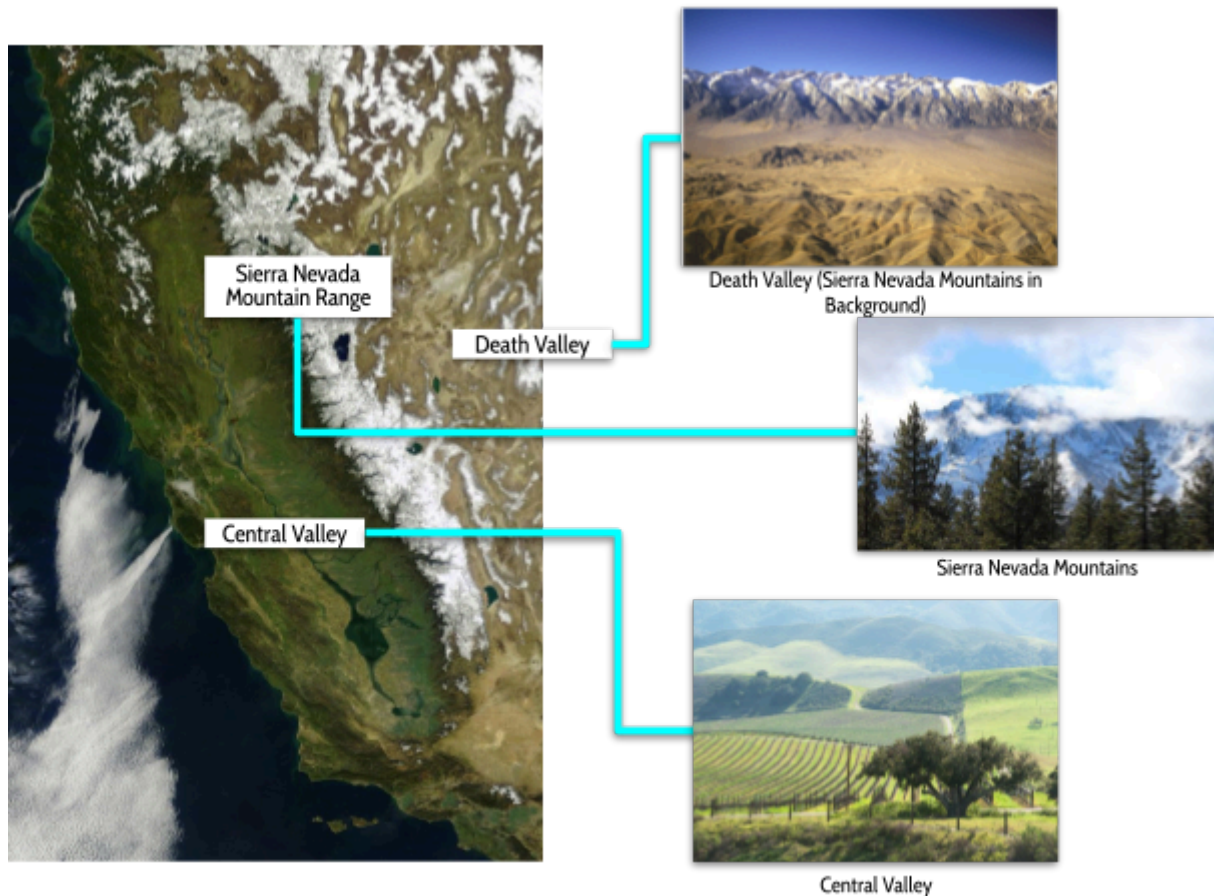
Death Valley in California is the hottest, driest national park. It holds the record for hottest temperature recorded in the world - at 134 degrees! And yet, just on the other side of the mountain, there is tons of rain and snow! Scientists refer to these deserts that are right on the other side of a mountain as a *rain shadow*.

In this task, you will use your knowledge of Earth systems to explain why Death Valley is so hot and dry compared to the cold, wet Sierras right next door to the west.

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Part 1: Analyze Satellite and Photo Evidence to Identify Earth's Systems

For Part 1, you will be using the following images:



Look at the satellite image map on Page 1 on the left, and the other ground-level photos of each of the regions.

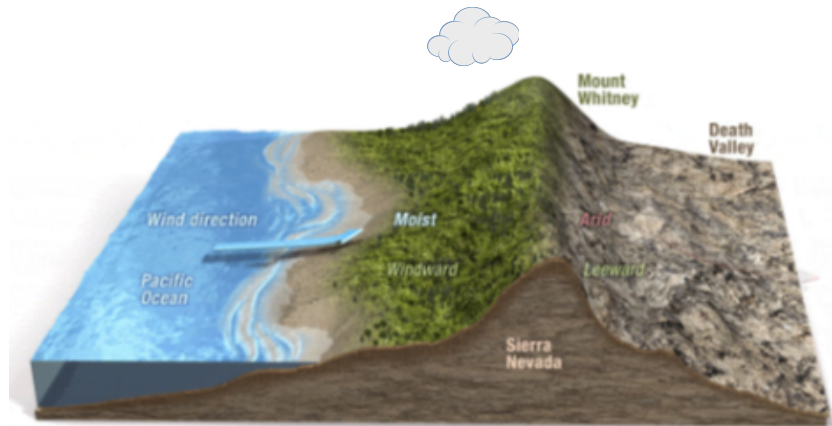


1. What Earth systems can you identify in the images of these regions? Use evidence from the photos to explain how you identified each system.

	Earth System	Evidence from the Photos
1		
2		
3		

Part 2: Use a Model to Describe Interactions Between Earth's Systems

Now let's look at a model to see the region from a different angle. Observe the model below:



2. Describe two interactions between Earth systems that you see in the model. In your descriptions, include a) the two systems and how they interact, and b) what happens when they interact.

	a) Name the two systems and describe how they interact	b) Explain the effect of the interaction
1		
2		

Part 2: Develop a Model to Explain Why Death Valley is So Hot and Dry

3. Why is Death Valley so hot and dry compared to the cold, wet Sierras right next door to the west? Add to the image below to develop a model that explains why. Make sure to include:
- ☐ **Labels** to describe each region (name of the region, vegetation, hot/cold, wet/dry, etc.).
 - ☐ **Arrows** to show the movement of the air through the system.
 - ☐ **Captions** to explain how water moves through the system.



- ☐ In the box below, explain how the interactions you show in your model lead to a hot and dry Death Valley compared to the cold and wet area to the west.