

The physical geography of South America

By National Geographic Society, adapted by Newsela staff on 09.12.17

Word Count **1,164**

Level **1070L**



South America's extreme geographic variation contributes to the continent's large number of biomes. Then largest waterfall system in the world, Iguazu Falls is located where the countries of Brazil, Argentina and Paraguay meet. Photo by: Nico Kaiser/Flickr

South America is the fourth largest of the seven continents. It extends from the Isthmus of Panama in the northwest to the archipelago of Tierra del Fuego in the south. From Tierra del Fuego, it is possible to reach Antarctica by boat, a journey of about 600 miles.

South America can be divided into three physical regions: mountains and highlands, river basins and coastal plains. Mountains and coastal plains generally run in a north-south direction, while highlands and river basins generally run in an east-west direction.

South America's extreme geographic variation contributes to the continent's large number of biomes. A biome is a community of animals and plants that spreads over an area with a relatively uniform climate.

Within a few hundred miles, South America's coastal plains' desert biome rises to the alpine biome of the Andes mountains. One of the continent's river basins, the Amazon, is defined by dense rain forest. The continent's other river basin, the Paraná, is made up of vast grasslands.

Mountains And Highlands

South America's primary mountain system, the Andes, is also the world's longest. The range covers about 5,500 miles. Situated on the far western edge of the continent, the Andes stretch from the southern tip to the northernmost coast of South America. There are hundreds of peaks more than 15,000 feet tall, many of which are volcanic.



The highest peak in the Andes, Aconcagua, stands at 22,841 feet and straddles the Argentina-Chile border. Aconcagua is the tallest mountain in the world outside Asia.

High plateaus, or elevated areas of relatively flat ground, are also a feature of the Andes. The Altiplano of Peru and Bolivia, for example, has an elevation of about 12,300 feet. The Patagonia region of Argentina and Chile consists of lower-elevation plateaus and rugged glaciers.

Most plants in the alpine biome are small, and their leaves are stiff and strong to protect them from frost and drought. The largest herb in the world, *Puya raimondii*, is known as the Queen of the Andes. A *Puya raimondii* can live for 100 years and can grow to more than 30 feet tall. The leaves of this herb all grow from one woody stem, allowing moisture to run down the leaves to the base of the plant.

Outside the Andes, South America has two principal highland areas: the Brazilian Highlands and the Guiana Highlands. Located south of the Amazon River in Brazil, the Brazilian Highlands are made up of low mountains and plateaus that rise to an average elevation of 3,300 feet. The Guiana Highlands are located between the Amazon and Orinoco Rivers. The heavily forested plateau of the Guiana Highlands covers southern Venezuela, French Guiana, Guyana, northern Brazil and a portion of southeastern Colombia.

River Basins



South America has three important river basins, the Amazon, Orinoco and Paraná. A river basin is an area of land where water from rain or snow melt drains into a specific river.

The Amazon River basin has an area of almost 2.7 million square miles, making it the largest watershed in the world. The basin covers most of northern South America. Every second, the Amazon River empties 7,381,000 cubic feet of freshwater into the Atlantic Ocean.

The Amazon River is the life force of the equally vast Amazon rain forest, which makes up about half of the rain forest of the entire planet. This tropical biome has as many as 100 different tree species on a single acre. They include the rubber tree, silk cotton tree and Brazil nut tree. Other important plant species include palms and ferns.



The range of animal life in the Amazon rain forest is unmatched in the rest of the world. The rain forest is perfectly suited for arboreal, or tree-living, animals. More than 2 million species of insects are native to the region, including hundreds of spiders and butterflies. Monkeys are abundant, along with sloths, snakes and iguanas. Thousands of native birds include brightly colored macaws, parrots, toucans and parakeets.

The Orinoco River flows north of the Amazon. The Orinoco flows in a giant arc for more than 1,700 miles, beginning in the Guiana Highlands of northern Brazil and discharging in the Atlantic Ocean in Venezuela. The Orinoco River basin covers an area of about 366,000 square miles.

