Desert Biomes

Geography Year 6

What is it like to live in the Mojave Desert?

Death Valley, located in the Mojave Desert, was formed through complex geological processes primarily driven by tectonic activity. It lies within a rift zone created by the stretching and thinning of the Earth's crust in the Basin and Range Province. This process, known as crustal extension, caused blocks of land to drop along fault lines, forming a graben—a sunken valley bordered by uplifted mountain ranges like the Panamint Range to the west and the Black Mountains to the east. This tectonic activity, combined with volcanic eruptions and erosion, helped shape the valley's dramatic topography. Over millions of years, sediment from the surrounding mountains accumulated in the valley floor, creating vast salt flats and playa lakes, such as the famous Badwater Basin.

A desert biome is characterised by its extremely low precipitation, typically receiving less than 25 cm (10 inches) of rainfall annually. This arid environment leads to sparse vegetation, dominated by drought-resistant plants such as cacti, succulents, and hardy shrubs.

Deserts often feature sandy or rocky terrain, and the soils are typically nutrient-poor and dry. Temperature extremes are common, with scorching heat during the day and significant drops at night due to the lack of moisture and vegetation to retain heat.

Hot deserts are situated around the equator so their temperatures can be very high during the hottest months — average temps might hover between 29 and 35 degrees Celsius with midday spikes often exceeding 1 (43 degrees Celsius. Hot deserts are not only blisteringly hot, they're dry and sunny.

Many people camp or enjoy wildlife in protected nature reserves such as the Death Valley or Joshua Tree National Park; The Mojave Desert can be enjoyed recreationally. Each year tourists enjoy quad biking and rock climbing; many people use the desert for their livelihood through ranching and farming. They have cattle, other farm animals and grow crops well-suited to the desert environment; as the desert has many open spaces it is used by the military for bases, training and storage; some areas of the desert are mined for oil coal and precious metals and stone; the open flat spaces in the Mojave Desert are ideal for solar panels and wind farms which are used to generate renewable energy; the desert has many settlements ranging from small villages to Las Vegas.

Very Important Vocabulary

Biome: A big area of the world with the same type of plants, animals, and climate.
Tropic of Cancer: An imaginary line around the Earth, north of the equator, where the sun can shine directly overhead.
Tropic of Capricorn: An imaginary line around the Earth, south of the equator, where the sun can shine directly overhead.
Desert: A very dry place with little rain and few plants.
Rift zone: A place where the Earth's surface is pulling apart and breaking.
Crustal extension: When the outer layer of the Earth stretches and becomes wider.