

SCIENCE IN LOWER PRIMARY CLASSES

A RESOURCE BOOK FOR LEARNING SCIENCE (LUGANDA LANGUAGE)

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FOREWORD

The teaching and learning of science in lower primary schools can improve if pupils local learning environment is greatly used. Science concepts in local languages can be integrated in thematic curriculum strands if teachers are exposed to them. This resource book is an attempt to supplement teacher's local knowledge about science concepts that improve the learning of science in lower primary schools.

Much of our environments consist of plants and animals which pupils must learn about. These together with their parts have equivalent science terminologies in local languages that would make it easier for teachers to transfer science concepts to learners. This builds confidence as learners advance in their education and enables them to creatively construct innovations based on their understanding. This resource book can also help teachers and learners to appreciate the importance of the relatives exhibited in the social hierarchies of our extended family. All these when learned about can establish an interesting baseline of local language terminologies relevant to the learning of science in the environments around their homes and schools.

This resource book is a result of a research that documented local terminologies relevant to the teaching and learning of science concepts in lower primary schools in central Uganda. The resource book can provoke interactions amongst learners and teachers to constructively build knowledge for themselves, but can also guide excursions and discussions when learning activities take place outside classrooms.

Learners who are passionate about science can also use this book.



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A SHORT TEACHERS GUIDE

This resource book is to assist teachers as a starting guide in preparing thematic curriculum lessons in luganda speaking areas. Other familiar terms that are commonly used in the area can be adopted. Teachers are encouraged to develop collections of local terms that could be built on with time.

1. EBIKWATA KU MUNTU.

Abayizi balina okumanya ebitundu by'omuntu n'emigaso gyabyo. Amannya g'ebitundu bino mu lulimi Oluganda nga bwe gateekeddwa mu katabo kano gasobola okuyamba omusomesa okuyigiriza Ssayansi mu misomo nga bwe girambikiddwa mu nsoma ya nnamiramwa. Bino bye bimu ku bitundu by'omuntu ebigwanidde okumanyibwa abaana abato.

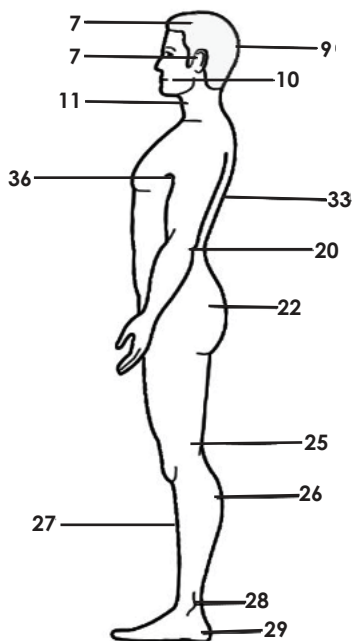
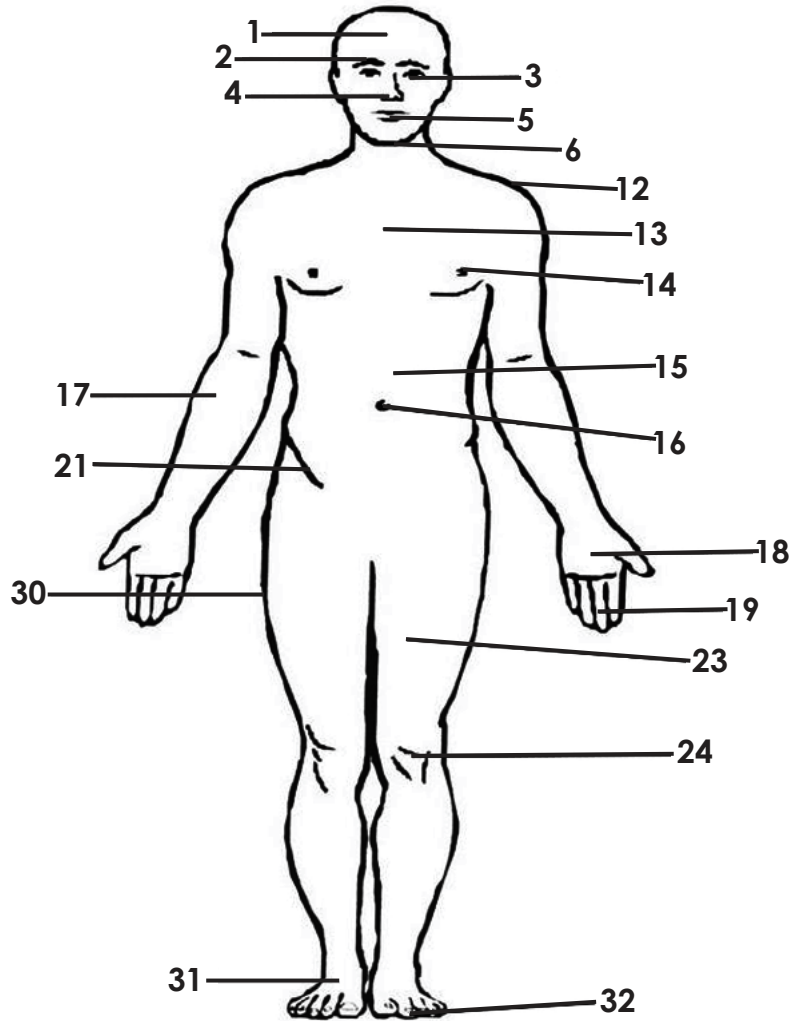
- Ebitundu by'omubiri - Laba olupapula naba 2 ne 3
- Ekkubo ly'emmere - Laba olupapula naba 4
- Ensengeka y'okussa - Laba olupapula naba 5
- Ebika by'amannyo - Laba olupapula naba 6
- Emikono n'engalo - Laba olupapula naba 7

1. ABOUT THE HUMAN BEING.

Learners need to know about the human body parts and their uses. An attempt has been made to provide a list of body parts in luganda language for

- a) Parts of the body - Page No. 1
- b) Alimentary canal
- c) Respiratory system
- d) Types of teeth
- e) Hands and fingers

EBITUNDU BY'OMUBIRI (PARTS OF THE BODY)



34



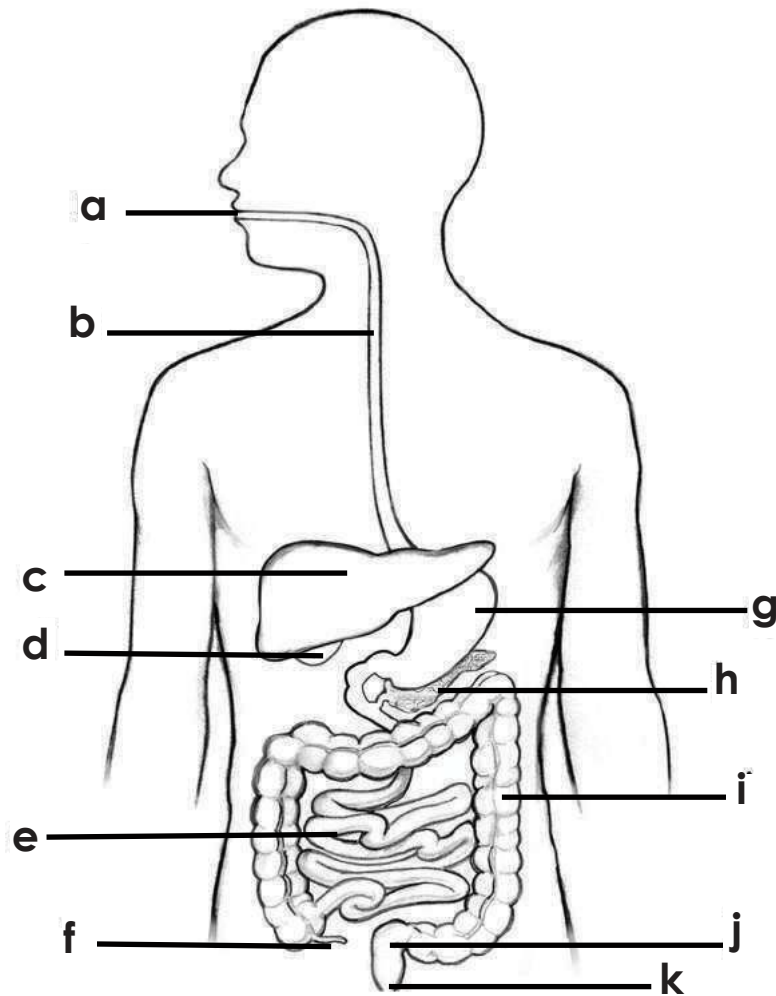
35

LUGANDA

ENGLISH

1. Ekyenyi	1. Fore Head
2. Ekisige	2. Eye brow
3. Eriiso	3. Eye
4. Ennyindo	4. Nose
5. Omumwa	5. Mouth
6. Akalevu	6. Chin
7. Enviiri	7. Hair
8. Okutu	8. Ear
9. Enkoona	9. Back of a Head
10. Ttama	10. Cheek
11. Obulago	11. Neck
12. Ekibegabega	12. Shoulder
13. Ekifuba	13. Chest
14. Ebbeere	14. Breast
15. Olubuto	15. Stomach
16. Ekkundi	16. Navel
17. Omukono	17. Hand
18. Ekibatu	18. Palm
19. Engalo	19. Finger
20. Akakokola	20. Elbow
21. Ekiwato	21. Waist
22. Akabina	22. Buttock
23. Ekisambi	23. Thigh
24. Evviivi	24. Knee
25. Ntegetege	25. Behind the Knee
26. Entumbwe	26. Culf
27. Lulundulirunduli	27. Front Calf
28. Akakongovvule	28. Ankle
29. Ekisizziro	29. Heel
30. Makudde	30. Hip
31. Kigere	31. Foot
32. Obugere	32. Toes
33. Omugongo	33. Back
34. Kiwalaata	34. Bald
35. Bukoowekeowe	35. Eye lashes
36. Ekwawa	36. Armpit

