



WATER IS LIFE

**Amman Imman**

*Bringing water and hope to those who have none*

## **Geography Lessons**

**For ages 8-14**

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# Geography Lessons

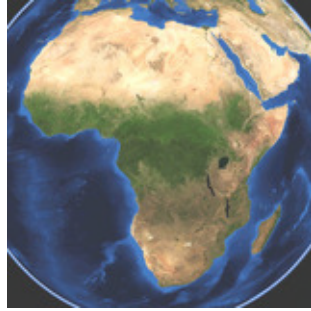


Photo courtesy of Nasa World Wind

## Goal

To help students comprehend the physical and political geography of the Azawak so they can better understand the culture, lives, and circumstances of its inhabitants.

Lessons are appropriate for students 8-14 years old and can be used for large or small group discussions as well as individual and small group work.

## Key Points

- All the land south of the Sahara is considered to be Sub-Saharan.
- Africa is a continent with diverse vegetation; the Azawak is part of a grassy plain called the Sahel, just south of the Sahara Desert. The northern parts of both Mali and Niger are part of the Sahara Desert.
- Countries are defined by political borders. The Azawak is located on the western edge of the country of Niger and the eastern edge of Mali.
- During the rainy season in the Azawak, the rains that fall pool into marshes.
- There are underground sources of water deep beneath the ground and these are the pure aquifers flowing throughout the Azawak. These aquifers are not seasonal; rather they flow all the time.

## Classroom Materials

- Globe
- Atlas
- Blank maps of Africa

## Sub-Saharan Grassy Plains of the Sahel

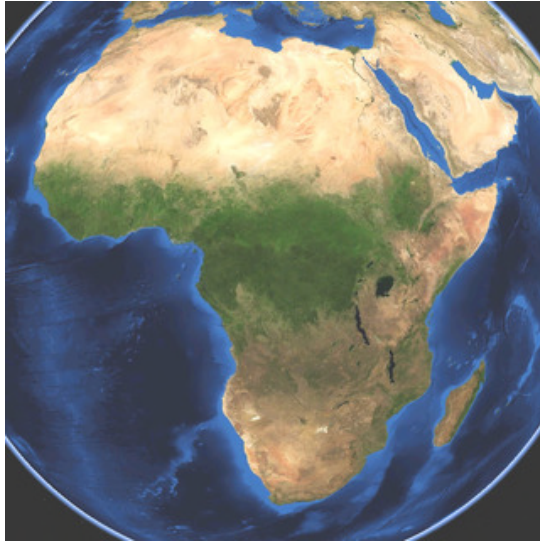


Photo courtesy of Nasa World Wind



Photo courtesy of US Department of Commerce: ESRL

### African Legend Introduction:

*According to an ancient African legend, two bulls once fought a fierce battle. They pawed and stamped with such rage that they smashed mountains into powdery dirt. Their hoofs churned up giant clouds of red dust that covered the entire land of West Africa.*

## **The Plains of the Azawak**



**This legend describes much of the Sahel, a dry, grassland that stretches across Africa just south of the Sahara Desert. The word Sahel comes from the Arabic word “border” or “shore”. The Sahel is like a belt just below the Sahara Desert.**

