Teacher Notes

**AFRICA:**

1. **CHAPTER 19: North Africa:** Western Sahara; Morocco; Algeria; Tunisia; Libya; Egypt
	1. **Vocabulary**
		1. **delta**: area formed by soil deposits that build up as river water slows down; usually located where a river meets another body of water
		2. **silt**: a fine, rich soil that is excellent for farming located along the banks of a river and in the delta
		3. **erg**: vast stretch of sand located in the Sahara desert
		4. **nomad**: people who move about from place to place in search of food
		5. **phosphate**: chemical compound often used in fertilizers
		6. **aquifer**: underground layers of rock in which water collects
	2. **Landforms**
		1. NORTH: Low, narrow, **coastal plains** along the Atlantic and Mediterranean
		2. WEST: **Atlas** Mountains (cordillera) stretching across Morocco, Algeria, and Tunisia. **Qattara Depression:** marshy lowlands in northwestern Egypt.
		3. SOUTH: low **plateau** stretches across most of North Africa
		4. EAST: **Nile River** and **Red Sea** to the east with some mountainous land in **Sinai Peninsula**.
	3. **Bodies of Water**
		1. MEDITERRANEAN SEA: made possible trade, movement of ideas, and armies for centuries.
		2. NILE RIVER: most important river in the region ~4,000 mi. long = longest river in the world. **White Nile** begins in Lake Victoria, **Blue Nile** begins in highlands of Ethiopia, and it flows north (rare).
		3. NILE RIVER DELTA: rich **silt** deposits left here from annual flooding. Ancient Egypt called “**the gift of the Nile**” because Nile established reliable food and water source in what would have been pure desert.
		4. DAM: **Aswan High Dam** controls the flooding today by holding back floodwaters and releasing small amounts throughout the year. **Pro**: Farmers can grow year-round, no more catastrophic flooding. **Con**: no more enriching silt deposits, water restrictions
		5. CANAL: Egypt controls human-made **Suez Canal** that connects Red Sea to Med Sea, and the Atlantic Ocean to Indian and Pacific Oceans.
	4. **Natural Resources**
		1. OIL + GAS: Libya has the most **oil**, Algeria has the most **natural gas**, Algeria and Egypt have more natural gas than oil.
		2. OTHER RESOURCES: Tunisia and Morocco have iron and **phosphates**. Morocco also relies on **fishing** industry.
		3. WATER: limited rainfall + high temperatures = **little fresh water**. **Nile** is only reliable source of water. **Oases** and **aquifers** supply the rest.
		Growing populations demand for water 🡪 aquifers may run out!

1. **CHAPTER 20: East Africa:** Sudan, South Sudan, Eritrea, Ethiopia, Djibouti; Somalia; Uganda, Rwanda, Burundi; Kenya; Tanzania
	1. **Vocabulary**
		1. **rift**: (v.) to separate or drift apart
		2. **desertification**: process by which agricultural land is turned into desert
		3. **hydroelectric power**: production of electricity through the use of falling water
		4. **geothermal energy**: energy that comes from underground heat sources
	2. **Landforms**
		1. **GREAT RIFT VALLEY/SYSTEM**: series of large depressions in Earth’s surface. 30-40 miles in width; begins in Jordan; has eastern and western branches. One of the hottest, driest places with earthquake and volcanic activity. Deep valleys and lakes in the south of the system.
		2. PLAINS, PLATEAUS and DESERT: Sudan has plains and plateaus, deserts in northern Sudan, Somalia, and Djibouti (mountains and desert plains)
		3. RUWENZORI MOUNTAINS in western Uganda called “**Mountains of the Moon**”
		4. HILLS: Rwanda known as “**land of a thousand hills**”
	3. **Bodies of Water**
		1. NILE BASIN: in parts of Tanzania, Burundi, Rwanda, Kenya, Uganda, Ethiopia, Sudan, and South Sudan.
		2. **SUDD**: large region of swampy wetlands in central South Sudan through which the White Nile passes. 1970s: **Jonglei Canal** project began. Suspended in 1983.
