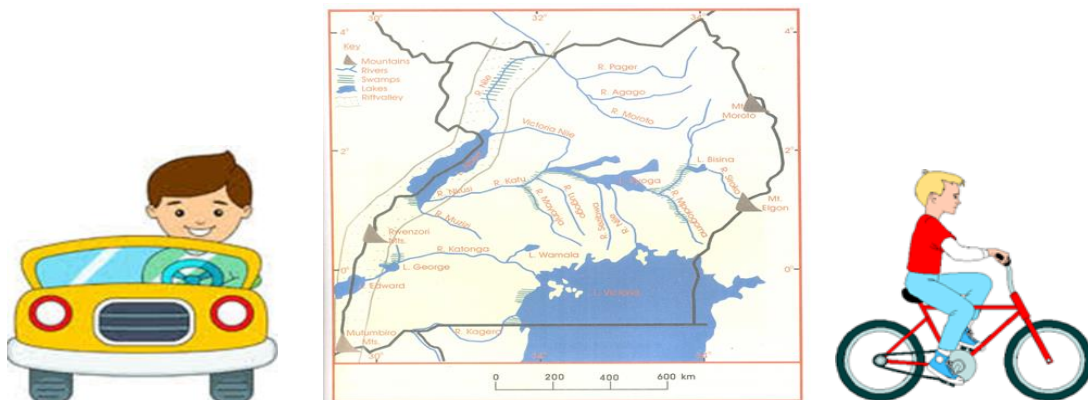


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LOCATION OF UGANDA

Uganda is one of the three countries which form the East African region.

Countries of East Africa

Country	Capital city	Size (km ²)
Tanzania	Dodoma	934000
Kenya	Nairobi	585000
Uganda	Kampala	244000

Other regions of Africa

-North Africa

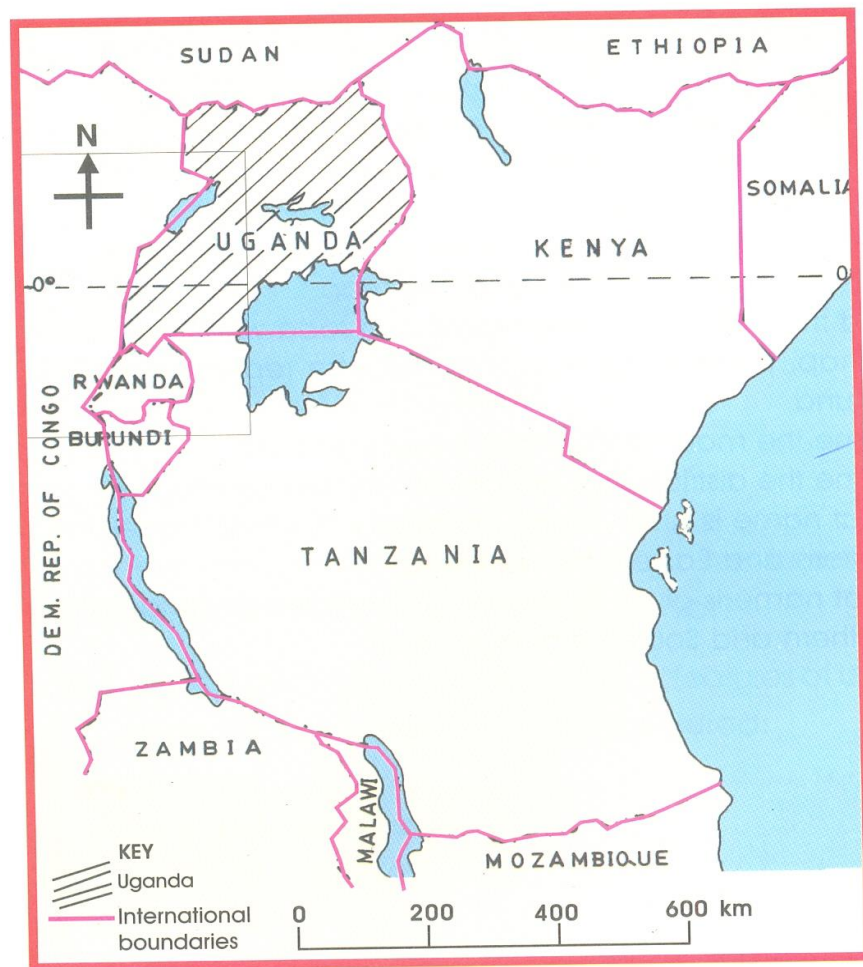
-West Africa

-Central Africa

-Horn of Africa

-Southern Africa

Location of Uganda on the map of East Africa



POINTS TO NOTE

- Uganda is the smallest country in East Africa
- Uganda was referred to as the pearl of Africa by Churchill due to its beautiful nature
- Uganda is a land locked country and it uses ports Mombasa and Dar-es-salaam for importing and exporting her goods.

- Uganda's main export are agricultural products
- The source of the Nile is found in Uganda at Jinja on L. Victoria the largest fresh water lake in Africa

Location of Uganda on the African map can be determined by;

- Neighbouring countries
- Lines of Latitude and Longitude

Countries neighbouring Uganda

Country	capital city	direction
Kenya	Nairobi	East
Tanzania	Dodoma	South
Rwanda	Kigali	Southwest
Democratic Republic of Congo	Kinshasa	West
South Sudan	Juba	North

Features which make natural boundaries between her and her neighbours

L. Albert	between Uganda and D.R. Congo
L. Edward	between Uganda and D.R. Congo
R. Kagera	between Uganda and Tanzania
Mt. Elgon	between Uganda and Kenya
Mt. Rwenzori	between Uganda and D.R. Congo
R. Semliki	between Uganda and D.R. Congo
Mt. Mufumbiro	Between Uganda and Rwanda

Lesson 2

Location of Uganda by Grid reference

Grid reference: is the method of locating places on maps using Lines of latitude and longitude

LINES OF LATITUDE

Lines of Latitude are imaginary lines drawn on a map from East to West
Latitude is the distance away from the North and South of the Equator.

MAJOR LINES OF LATITUDE

- Equator (0^0)
- Tropic of cancer ($23 \frac{1}{2}^0\text{N}$)
- Tropic of Capricorn ($23 \frac{1}{2}^0\text{S}$)

THE EQUATOR

- The equator is the major line of latitude
- It divides the world into two equal parts called hemispheres.

COUNTRIES CROSSED BY THE EQUATOR

- Uganda
- Kenya
- Democratic Republic of Congo (D.R.C)
- Gabon
- Somalia
- Congo Brazaville

DISTRICTS CROSSED BY THE EQUATOR

- Wakiso
- Mpigi
- Kamwenge
- Sembabule
- Kalungu
- Kasese

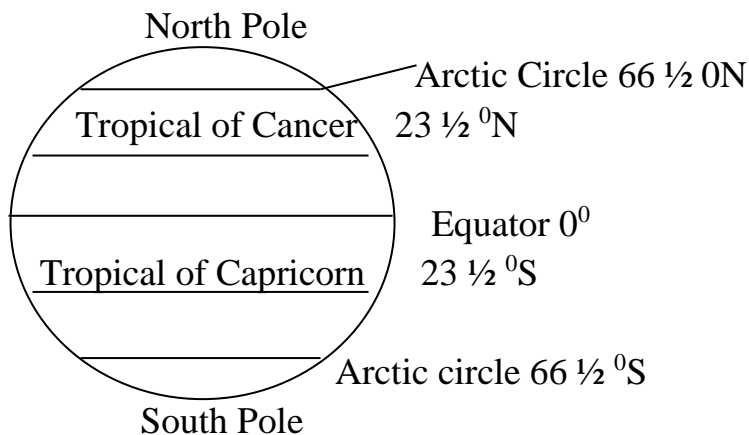
LAKES CROSSED BY THE EQUATOR

- Lake Victoria.
- Lake George.

Note: -The time when the sun over heads the equator is called equinox.

- Equinox is the time of the year when the number of hours in day and night are equal all over the world.
- The equator crosses a town of Uganda called Entebbe and in Kenya it crosses Nanyuki town.
- The equator is marked with 0 degrees because it's the starting point of measuring lines of latitude

A GLOBE SHOWING LINES OF LATITUDE



LONGITUDE / MERIDIANS

Lines of Longitude are imaginary lines drawn on a map from North to South
Longitude is the angular distance of a place East or West of the Greenwich

MAJOR LINES OF LONGITUDE

- Greenwich
- International Date Line

Countries crossed by prime meridian

- 1- Mali
- 2- Ghana
- 3- Algeria
- 4- Bukinafaso

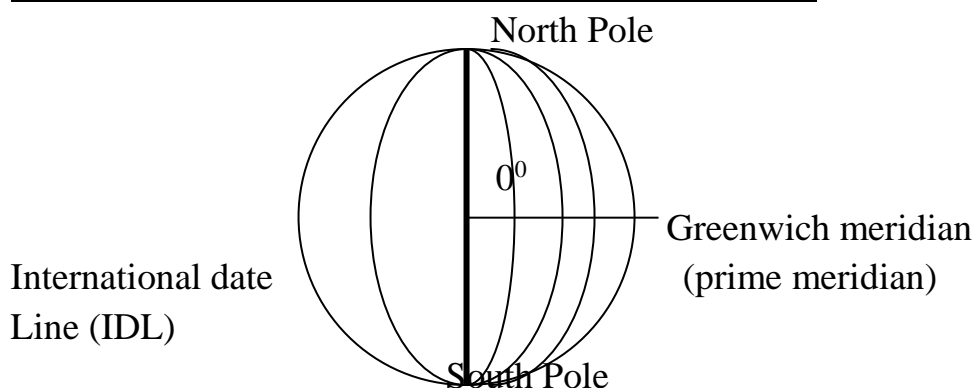
NOTE: The Greenwich passes through Accra town in Ghana.

Activity

1. Define the term grid reference
2. Name any one landlocked country which is a neighbour to Uganda
3. What is latitude?
4. Why is the equator marked 0 degrees?
5. How is the line of longitude marked 180 degrees important?
6. State any one problem Uganda faces due to its landlockedness
7. What is the capital city of Kenya
8. Why does Uganda's most imports pass through Mombasa than Dar-es-salaam
9. What is excise duty
10. Name the latitude marked $23\frac{1}{2}^{\circ}\text{N}$

LESSON 3

A GLOBE SHOWING LINES OF LONGITUDES



Importance of imaginary lines (lines of latitude and longitude)

- Imaginary lines help to locate places on a map.
- Greenwich prime meridian is used to determine world time.
- International dateline is used to determine world dates.
- The equator is used to determine the climate of an area.