**How is what you see in this photo like the land described in the African Legend?**

**What natural resources do you see?**

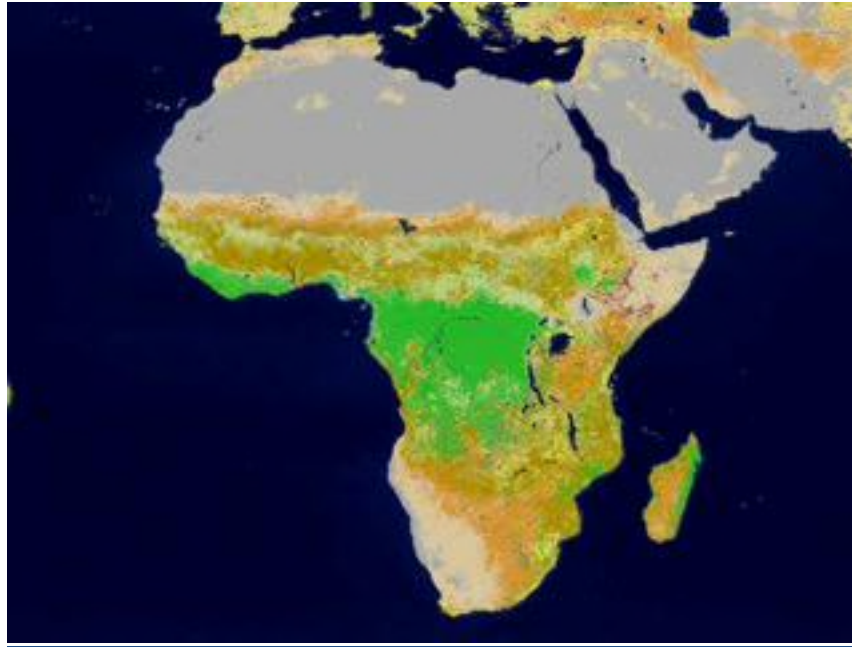
**What is available for people to eat?**

**What is available for people to make shelters?**

**How is this land similar to the place that you live? How is it different?**

# **Desertification**

**The Sahara is Expanding**



**Identify the Sahara Desert.**

**Identify the Sahel Region.**

**What is desertification?**

**What is causing desertification in the Sahel today?**

**How does the increase of desert land impact the people of the Sahel?**

# The Azawak

*Amman Imman* Map of Mali and Niger



- The Azawak is located between the countries of Niger and Mali, just below the Sahara Desert.
- The Azawak is a vast plain, spanning 80,000 square miles. It is about the size of the state of Florida.
- 500,000 people inhabit the Azawak.
- The rainy season in the Azawak lasts between one and three months.

## **Marshes**

**During the 1-3 months rainy season, marshes in the Azawak fill with water.  
When the rain stops, the marshes evaporate.**

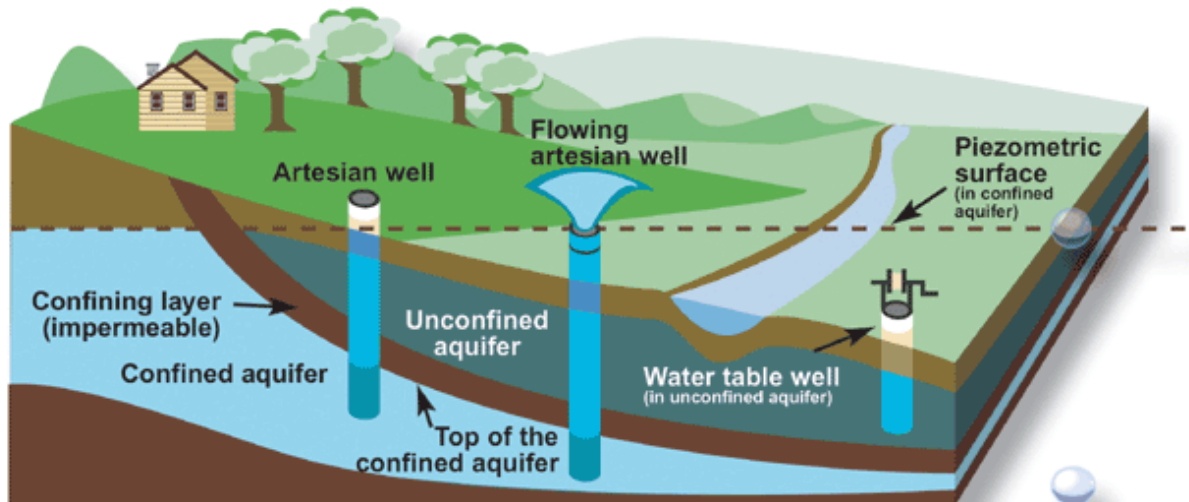


**These children are collecting water to be used for drinking, cooking, bathing, and cleaning.**

# Sustainable Aquifer

Sustainable aquifers flow 600-3,000 feet beneath the plains of the Azawak.