EKKUBO LY'EMMERE (HUMAN ALIMENTARY CANAL)



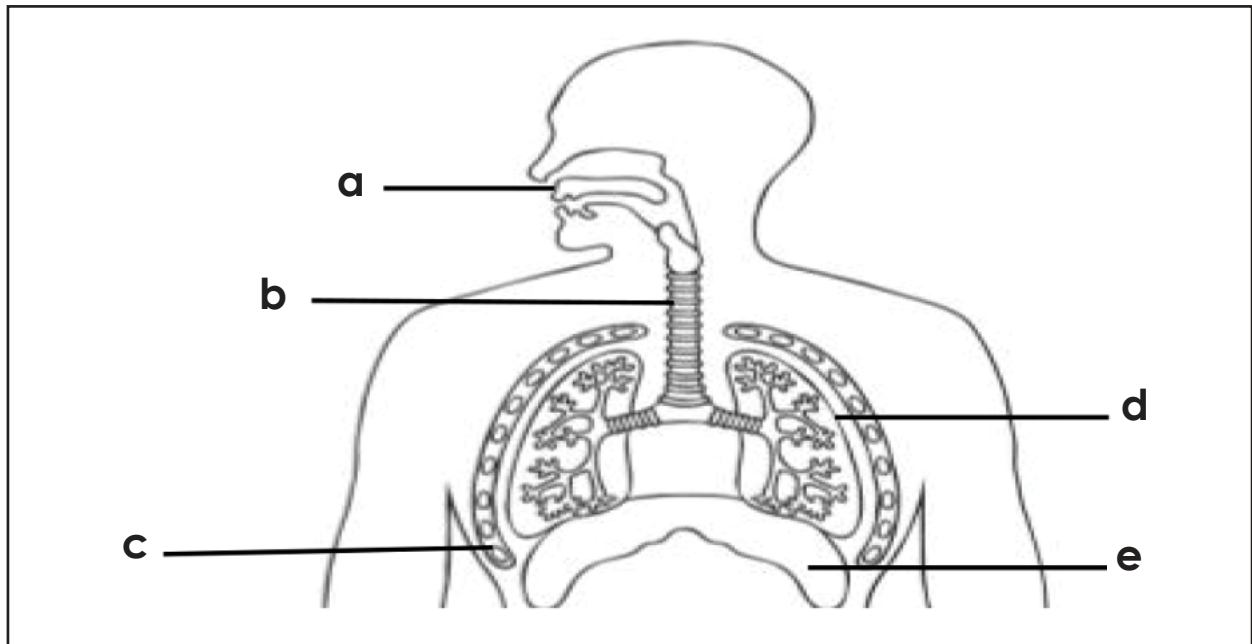
LUGANDA

- a. Omumwa
- b. Omumiro
- c. Ekibumba
- d. Akalulwe
- e. Ekyenda ekitono
- f. Ekyenda ekitereka obuyinja
- g. Ekyenda ekinene
- h. Kataago
- i. Lubuto
- j. Emmeeme ya wansi
- k. Akatiiri

ENGLISH

- a. Mouth
- b. Gullet
- c. Liver
- d. Gall Bladder
- e. Small Intestine
- f. Appendix
- g. Stomach
- h. Pancreas
- i. Large Intestine
- j. Rectum
- k. Anus

ENSENGEKERA Y'OKUSSA (RESPIRATORY SYSTEM)



LUGANDA

ENGLISH

a. Ennyindo

a. Nose

b. Akaggula

b. Windpipe

c. Akabubi

c. Membrane

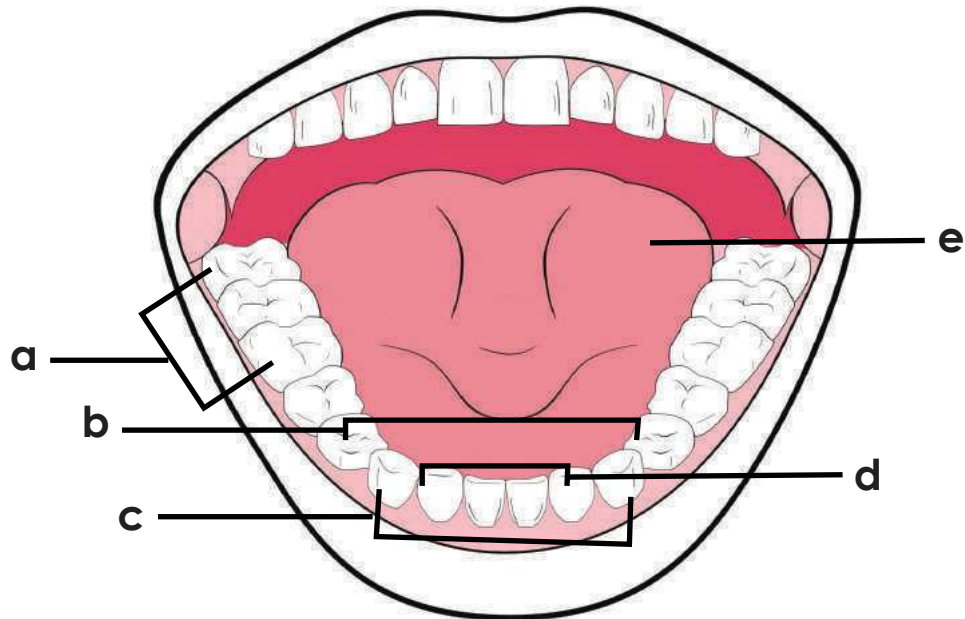
d. Amawuggwe

d. Diaphragm

e. Ekinywa kya mawugwe

e. Diaphragm

EBIKA BY'AMANNYO (TYPES OF TEETH)



g



f

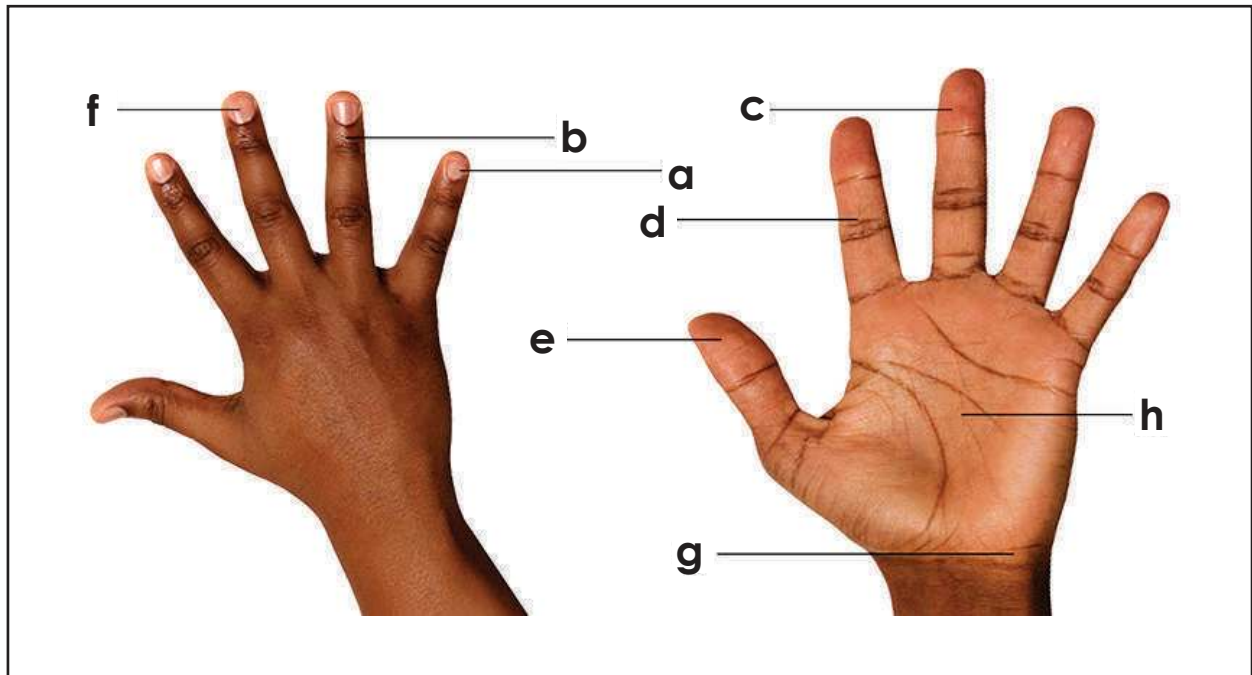
LUGANDA

- a. Amagego
- b. Amagego Agasooka
- c. Amasongezo
- d. Amasazi
- e. Olulimi
- f. Akazigo
- g. Akannya k'okuttama

ENGLISH

- a. Molars
- b. Premolars
- c. Canine
- d. Incisors
- e. Tongue
- f. Diastema
- g. Dimple

EBITUNDU BY'OMUKONO (PARTS OF A HAND)



LUGANDA

- a. Nasswi
- b. Ntevuunya / Enkazi
- c. Kwemmembekedde
- d. Lunwe
- e. Kyalakisajja/Ensajja
- f. Olwala
- g. Ekiseke
- h. Ekibatu

ENGLISH

- a. Little Finger
- b. Ring Finger
- c. Middle Finger
- d. Index Finger
- e. Thumb
- f. Finger Nail
- g. Wrist
- h. Palm

2. EBISOLO.

Abayizi bateekeddwa okumanya ebisolo, ebikwata ku bisolo (Ebika nga 20) mu Uganda n'emigaso gyabyo. Ebisolo biri mu bika bya njawulo okugeza nga:

- a) Ebisolo by'awaka - Laba olupapula naba 9 ne naba 10
- b) Ebisolo by'omu nsiko - Laba olupapula naba 11 paka ku 16

EMIGASO GY'EBISOLO:-

- Bivaamu emmere, tubirya.
- Tubitunda ne tufuna ensimbi ezituyamba.
- Ebitundu by'ebisolo nga amaliba tugajaamu engato, ensawo, emisimpi, engoye nebirala.
- Tubikolamu eddagala.
- Bikola ebyobulambuzi.
- Emiziro gyebika gy'abantu mu Buganda.
- Tubiyigako wamu n'okubinoonyerezaako.
- Bitundibwa mu mawanga ag'ebweeru.
- Bwe bifa bivunda ne bifuka kigimusa mu ttaka.