AMAP SHOWING LOCATION OF UGANDA BY GRID REFERENCE (New fountain book 5 pg7)

Note: Uganda lies between latitudes $4\frac{1}{2}^{\circ}\text{N}$ and $1\frac{1}{2}^{\circ}\text{S}$ of the equator and longitudes 29°E and 35°E of Greenwich/prime meridian.

MAP READING

A map: is a representation of an object drawn as seen from above.

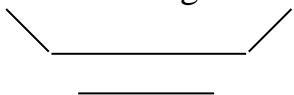
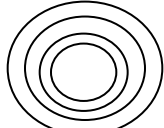


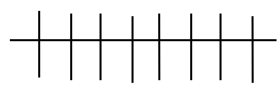



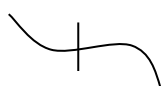
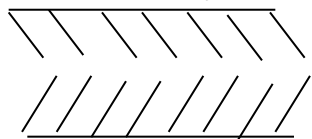

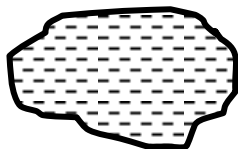
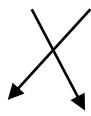
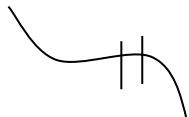
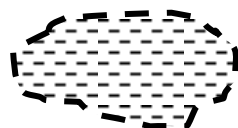

Or a map is a drawing of an object as seen from above.

Differences between a map and a picture.

-A map is a representation of an object drawn as seen from above while a picture is a representation of an object drawn as seen aside.

-A map gives detailed information while a picture does not.

Examples of common map symbols

MAP SYMBOL	MAP SYMBOL	MAP SYMBOL
<p>Bridge</p> 	<p>Hill</p> 	<p>Permanent river</p> 
<p>Mountain peak</p> 	<p>Railway line</p> 	<p>Seasonal river</p> 
<p>Swamp</p> 	<p>Air port</p> 	<p>Plateau</p>
<p>Dam</p> 	<p>Rift valley</p> 	<p>Grass</p>
<p>Mine</p> 	<p>Permanent lake</p> 	<p>Quarry</p> 
<p>Water fall</p> 	<p>Seasonal lake</p> 	<p>Canal</p> 

Reasons why map symbols are used

- To avoid congestion

- To represent big real objects

LESSON 4

ELEMENTS OF A GOOD MAP.

- A key
- A title
- A compass direction
- A scale
- A frame (boundary)

Uses / importance of each element to a map reader.

A key: A key is used to explain or interpret important symbols and colours used on a map.

A title: It is used to tell us what the map is all about.

A compass direction: It helps to show correct direction of places on a map.

A frame (boundary) It encloses part of the world map one is studying.

A scale: It measures the actual distance between places on a map.

Types of scales.

1- Linear scale



1. Fractional scale.

$$\frac{2}{10} \quad \frac{4}{10} \quad \frac{6}{10} \quad \frac{8}{10}$$

2. Rational scale / statement scale

2: 10, 4:10, 6: 10, 8 :10

Calculation of scales:

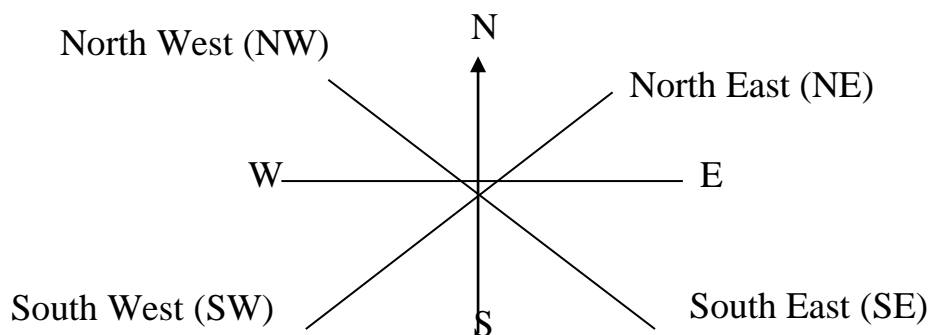
1cm : 25km

4cm = (4 x 25) km

= 100km.

Lesson 5

CAMPASS DIRECTION



Groups of people who use a compass in their daily activities / work.

- 1- pilots
- 2- mountain
- 3- sailors
- 4- captains.

Ways of locating different places on a map

- By using a compass

- By using the direction of the sun and stars.
- By using land forms / land marks.
- By using lines of latitude and lines of longitudes

Note: The commonest way of locating places is by using the sun.

The sun rises from the east and sets to the west.

LAND LOCKED COUNTRIES

These are countries which have no sea ports / coast line.

Examples of land locked countries

Uganda, Rwanda, Ethiopia etc

Problems facing land locked countries.

- Goods are over taxed
- Goods delay on the way
- Lack of privacy when transporting goods etc.

Solutions to the above problems

- Promote friendship with neighbouring countries with sea ports.
- Promoting air transport
- Building more home industries.

Activity

1. Why is Uganda referred to as a land locked country
2. How did Ethiopia become a landlocked country?
3. Suggest one solution you would give to a landlocked country
4. What are tariffs?
5. Give one reason why map symbols are used on maps instead of real objects
6. How does a pilot flying a plane from Soroti to Entebbe find its destination
7. Peter was going to school in the morning and he saw his shadow on his left hand side, to which direction was his school?
8. Mary is standing at spot in the East, what will be her new direction after turning 135 degrees clockwise?
9. Why should every map have a key?
10. What problem will Joseph face in reading a map without a scale?

Lesson 6

NATURAL RESOURCES

Natural resources are things found in the environment which can be used to satisfy man's needs.

Examples of natural resources:

- | | | |
|--------------------|--------------|------------------|
| - Land | - Minerals | - Wild life |
| - Lakes and rivers | - Vegetation | - Human resource |

PHYSICAL FEATURES AS NATURAL RESOURCES

Physical features are natural land forms which can easily be seen in an area.

Examples of physical features / natural land forms of Uganda.

1- mountains

2- hills

3- plains

4- valleys

5- lakes

6- rivers

7- rift valley

8- plateau

9- basins etc

THE PLATEAU

A plateau is a raised flat topped piece of land.

A plateau is a table land

A plateau covers the largest part of Uganda.

Human activities carried out on a plateau:

- cultivation
- tourism
- pastoralism
- mining
- lumbering

Reasons why a plateau is good for human settlement

- It has fertile soils for farming
- It has pasture for cattle keeping
- There is easy transport on the plateau

MOUNTAINS IN UGANDA

There are two types of mountain in Uganda namely;

