Module: Physical Geography
Topic Content: Other Climate and Vegetation Regions

Other Climate and Vegetation Regions

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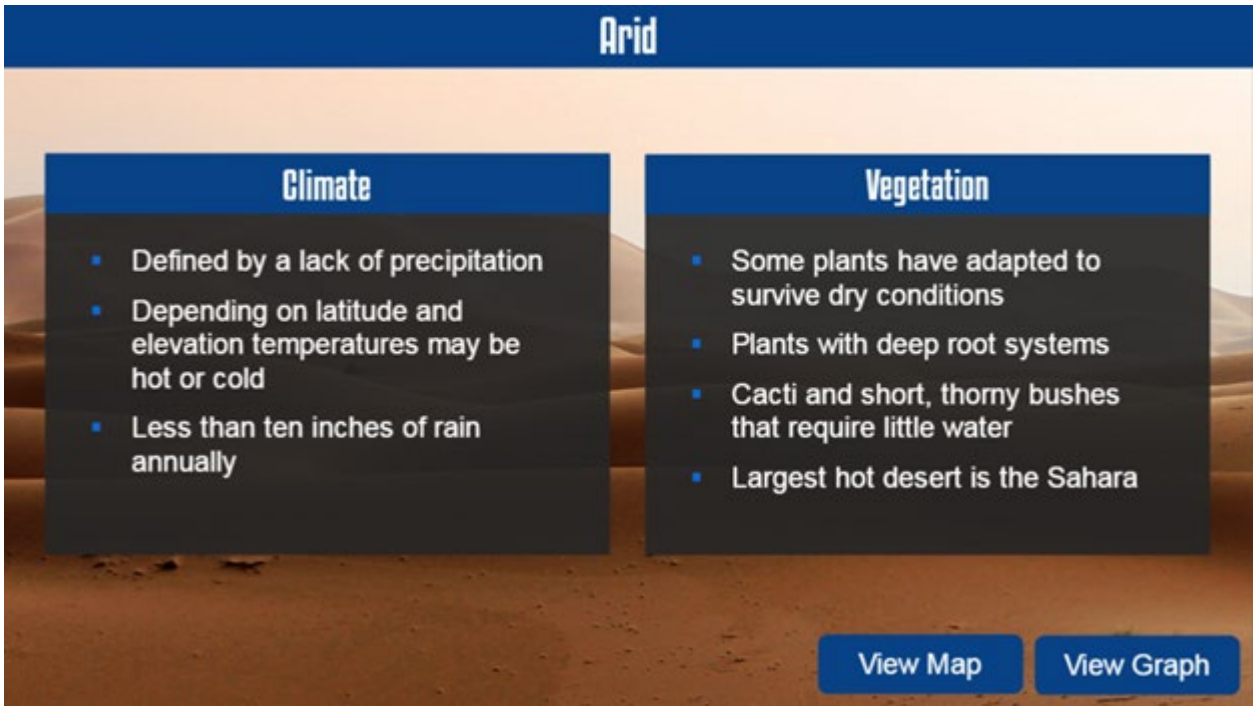
There are a few climate regions that cannot be categorized by latitude. These regions are influenced by other physical factors, and can be found in many different latitudinal zones.