## Aquifers and wells



Source: Environment Canada

Photo courtesy of US Geological Survey

What is an aquifer?

How do aquifers form?

What kind of rock protects and holds the water in the aquifer?

What keeps the water in an aquifer fresh and clean?

# Map of Vegetation Diversity in Sub-Saharan Africa

## Present Potential Vegetation

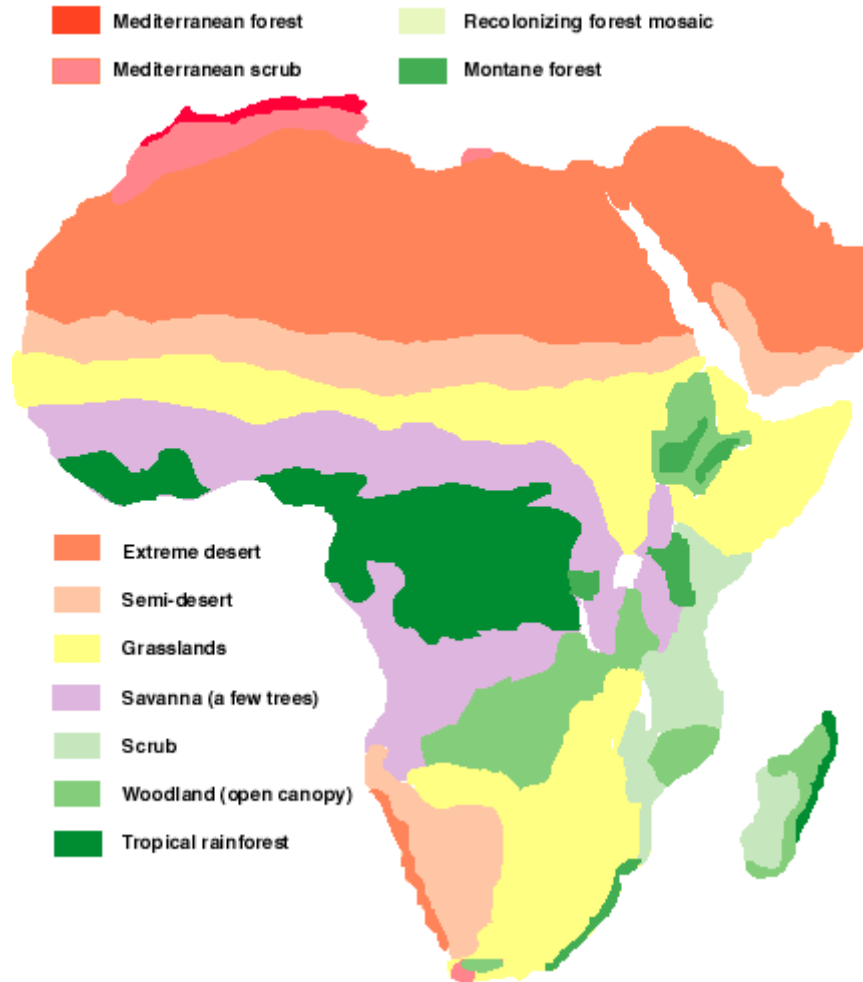


Photo Courtesy of Environmental Sciences Division: Oak Ridge National Laboratory

Identify the Sahel. The Sahel *borders* the Sahara Desert.

Identify the other kinds of vegetation in Sub-Saharan Africa.

Why is there so much diversity of vegetation in Africa?

# Political Map of Africa



Photo courtesy of Eric Gaba, Wikimedia Commons

**Political boundaries are generally created by governments and define each country's borders.**

**How many countries are there in Africa currently?**

**What is the origin of names of the rivers, countries, towns, cities, etc. on the political map?**

**What do the names mean?**

**Have the names changed? Why did they change?**

## Glossary of Terms for Related Topics

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### **Agriculture**

Cultivating land to grow crops, raise livestock, and farm.

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### **Aquifer**

A large layer of underground water.

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### **Borehole**

A long pipe drilled deep into the ground that pumps water from **aquifers**.