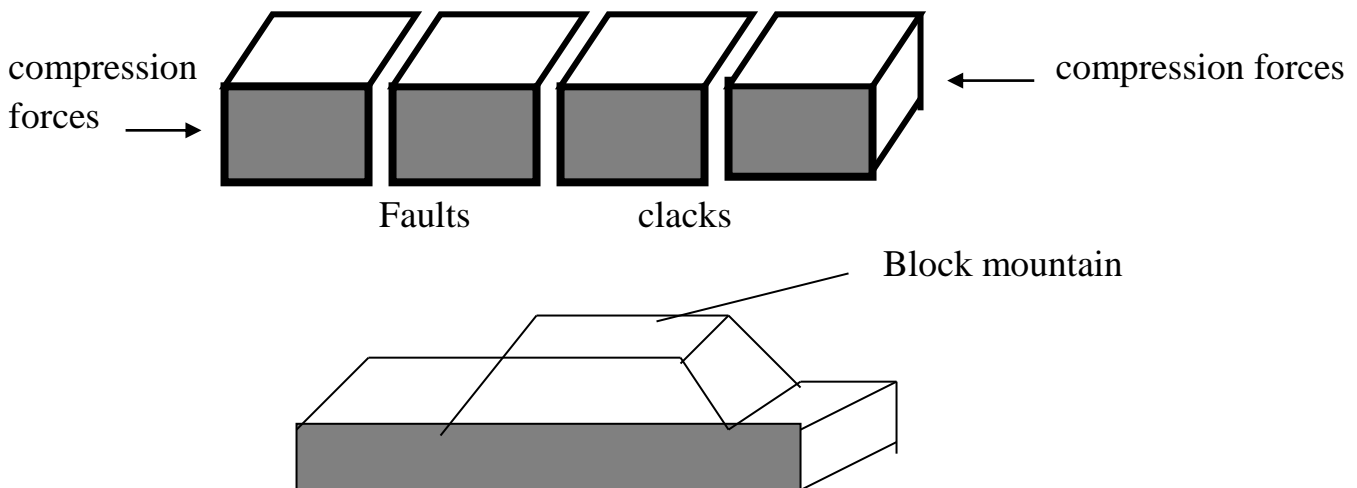
a) Block mountains

b) Volcanic mountains

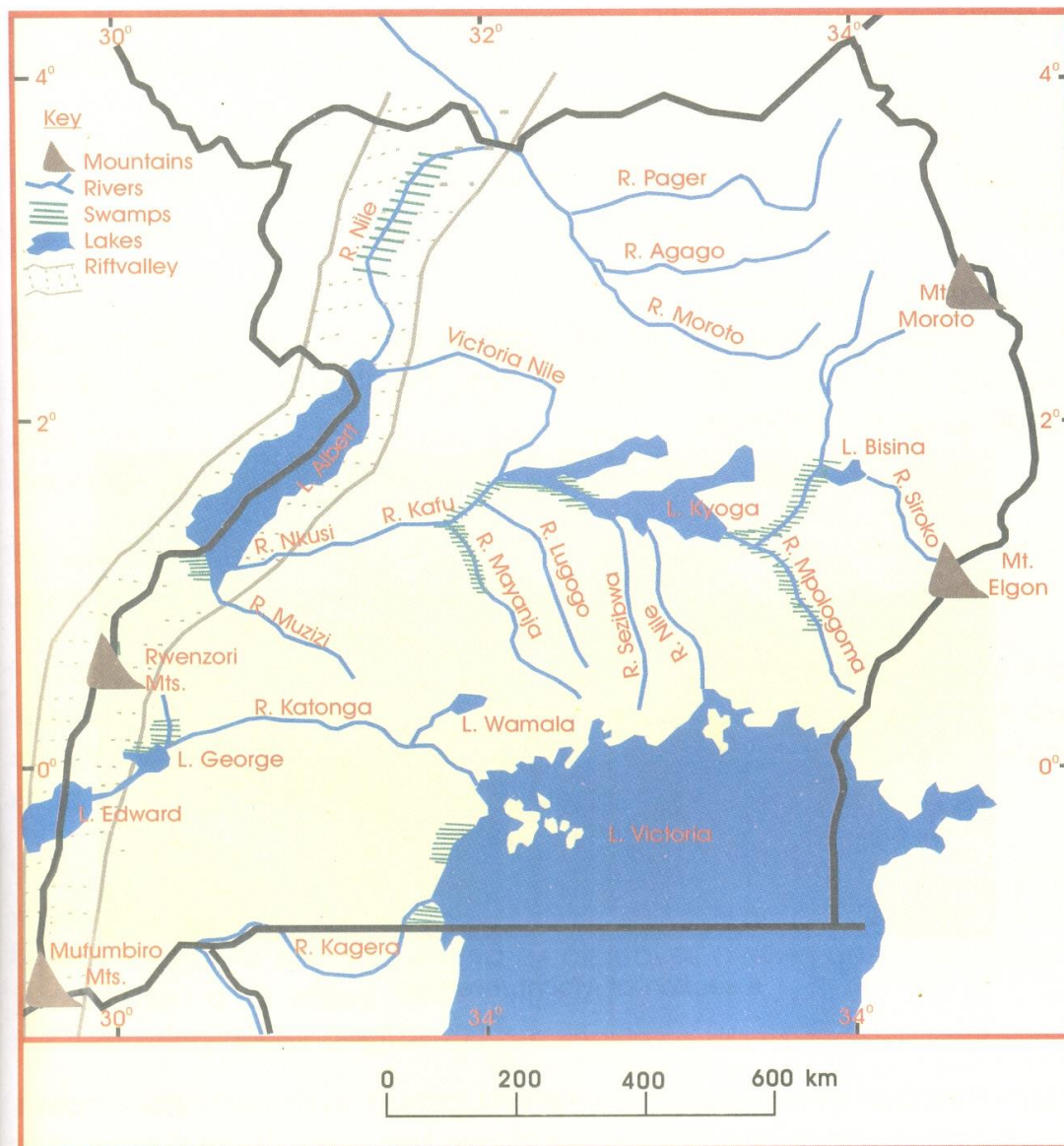
BLOCK MOUNTAINS

- ♥ Block mountains were formed by faulting.
- ♥ The faulting process involved the tensional and compressional forces.
- ♥ These were formed when the blocks between faults were lifted by forces coming from the center of the earth.
- ♥ The middle block is forced to sink or move up
- ♥ The raised blocks are known as horst or block mountains
- ♥ Mt. Rwenzori is only example of a block mountain in Uganda.

Diagrams showing the formation of block mountain.



MAP OF UGANDA SHOWING MOUNTAIN



Note: An escarpment/scarp is steep side of a rift valley

Lesson 7

VOLCANIC MOUNTAINS IN UGANDA

-Volcanic mountains were formed when molten rocks known as magma forced on to the earth's surface

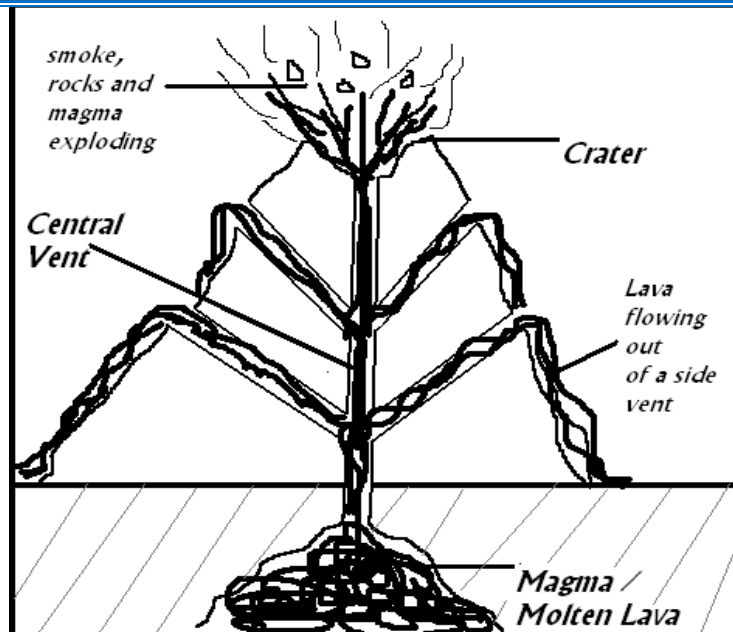
-They were formed by volcanic activities

-A vent is an opening which hot molten rocks pass to reach the earth's surface

-Lava is the solidified magma that cooled and its found on the earth's surface

-Crater is a hole/depression on a volcanic mountain

A diagram showing a formation of a volcanic mountain(Mk bk5 pg 21)



Examples of volcanic mountains in Uganda

Mt. Elgon,

Mt. Napak

Mt. Mufumbiro

Mt. Kadam.

Mt. Moroto

TYPES OF VOLCANIC MOUNTAINS

- Active volcanoes:** These are volcanic mountains which do not take long to erupt e.g mt. Mufumbiro.
- Dormant volcanoes:** These are volcanic mountains which take long to erupt e.g mt. Moroto, mt. Napak and mt. Kadam.
- Extinct (dead) volcanoes;** These are volcanic mountains which can not erupt again. E.g mt. Elgon.

Importance of mountains and Highlands

- They bring plenty of relief rainfall
- They have fertile soils for farming
- They sources of rivers
- They are sources of minerals like copper and cobalt at Kilembe
- Mountains attract tourists who bring foreign income

Dangers associated to mountains

- Active volcanoes can erupt and destroy lives of people and property
- Landslides
- Severe soil erosion
- They make road and railway construction difficult and expensive

Activity

1. How were Block Mountains formed?

2. Which type of coffee is grown on most slopes of volcanic mountains
3. Give two reasons why mountainous areas densely populated
4. State any one cause of landslides in mountainous areas
5. Which type of rainfall is received in highland areas?
6. Give one reason why people in mountainous areas experience low temperatures
7. State one way people in mountainous areas can control soil erosion
8. Why do the people of Kabale keep donkeys
9. Give one reason why road and railway construction in mountainous areas is difficult
10. How is the formation of Mt. Rwenzori different from that of Mt. Elgon

Lesson 8

Major mountains

MOUNTAIN RWENZORI

- It's found in western Uganda at the boarder between Uganda and D.R Congo
- H.M. Stanley was the first white man to see mt. Rwenzori. He named it "the mountains of the moon" because its peak had snow shining like the moon.
- Margherita is the highest peak of mt. Rwenzori while Stanley is the second highest peak of this mountain.
- It occupies Kasese and Bundibugyo districts
- The Bantu people who settled on the slopes of mt. Rwenzori ranges are Bakonjo and Bamba
- Mt. Rwenzori is snow capped throughout the year because its peak is above the snow line.
- The major economic activity on this mountain is farming
- The pygmies live around mt. Rwenzori on the side of D.R. Congo.

MOUNTAIN ELGON

- Its local name in Masaba.
- It is located in eastern Uganda at the boarder between Uganda and Kenya.
- The Bagishu live on the slopes of mt. Elgon and they grow Arabica coffee and bananas.
- The Bagishu practice circumcision among male adults.
- It has a crater on top from which the Bagishu believe that Mundu and Seera came.
- Wagagai is the highest peak of mt. Elgon.
- Joseph Thomapson was the first European to see mt. Elgon after crossing the Masai land in Kenya from the coast.
- Mt. Elgon is the second highest mountain in Uganda following mt. Rwenzori which is the highest.
- The Sabiny live in Kapchowra district found in the northern part of mt. Elgon.

- Kapchworwa is the leading producer of wheat in Uganda due to the cool climate and reliable rainfall in Kapchorwa.
- Mt. Elgon is a source of some rivers e.g R. Nzoia, R. Malaba and R. Manafa.

THE MUFUMBIRO RANGES

- Mountain Mufumbiro ranges is found in South western Uganda
- It has fertile volcanic soils which support farming.
- **Muhavura** is the highest peak of the Mufumbiro ranges.
- Other peaks are **Sabinyo** and **Gakinga**.
- It has a lot of Bamboo forests which act as a home for mountain gorillas
- Mufumbiro covers districts like Kisoro and Kabale.
- People who live in the slopes of mt. Mufumbiro are Bakiga, Bafumbira, Bahororo and Batwa.
- Terrace farming and contour ploughing are used to reduce soil erosion.
- Land fragmentation is a big problem caused by high population.

LESSON 9

MOUNT MOROTO

- It is found in north eastern Uganda. Areas around this mountain receive very little rainfall throughout the year.
- Pastoralism is the major economic activity done by the Karimojong Morot is the highest peak of mt. Moroto.
- The Karimojong are the people who live on the slopes of mt. Moroto.
- Mountain Moroto is found in Moroto district.

THE RIFT VALLEY

A rift valley is a long depression on the earth's surface.

It was formed by the process called faulting and by the help of either tensional or compressional forces

Faults occurred as a result of disturbances in the earth's crust

Scarps/escarpments are steep sides of the rift valley

The arms of the Great rift valley in East Africa

THE WESTERN RIFT VALLEY

This arm runs from Uganda, Rwanda, Burundi and Tanzania.

Examples of lakes found in the western arm / part of the rift valley.

Lake Albert	L. George	Lake Tanganyika (in Tanzania)
Lake Edward	L. Kivu	

THE EASTERN BRANCH OF THE RIFT VALLEY

This arm runs through Kenya and Tanzania.

Examples of lakes in the eastern arm of the rift valley.

- 1- Lake Turkana
- 2- Lake Magadi
- 3- L. Natron

- 4- Lake Nyasa
- 5- Lake Eyasi
- 6- Lake Baringo

Note L. Magadi is a source of soda ash used for making glasses

L. Nakuru is a sanctuary of **flamingo birds** which attract many tourists in Kenya

Characteristics of rift valley lakes

- They are deep
- They are narrow shaped.
- They have salty water
- Most of them have no major outlets.

Points to note: Lakes get water from rainfall, stream and rivers

Rift valley lakes have salty water because;

- They have more inlets than outlets
- They have salty basement rocks

Activities carried out in the rift valley region.