Arid

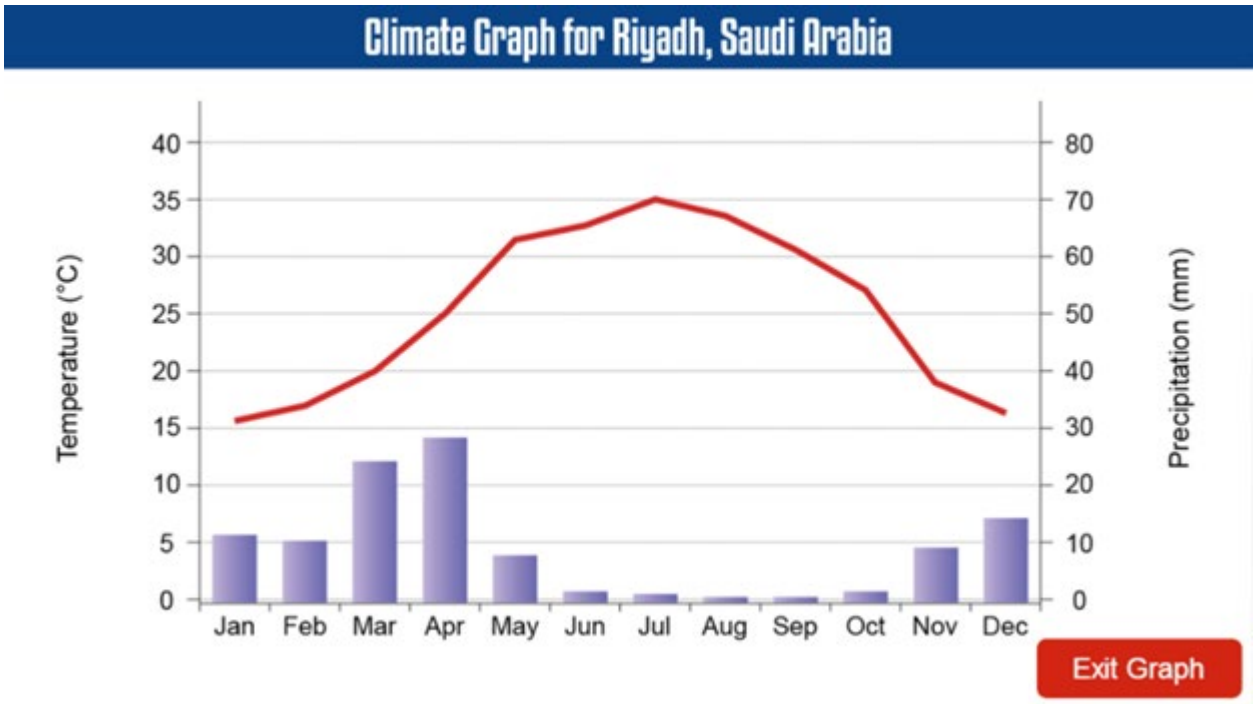


Arid climate regions, or deserts, can be found at various latitudes; however, the largest deserts are found at 30° North and South latitude. This is due to global air-circulation patterns. At the equator, warm, moist air, rises into the atmosphere, where it cools. This causes the moisture to fall as rain, leaving cold, dry air. This cold, dry air descends around 30° North and South latitude, creating an arid climate. Other factors that may contribute to an arid climate are the rain shadow effect and the distance from the oceans.

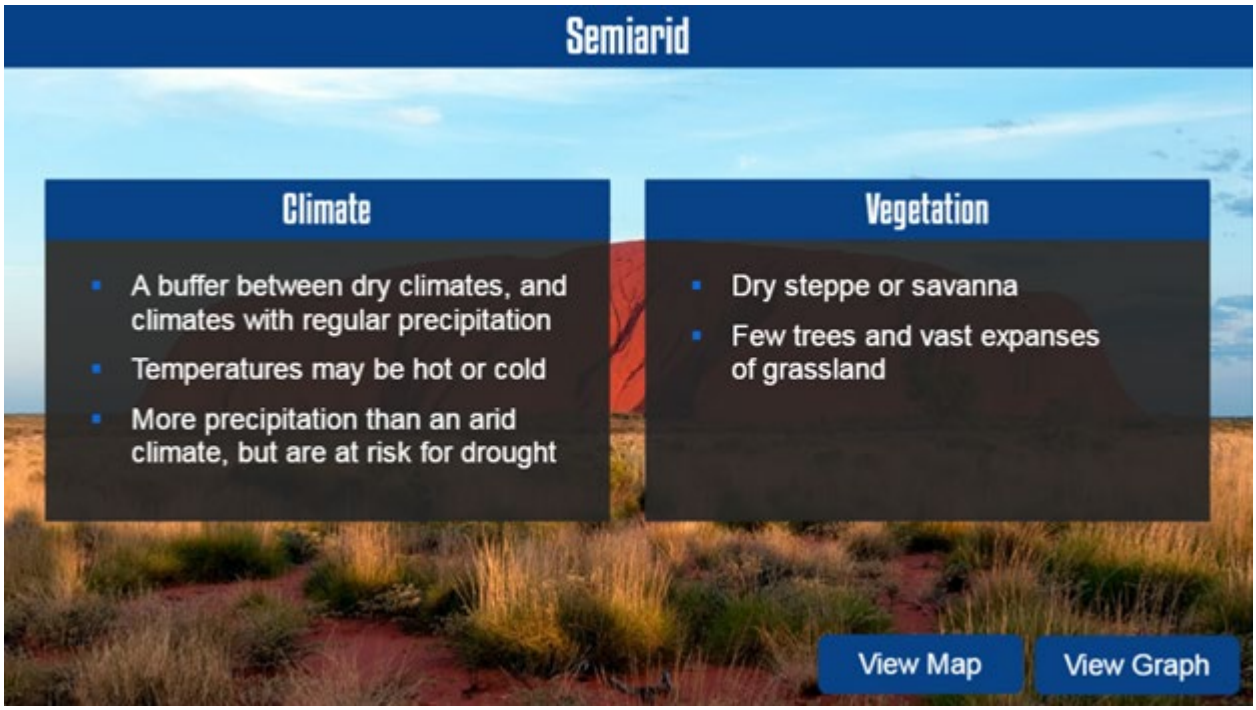
It is important to note that a desert is defined by its lack of precipitation, not its temperature. Typically, when people think of a desert, they imagine a place that is hot, dry, and sandy. Since arid climates can be found at various latitudes and elevations, some deserts are actually quite cold. For instance, Antarctica is considered a desert.