		3. KHARTOUM: city where the White and Blue Nile meet
		4. LAKES: located near Great Rift Valley/System. Largest: **Lake Victoria** (on borders of Uganda, Kenya, and Tanzania) is second largest freshwater lake in the world. **Lake Tanganyika**: south of Lake Victoria between Tanzania and Dem. Rep. of Congo, longest freshwater lake at 410 miles long, 4,710 feet deep. **Lake Malawi** forms border between Malawi, Tanzania, and Mozambique.
	4. **Natural Resources**
		1. MINERALS: **Gold** in Kenya, Uganda, and Tanzania. **Gemstones** (diamonds + sapphires) in Tanzania. **Tin** in Rwanda. **Lumber** in Ethiopia and Uganda. The world’s largest **salt** reserve (1 billion tons) found in **Lake Assal**, Djibouti.
		2. ENERGY: **Coal** in Tanzania. **Petroleum** in Uganda, South Sudan, and Kenya. **Hydroelectric power** in Kenya + Tanzania, possible in future Sudan. **Geothermal energy** development happening in Kenya and Djibouti. Energy management uneven: consumed by urban areas while rural areas are left out.
		3. LAND: **Soil** is rich and good for agriculture. **Tourism** is important.
		4. WILDLIFE: Famous **national parks** and wildlife sanctuaries in Kenya and Tanzania such as the **Serengeti National Park** that showcase local wildlife and bring thousands of tourists who are attracted to the **Great Migration**.

1. **CHAPTER 21: Central Africa**
	1. **Vocabulary**
		1. **watershed**: the land drained by a river and its system of tributaries
		2. **estuary**: a water passage in which freshwater meets salt water
		3. **slash-and-burn**: clearing plots of forestland by cutting down and burning trees and shrubs in order to make the soil temporarily more fertile
		4. **biodiversity**: a wide variety of life
	2. **Landforms**
		1. CONGO BASIN: **watershed** is the dominant landform. A rolling plain spreads across the basin with high plateaus on the sides.
		2. GREAT RIFT VALLEY/SYSTEM: **Margherita** peak is part of Ruwenzori range is third largest peak in Africa (16,763 ft) after Kilimanjaro and Mount Kenya.
		3. COASTAL **LOWLANDS** exist along Atlantic coast
		4. **ISLANDS**: São Tomé and Príncipe = a country. Bioko and Pagalu and other small islands and mainland of Mbini belong to Equatorial Guinea.
	3. **Bodies of Water**
		1. COAST: 6/7 countries have coastlines. Central African Republic is landlocked.
		2. CONGO RIVER and **tributaries** make up most of Central Africa’s waterways. Source lies in East Africa between Lake Tanganyika and Lake Malawi. 2,900 miles long to the Atlantic. Its length is second in Africa only to the Nile.
		3. CATARACTS make the Congo River **difficult to navigate** entirely despite its many tributaries and navigable waterways.
		4. IMPORTANCE: 1. water helps **agriculture** and provides fish
		2. **transportation** since there are few roads and no railway system
		3. dams generate **hydroelectric power**
	4. **Natural Resources**
		1. MINERALS: **Katanga** province in Dem. Rep. of Congo [DRC] is rich in cobalt, copper, gold, and uranium as well as diamonds, iron, and limestone. **Gabon** is rich in **manganese** (used in iron and steel production) and uranium, diamonds, gold and iron. Minerals yet to be exploited include bauxite and cobalt in **Cameroon**, uranium, gold iron ore, and manganese in **Equatorial Guinea**, and uranium, gold, and diamonds in the **Central African Republic**.
		Diamond mining is an important industry today. Forced labor and child slavery have earned CAR diamonds the nickname “**blood diamonds**”
		2. ENERGY: rapids and waterfalls along the Congo River in the DRC offer potential for **hydroelectric power**. Forest reserves of the DRC offer timber. **Damming** rivers and **deforestation** cause environmental issues, however.
		3. GAS + OIL: 1990s: large petroleum and natural gas reserves discovered off **Equatorial Guinea**’s Atlantic Coast 🡪 boosted country’s economy. Petroleum has been **Cameroon**’s leading export since 1980. Natural gas deposits remain untapped because nearly all the energy comes from hydroelectricity.