Farming

Mining

Lumbering etc

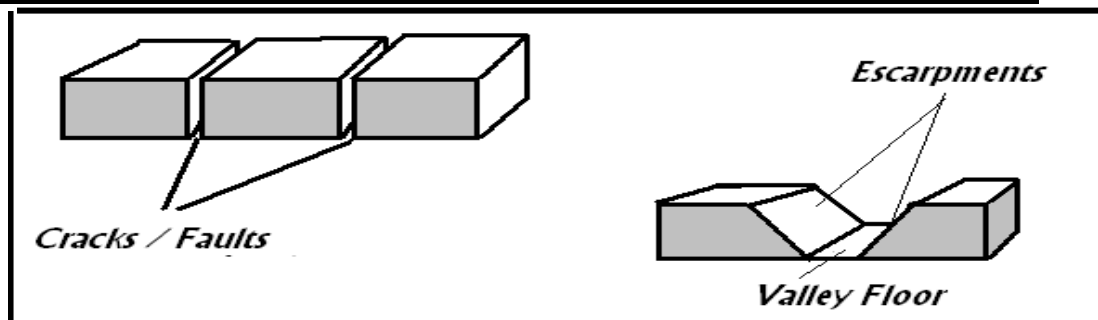
Fishing

Tourism

Problems people face in the rift valley area.

- soil erosion
- land slides
- high temperatures
- poor transport and communication
- lack of enough fresh water.

DIAGRAM SHOWING THE FORMATION OF A RIFT VALLEY



ACTIVITY

1. Name two forces which led to formation of the rift valley
2. Why do people in rift valley areas experience high temperatures?
3. Give one reason why there no living organisms in lake Katwe
4. State one political importance of mountains
5. In which one way are mountains important to farmers living around them
6. State one major reason why rift valley lakes have salty water
7. Name the first European explorer to reach mt. Rwenzori

8. How was the rift valley formed
9. Name the major tourist attraction on L. Nakuru
10. Give one use of the soda ash obtained from L. Magadi

LESSON 10

DRAINAGE IN UGANDA

Drainage is the underground water pattern in an area

Examples of drainage features

- Lakes
- Rivers
- Springs
- Swamps

LAKES AND RIVERS IN UGANDA

LAKES

A lake is a depression filled with water on the earth's surface

Examples of lakes in Uganda

Lake Victoria	Lake Edward	Lake Bunyonyi	Lake Bisina
Lake Kyoga	Lake Wamala	Lake Mutanda	Lake Opeta
Lake Albert	Lake katwe	Lake George	Lake Kwanja

TYPES OF LAKES

Uganda has the following types of lakes;

- 1- Rift valley lakes (fault lakes)
- 2- Down warped lakes (depression lakes)(Basin lakes)
- 3- Crater lakes
- 4- Volcanic lakes
- 5- Ox-bow lakes
- 6- Human made lakes etc

RIFT VALLEY LAKES IN UGANDA

QN. Why are rift valley lakes salty?

How is the formation of the rift valley different from Mt. Rwenzori?

Mention any two examples of rift valley lakes

DOWN WARPED LAKES (DEPRESSION LAKES)

- These are lakes which were formed by down warping.
- Down warping occurred when land sank to form depressions (big holes) where water collected to form down warped lakes.
- Down warped lakes are also called Basin lakes or depression lakes or fresh water lakes.

Examples of down warped lake sin Uganda

L. Victoria	L. Opeta	L. Wamala
L. Kyoga	L. Bisinia	L. Kwanja etc

Characteristics of down warped lakes.

- They have fresh waters.
- They have inlets and outlets.
- They are shallow.
- They are wide.
- They are basin shaped etc

CRATER LAKES

They are formed when water collects in the craters of volcanoes

Crater lakes were formed by volcanicity

Examples

- L.Katwe
- ELgon crater.
- L.N yungu
- L.Nyakasura
- L.Muhavura

Lesson 10

HUMAN MADE LAKES

These lakes are formed when people dam or block a river or they are formed when people dig depressions where water collects.

Examples of human made lakes

- 1- Kabaka's lake in Kampala
- 2- Namugongo martyrs lake etc

OX-BOW LAKES

They are formed as a result of river meandering and deposition

Examples

- Semliki

LESSON 11

VOLCANIC LAKES

They are formed as a result of lava blocking a river

Examples

- L. Mutanda
- L. Bunyonyi as the deepest lake in Uganda.

Major lakes in Uganda

LAKE VICTORIA

- It is the largest fresh water lake in Uganda and Africa at large.
- It was named after the queen of England called Victoria.
- Its local name in Uganda is Nalubaale.
- It was named by John Hannington Speke
- It is shared by the three East African countries.
- R. Nile drains lake Victoria to the Mediterranean sea.

PORTS FOUND ON LAKE VICTORIA

The following are the inland ports found on L. Victoria.

Port	country
Port bell	Uganda
Jinja port	Uganda
Entebbe port	Uganda
Bukakata port	Uganda
Port Kisumu	Kenya
Port Mwanza	Tanzania
Port Bukoba	Tanzania
Port Musoma	Tanzania

Lesson 12

Islands found Lake Victoria

- Ssese island
- Buvuma
- Kalangala

Economic importance of Kalangala islands to Uganda

- Attracts tourists who bring foreign exchange
- It has oil palm farms which provide jobs to people

LAKE KYOGA

It is the most swampy lake in Uganda because it is shallow.

Its shallow due to silting

Water transport is difficult on L.kyoga because it is swampy.

The major economic activity on L.kyoga is fishing and its main port is Bukungu.

LAKE ALBERT

It's found in western Uganda at the boarder with D.R.Congo.

It's local name is Mwitanzige.

It was named L.Albert by sir Samuel Baker.

The major inland port on lake Albert is port Butiaba.

Crude oil was discovered on this lake

Reasons why port Butiaba was set up

- To promote bilateral trade
- To make water transport easy

Ways Uganda will benefit from oil mining from the Albertine region

- It will create job opportunities for people
- Oil mining will earn foreign exchange to Uganda
- It will lead to improved social services in the region

Products of crude oil

- Kerosene
- Petrol
- Plastics
- Jet fuel

LAKE GEORGE AND EDWARD

- They are joined together the Kazinga channel.
- H.M.Stanley explored and named L.George and L. Edward.
- The Kazinga channel is located in Queen Elizabeth National Park.
- The Kazinga channel is well known for having the biggest number of hippopotamus (hippos) in the world.

LAKE MBURO

It is found in Kiruhura district in South western Uganda.

Lake Mburo has a national park around it

Human activities carried out on Uganda's lakes.

- Fishing
- Tourism
- Water transport
- Mining etc

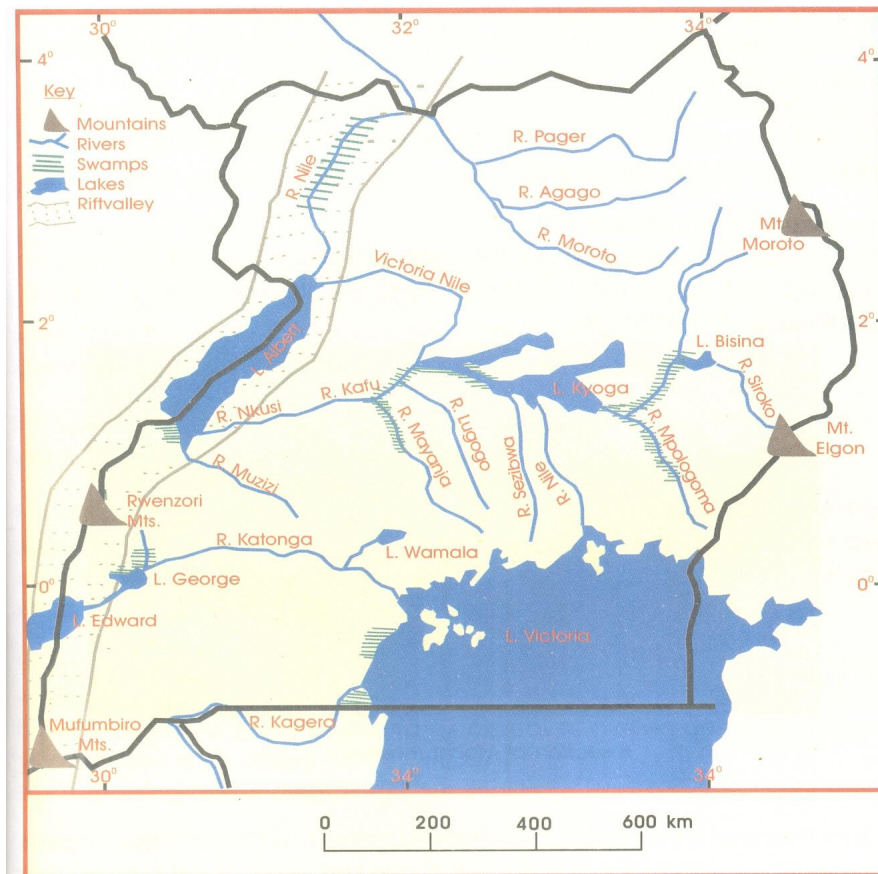
Reasons why areas around lakes have a dense (high) population

- They have fertile soils for growing crops.
- They receive reliable rainfall or they have cool climate.

Activity

1. Define the term drainage
2. Give two reasons why most shores of lakes are densely populated
3. Name any one port on lake Victoria
4. Give two reasons why port Butiaba was built
5. Give evidence to show that lake Victoria is on higher altitude than lake Kyoga
6. Why is lake Kyoga swampy
7. What is silting
8. Mention two methods used on lake Victoria to catch fish
9. How are water hyacinth are disadvantage to the fishing industry?
10. Give two reasons why you think oil mining in the Albertine region will develop Uganda

MAP OF UGANDA SHOWING LAKES AND RIVERS



Lesson 13

RIVERS IN UGANDA

A river is a stream of water flowing over a long distance

Types of rivers

-**Perennial rivers:** are rivers which flow throughout the year

-**Seasonal rivers:** are rivers that flow mainly during the rainy season

Examples of seasonal rivers

- R. Agago

Examples of major rivers in Uganda

- | | | |
|------------------|------------------|--------------------|
| 1- River Nile | 5- River Aswa | 9- River Mpologoma |
| 2- River Katonga | 6- River Semliki | 10- River Agago |
| 3- River Kagera | 7- River. KAfu | etc |
| 4- River Achwa | 8- River Nkusi | |

Terms connected to river

Source of a river

It is an area where a river begins from or it is an origin of a river.

Mouth of a river

It is an area where a river ends to flow. Or it is where a river pours its water.

Tributary

It is a small river joining a main river to flow together.

Distributary

It is a small river flowing out of the main river. Or it is the small river that branches away from the main river.

Confluence

Is a point of a river where two or more rivers meet.

A delta

Is a point of a river where it divides into many streams at its mouth.

An estuary

Is a point of a river where it widens to flow.