Despite the fact that arid climate regions receive less than ten inches of rain annually, some plants have adapted to survive in the harsh, dry conditions. Some plants thrive due to root systems that grow up to eighty feet underground. There are also different species of cacti and short, thorny bushes that require little water to survive. The largest hot desert in the world is the Sahara, which is located in northern Africa.

Arid Climate Map and Graph



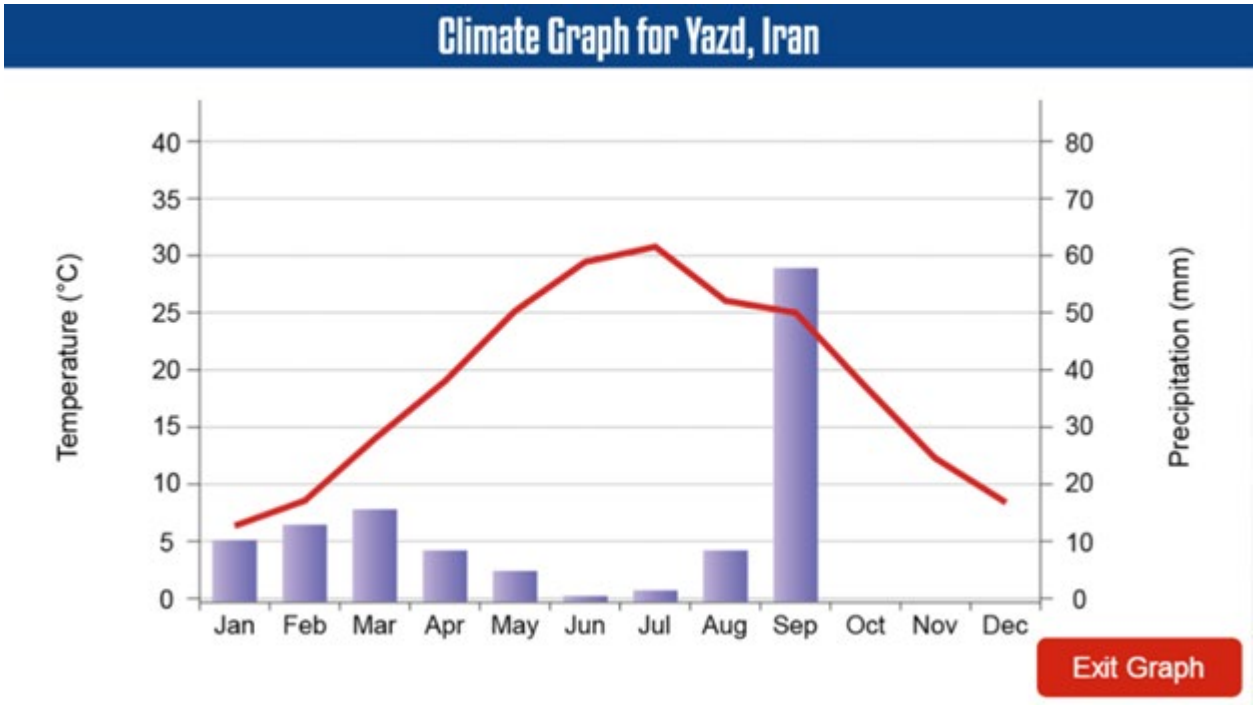
Semiarid



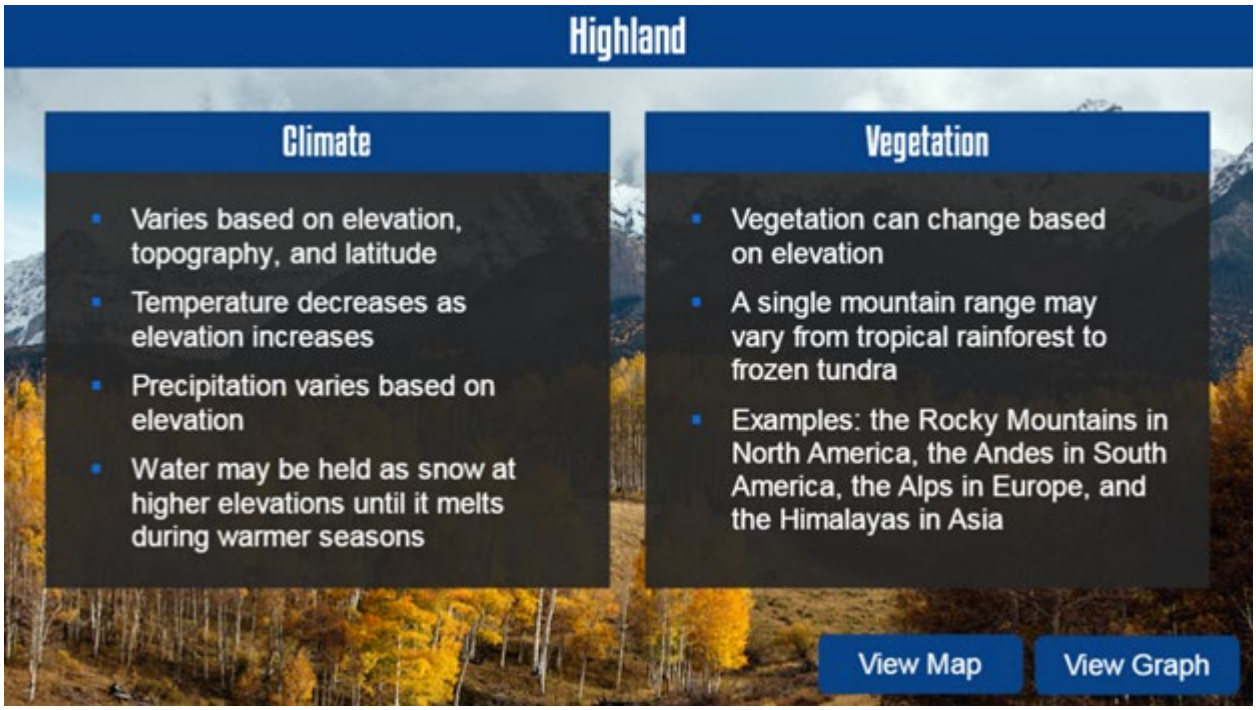
Semiarid climates are found on the border of arid climates. These climates serve as a buffer between extremely dry desert climates, and climates that receive regular precipitation. Like arid climates, semiarid climates may be hot or cold, depending on the latitude and elevation. These regions receive more precipitation than an arid climate, but are at a great risk for drought.

The vegetation found in this region is generally dry steppe or savanna, with few trees and vast expanses of grassland. Many animals graze in the grasslands, but migrate to wetter climates when conditions become too dry.

Semiarid Climate Map and Graph



Highland



Highland climates are found in mountainous regions. These climates can vary somewhat, because of differences in elevation, topography, latitude, and other factors between mountain ranges. Generally, highland climates are significantly cooler than the adjacent areas. This is because temperatures tend to decrease as elevation increases. Precipitation in a highland climate also varies based on elevation. For example, the climate at the base of a mountain may be dry, while the top of the mountain is covered in snow. Many highland regions trap large amounts of water in the form of snow, which is held at the higher elevations until warmer seasons. When the temperature rises, the snow melts, providing water to the surrounding regions.

Just as the climate can change drastically as you move up a mountain, the vegetation can also be quite different depending on the elevation. In fact, vegetation may change from tropical rainforest to frozen tundra, all in a single mountain range. A few prominent examples of highland climate regions are the Rocky Mountains in North America, the Andes in South America, the Alps in Europe, and the Himalayas in Asia.

Highland Climate Map and Graph