2. ANIMALS.

Learners need to know about animals (at least 20) in our environment, their uses and habitats

- a) Common domestic animals.
- b) Wild animals.

Note: Only a few of them have been represented in this book make a list of common animals as you identify them to build on those that occur in our environment.

IMPORTANCE OF ANIMALS:-

- Source of food
- Source of Income
- For industries eg bags, shoes, music instruments, etc
- Source of Medicine
- For Tourism and leisure
- For Education
- Source of Foreign exchange
- For totems
- When they decompose they fertilize the soil.

EBISOLO BYA WAKA (DOMESTIC ANIMALS)



Ente
(Cow)



Embuzi
(Goat)



Embwa
(Dog)



Akamyu
(Rabbit)



Endiga
(Sheep)



Ndogoyi
(Donkey)

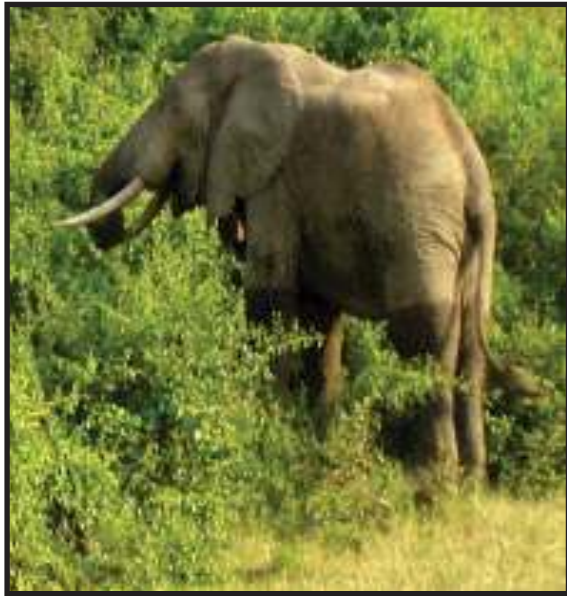


Embizzi
(Pigs)



Kkapa
(Cat)

EBISOLO BY'OMUNSIKO (WILD ANIMALS)



Enjovu
(Elephant)



Nvubu
(Hipopotamus)



Enkula
(Rhinoceros)



Njiri
(Warthog)



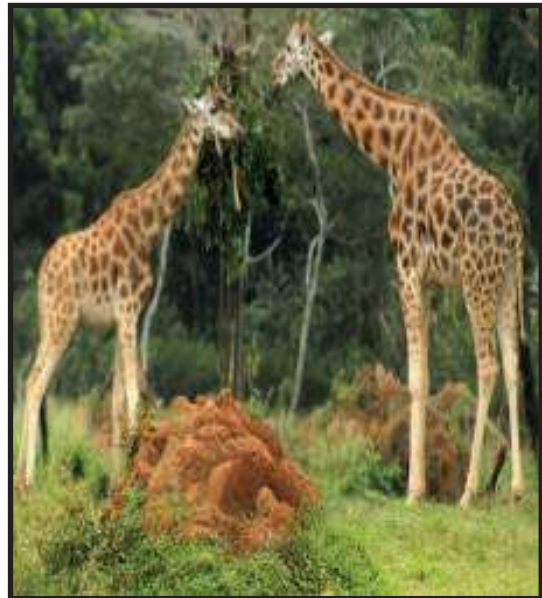
Entulege
(Zebra)



Ngabi
(Kob)



Mmese
(Rat)



Ntugga
(Giraffe)



Mbogo
(Buffalo)



Mpisi
(Hyena)



Ggoonya
(Crocodile)



Nfudu
(Tortoise)



Kamujje
(Squirrel)



Enjonge
(Otter)



Kibe
(Fox)



Nsama
(Waterbuck)



Engo
(Leopard)



Enkobe
(Baboon)



Zzike
(Chimpanze)



Cheetah



Tiger



**Kisodde
(Gorrila)**



**Enkima
(Monkey)**



**Empologoma
(Lion)**

Omusesa akole enkalala z'ebisolo ebirala ebisangibwa mu Uganda

EBISOLO EBIRALA.

Ebikere, Emisota N'eminya

Emisota n'ebikere bibeera mu nsiko. Gyewalula bwewaluzi tegirina bigere. Egimu girina obusagwa. Bwe gukuluma gusobola okukutta. Egisinga obungi tegirina busagwa. Olina okumanya egirina obusagwa okugyawula ku gitalina. Si kirungi kumala gazannyisa misota. Singa giyingira mu nnyumba, ogigoba oba oyita abobuyinza ne bakuyambako ne baginona ne bagitwala.

Eminya nagyo gifaanana nga emisota naye gyo girina ebigere. Muno mulimu n'amakonkome enswaswa ne goonya. Enfudu ne nawolovu nabyo biri mu ttuluba lino. Waliwo eminya egibeera mu mayumba. Gino giyambako okulya obuwuka nga ensiri eziyingira mu nju. Goonya zibeera mu mazzi. Ziry ebisolo. Oluusi ziry n'abantu.

Ebikere bibeera kumpi n'amazzi. Ebikere bibiika amagi gaabyo mu mazzi. Amagi gaalula obukolwa ne bubeera mu mazzi okutuuka lwe bufuuka ebikere. Olwo ne bugenda ku lukalu. Ebikere birya ebiwuka n'ebyawalula omuli ensiringanyi n'amakovu. Bikozeza olulimi okukwata kye bigenda okulya.

OTHER ANIMALS.

Snakes and frogs live in bushes. Frogs live near water. They lay their eggs in water. The eggs hatch into young ones called tadpoles. Tadpoles breath in water. Frogs breath in air. Frogs mainly eat insects and worms. Some eat snails. They use their sticky tongue to catch their prey. Snakes also live in our environment. Some snakes are poisonous. Their bites can kill. Most snakes are not poisonous. But you need to know which ones are poisonous and which ones are not.

Its not good for anybody to play with snakes and frogs. Its important to remove the bush which attract snakes near our homes and water logged places which attract frogs. If snakes get into the house and cannot be scared away, call the authorities to capture it and take it away. This is in case you cannot scare or repel them away.

EBISOLO EBIRALA (OTHER ANIMALS)



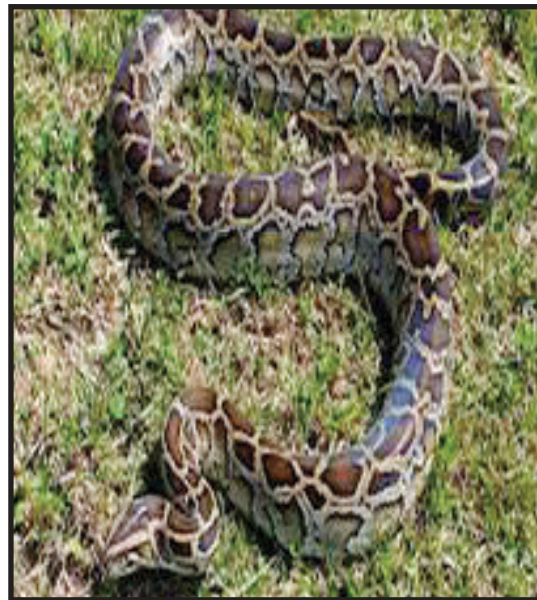
**Enswera
(Cobra)**



**Omunya
(Lizard)**



**Akawundo
(Bat)**



**Ttimba
(Python)**



Ekikere
(Frog)



Ekkonkome
(Female Gheko)



Nawolovu
(Chameleon)



Omusota
(Snake)

Omusomesa akole olukalala lwe misota egiri mu Uganda.

EBITONGOLE EBIKUUMA EBISOLO BYOMUNSIIKO

Institutions that manage Wildlife and their habitats in Uganda.

a) Uganda Wildlife Authority

(How many National Parks are in Uganda?)

- a. National Parks
- b. Wildlife reserves

b) National Forestry Authority

(How many forest reserves are in Uganda?)

- a. Forest reserves

c) Ministry of Water and Environment

(Mention big lakes and rivers in Uganda?)

- a. Lakes, rivers and ground water
- b. Wetlands

d) Agriculture Animal Industry and Fisheries

- a. For domestic animals and fish

e) Uganda Wildlife Education Center

- a. Animals in captivity

f) Every Human Being

- a. Animals in sanctuaries and our surroundings

g) National Environment Management Authority

- a. Regulation of use

3. EBIWUKA.

Abayizi bateekeddwa okuyiga ku biwuka ebitwetoolodde wamu n'emigaso gyabyo. Okusingira ddala okumanya:-

- Ammanya g'ebiwuka bye tintera okulaba
- Ebitundu by'ekiwuka - Laba olupapula naba 20
- Enkula y'ebiwuka - Laba olupapula naba 21
- Ebika by'ebiwuka - Laba olupapula naba 22 paka ku 27

EMIGASO GY'EBIWUKA:-

- Bivaamu emmere.
- Bivaamu ensimbi ezituyamba.
- Bikolebwamu amakolero nga ag'engoye.
- Bivaamu eddagala.
- Bitambuza enkwaso mu bimera.
- Emiziro gy'abantu mu Buganda nga Enseene, Ekinyomo.
- Tubiyigako wamu n'okubinoonyerezako.
- Bitundibwa mu mawanga ag'ebweeru.