2. **CHAPTER 22: West Africa**
	1. **Vocabulary**
		1. **basin**: a lower area of land drained by a river and its tributaries.
		2. **harmattan**: a hot wind that blows through the Sahara from November to March. Dust storms carry sands for hundreds of miles 🡪 desertification.
	2. **Landforms**
		1. MOUNTAINS: **The Air/Air Massif**: group of mountains in Central Niger; **Tibesti Mountains** in NW Chad = highest elevation in W. Africa.
		2. PLATEAUS: most of the land in W. Africa; **Ennedi** and **Jos** Plateaus
		3. HIGHLANDS: **Guinea highlands** are humid and densely forested.
		Ex.) **Fouta Djallon**: deciduous forest region of the savanna
	3. **Bodies of Water**
		1. **NIGER RIVER**: longest and most important river in South Africa. Originates in Guinea highlands. Enters “inland delta” in Mali, which floods in the rainy season and becomes fertile farmland (agriculture!) in the dry season.
		2. **BENUE RIVER**: Niger River tributary that doubles the volume of the Niger.
		3. **SENEGAL RIVER**: flows NE to Atlantic. Border b/w Mauritania and Senegal.
		4. BLACK AND WHITE **VOLTA RIVERS**: flow from Burkina Faso to Ghana. **Akosombo Dam** sits where both rivers meet to form one of the largest artificial lakes in the world: **Lake Volta**.
		5. **LAKE CHAD**: Connects Niger, Nigeria, Chad, and Cameroon. Used to be larger. Today it is shrinking due to agriculture and drought (climate change).
	4. **Natural Resources**
		1. **FUNDING**: Although resources are plentiful, W. African countries ***lack the money to develop them into industries.***
		2. **WATER**: **Niger River** = irrigation, hydroelectric power, transport, and fish. Ghana’s main energy source is hydroelectric as is Mauritania, Togo, + Nigeria.
		3. **DAM**: **Akosombo Dam** and **Lake Volta** provide hydroelectricity and irrigation
		4. **OIL**: Nigeria is region’s biggest producer of **petroleum**. Also natural gas. Chad, Benin, and Ghana also have oil fields.
		5. **GOLD**: Used to be called the “**Gold Coast**” during Age of Imperialism.
		Gold mining still important today
		6. **MINERALS**: diamonds, manganese, and bauxite, limestone, and iron ore, phosphates, salt, copper, tin, chromium, and marble.
		7. **LUMBER**: Benin is a leader in hardwood production, but not for long (**deforestation** of the Congo Rainforest)

1. **CHAPTER 23: Southern Africa** (Angola, Zambia, Malawi, Mozambique, Zimbabwe, Botswana, Namibia, South Africa, Lesotho, Swaziland, Madagascar, Island Countries of Madagascar, Comoros, Mauritius, and Seychelles)
	1. **Vocabulary**
		1. **escarpment**: a steep cliff between a higher and lower surface and runs parallel to the Atlantic Coast.
		2. **landlocked**: a country that does not border an ocean or sea.
		3. **reservoir**: an artificial lake created by a dam.
		4. **blood diamonds**: diamonds that are mined for the purpose of paying for rebellions and other violent conflicts.
		5. **poaching**: illegally killing animals (game) for their valuable tusks, horns, skins, etc.
	2. **Landforms**
		1. PLATEAUS cover most of the area. Northern plateaus extend from Malawi across Zambia and Angola and are mostly forested. Southern plateaus are mainly grassland.
		2. **GREAT ESCARPMENT:** located in Angola, it runs parallel to the Atlantic Coast and continues through Namibia.
		3. **NAMIB DESERT:** **lies between the escarpment and the Atlantic Ocea**n and runs 1,200 miles from southern Angola to western South Africa where it merges with the Kalahari Desert.
		4. **KALAHARI DESERT:** **a sand-covered plateau that covers much of eastern Namibia and most of Botswana**. Long chains of sand dunes can rise as high as 200 feet. In some areas, the sand is red because of minerals that coat the sand.
		5. CAPE RANGES: located **south of the Kalahari Desert are a group of ranges** that are separated from each other by **dry basins called the Great Karoo and the Little Karoo**.