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### **Climate change**

Changes in the Earth's weather that affect temperature and rainfall.

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### **Dehydration**

The condition of not having enough water in your body, causing you to become very sick.

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### **Desertification**

The process that happens when an area does not get enough water for a long time, causing the land to slowly turn into a desert-like region.

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### **Drought**

A long period of dry weather, when a region gets very little water.

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### **Ecology**

The study of the relationship between living things and their environments.

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**Ethnic Group**

A group of people in a population that is set apart from others, but tied together by their language, nationality, or culture.

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**Famine**

A period of time when a region does not produce or receive enough food to feed its population, causing people to become very hungry and even starve.

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**Hygiene**

The practice of healthy living and disease prevention.

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**Inaccessible**

Unreachable, impossible to access or enter.

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**Malnutrition**

Unbalanced, or lack of, proper nutrition.

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**Marsh**

Low, treeless wetland characterized by growth of grasses, cattails, and other plants.

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**Oasis**

A small area in a desert that has a supply of water and is able to support vegetation. An oasis forms when groundwater lies close enough to the surface to be reached by wells.

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**Pastoral nomads**

Communities of people that don't have a permanent home, and

move around from pasture to pasture, herding animals.

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**Philanthropy**

The practice of performing charitable or kind actions.

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**Potable water**

Water that is clean and safe to drink.

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**Refuge**

Shelter or protection from danger or trouble.

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**Sahel**

The semi-arid region in Africa where the Sahara desert ends that stretches from western Africa to eastern Africa.

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**Sanitation**

The promotion of health and prevention of disease by stopping human contact with waste.

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**Sedentary farmers**

In the Azawak, previously **nomadic pastoralists** who have settled into villages to try and grow crops.

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**Sediment**

Material that settles to the bottom of a liquid.

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**Sustainability**

The ability to maintain something without using up a lot of resources or causing damage.

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**Sustenance agriculture**

The production of just enough crops for a group of people to survive.

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**Tuareg**

**Pastoral nomads** who historically traveled throughout the Sahara. Today they live mostly in North and West Africa. One of the dominant ethnic groups in the Azawak region.

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**Water scarcity**

When a region does not have enough **potable water** for everyone to drink.

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**Woodabe Fulani**

Nomadic cattle-herders who traditionally travel throughout the Sahel. Another large **ethnic group** that lives in the Azawak valley.

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## **Extension Activities**

1. Create political, regional, vegetation, elevation, etc. maps of Africa.
2. Create an atlas of maps on Africa or maps related to the Azawak.
3. Create a topographical map using clay (directions below).
4. Research the Azawak, the Sahel, etc.
5. Research the establishment of political boundaries.
6. Research the names of countries, cities, rivers, etc.

## **Making a Topographical Map**

[Topographical maps can be created for Africa, the Azawak etc.]

### **Materials**

- Card board, tray or wood for building base
- Clay in various colors
- Photocopy or drawing of map the desired size of topographical map
- Elevation map
- Ruler
- Tooth picks
- Labels or strips of paper to make labels

### **Directions**

1. Glue the photocopy or drawing of the map to the building base.
2. Establish a comparison scale for height of each area.  
- For example, 1cm =100 m above sea level.  
Discuss elevation related to feet or meters above sea level.
3. Fill the regions in with different colors of clay.
4. Use ruler to add clay to establish the desired height or elevation.
5. Create labels using paper and toothpicks.
6. Place labels in the appropriate locations.
7. Create a map key and a compass rose.

## **Research Questions**

- What plants and animal are native to the grassy plains of the Azawak?
- What tribes inhabit the Azawak?
- Are the people nomadic or sedentary?
- What kind of shelter/s do they build?
- What language/languages do they speak?
- What are their religious beliefs and traditions?
- What is their traditional music?
- What is their traditional clothing?
- What do they eat?
- Do they raise animals?
- Do they grow crops?
- How are their lives affected by desertification?
- How are their lives affected by the current water crisis?
- What are the main products of Niger and Mali?
- What brings the rainy season?