


I can explain elevations effects on temperature & precipitation

I can contrast the windward & leeward side of a mountain

I can describe vegetation's effects on temperature


I can explain how clouds effect temperature during the day & night



The Factors that Influence Climate are:



- Latitude
- Planetary and pressure belts
- Oceans and other large bodies of water
- Ocean currents
- Coverage of Clouds
- Vegetation

Don't Write!





Elevation

- As elevation increases, the air becomes less dense and expands.
- Less-dense air cannot hold as much heat
- So as elevation increases, the temperature decreases.

Elevation & Precipitation

- As elevation increases the amount of water vapor the air can hold decreases
- The air reaches its dew point
 - Condensation forms clouds
 - Precipitation starts to fall





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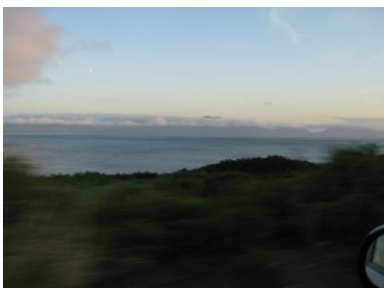
Mountains

There are two sides to a mountain range:

- Windward**
 - The side that faces oncoming winds
 - Rain or snow fall on this side



Island of Maui. Located between 19°N & 20°N

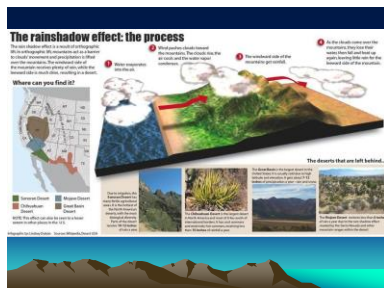



The rainshadow effect: the process

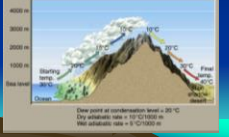
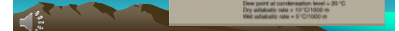
- As the windward side of the mountain rises, the air is forced upward. As it rises, the air expands and cools.
- The air reaches its dew point, and condensation occurs, forming clouds and precipitation.
- On the leeward side, the air descends and is compressed. As it descends, the air warms and dries.
- The dry air is unable to form clouds, resulting in a rain shadow.

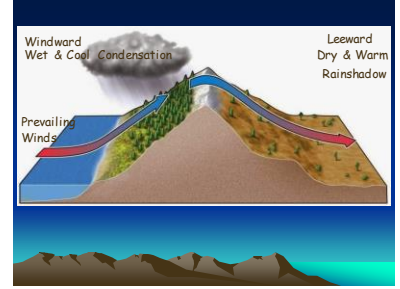
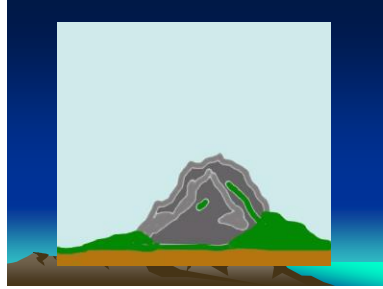
Where can you find it?

The beauty that you left behind.



- Leeward**
 - The downside of the mountain
 - Dry air, sometimes called the rain shadow
 - Often times you will find a desert located here



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Vegetation

- When forests are cut down, **deforestation**, more runoff occurs
- Without the trees to **absorb** the solar energy from the sun the energy **heats** the **land**, which than heats the **atmosphere**

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Cloud Cover

- The **less clouds** the **more heat** reaches the Earth from the sun during the day & more heat is released at night

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