3. INSECTS.

Learners should learn about common insects, their parts and uses particularly their

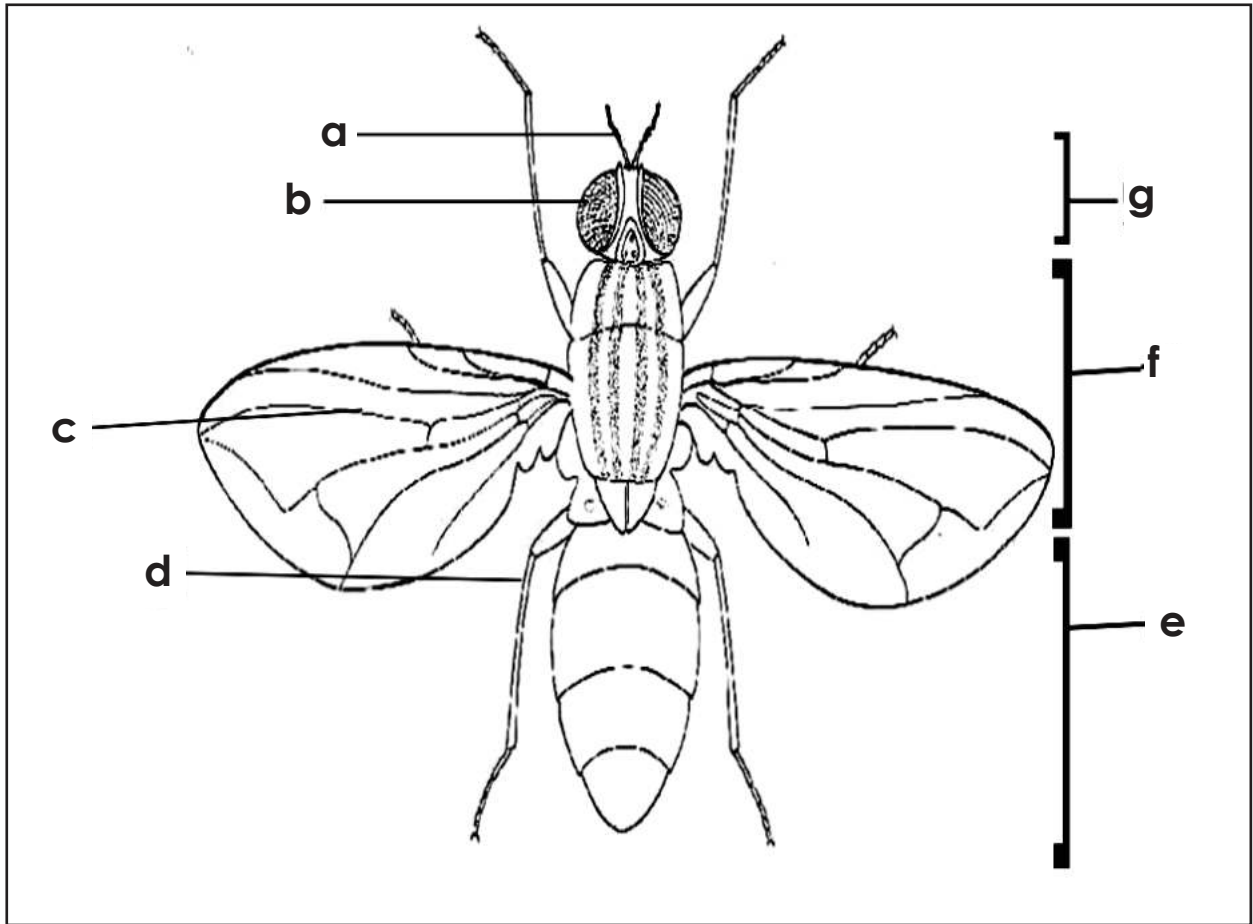
- a) Names of common of insects
- b) Parts
- c) The two kinds of reproductive life cycles
- d) Classification of insects
 - i. Common insects (**Ebiwuka bye tintera okulaba**)
 - ii. Biting insects (**Ebiwuka ebiruma**)
 - iii. Useful insects e.g food, pollination, silk, medicine (**Ebiwuka eby'omugaso**)

- iv. Insects that cause diseases – vectors (**Ebiwuka ebireeta endwadde**)
- v. Social insects (**Ebiwuka ebibeera mu ebibinja**)
- vi. Seasonal insects e.g. grasshoppers, armyworms, locusts, lake flies, (**Ebiwuka ebya sizoni**)

IMPORTANCE OF INSECTS:-

- Source of Income
- Source of Food
- For pollination
- Source of Medicine
- For industries e.g silk worm
- For soil fertilization
- For education and research
- Decomposition e.g houseflies produce maggots which can be fed to chicken

EBITUNDU BY'EKIWUKA (PARTS OF AN INSECT)



LUGANDA

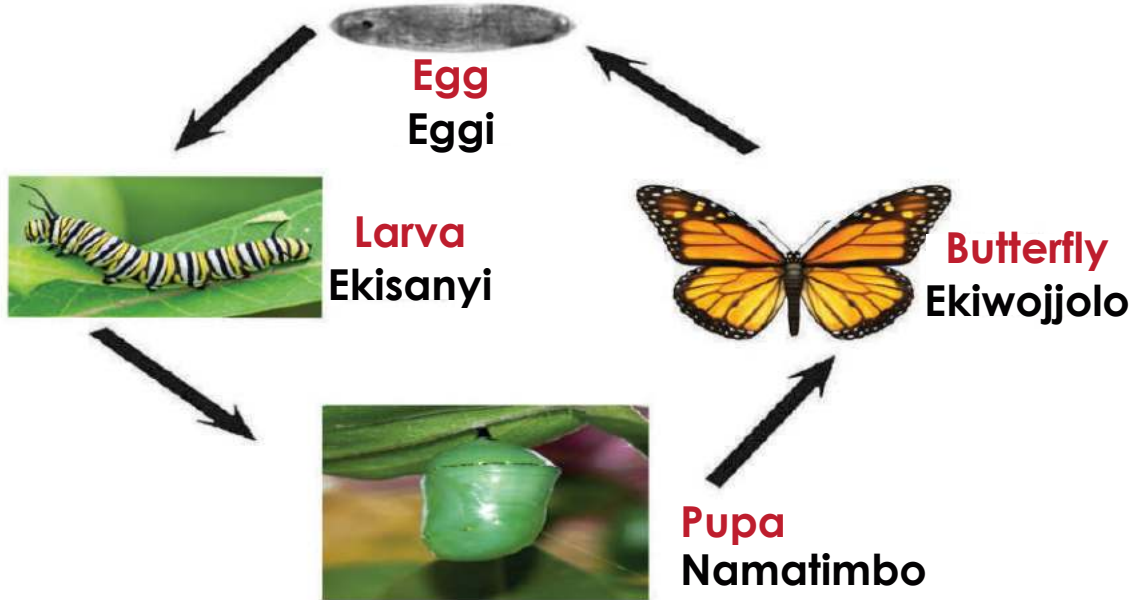
ENGLISH

- a. Obuyembe
- b. Eriiso
- c. Ekiwawaatiro
- d. Okugulu
- e. Ekibuto
- f. Ekifuba
- g. Omutwe

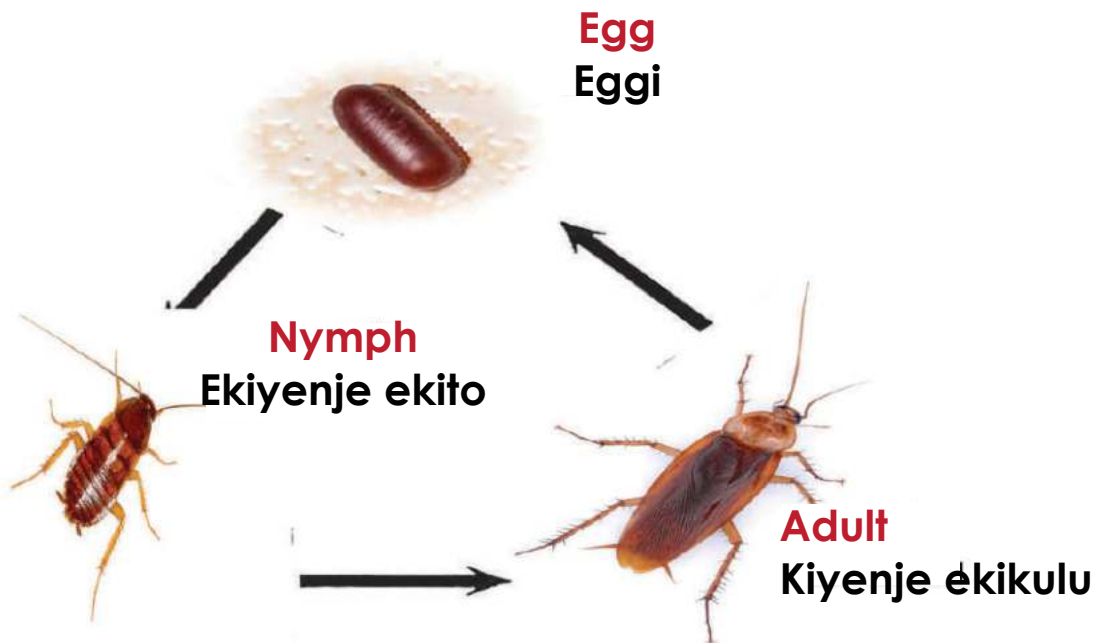
- a. Antennas
- b. Compound Eye
- c. Wing
- d. Leg
- e. Abdomen
- f. Thorax
- g. Head

ENKULA Y'EBIWUKA (LIFE CYCLE OF INSECTS)

COMPLETE CYCLE OF A BUTTERFLY



Incomplete Cycle of a Cockroach



Waliwo akayimba akakwata kubiwuka binno?