Lesson 10

Sources of rivers

- Lakes
- Highlands
- Wetlands
- Springs

Major rivers of Uganda

RIVER NILE

- Its local name is Kiira in areas of Buganda and Busoga.
- River Nile is the longest river in the world having 6640km or (4150 miles)
- Its source is lake Victoria at Jinja and mouth is Mediterranean sea
- It flows through Uganda, South Sudan, Sudan and Egypt
- John Speke was the first European explorer to reach its source in 1862.

Parts of River Nile.

1- Victoria Nile

2- Albert Nile

3- White Nile

Water falls found on river Nile

1- Ripon falls at Jinja

3- Karuma falls

2- Bujagali falls at Jinja

4- Murchison falls

Importance of waterfalls

- They are used to generate hydro electricity
- They attract tourists who bring income

Lesson 14

Dams on river Nile

- Nalubaale dam

- Bujagala dam

- Karuma dam

RIVER KAGERA

- Its source is in the highlands of Burundi and its mouth is L. Victoria.
- River Kagera flows through Burundi, Rwanda, Tanzania and Uganda.
- River Kagera forms a natural boundary between Uganda and Tanzania.

RIVER KATONGA

- It joins L. George and L. Victoria
- It flows from lake George into lake Victoria

RIVER ACHWA

It is a tributary of R. Nile.

It's water is used for irrigation on a large scale in Uganda.

It forms a confluence with River Nile at Nimule at the border of Sudan and Uganda.

RIVER SEMLIKI

It is found in western Uganda at the boarder of Uganda and D.R. Congo

It pours its water into L. Albert.

River Semliki national game park is located along River Semliki.

RIVER KAFU AND RIVER NKUSI

They are found in western Uganda

Their source is in the swamps of Hoima district.

River Kafu flows into Lake Kyoga while River Nkusi flows into Lake Albert.

Reasons why navigation (water transport) is difficult on most rivers of Uganda

- | | |
|--|----------------------|
| ☞ Due to suds i.e floating vegetation. | ☞ Due to rapids. |
| ☞ Due to rocks. | ☞ Due to waterfalls. |

Problems facing water bodies (lakes and rivers) in Uganda

- | | |
|---|--|
| <input checked="" type="checkbox"/> Water pollution | <input checked="" type="checkbox"/> The water weeds |
| <input checked="" type="checkbox"/> Drought | <input checked="" type="checkbox"/> Over fishing etc |

Influence of physical features on people

- People settle around physical features to carry out farming
- Physical features with minerals influence mining.

Importance of lakes and rivers

- ❖ They act as tourist attractions.
- ❖ Some rivers help us to generate H.E.P
- ❖ People carry out fishing on some lakes and rivers
- ❖ Some lakes are used for salt mining.
- ❖ We get water for irrigation from lakes and rivers.

Dangers of lakes and rivers.

- ❖ They are breeding places of disease vectors
- ❖ They are homes of dangerous wild animals.
- ❖ They flood and destroy people's properties.

A map showing physical features of Uganda(Mk atlas)

Lesson 15

IRRIGATION SCHEMES

An irrigation scheme is an area where crops are grown under the artificial supply of water from lakes or rivers

Irrigation is the artificial supply of water to land for plant growth.

Objectives of irrigation schemes

- To increase production off crops
- To idle land into uses
- To diversify/modernize agriculture

Advantages of growing crops by irrigation

- Crops are grown throughout the year
- Crops give high yields
- Dry land is put to use

Examples of irrigation schemes in Uganda

Scheme	Major crop grown
Doho	Rice
Tilda	Rice
Ongom	citrus fruits
Kiige	citrus fruits
Mobuku	cotton
Kiruruma	vegetables

Topical test

1. Why does river Nile flow Northwards?
2. Name the water body where river Nile pours its water
3. How is the formation of the rift valley similar to that of Mt. Rwenzori
4. State any one way physical features influence human settlement
5. Which is the commonest mean of transport used in mountainous areas
6. What is the direction of Mt. Rwenzori from Mt. Elgon
7. Why are landslides not common in central and northern Uganda
8. Give one reason why people in mountainous areas terrace their land
9. State the major cause of land fragmentation in south western Uganda
- 10a) What are physical features
- b) Mention any two ways in which mountains are important
- c) How do farmers benefit from living near mountains
- 11a) how did river Nile contribute to the coming of many explorers to Africa
- b) name the first explorers to reach:
 - i) Mt. Rwenzori
 - ii) Mt. Elgon
- c) why did most explorers who came to Uganda passed through Bagamoyo instead of Tanzania
- 12a) State two ways in which water falls are important to the economy of Uganda
- b) Define the following terms;
 - i) tributary of a river
 - ii) estuary
- 13a) why is every tourist who comes to Uganda given a map of Uganda

- b) State one way physical features promote tourism
- c) Why is tourism referred to as an invisible export
- d) Apart from tourism, name one other invisible export of Uganda

Lesson 16

WEATHER AND CLIMATE OF UGANDA

Weather: Is the daily condition of a place at a given time in the atmosphere.

Types/conditions of weather

- Windy - sunny - rainy - humid
- Cloudy - misty - foggy

Elements of weather

- Rainfall.
- Wind
- Temperature
- Sunshine
- Cloud cover
- Humidity
- Air pressure.

Types of clouds.

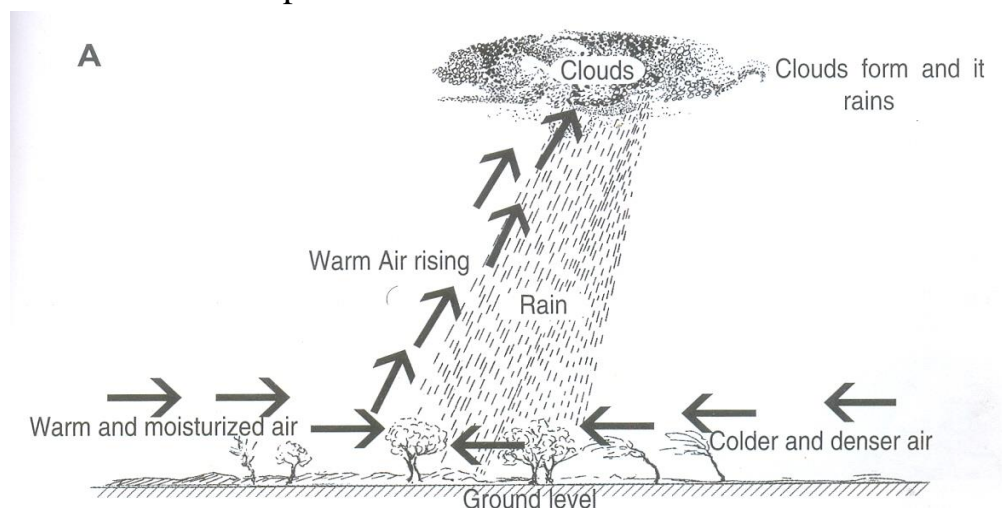
- (i) Cirrus
- (ii) Stratus
- (iii) Nimbus
- (iv) Cumulus
- (v) Cumulo nimbus etc

Types of rainfall

Rainfall: Is a type of precipitation. It can fall steadily as from Nimbus clouds or in heavy shower as from cumulo-nimbus.

❖ Cyclonic (frontal) rainfall.

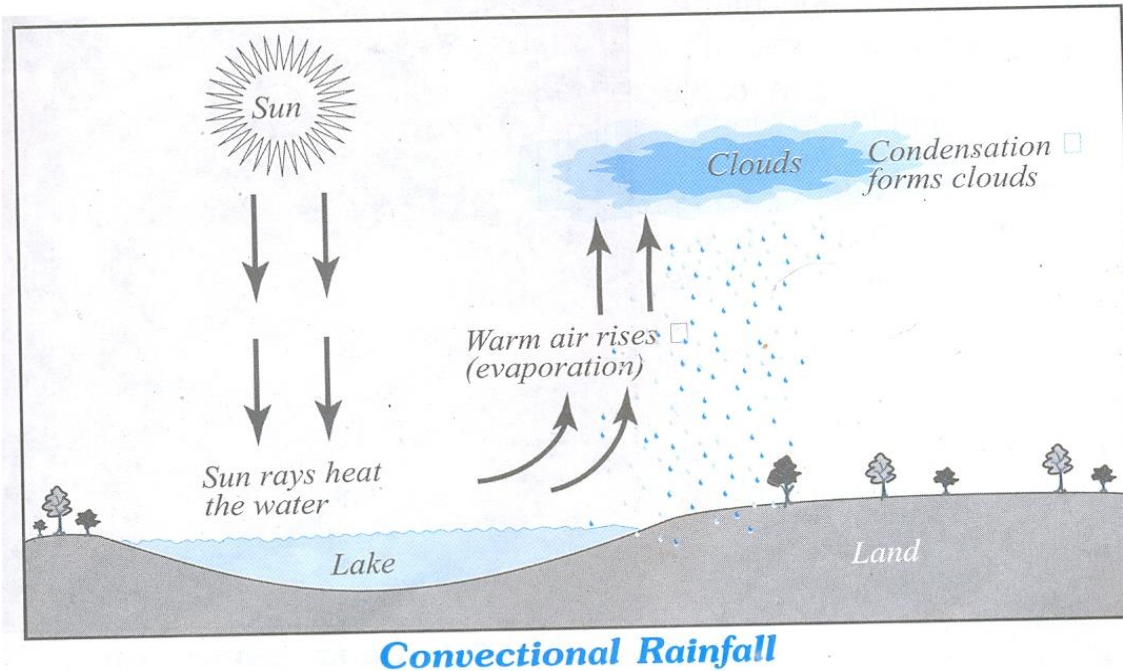
- It occurs when warm air meets cold or cool air and it's forced to rise up as cool air takes its place.
- As cool air rises up it expands and cools, condensation takes place to form clouds of water droplets.
- Its common in plain areas with few trees and no water bodies.



