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**# Number Paragraphs—**Number each paragraph in the text. Write numbers next to the first word in each paragraph and circle them.

**Circle Key Terms/Data—**Circle key terms related to the main idea and all vocabulary words.

**Underline Information—**Underline the main idea of each paragraph. Remember to only underline the main idea and not details.

**Factors Affecting Climate**

**Main Idea**: Most of Africa South of the Sahara has warm or hot climates. Rainfall, however, varies greatly throughout the region.

\_\_\_\_\_\_\_Africa south of the Sahara lies mainly in the Tropics. As a result, most of the region receives the direct rays of the sun year-round, producing generally high temperatures. At higher elevations in this latitude, thye climate is very different, however. For example, places with high elevation, such as mountains, often are cooler than lowland plains at the same latitude.

\_\_\_\_\_\_\_Figure 2 on page 539 shows that Africa south of the Sahara has wet, dry, and temperate climate zones. Rainfall varies greatly throughout the region. The rain forests of Central and West Africa receive more than 80 inches of rain **annually.** By contrast, the Namib Desert in Southern Africa often gets less than 10 inches of rain per year. Some parts of Africa south of the Sahara have long **droughts**, or periods of time when there is no rain at all. Droughts can cause crop failures and widespread starvation.

**Tropical and Dry Climates**

**Main Idea:** Most of Africa south of the Sahara is covered by tropical or dry climate zones.

\_\_\_\_\_\_\_ Suppose you are standing at the Equator in Africa. Traveling either north or south, you would pass through the same pattern of climate zones: from tropical wet to tropical dry, then to steppe, and then desert.

**Tropical Wet Climate**

\_\_\_\_\_\_\_A tropical wet climate is found along the Equator in Central Africa and West Africa. Hot temperatures and plentiful rainfall in this zone support the growth of rain forests. **Rain forests** are dense stands of trees and other plants that receive high amounts of precipitation each year.

\_\_\_\_\_\_\_In a rain forest, vegetation grows at several different levels. The forest floor has mosses, ferns, and shrubs. Above these, palms and other trees grow about 60 feet high. The tops of the highest trees form an umbrella-like covering called the **canopy**. The forest canopy is alive with tropical flowers, fruits, monkeys, parrots, snakes, and insects.

\_\_\_\_\_\_\_Rain forests support an **enormous** variety of plant and animal life. Many tropical African countries rely on the sale of products from the rain forests, such as wood, for income. In addition, farmers clear the land for new farmland. They also depend on cut wood for fuel. All of these practices have led to **deforestation**, or the widespread clearing of forestland. The soil on the cleared lands, however, quickly becomes less fertile. Farmers are then forced to clear even more forestland to grow their crops.

\_\_\_\_\_\_\_To preserve rain forests, and boost their economies, some African countries are encouraging ecotourism. **Ecotourism** is touring a place without causing harm to the environment. Ecotourists thus help increase a region’s revenue while preserving the environment.

**Tropical Dry Climate**

\_\_\_\_\_\_\_Farther from the Equator, rain forests give way to great stretches of tropical **savanna**, or grasslands with scattered woods. In this climate zone, temperatures remain hot all year, but rainfall amounts are much lower than in rain forest areas. Rains are heavy in the summer but light in the winter.

\_\_\_\_\_\_\_Savanna grasslands are home to some of Africa’s most recognizable animals, including elephants, lions, rhinoceroses, and giraffes. Because hunting and human settlement threaten savanna plants and animals, several countries have set aside land as national parks to protect them.

**Steppe**

\_\_\_\_\_\_\_Continuing farther from the Equator, rainfall becomes scarcer, and savannas merge into drier steppes. In these areas, only about 8 to 15 inches of rain falls over the course of a few months each year. Vegetation includes different varieties of trees, thick shrubs, and grasses.

\_\_\_\_\_\_\_Steppe areas are threatened by **desertification**, the process that turns fertile land into land that is too dry to support life. Climate changes that bring long periods of extreme dryness and water shortages can lead to desertification. Clearing areas of trees and other vegetation or herding large amounts of livestock can also damage and dry out the land.

**Deserts**

\_\_\_\_\_\_\_In very dry areas of Africa, deserts dominate the landscape. The largest are the Sahara in the north and the Kalahari and Namib in the south.

\_\_\_\_\_\_\_The Sahara has high temperatures and little rain. Instead of sandy dunes, it contains barren rock or stony plains covered by rocky gravel. Very little vegetation can live outside the oases and the highlands.

\_\_\_\_\_\_\_By contrast, the Kalahari in Southern Africa is covered by vast stretches of sand. It has high temperatures and little rainfall. When rains do fall, they are immediately absorbed by the sand, leaving the surface dry. Certain areas of the Kalahari have trees with long roots that reach the moisture in the deep sand.

\_\_\_\_\_\_\_The Namib, along the southwestern coast, is made up of rocks and dunes. This desert is arid, but temperatures tend to be cooler than in other African deserts because of breezes from the ocean. Fog that forms along the coast reaches the desert and provides moisture to many varieties of succulents. **Succulents** are plants such as cacti with thick, fleshy leaves than can conserve moisture.

**Moderate Climate Regions**

**Main Idea:** Small areas of Africa south of the Sahara have moderate climate regions.

\_\_\_\_\_\_\_Figure 2 on page 542 shows moderate climates as being found in coastal Southern Africa and the highlands of East Africa. These areas have comfortable temperatures and enough rainfall for farming.

\_\_\_\_\_\_\_Southeastern Africa has a humid subtropical climate of hot, wet summers and mild, wet winters. The farther south you go in Africa south of the Sahara, the farther you are from the Equator. As a result, temperatures become cooler.

\_\_\_\_\_\_\_Southwestern Africa has a Mediterranean climate. Here, winters are mild and wet, but the summers are warm and dry. Because the area is south of the Equator, seasons occur opposite of those in the United States. Autumn occurs in April, a period when some rain may fall. However, most rain falls during the area’s winter months, which are June through August.

\_\_\_\_\_\_\_Highland climates are found in areas of higher elevation in East Africa. Temperatures in the highlands are cooler than in surrounding areas because of the higher altitude. Snow often falls at high elevations, and vegetation is abundant at lower elevations.

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| **Segment Title:** | **Write a 2 sentence summary of the main ideas listed in each of the segments listed below.** |

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| Factors Affecting Climate |  |
| Tropical and Dry Climates |  |
| Tropical Wet Climate |  |
| Tropical Dry Climate |  |
| Steppe |  |
| Deserts |  |
| Moderate Climate Regions |  |