

Name: _____ Date: _____ Block: _____

Chapter 18 Guided Notes Answer Key

Physical Geography of Africa: The Plateau Continent

Africa is a continent of plateaus, basins, and rift valleys; Africa features dense rain forests, vast grasslands, and the world's largest desert.

Section 1: Landforms and Resources

Section 2: Climate and Vegetation

Section 3: Human-Environment Interaction

Section 1: Landforms and Resources

- A large plateau covers most of Africa.
- Africa's natural resources made it appealing to European colonizers.

A Vast Plateau

After *Pangaea*

- Pangaea supercontinent broke up 200 million years ago
 - Africa moved very little, unlike Americas, Antarctica, Australia, and India.
 - Africa is second largest continent.

Africa's Plateau

- Huge plateau covers most of Africa, rising inland from coasts
 - Most of Africa is at least 1,000 feet above sea level
 - known as the "plateau continent"

Basins and Rivers

- Basins—huge depressions on plateau
 - Each is more than 625 miles across, up to 5,000 feet deep.
- Nile River—world's longest: 4,000 miles through Uganda, Sudan, South Sudan, and Egypt.
 - Waters are used for irrigation; 95% of Egyptians get water from the Nile.
- Egypt's population density near the Nile is 3,320 people per square mile
 - Only 177 per square mile overall.

Distinctive African Landforms

Basins and Rivers

- Waterfalls, rapids, and gorges make rivers less useful for transportation.
 - 2,900-mile Congo is largest river network.
 - 32 cataracts (waterfalls) make much of Congo impassable.
- Rivers' meandering courses also make them less useful

Rift Valleys and Lakes

- East Africa: continental shift created huge cracks in East Africa.
 - Land sank, formed long, thin rift valleys.
 - stretch 4,000 miles from Jordan to Mozambique

- Eastern part is still slowly pulling away from Africa.
- Long, deep lakes form at bottoms of rift valleys
 - Lake Tanganyika is the longest freshwater lake in world.
 - Lake Victoria is Africa's largest lake; it sits in a basin between rift valleys.

Mountains

- Africa mainly has volcanic mountains: Mount Kenya, Mount Kilimanjaro.
 - Mount Kilimanjaro is Africa's highest mountain
 - Volcanoes created Ethiopian Highlands
 - Also Tibesti Mountains (Sahara), Mount Cameroon (West Africa)
- Volcanic rock covers Great Escarpment in Southern Africa
 - Escarpment—steep slope with flat plateau on top

Africa's Wealth of Resources

A Wealth of Minerals

- Africa's minerals make it one of world's richest continents
 - Copper, phosphates, diamonds; 42% of world's cobalt.
- South Africa is largest producer of chromium, for stainless steel
 - produces 80% of world's platinum, 30% of gold.
- Mineral wealth has not created general African prosperity
 - Colonial rulers sent natural resources to Europe.
 - Nations are slow to develop infrastructure, industries.

Oil Resources

- Libya, Nigeria, Algeria among world's leading petroleum producers
 - Angola, Gabon have untapped oil reserves
- Angola is example of resources not benefiting Africans
 - Oil deposits will make it Africa's most oil-rich country
 - American companies will pay Angola to drill oil
 - Money will be spent on ongoing ethnic civil war
 - Little will be invested in schools, hospitals, and other infrastructure.

Diversity of Resources

Major Commodities

- Coffee is Africa's second most profitable commodity
 - Few Africans drink coffee, but 20% of world's supply is grown there.
- Nigeria leads in lumber exports, but logging is depleting forests.
 - Each year an area twice the size of New Jersey is cleared.
- Other commodities include sugar, palm oil, and cocoa.
- Agriculture is Africa's single most important economic activity
 - 66% of Africans earn a living farming; this accounts for 1/3 of their exports.

Section 2: Climate and Vegetation

- Africa contains dry and hot deserts, warm tropics, and permanently snowcapped mountains.
- Africa's vegetation includes thick rain forests, tall grasslands, and desert areas.

A Warm Continent

The Deserts

- Sahara is largest desert in world; name means “desert” in Arabic.
 - 3,000 miles from Atlantic to Red Sea; 1,200 miles north to south.
 - Temperatures as high as 136 degrees in summer, and freezing at night.
 - Fewer than 2 million of Africa’s 800 million people live in the Sahara.
- Only 20% is sand; rest is mountains, rocks, or gravelly plains.
 - Tibesti Mountains in northwestern Chad rise 11,000 feet

The Deserts

- Saharan travelers rely on camels that can go 17 days without water.
- 6,000 feet under Sahara are aquifers—stores of underground water.
 - When this water comes to the surface it creates an oasis.
- Other African deserts include Kalahari, and the Namib.