Lesson 17

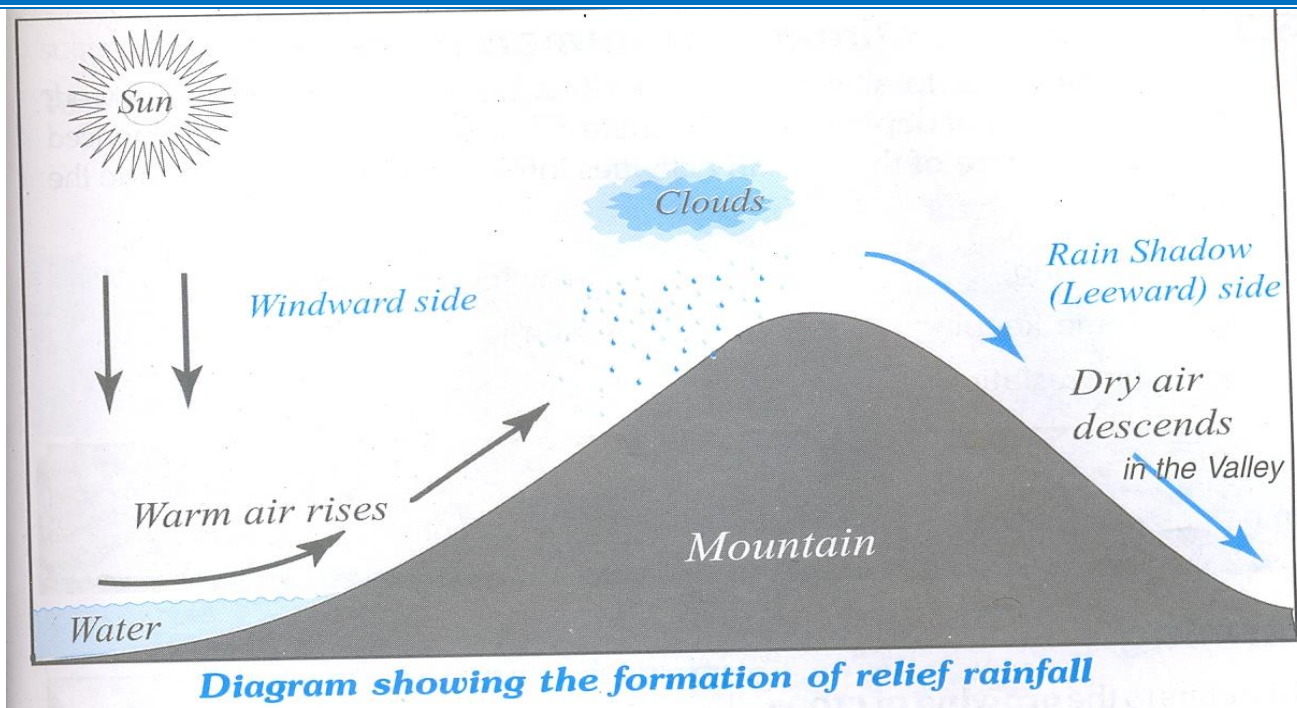
❖ Convictional rainfall

- Its formed when hot air rises and creates convectional currents.
- As hot air rises rapidly it cools at higher heights and it condenses to form cumulo-nimbus clouds.
- Heavy rainfall from these clouds.
- Such rainfall is received in areas around water bodies and forests.



❖ Relief (orographic) rainfall

- It is formed when moist winds blowing across, oceans, seas and lakes are forced to rise up over a mountain.
- As wind rise higher and higher the water vapour cools and condenses to form clouds.
- Rainfall occurs on the Windward side of a mountain the side that does not receive rainfall in the leeward side.
- Relief rainfall mainly occurs in highland areas.



Factors necessary for rainfall formation

- Sunshine
- Prevailing winds
- Nature of vegetation
- Water masses

Processes involved in rainfall formation

- Transpiration
- Evaporation
- Condensation

Meteorology is the scientific study of weather

- People who study weather and its conditions in the atmosphere are called meteorologists.
- The main metrological station in Uganda is found at Entebbe.

LESSON 18

WEATHER INSTRUMENTS

- ♥ **Rain gauge**: It measures the amount of rainfall received in an area.
 - It helps a farmer to know the amount of rainfall received.
 - It's always placed in an open area to collect the amount of rainfall without obstructions.
 - It's always raised above the ground to avoid entry of running water.
- ♥ **Hygrometer**: It measures humidity (Humidity is the amount of water vapour in the atmosphere)
- ♥ **Sixth thermometer (minimum and maximum)**
 - It measures the highest and lowest temperature of a place.
 - It uses two liquids namely mercury and alcohol.
- ♥ **Barometer**: It measure atmospheric (air) pressure.
- ♥ **Wind vane**: It shows the direction from which wind is blowing.
- ♥ **Windsock**: It shows the direction and strength of wind.
- ♥ **Sunshine recorder** It measures the intensity of sunshine.

♥ **Altimeter**: It measures the Altitude of an area.

All delicate weather instruments are kept in a Stevenson screen

The Stevenson screen is painted white to reflect sun heat

Terms associated with weather

- Isohels; these are lines drawn on a map to show places with the same sunshine
- **Isohyets**: - These lines join places with the same amount of rainfall.
- **Isotherms**: - These lines join places with the same temperatures.
- **Isobars**: - These lines join places with the same air pressure.
- **Contours**: - These lines join places with the same altitude.

Importance of weather

❖ **Rainfall**

- Source of water
- Helps crops grow well

❖ **Sunshine**

- Helps to dry clothes

- Helps to dry harvested crops

❖ **WIND**

- Used in winnowing
- Helps to run wind mills

Activity

1. How is weather different from climate
2. Apart from sunny weather, mention any one other condition of weather that dry clothes
3. Why are farmers advised to always plant their crops at the beginning of every rainy season
4. State two advantages of growing crops irrigation
5. What are perennial crops
6. Why should a good farmer always keep weather records
7. Give one reason why shores of lake Victoria are densely populated
8. Why is a wind sock not kept in the Stevenson screen
9. How is weather forecasting important to farmers
10. Why is rainfall measured millimeters not milliliters

Lesson 19

Dangers of weather and their effects to man

Floods: are large amounts of water covering an area

Causes of floods

- Heavy rainfall
- Drainage of swamps
- Bursting of lakes and rivers

Effects of floods

- Destruction of property
- Leads to famine by destroying crops

- Leads to loss of lives
- Leads to spread of diseases etc

Ways floods can be controlled

- Conserving swamps
- Constructing drainage channels

Drought: is a long period of sunshine

Causes of drought

- High rate of deforestation
- Swamp drainage
- Bush burning
- Dry prevailing winds

Effects of drought

- Famine
- Shortage of water and pasture
- Death of animals

Solutions to drought

- Practicing irrigation farming
- Afforestation
- Practicing agro-forestry

Landslides: are masses of soil or rock that falls down the slope of a mountain

Causes of landslides

- Heavy rainfall
- Over cultivation on mountain slopes
- Deforestation on mountain slopes

Effects of landslides

- Loss of lives
- Destruction of crops/property
- Displacement of people

Hailstones: are small balls of ice which falls like rain

Its caused by heavy rainfall

Effects of hailstones

- Destroys crops
- Kills animals

Ways of helping people affected by weather disasters

- By giving them food
- Giving them clothes
- Providing medical care
- Resettling disaster victims

Lesson 20

WEATHER FORECASTING

Weather forecasting is the fore telling of future weather changes in a day

Importance

- It helps people to plan for their activities

Examples of people who need weather forecasting in their daily work.

- Farmers
- Pilots
- Sailors

Farmers

- Helps farmers to know when to plant their crops
- Helps farmers to know when to harvest their crops

Sailors: helps them to know the right weather for sailing

Pilots: helps them to know the right weather to fly a plane

Influence of weather on people during;

Wet or rainy days

- People plant their crops
- People put on heavy clothes

Dry or sunny season

- They harvest their crops
- They dry their harvests
- They put on light clothes

Windy weather

- Farmers winnow their seeds
- People sail

CLIMATE

Climate is the average weather condition of a place studied and recorded for a long period of time.

Factors affecting / influencing the climate of Uganda

The climate of Uganda is determined by the following factors.

- ◆ Distance from the equator (latitude)
- ◆ Distance from large water bodies.
- ◆ Distance from large vegetation
- ◆ Ocean currents
- ◆ Relief of the land
- ◆ Human activities
- ◆ Altitude
- ◆ Prevailing winds. Etc

ACTIVITY

1. How does altitude influence climate of an area
2. State any one weather influences people

3. Why is the way of dressing for the people of Karimoja different from that of those in Kabale
4. In which one way can you help people affected by floods
5. What are isobars
6. State any one cause of drought in an area
7. What is weather forecasting
8. Mention any one condition of weather on which people use umbrellas
9. What was the major cause of the landslides in Bududa in 2009
10. State any one danger of weather to man

Lesson 21

WAYS CLIMATE AFFECTS MAN

- People put on light clothes during hot days(vice versa)
- People in dry areas grow drought resistant crops eg sorghum
- People in rainy areas build slanting roofed houses
- People in hot areas build flat houses to control temperature