EBIWUKA (INSECTS)



Kisaanyi
(Caterpillar)



Namatimbo
(Pupa)



Ekiyenje
(Cockroach)



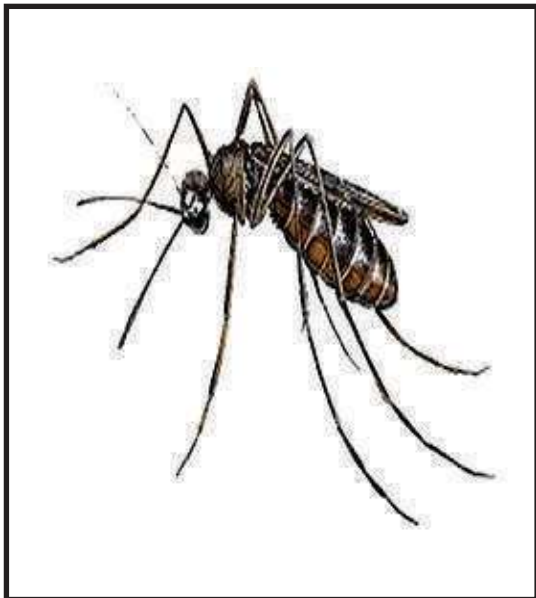
Ekiwojjolo
(Butter Fly)



Eggongolo
(Millepede)



Enkuyege ensajja
(Termite)



Ensiri
(Mosquito)



Ensowera
(House Fly)



Ensanafu
(Safari Ants)



Kaasa
(Solider Ant)



Kalalankoma
(Paper wasp)



Enseenene
(Grasshopper)



Enswa
(Safari Ants)



Nnamunswa
(Queen ant)



Ensiringanyi
(Earth worm)



Ekkovu
(Snail)



Ejjanzi
(Grasshopper)



(Nairobi Fly)



Kkongoolamabere
(Playing Mantis)



Akanyenyenkule
(Cricket)



Enkwa
(Ticks)



Ebikunnembi
(Sugar ant)



Nnabbubi
(Spider)



Ennumba
(Wasp)

Waliwo akayimba akakwata kubiwuka binno?

Omusomesa akole olukalala lw'ebiwuuka ebiri mu Uganda.

4. EBINYONYI.

Tulina ebika by'ebinyonyi bingi mu Mu'nsi. Ebinyonyi ebimu birundibwa awaka ng'ate ebirala bibeera mu nsiko. Ebinyonyi ebirundibwa awaka biba bya kulya wamu n'okufuna ensimbi.

EGIMU KU MIGASO GY'EBINYONYI EBIBEERA AWAKA GYEGINO:-

- Bivaamu emmere ezimba omubiri
- Bivaamu ebigimusa
- Bivaamu ensimbi
- Biyamba ku byobulambuzi
- Bigera obudde
- Bisomesebwako
- Ebimu bivaamu eddagala
- Ebinyonyi bikuuma awaka

Ebinyonyi by'omu nsiko bibeera mu bisu bye bizimba mu miti, ku ttaka oba ku mayumba g'abantu. Ebimu bibuuka ate ngebirala nga Mmaaya tebisobola kubuuka. Ebinyonyi by'omu nsiko bya migaso mingi omuli okubirya (enkofu, enkwale, enjibwa), okubiggyamu eddagala (amaggi g'enkwale). Biyamba okugera obudde ne sizoni. Tubisomako wamu n'okubinoonyerezaako.

Ngaali kye kinyonyi ky'eggwanga lyaffe Uganda.

4. BIRDS.

There are many birds in our environment. Some birds are kept in our homes others are wild. The ones kept in our homes are mainly for food and for income.

Common uses of domestic birds include:-

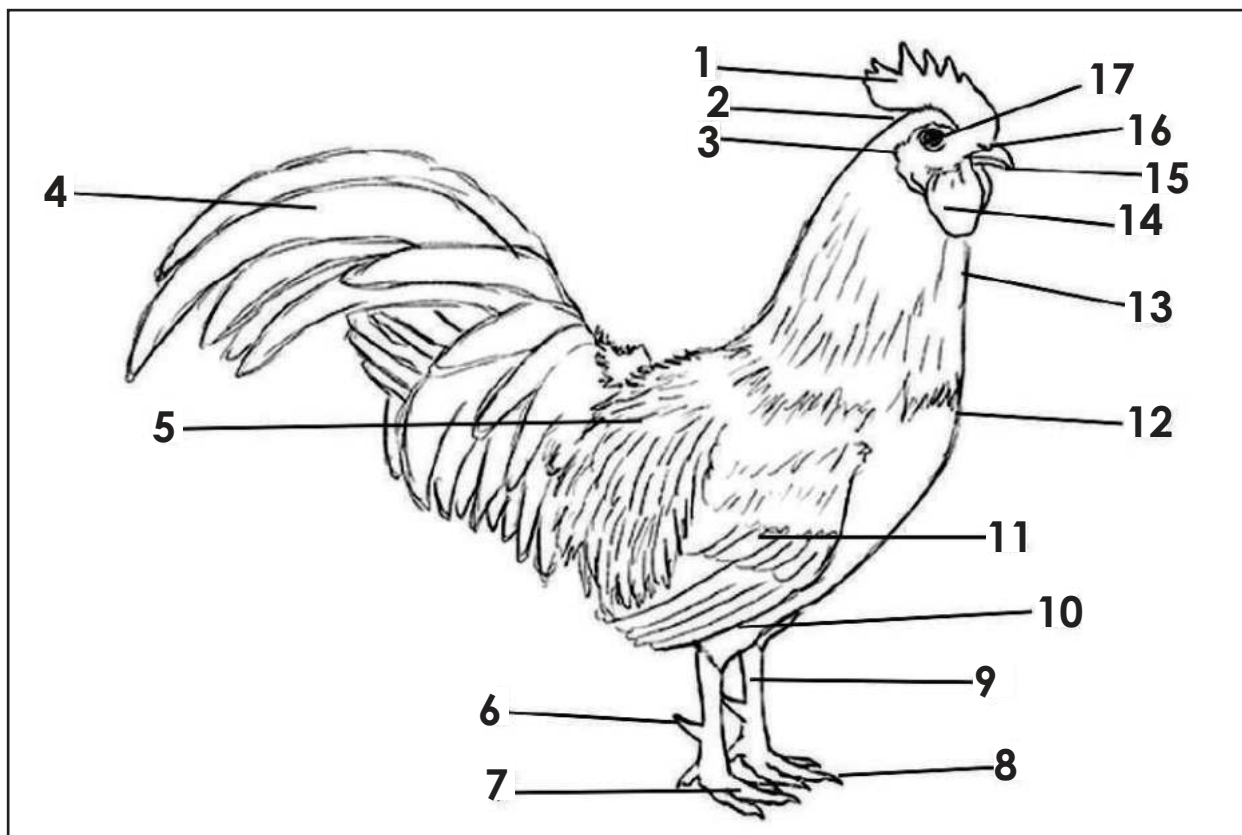
- Source of food for animal protein.
- Fertilizer from droppings.
- Source of Income through employment as a poultry farmer and tourism.
- Some are kept as pets.
- Some are kept for medicinal purposes.
- For education purposes and research.

Some wild birds live in trees, ground and houses. Some birds can fly while others cannot fly. Ostrich cannot fly.

BIRDS ARE USEFUL IN MANY WAYS. THEY CAN:-

- a) Be eaten by humans e.g. Guinea fowl, doves, Quail, ostrich and their eggs etc.
- b) Are totems especially in Buganda region.
- c) Many birds are attractive for tourism called Avi-tourism which is source of income e.g. peacock.
- d) The national bird is crested crane; it has the colors of the national flag.
- e) Birds like parrots can be kept as pets.
- f) Birds can be learned about in education and research.
- g) Birds can predict time and seasons.

EBITUNDU BY'EKINYONYI PARTS OF A BIRD (NKOKO)



LUGANDA

1. Oluwonzi
2. Omutwe
3. Akabubi k'okutu
4. Kyensuti
5. Byoya by'enkoko
6. Ejjindu
7. Bigere
8. Enjala
9. Kugulu
10. Kisambi
11. Ebiwawaatiro
12. Kifuba
13. Olusingosingo
14. Mayunju
15. Mumwa
16. Nnyindo
17. Eriiso

ENGLISH

1. Comb
2. Head
3. Ear
4. Main Tail
5. Feathers
6. Spur
7. Toes
8. Claws
9. Leg
10. Thigh
11. Wing
12. Chest
13. Neck
14. Wattle
15. Beak
16. Nostril
17. Eye

EBINYONYI BY'AWAKA (DOMESTIC BIRDS)



**Sseggwanga
(Cock)**



**Enkoko enkazi
(Hen)**



**Ssekkokko
(Turkey)**



**Embaata
(Ducks)**



Enkofu
(Guinea Fowl)



Enjiibwa
(Pigeons)

EBINYONYI BYO'MUSIKO (WILDS BIRDS)



Kalooli
(Marabou)



Nyange
(Cattle Egret)



Ssekanyolya
(Grey heron)



Mpungu
(Long crested Eagle)



Ejjuba
(Dove)



Mpaabaana
(African green Ibis)



Enkofu
(Guinea fowl)



Namunjoona
(Pied crow)



(Shoe bill)



Kamunye
(Fish Eagle)



Nyonyimuzinge
(Peacock)



Nkazaluggya
(Sparrow)



Nkusu
(Parrot)



Amafulungu
(Blue Turaco)



Akasanke
(Penduline tit)



Endegeya
(Weaver Bird)



Maaya
(Ostriches)



Nsega
(Vulture)



ŋŋaali
(Crested crane)



Ebinyira
(Bat)



Kiwuggulu
(Owl)



Naddibanga
(Hammercop)

Omusomesa akole olukalala lw'ebinyonyi ebiri mu Uganda.