		6. **DRAKENSBERG MOUNTAINS follow the Great Escarpment and South Africa’s Indian Ocean coastline for 700 miles through Lesotho and Swaziland**. The Drakensberg Mountains make up the most rugged part of the escarpment where mountain peaks rise to more than 11,000 feet.
		7. NARROW COASTAL PLAIN: lies between the mountains and the Indian Ocean.
	3. **Bodies of Water**
		1. **ZAMBEZI RIVER** is 2,200 miles long (**the region’s longest**).
		2. **VICTORIA FALLS**: on the Zambia-Zimbabwe border, midway through the Zambezi River, is Victoria Falls that plunges into a narrow gorge. The falls are about twice the width and height of Niagara Falls.
		3. **ORANGE RIVER is Southern Africa’s second-longest river**. It begins in the highlands of Lesotho and flows westward to reach the Atlantic Ocean. The **Orange River is the southern boundary of the Kalahari Desert.**
		4. **LIMPOPO RIVER is the region’s third-longest river**. It **flows eastward in a large arch along the Botswana and Zimbabwe borders**. The river drops over the Great Escarpment, crosses the plains of Mozambique, and into the Indian Ocean.
		5. **LAKE KARIBA: Southern Africa’s second largest lake is really a reservoir**, or artificial lake created by a dam.
		6. **LAKE MALAWI (aka Lake Nyasa) forms Malawi’s border with Mozambique and Tanzania**. It is the southernmost lake of the Great Rift Valley. Lake Malawi fills a depression that follows a rift or tear in the Earth’s crust. Because of the depth of the depression, **Lake Malawi is one of** **the deepest lakes in the world**.
		7. **ESTOSHA PAN:** Flat basins (or pans) **contain salt deposits that provide nourishment for wild animals**. Located in northern Namibia, Estosha Pan covers 1,900 square miles. It is the largest pan in Africa and is in the center of Estosha National Park. The park is home to lions, elephants, rhinoceroses, and other large animals.
	4. **Natural Resources**
2. MINERALS: **South Africa** is world’s largest producer of platinum, chromium, gold, coal, iron ore, uranium, copper, and other minerals; one of the largest producers of diamonds, both gems and industrial diamonds (used to make cutting or grinding tools) have created a strong mining industry. **Namibia** produces tin, zinc, copper, gold, silver, and uranium. With South Africa and Botswana, Namibia also mines diamonds. In the 1990s, rebels captured **Angola’s** mines and sold the diamonds to continue a 20-year-old civil war against the government. In countries outside Southern Africa, groups have mined diamonds to pray for rebellions and other violent conflicts. Diamonds mined for this purpose are called **blood diamonds. Zimbabwe** is a leading exporter of gold. **Mozambique** has world’s largest supply of rare metal tantalite (used to make electronic parts and camera lenses). Platinum, diamonds, iron ore, and copper are mined there as well. **Zambia** has some of the world’s largest emerald deposits. **Malawi** mines rubies, sapphires, and semiprecious gems. **Malawi’s** most important natural resource is fertile soil, economy is based on agriculture, and tobacco is its most important export. **Zimbabwe** exports farming products. **Lesotho** and **Swaziland** have few natural resources.
3. ENERGY RESOURCES: **South Africa, Zimbabwe, Botswana, and Mozambique** mine and burn coal to produce most of their electric power. **Mozambique and Angola** have large deposits of natural gas. **Angola and Namibia** have oil and natural gas deposits. **Zimbabwe and Zambia** get electricity from the Kariba Gorge dam on the Zambezi River. **Malawi’s** rivers and falls generate electricity. **Deforestation** allows more sediment to enter the rivers, which reduces the water flow and the electricity that the rivers produce.
4. WILDLIFE: Wildebeests, lions, zebras, giraffes, and many other animals are found across Southern Africa. They live in and outside of many national parks and wildlife reserves that nearly every country has created to protect them. **Poaching**, or illegally killing animals (game) is a problem. Poachers shoot elephants for their **tusks**, rhinoceroses for their **horns**, and other animals are killed for their **skins and meat** and to **protect livestock and crops**.