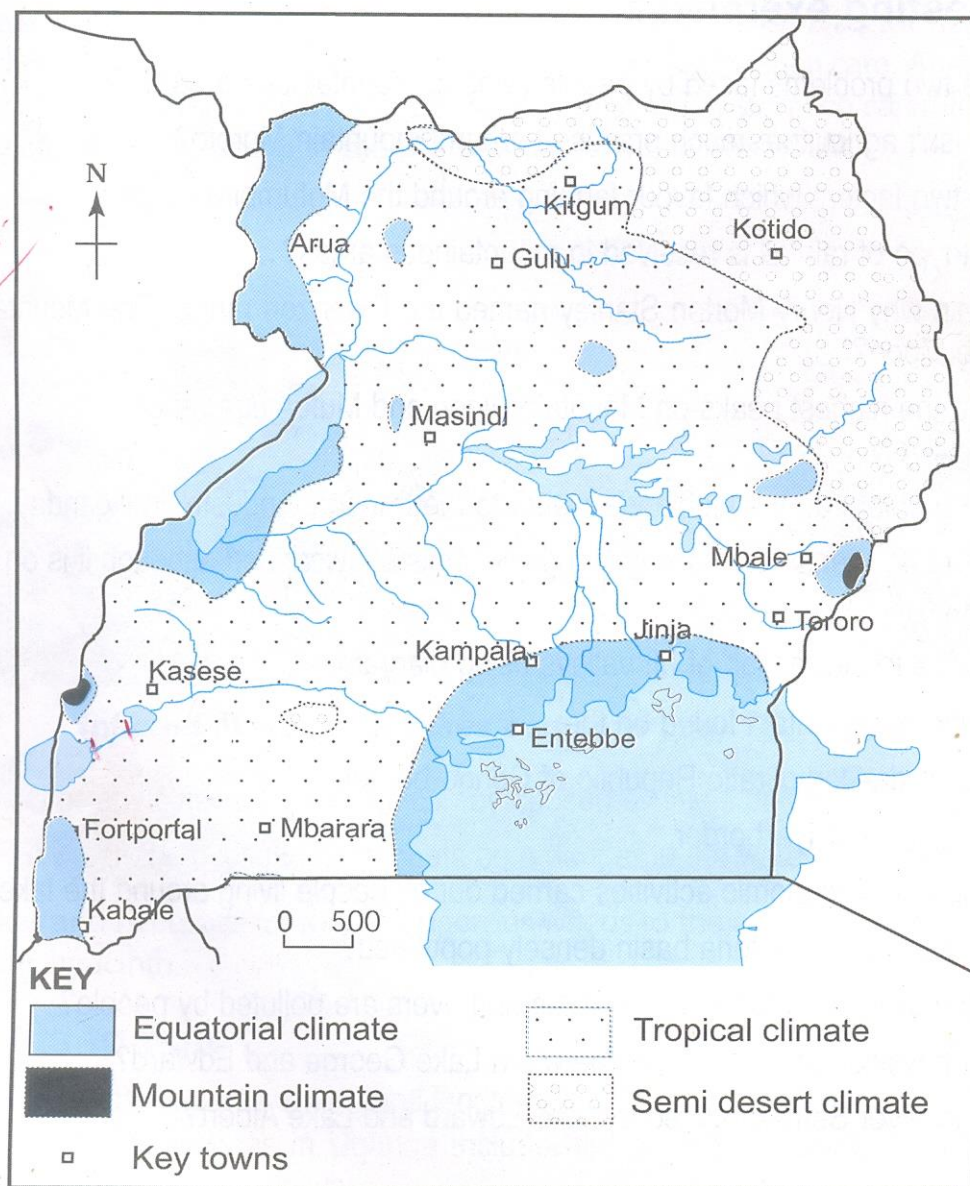
WAYS MAN AFFECTS CLIMATE

- People cut down trees which reduce rain formation
 - * Through lumbering
 - * Carrying out swamp drainage
 - * Carrying out industrialization
 - * Through charcoal burning
- People activities like afforestation, agroforestry increase rain formation

WAYS PHYSICAL FEATURES AFFECT CLIMATE

- High altitude mountains have ice on their peaks and low temperatures
- Low altitude areas have high temperatures e.g rift valleys
- Water bodies help in rain formation

MAP SHOWING CLIMATIC REGIONS



TYPES OF CLIMATE IN UGANDA

Uganda has the following climate regions or types of climate:-

- Equatorial climate
- Tropical climate
- Mountain climate
- Semi- desert climate

EQUATORIAL CLIMATE

This is experienced in lower latitudes between 6-7° north and south of the equator.

It is received in areas like Kampala, Mukono and Jinja etc.

Characteristics of equatorial climate

- It is hot and wet throughout the year.
- It receives high temperatures
- It receives heavy rainfall throughout the year

-It receives a double rainfall maxima and its convectional

Economic activities

-Farming

-Fishing

-Tourism

-Hunting

TROPICAL CLIMATE

This is experienced between 5-15 north and south of the equator.

Most parts of Uganda receive tropical climate because Uganda is found in the tropics.

It is received in central and eastern districts of Uganda

Characteristics of tropical climate

-It is wet and dry

-It has high temperature throughout the year.

-Rainfall is mainly received in the wet season

Economic activities

-Charcoal burning

-Tourism

-Bee keeping

-Farming

LESSON 22

MOUNTAIN CLIMATE

It is received in areas with highlands or mountains.

Its received in areas around Rwenzori, Elgon, Mufumbiro mountainous districts.

Characteristics of mountain climate

-Temperatures decrease with increase in altitude

-Receive heavy rainfall which is always orographic

-Windward sides are wetter than lee ward sides

Economic activities

-Farming

-Stone mining(quarrying)

-Tourism

SEMI –DESERT CLIMATE

Its mainly found in the sub tropic 20-30 north and south of the equator

It is experienced in North –eastern districts of Uganda (Karamoja)

Characteristics of semi- desert climate.

-It is hot and dry.

-It receives daily high temperatures

-Very hot days and very cold nights

-Rainfall is low and unreliable

Economic activities

-Pastoralism(cattle keeping)

-Tourism

- Mining

Note: The teacher should help learners to draw and answer questions about the climate graph from MK/ New fountain pupils books p.5

A sketch map of Uganda showing the climatic regions

Refer to page 25 of mk pupils book 5

Ways climate affects human activities

- 1- Climate determines the type of crops grown in an area.
- 2- Climate determines the type of animals kept in an area.
- 3- Determines the type of houses built in an area.
- 4- It determines the way people dress
- 5- Climate determines the type of transport used etc.

Topical test

1. What is climate
2. How is weather different from climate
3. Mention any one condition of weather
4. How does latitude influence climate in Uganda
5. State one way physical features influence climate
6. In which one way do human beings influence climate of an area
7. Give one reason why equatorial regions experience double rainfall maxima
8. Why is Mombasa hotter than Kampala yet it is near the ocean
9. How does climate influence farming
10. Describe equatorial climate
 - b) mention two characteristics of equatorial climate
 - c) which type of vegetation is found in equatorial regions

Lesson 23

THE VEGETATION OF UGANDA

Vegetation is the plant cover of an area.

Vegetation includes; natural vegetation and planted vegetation by people.

Components of vegetation

- | | | |
|-----------|---------|---------------|
| - trees | - grass | - flowers etc |
| (forests) | - crops | |

NATURAL VEGETATION

Natural vegetation is the plant cover of an area that grows on its own. **Plantation**

vegetation is the plant cover of an area grown by people.

A grassland is a big area with grass (pasture)

A forest: Is a big collection of trees in an area.

A swamp (wetland) is a water logged and vegetated area.

Factors affecting / influencing the natural vegetation of Uganda

- ◆ Distance from the equator (latitude)
- ◆ Distance from large water bodies.
- ◆ Climate
- ◆ Soil fertility
- ◆ Relief of the land
- ◆ Human activities e.g deforestation, swamp drainage, industrialization, afforestation etc.
- ◆ Altitude

Types of natural vegetation in Uganda.

- equatorial vegetation (tropical rain forests)
- savannah vegetation
- mountain vegetation (montane vegetation)
- semi-desert vegetation.

EQUATORIAL VEGETATION (RAIN FORESTS)

It's found in areas which experience heavy rainfall.

It grows in areas around Lake Victoria and south of lake Kyoga.

Examples of natural forest in Uganda

- Mabira natural forest in Mukono
- Bugoma natural forest in Hoima
- Budongo natural forest in Masindi
- Maramagambo natural forest in Bushenyi
- Bwindi natural forest in Kabale
- Marabigambo natural forest in Rakai
- Sese island natural forest in Kalangala etc

Examples of planted forests in Uganda

Lendu forest in west Nile

Mafuga forest in Rukungiri

Itwara forest in Kyenjojo

Buganba forest in Mbarara etc

Lesson 24

Importance of forest

- Source of timber
- Source of wood fuel
- Habitats for wildlife
- Helps in rain formation
- For tourist attraction

Characteristics of equatorial vegetation

- Trees are ever green
- Trees grow very tall.
- Trees are big
- Trees have broad (big) leaves
- Trees have hard wood
- Trees form a canopy etc

Examples of trees found in equatorial rain forests.

- Mvule
- Green heart
- Iron wood etc
- Mahogany
- Rose wood

Examples of trees found in plantation forests

- pine
- conifer
- eucalyptus (Kalitusi)

Note: lumbering is the major activity done in the equatorial areas.

Economic activities

- Fruit gathering
- Mining

SAVANNAH VEGETATION

It occurs in areas which experience tropical climate

It is the type of natural vegetation that covers most areas of Uganda.

Characteristics of savannah vegetation (plants)

- Plants shed off leaves in dry season.(deciduous)
- Plants have small compound leaves
- Plants have small leaves
- Plants have long roots.
- Trees have thick barks.

Economic activities in savannah regions / areas

- 1- Tourism
- 2- Cattle keeping

NB: Most of the game parks and game reserves are located in savannah areas because they have enough pasture and water for wild animals to feed on.

ACTIVITY

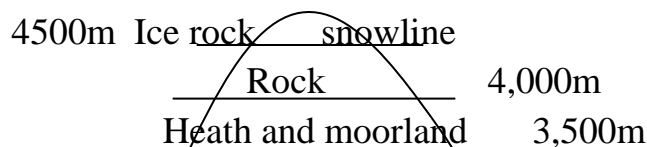
1. What is natural vegetation
2. Give one reason why trees in equatorial rainfall forests grow tall
3. Why is it bad to graze animals near forests
4. Why do trees in tropical regions shed off leaves
5. How does vegetation influence human settlement
6. Why are most game parks located in the savanna region
7. Give one reason why different animals live in different vegetation zones
8. State one reason why Uganda has different vegetation zones
9. State the main reason why Mabira forest exists in the area where it is today
10. State any one way man benefits from vegetation

LESSON 25

MOUNTAIN (MONTANE) VEGETATION.

It grows in mountainous areas.

A diagram showing mountain vegetation.



Bamboo	3,000m
Forest	1,500m
Grassland	

SEMI-DESERT VEGETATION

It grows in hot and dry areas of north-eastern Uganda that receives semi-desert climate.

Characteristics of semi-desert vegetation

- Plants have long roots.
- Trees shed off leaves to control transpiration.
- Plants have small and thick leaves.
- Trees have thick barks etc

Ways through which people have destroyed vegetation

- deforestation
- through bush burning
- through industrialization
- through swamp drainage
- through over grazing
- through over cultivation etc.

Ways of conserving / protecting vegetation

- Carryout afforestation
- Through re-afforestation
- Educate people about the importance of vegetation.
- Make strict laws against deforestation
- Advise people to stop deforestation. Etc

Values / importance of vegetation to people.

- People carry out lumbering in vegetation.
- People carry out charcoal burning in forests.
- Vegetation helps in the formation of rainfall.
- Vegetation attracts tourists to our country.
- Vegetation controls soil erosion.
- It's a source of herbal medicine.
- It's a source of raw materials for the paper industry etc.