5. EBYENNYANJA.

Ebyennyanya bibeera mu mazzi nga mu nnyanja, emigga, ne mu ntobazzi. Ebyennyanya ebimu birundibwa mu bidiba oba mu nnyanja. Ebyennyanya bikozeza obukuba amazzi okutambula era bikozeza ebiviiri okussa. Tulina ebika by'ebyennyanya bingi ebibeera mu nnyanja n'enzizi za Uganda.

EBYENNYANJA BIRINA EMIGASO MINGI ERI ABANTU OKUGEZA NGA:-

- Bivaamu emmere ezimba omubiri wamu n'emmere y'ebisolo.
- Ebimu bivaamu eddagala nga mukene n'enkejje.
- Ebimu miziro gy'abantu nga emmamba n'enkejje.
- Bivaamu ensimbi.
- Biyamba ku byobulambuzi.
- Bisomesebwako w'amu n'okubinoonyerezaako.
- Omusomesa akole olukalala lw'ebyennyanya ebiri mu Uganda.

5. FISH.

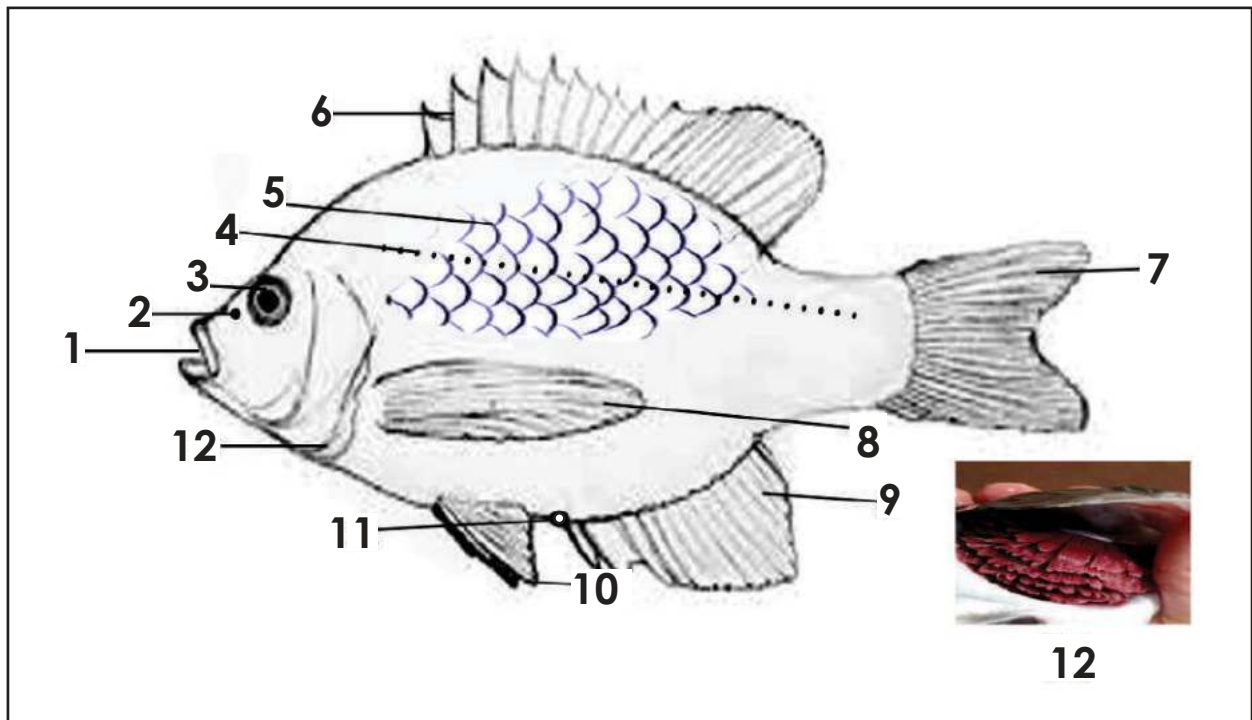
Fish live in water habitats such as lakes, rivers and wetlands. Some fish can be grown in ponds. They can also be grown in cages made in lakes. They move by use of their fins and breathe in water using gills. There are many types of fish which live in freshwater. Sharks live in oceans and marine salty water.

FISH HAVE MANY USES TO HUMANS:-

- a) Many of them can be eaten to provide proteins.
- b) Fish is source of protein for animal feeds.
- c) Fish is source of medicine e.g silver fish and nkejje.
- d) Fish is source of income to fishermen and fishmongers.
- e) They are for education and research.
- f) They are for sport fishing.
- g) Some fish are totems e.g lungfish and nkejje.

Learn about fish found in Uganda in a song, poem or story.

EBITUNDU BY'EKYENNYANJA (PARTS OF A FISH)



LUGANDA

ENGLISH

- | | |
|--------------------------|---------------------|
| 1. Omumwa | 1. Mouth |
| 2. Ennyindo | 2. Nostril |
| 3. Eriiso | 3. Eye |
| 4. Akawuliririza abavubi | 4. Lateral line |
| 5. Amagirigimba | 5. Scales |
| 6. Akakuba mazzi | 6. Dorsal fin |
| 7. Ekyenkira | 7. Tail fin |
| 8. } | 8. Pectoral fin |
| 9. } Obukuba amazzi | 9. Anal/Ventral Fin |
| 10. } | 10. Pelvic fin |
| 11. Akatiiri | 11. Vent / Anus |
| 12. Biviiri | 12. Gills |

EBYENNYANJA (FISH)



**Ngege
(Tilapia)**



**Mpuuta
(Nile perch)**



Ensonzi
(Cat fish)



Mukene
(Silver Cyprinid fish)



Nkejje
(Haplochromine)



Nkolongo
(Synodontis)



Emmale
(Mud Fish)



Emmamba
(Lung Fish)

6. EBIMERA.

Abayizi bateekeddwa okumanya ku bimera nga bwe balina okumanya ebisolo. Waliwo ebika by'ebimera bya mirundi ebiri. Ebimera ebimulisa ebimuli n'ebyo ebitasobola kumulisa bimuli. Ebimera ebimulisa bivaamu ensigo. Omuyizi ateekeddwa okumanya ebitundu by'ebimera okusobola okuyiga emigaso gyabyo. Muno mulimu emirandira, ebikoola, enduli amatabi ebimuli n'ebibala. Abayizi bateekeddwa okumanya ebika n'ebitundu by'ebimera. Okumera kw'ensigo nakwo kwa mugaso naddala okulaga abayizi emmera y'ensigo okuva lw'esimbibwa okutuusa lw'emera. Ebitundu by'ensigo n'emigaso gyabyo.

6. PLANTS.

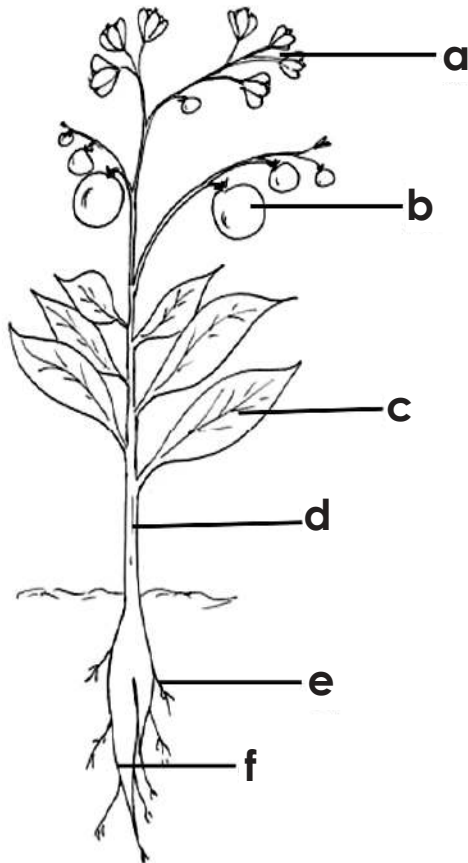
Plants, like animals, are important for learners to know about. There are two types of plants. Those that can bear flowers are called flowering plants and those that do not bear flowers are called non flowering plants. Flowering plants can be either monocotyledonous or dicotyledonous. The parts of the plant are useful to know about including the roots, the leaves, the stem, branches, flowers and fruits. The stages of germination are also useful to be demonstrated practically.

LEARNERS SHOULD KNOW:-

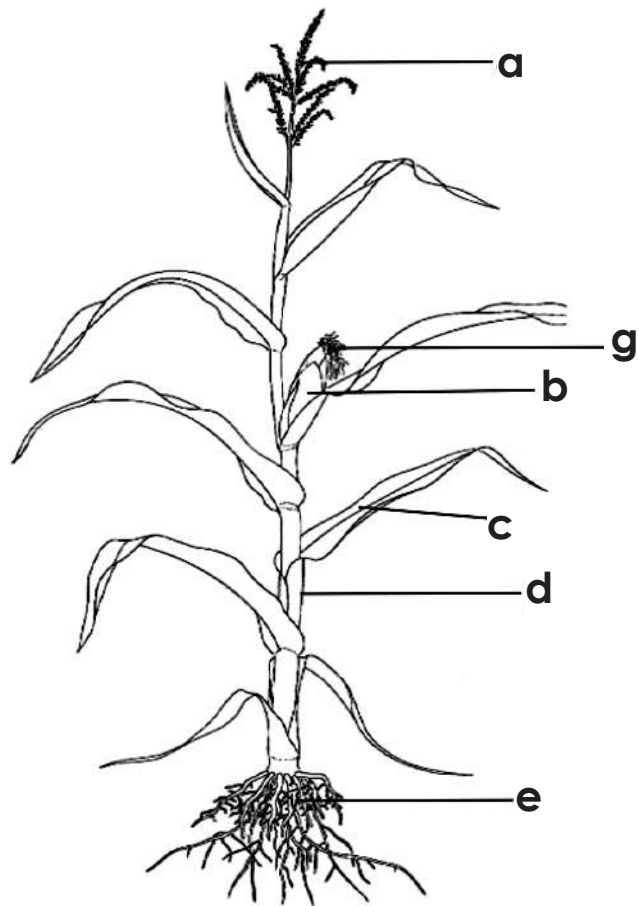
- a) Types and Parts of the plants, leaves, roots and their uses
- b) Stages of germination
- c) Parts of seeds and their uses
- d) Common Useful plants
 - (i). Food plants (Ebimera ebivaamu emmere)
 - (ii). Seed plants e.g cereals and beans (Ebimera eby'ensigo)
 - (iii). Common Fruits (Ebibala)
 - (iv). Vegetables (Enva endiirwa)
 - (v). Medicinal plants (Ebimera ebivaamu eddagala)
 - (vi). Common weeds (Omuddo)
 - (vii). Mushrooms (Obutiko)
- e) Wild useful plants (Ebimera eby'omu nsiko)