The Tropics

- Africa has the largest tropical area of any continent.
 - 90% of Africa lies between tropics of Cancer, and Capricorn.
 - High temperatures year around; especially in Somalian Sahara.
 - Africans say nighttime is the “winter” of the tropics.

Sunshine and Rainfall

Rainfall Patterns

- Rains all year in rain forests; most of Africa has rainy seasons.
- Tropical savanna covers half of Africa; six-month rainy season.
- Longer rainy seasons near equator; longer dry seasons near desert.
- West coast gets heavy rain; Monrovia, Liberia, has 120 inches yearly.
- Sahara, other deserts may go years without rain.

Africa’s Moderate Areas

- Mediterranean climate on northern, southern tips of Africa
 - clear blue skies, moderate summers, rain in winter

A Grassy Continent

Tropical Grassland

- Tropical grassland covers most of Africa
- Serengeti Plain—northern Tanzania grassland
 - dry climate, hard soil prevent growth of trees, crops
- Serengeti National Park has best grasslands in the world
 - some grasses grow taller than a person
 - ideal for grazing animals like wildebeests, gazelles, zebras
 - site of largest numbers of migrating land mammals

Africa's Extremes

Rain Forest

- Major tropical rain forests are on equator in the Congo Basin.
- A square acre can have hundreds of different types of trees, and birds.
 - Plants, trees, leaves block out most sunlight; air is hot, moist.
 - Plants, vegetation decay 8 times faster than in Europe
- Most animals live in canopy—uppermost branches, 150 feet off ground.
 - Birds, monkeys, flying foxes, and snakes can live in the canopy.

Rain Forest

- Farmers' slash-and-burn methods endanger rain forest.
 - Madagascar's rain forest is almost completely gone.
 - Some estimate over half of Africa's original rain forests are gone.

Varieties of Plant life

- Oak, and pine forests are in the Atlas Mountains of North Africa.
- Mangrove trees grow along the West African river banks.
 - Roots are breeding grounds for fish.
 - Roots help build dry land by holding silt.

Section 3: Human-Environment Interaction

- The Sahara's expansion is causing problems for Africa's farmers.
- The Nigerian oil industry has caused serious environmental damage in the Niger delta.

Desertification of the Sahel

The Spreading Sahara

- Sahel means "shore of the desert"
 - Narrow band of grassland runs east-west along southern Sahara edge
 - used for farming, and herding.
- Since 1960s, desert has spread into the Sahel.
 - Desertification—expansion of dry conditions into nearby moist areas
 - Both natural and long-term desertification cycles have been sped up by human activity.

Human Causes of Desertification

- Livestock- overgrazing exposes and tramples soil, increases erosion.
- Clearing land for farming increases erosion.
- Water drilling, and irrigation increase soil's salt levels.
 - Vegetation growth is stunted.
- Population levels require more crop land, more fuel (wood) to burn.

Results of Desertification

- Forests around Khartoum (Sudan), and Lake Chad are vanishing.
 - Some countries are planting trees to slow desertification.

Harming the Environment in Nigeria

A Major Oil Producer

- Oil was discovered in Nigeria in 1956 in the Niger delta.
- Nigeria is world's 6th leading oil exporter.
 - There are 2 million barrels of oil extracted each day; most shipped to U.S.
 - Oil provides up to 90% of national income.
- In 1970s, high oil prices made Nigeria one of Africa's richest nations.
 - When prices fell, Nigeria owed millions to other nations, U.S.
 - Poor planning, and corruption helped leave Nigeria poorer than ever before.

Destroying the Land and People

- There have been over 4,000 oil spills in four decades with slow or no cleanup.
 - Acid rain and soot from oil fires lead to respiratory diseases.
- Pipeline explosions kill 2,000 between 1998 and 2000
 - Bandits work with corrupt officials; drain pipeline fuel, and sell it.

A New Start

- Olusegun Obasanjo became the new Nigerian president in 1999.
 - fires corrupt officials, and begins economic reform.

Controlling the Nile

The Aswan High Dam

- Egyptians have always tried to control the Nile's flood, and droughts.
 - built first Aswan Dam in 1902; quickly obsolete.
- Aswan High Dam completed in 1970, creates 300-mile Lake Nasser.
- Dam provides regular supply of water for farmers
 - holds back Nile floodwaters for irrigation
 - Farmers now have two, or three harvests a year
 - Egypt's farmable land increased by 50%.

Problems with the Dam

- Construction meant relocating people, changing Nubian's way of life.
- Abu Simbel temples moved, but other treasures were lost at bottom of the lake.
- River no longer deposits rich silt—sediment—on farmland
- Irrigation raises water table.
 - River doesn't flush out salts that decrease soil fertility.
- Mosquitoes thrive in Lake Nasser and spread malaria, and other diseases.
- Millions of gallons of fresh water lost yearly due to lake evaporation.