Importance of vegetation to animals

Animals feed on vegetation

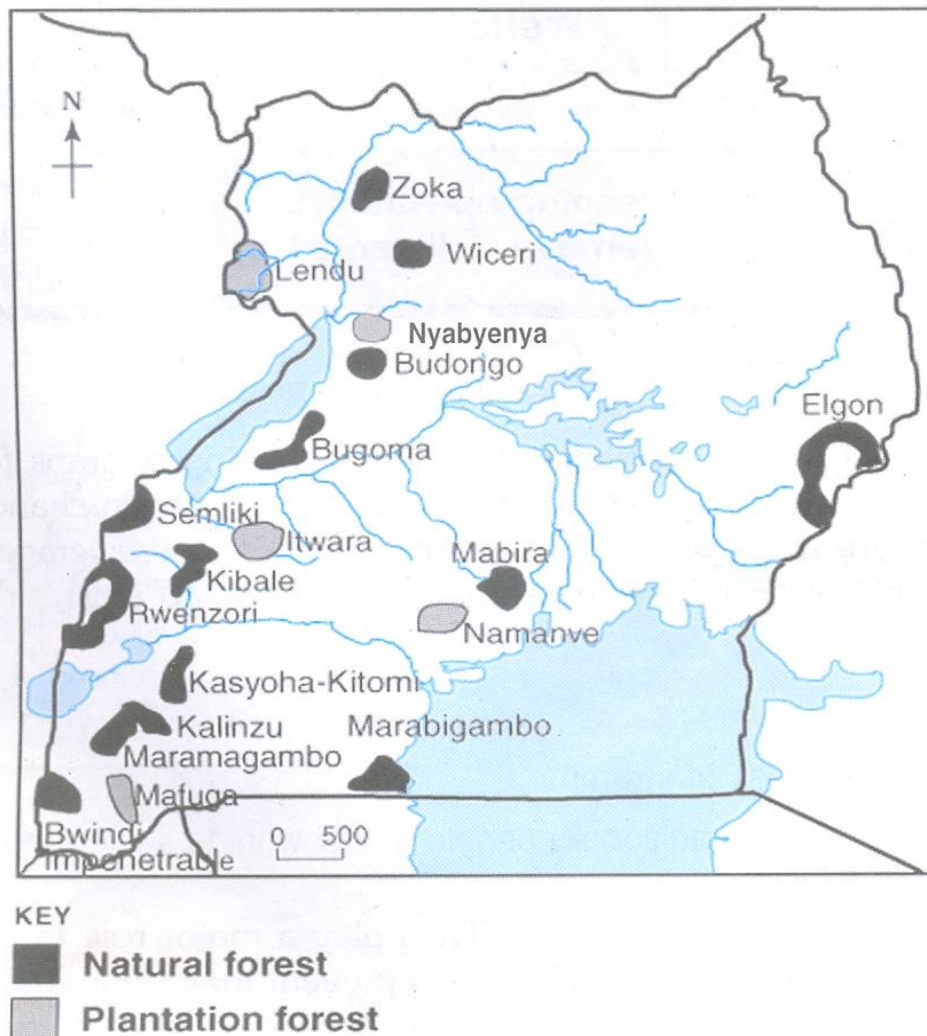
Vegetation shelter wild animals etc.

Problems caused by vegetation to people.

- It is a home of dangerous wild animals.
- It's a breeding place for biting insects like mosquitoes and tse-tse flies.
- It's a home of crop pests.
- It keeps criminals e.g rebels and thieves.

Lesson 26

A sketch map of Uganda showing major natural forests



Ways man destroys vegetation

- They want to get land for farming
- They want to create land for settlement
- They want to create land for industrialization
- They want to get timber.
- They want to get land for building roads etc

NB: The above are the causes of deforestation.

Effects / results of deforestation on the environment.

- Deforestation causes desertification (drought)
- It leads to the death of some animals.
- Leads to soil erosion.
- Leads to the formation of low rainfall in an area etc.

NB: The teacher should help learners to understand the term environmental degradation and its forms / ways.

GAME PARKS OF UGANDA

Vocabularies

- a) **A game park:** Is a place where wild animals are kept and protected and poaching is allowed on government permission.
- b) **A game reserve:** Is a place where wild animals are kept and protected and poaching is not allowed even on government permission.
- c) **Poaching:** Is the hunting / killing of wild animals in a game park with out government permission.
Or: Is the illegal hunting / killing wild animals in a game park.
- d) **Encroachment:** Is the illegal settlement on a park land.
Or: Is the settlement on a park land without government's permission.
- e) **Game rangers:** Are people who look after a game park.
- f) **Game warden:**

Game park

- Murchison fall NP
- Queen Elizabeth NP
- Mt. Rwenzori NP
- Kidepo NP

Major tourist attraction

- Bwindi Impenetrable forest NP
- Hippopotamuses/ Crocodiles
- Lions
- Ostriches

Examples of national reserves in Uganda

- Toro game reserve
- Karuma game reserve
- Katonga game reserve
- Kigezi game reserve
- Matheniko game reserve etc

Importance of National parks

- They attract tourists who bring money to a country.
- They are a home of wild animals.
- They are used for study purposes.
- They create job chances for people. Etc

Activity

1. What is tourism
2. Why is tourism referred to as an industry
3. State any one way the tourism industry can be improved in Uganda
4. Mention any two problems facing the tourism industry in Uganda
5. What reason do poachers give to hunt animals
6. What is the difference between a game ranger and a game warden
7. What is Bwindi impenetrable famous of
8. What is the major tourist attraction at Lake Nakuru
9. Why were elephants hunted in the 18th century
10. How do good hotels promote tourism

Lesson 27

Problems facing national parks

- poaching
- encroachment
- Shortage of fresh pasture and water.
- Animal diseases e.g bird flue, anthrax etc
- drought
- wild bush fires

Solutions to the above problems

- The government should educate people about the dangers of poaching and encroachment.
- The government should arrest and give fine to poachers and encroachers.
- Introducing pasture resistant to drought.
- Constructing / building valley dams.
- Educate people about the dangers of wild bush fires on a game park.
- The government should provide enough veterinary service to game parks.

Dangers of poaching

It reduces the number of wild animals in game parks.

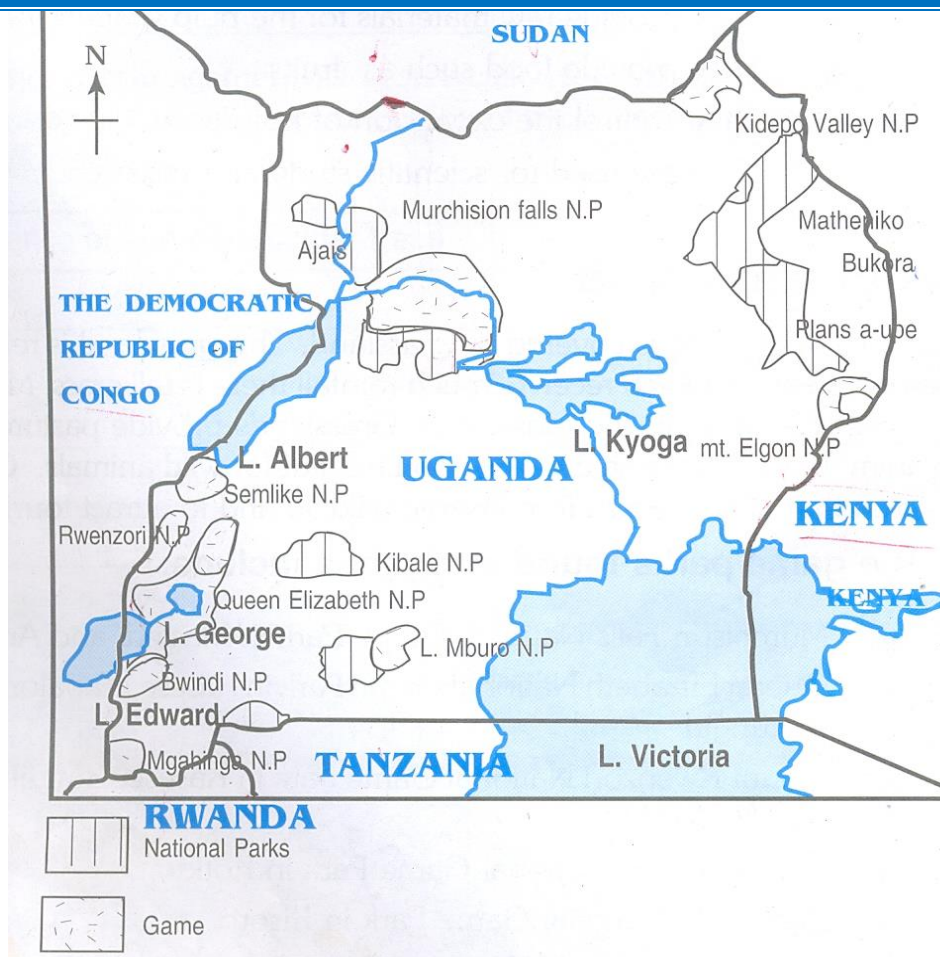
It leads to the death of wild animals in game parks.

NB: Most of the game parks are found / located in Savannah grasslands.

Reasons why most game parks are located / found in savannah grass lands.

- There is enough pasture for animals to eat.
- There is enough water for animals to drink.
- The climate is good for wild animals.
- There is enough space for animal movement.

Sketch map of Uganda showing the location of game parks



The teacher should help learners to draw a simply sketch map of Uganda with game parks.

Activity:

- 1- Which game park is famous for each of the following tourist attractions.
 - a) mountain gorillas
 - b) hippos
- 2- Mention one game park found in each of the following parts of Uganda.
 - (i) North Eastern Uganda
 - (ii) Western Uganda
- 3- Write down the largest national game park in Uganda
- 4- Why is it that hippos and crocodiles are not found in Kidepo valley national park etc

LESSON 28

TOURISM

Tourism is a business of providing food, accommodation and transport to tourists.

A tourist: Is a person who visits a place of his or her interest for leisure, adventure or education.

Importance of tourism to a country

It is a source of income.

It creates job chances for people.

Money got from tourism is used to provide social services e.g transport, medical care, education etc.

Tourism helps a country to be famous to the outside countries.

Problems caused by tourism to a country

- ◆ Easy spread of diseases.
- ◆ Loss of culture.
- ◆ It is expensive to build tourism facilities e.g hotels.
- ◆ Enemy countries can send spies as tourists.
- ◆ Un controlled tourism leads to destroying of the natural beauty of the environment . etc

Problems facing tourism industry in Uganda

- | | |
|------------------------------------|---------------------------|
| - Lack of enough food. | - Insecurity |
| - Poor accommodation | - Bad weather and climate |
| - Poor transport and communication | - Poor advertisement. |
| - Tropical diseases | |

Solutions to the above problems

- Building more hotels and lodges.
- Building good roads.
- Advertising using international radios and news papers.
- Use of the army and police to stop insecurity.
- Providing better medical services.

Questions:

1. Why is tourism called an industry?
2. State a reason why tourism is called an invisible trade.
3. Suggest a reason why tourism has improved in Uganda in the recent years etc.
4. How are archaeological sites important to the economy of Uganda
5. Which title is to a person who works in a museum
6. How does good communication network promote tourism
7. Give one way in which insecurity affects the tourism industry
8. Why is the tourism industry of Kenya better than that of Uganda
9. Write UWA in full
10. What factor has attracted many hippopotamuses at the Murchison falls?