EBITUNDU BY'EKIMERA (PARTS OF A PLANT)

DICOT PLANT



MONOCOT PLANT



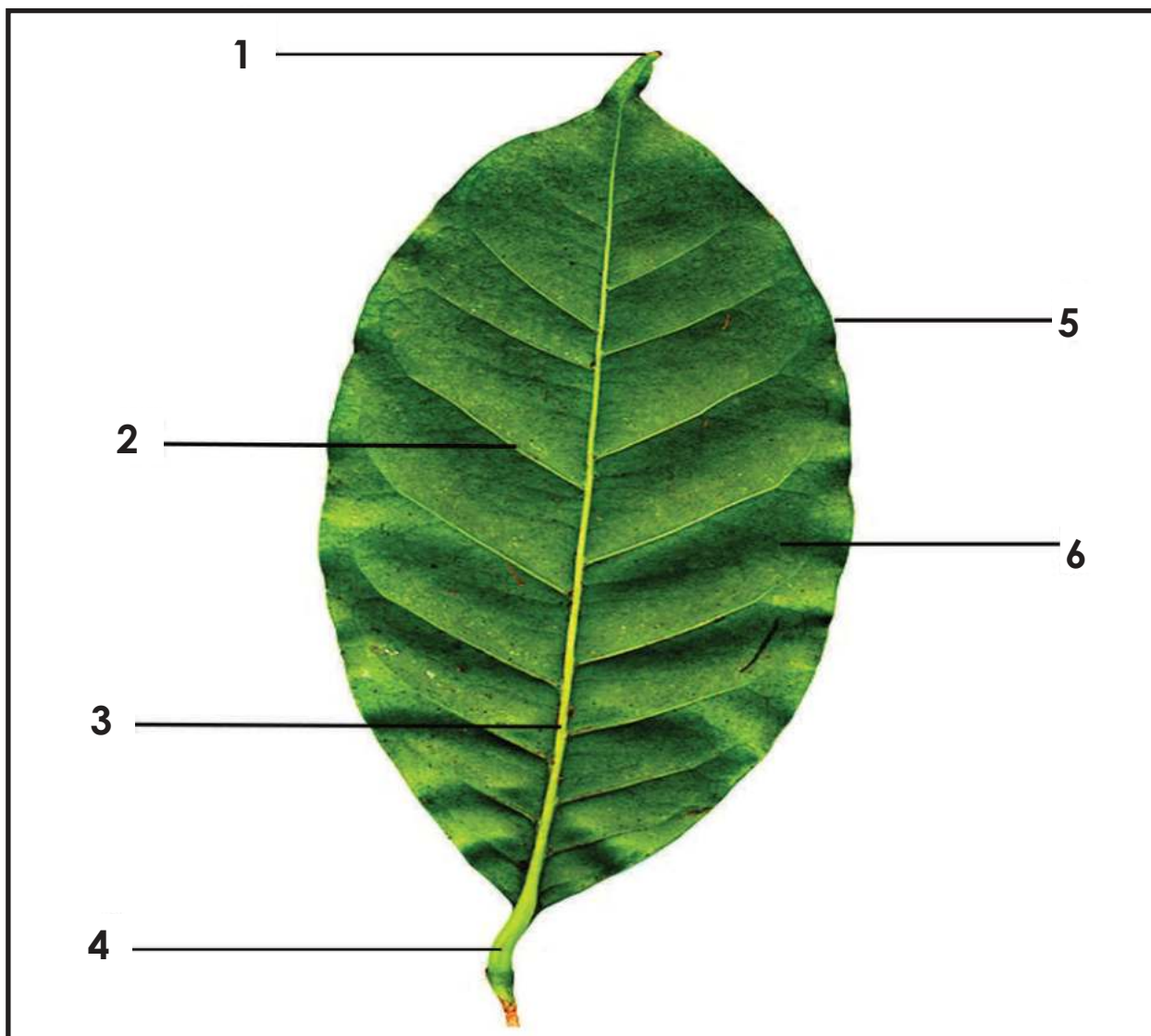
LUGANDA

- a. Ekimuli/Luyange
- b. Ebibala
- c. Ekikoola
- d. Enduli
- e. Emitala
- f. Omulandira omukulu
- g. Olubooya / Enviiri

ENGLISH

- a. Flower
- b. Fruit
- c. Leaf
- d. Stem
- e. Lateral Roots
- f. Tap
- g. Filament

EBITUNDU BY'EKIKOOLA (PARTS OF A LEAF)



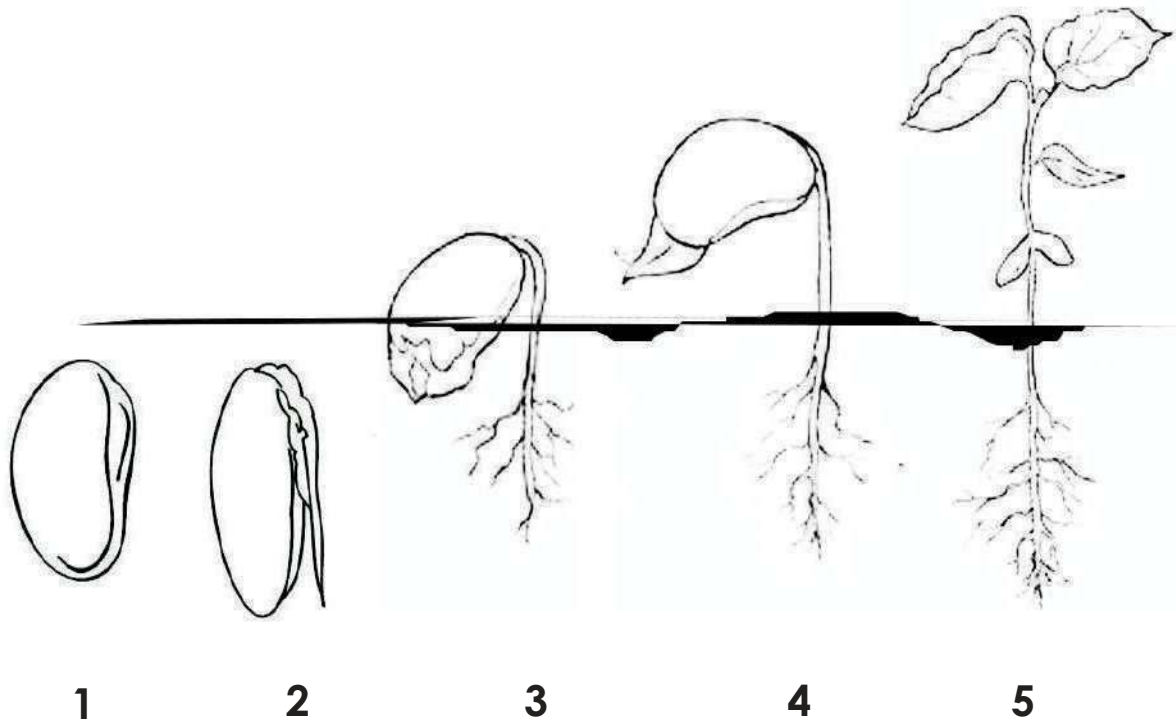
LUGANDA

1. Akasongezo
2. Omusuwa
3. Akazingonyo
4. Akakonda
5. Omugo gw'ekikoola
6. Olususu lw'ekikoola

ENGLISH

1. Apex
2. Vein
3. Midrib
4. Stalk
5. Leaf Margin
6. Leaf Blade

OKUMERA KW'ENSIGO (SEED GERMINATION)



EMITENDERA (STAGES)