The primary biome of the Orinoco River basin is a vast savanna or grassland region known as the Llanos. This area is primarily made up of grasses. Swamp grasses, sedges and bunchgrass are found in wet, low-lying areas, while carpet grass is found in the higher and drier elevations.

The Paraná River basin covers almost 1,081,000 square miles. This area includes much of southeastern Brazil and Bolivia, Paraguay and northern Argentina. The Paraná River includes Iguazu Falls, a massive series of waterfalls that extend for 1.7 miles.



The Paraná River basin supplies water to the plains biome, or Pampas, of South America. The Pampas have rich, fertile soil and predictable rainfall patterns. They are one of the most important grazing and cropland areas on Earth.

Coastal Plains

A coastal plain is an area of low, flat land next to an ocean. South American coastal plains are found on the northeastern coast of Brazil, on the Atlantic Ocean, and on the western, Pacific coast of Peru and Chile. The coastal plains of northeastern Brazil are extremely dry. The Brazilian Highlands act as a wedge that pushes moist sea winds away from the coastal plains.

The Atacama Desert, the driest region in the world, is part of the western coastal plain. The average rainfall is less than one inch a year, and some parts of the Atacama have never had rain in recorded history.



Very few plants grow in this desert. Even bacteria, insects and fungi are scarce. Larger animal species are also rare, and include the grey fox, a type of deer called the huemul, and the viscacha, the largest member of the chinchilla family. Ocean birds, such as penguins and pelicans, are found on the desert coast. While the Atacama lacks plants and animals, it is a rich source of copper and a chief source of income for the Chilean economy.

Quiz

- 1 Read the paragraph from the introduction [paragraphs 1-4].

South America's extreme geographic variation contributes to the continent's large number of biomes. A biome is a community of animals and plants that spreads over an area with a relatively uniform climate.

Which two words would BEST replace "variation" and "uniform" in the paragraph?

- (A) change; symmetrical
 - (B) diversity; consistent
 - (C) alteration; normal
 - (D) inequality; balanced
- 2 Read the paragraph from the section "Coastal Plains."

A coastal plain is an area of low, flat land next to an ocean. South American coastal plains are found on the northeastern coast of Brazil, on the Atlantic Ocean, and on the western, Pacific coast of Peru and Chile. The coastal plains of northeastern Brazil are extremely dry. The Brazilian Highlands act as a wedge that pushes moist sea winds away from the coastal plains.

WHY does the author compare the Brazilian Highlands to a "wedge"?

- (A) to show that they are located between the coastal plains and the sea
- (B) to describe how their shape affects the climate of the coastal plains
- (C) to provide a contrast between their appearance and the coastal plains
- (D) to illustrate that they are slowly pushing the coastal plains into the sea

- 3 Read the paragraph from the section "River Basins."

The range of animal life in the Amazon rain forest is unmatched in the rest of the world. The rain forest is perfectly suited for arboreal, or tree-living, animals. More than 2 million species of insects are native to the region, including hundreds of spiders and butterflies. Monkeys are abundant, along with sloths, snakes and iguanas. Thousands of native birds include brightly colored macaws, parrots, toucans and parakeets.

WHY does the author include this paragraph in the article?

- (A) to demonstrate the effects of the Amazon rain forest on the species of animals that live there
 - (B) to describe the contrasts between the plant and animal species found in the Amazon rain forest
 - (C) to elaborate on the idea that the Amazon River is an essential source of life for an unusually vast biome
 - (D) to emphasize the important relationships between the animals living in the Amazon River biome
- 4 Read the two sentences from the sections "River Basins" and "Coastal Plains."

The Pampas have rich, fertile soil and predictable rainfall patterns.

The Atacama Desert, the driest region in the world, is part of the western coastal plain.

The two sentences develop an understanding of South American geography by _____.

- (A) explaining solutions for lack of rainfall in different regions
- (B) describing the problems faced by different climates
- (C) illustrating the effects of rainfall on different regions
- (D) providing a contrast between two different climates