

Climate and Climate Change ▪ *Enrich***Earth's Deserts**

Although they all have arid climates, not all deserts are the same. They are classified as trade wind, midlatitude, rain shadow, coastal, monsoon, or polar deserts.

Trade wind deserts occur near the equator. As trade winds blow toward the equator, they heat up and dry out. The result is little or no cloud cover or precipitation and more sunlight heating the ground. Most of Earth's large deserts are in areas affected by trade winds. The world's largest desert, the Sahara in North Africa, is a trade wind desert.

Midlatitude deserts occur mostly in Earth's temperate zones. These deserts are far from oceans and are sometimes called "cold" deserts, although they may have a wide temperature range. The Sonoran Desert in southwestern North America is a midlatitude desert.

Coastal deserts are usually found on the western edge of continents near the Tropics of Cancer and Capricorn. The Atacama of South America is a coastal desert. In the Atacama, measurable rainfall—one millimeter or more of rain—is rare, occurring only about every 5–20 years.

Monsoon deserts form when warm ocean water evaporates, forms clouds, and is blown over hot, dry land. The result is heavy rainfall. As the air mass moves and drops its moisture, it dries out completely. Land located farther inland receives no rain. The Rajasthan Desert of India is a monsoon desert.

Polar deserts receive less than 250 millimeters of precipitation a year. Instead of sand dunes, snow dunes are sometimes common. Antarctica is an example of a polar desert.

Answer the questions below on a separate sheet of paper.

1. Why is Antarctica classified as a desert even though it has snow and ice?

2. Where do most of Earth's large deserts occur?

3. Where are coastal deserts usually found?

4. Compare and contrast two of the desert classifications described above.