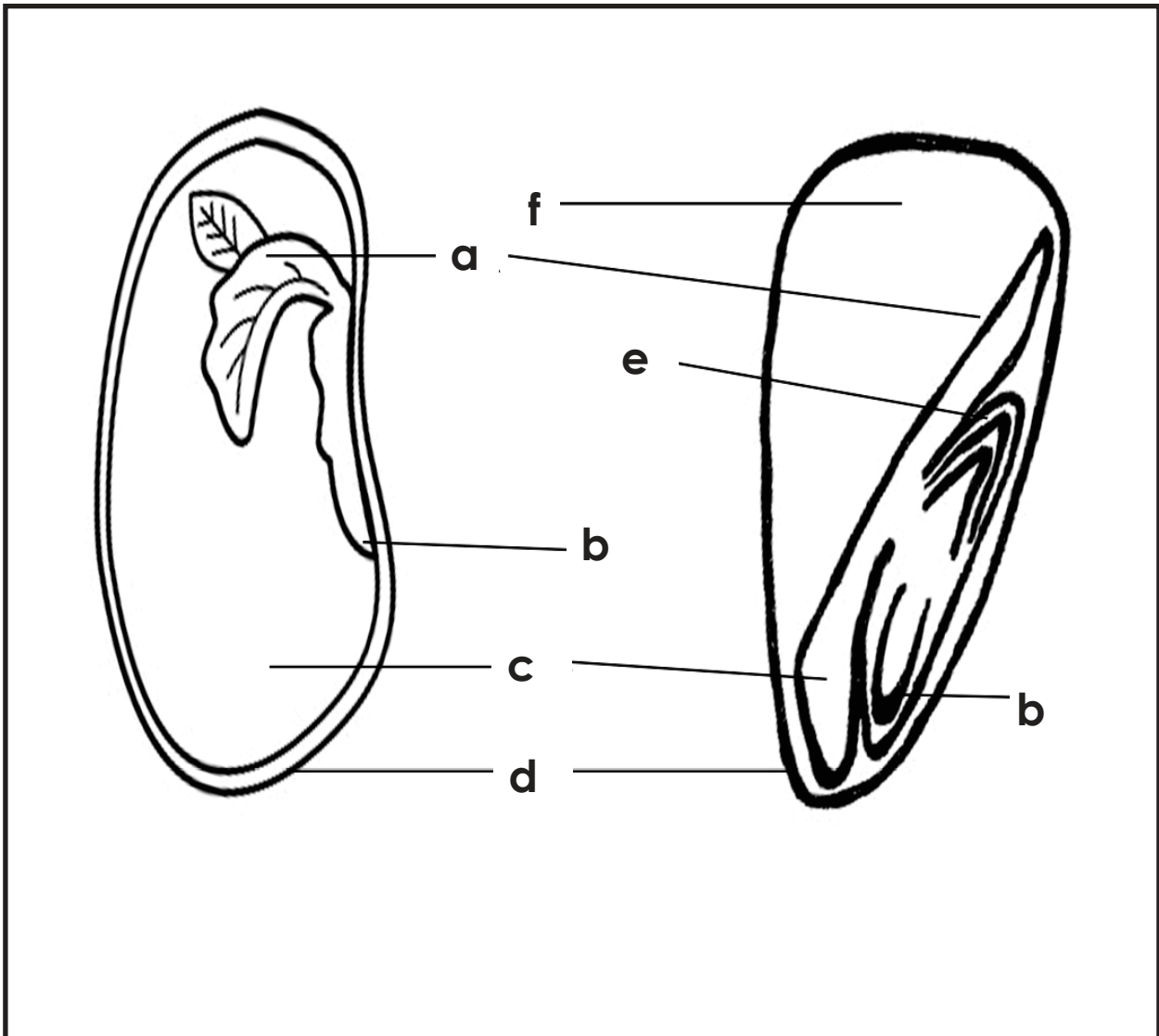
LUGANDA

1. Ensigo nga yakasimbibwa
2. Emera (Ereese emirandira)
3. Erore (Evaayo mu ttaka)
4. Etutumuse
5. Endokwa

ENGLISH

1. Planted seed
2. Germinating seed
3. Rooting seed
4. Shooting seed.
5. Seedling

EBITUNDU BY'ENSIGO (PARTS OF A SEED)



LUGANDA

- a. Omutunsi
- b. Omuva emirandira
- c. Ekiwayi
- d. Ekikuta
- e. Akaluli (Omuva Endokwa)
- f. Emmere y'ensigo

ENGLISH

- a. Embryo
- b. Radicle
- c. Cotyledon
- d. Testa
- e. Plumule
- f. Endosperm

EMMERE (FOOD)



Enkota y'Ettooke
(Matooke)



Ekiwagu
(Cluster)



Ndu y'ekitooke
(Sucker)



Ominwe gwe tooke
(Banana finger)



Ebikolo by'amayuuni
(Yam plant)



Amayuuni
(Yams)



Amalagala
(Sweet Potato vines)



Lumonde
(Sweet Potatoes)



Ensujju
(Pumpkin)



Ekiryo ky'ensujju
(Pumpkin plant)



Ebinyeebwa
(Ground nuts)



Ebikolo bye binyeebwa
(Ground nuts plant)



Muwogo
(Cassava)



Ekikolo kya muwogo
(Cassava plant)



Ebijanjaalo
(Beans)



Ekikolo ky'ekijanjaalo
(Beans plant)



Ekkobe
(Air yam)



Ekikolo ky'ekkobe
(Air yam plant)



Ekikolo ky'endaggu
(Yam plant)



Endaggu
(Yam plant)



Ekikolo ky'obukupa
(Purple yam plant)



Bukupa
(Purple yam)

ENSIGO (CEREALS)



Ebikolo bya kasooli
(Maize Plant)



Kasooli
(Maize)



Omuceere
(Rice corn)



Omusiri gw'omucere
(Rice plantation)



Omuwemba
(Sorghum corns)



Obulo
(Millet corns)



Engano
(Wheat)



Entungo
(Simsim)

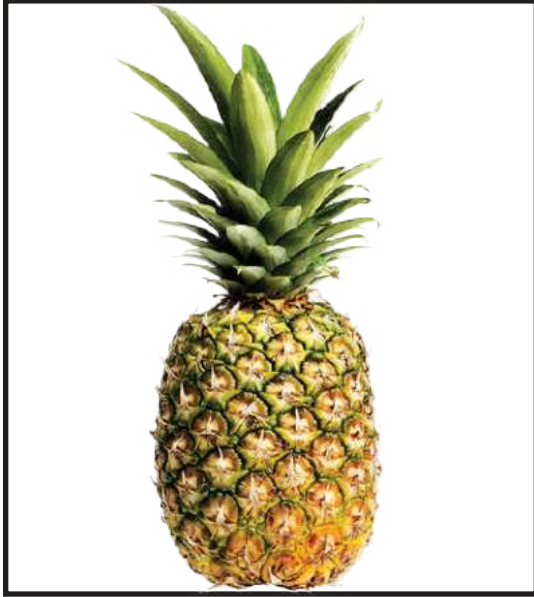
EBIBALA (FRUITS)



Emiyembe
(Mangoes)



Omuti gw'omuyembe
(Mango Tree)



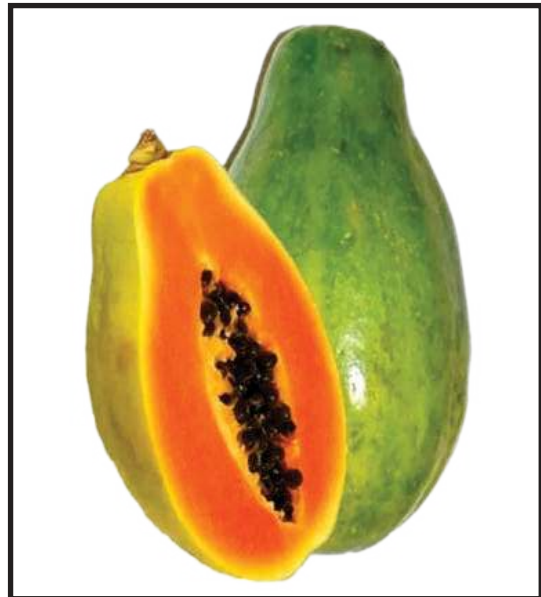
Ennanansi
(Pineapple)



Omusiri gw'ennannansi
(Pineapple plants)



Omuti gw'eppapaali
(Pawpaw Tree)



Amapapaali
(Pawpaws)



Ebikolo by'ebikajjo
(Sugarcane plant)



Ebikajjo
(Sugarcane)



Ennyaanya
(Tomatoes)



Ekikolo ky'omunyanya
(Tomato Plant)



Ekitafeeri
(Soursop)



Omusitafferi
(Soursop Tree)



Entuntunu
(Goose berry)



Ekikolo ky'omutuntunu
(Goose berry plant)



Ebinyaanya
(Pepino Melon)



Omuti gw'ebinyaanya
(Pepino melon tree)



Ffene
(Jack fruit)



Omufene
(Jack fruit tree)



Eemicungwa
(Oranges)



Omuti gw'emicingwa
(Oranges tree)



Meloni
(Water Melon)



Omusiri gwa meloni
(Water melon plantation)



Amapeera
(Guava)



Omuti gw'amapeera
(Guava tree)



Amatungulu
(Aframomum)



Ekikolo ky'amatungulu
(Aframomum tree)



Woova/Vokkedo
(Avocado)



Omuti gwa vokkedo
(Avocado tree)



Jambula
(Black Jamun)



Omuti gwa jambula
(Jambula tree)



Obutunda
(Passion fruit)



Ebikolo by'obutunda
(Passion fruit plant)



Kooko
(Cocoa)



Omuti gwa Kooko
(Cocoa tree)



(Vanilla)



**Ekikolo kya Vanilla
(Vanilla plant)**

ENVA ENDIRWA (VEGETABLES)



**Emboga
(Cabbage)**



**Omusiri gw'emboga
(Cabbage Plantation)**



Bbirinjanya
(Egg plant)



Ekikolo kya bbirinjanya
(Egg plant)



Obutungulu
(Onions)



Ebikolo by'obutungulu
(Onion plant)



Kaloti
(Carrot)



Omusiri gwa Karoti
(Carrot plant)



Ensusuuti
(Chayote)



Ekikolo ky'ensusuuti
(Chayote plant)



Entula
(Garden Egg)



Ekikolo ky'entula
(Garden Egg Plant)



Ddoodo
(Amaranthus)



Ddoodo
(Amaranthus Plant)



**Kamulari owekiragala
(Green pepper plant)**



**Green pepper
plant**



**Kamulali
(Hot pepper)**



**Ekikolo kya kamulali
(Hot pepper plant)**



Katunkuma
(Bitter garden egg)



Ekikolo kya Katunkuma
(Bitter garden egg)

EBIMERA EBIRALA (OTHER PLANTS)



Ekigaji
(Aloe vera)



Ennanda
(Wandering jew plant)



Ekikolo kya ttaaba
(Tobacco Plant)



Ttaaba
(Tobacco)



Omuti gw'emmwanyi
(Coffee tree)



Emmwanyi
(Coffee)



Ebisagazi
(Elephant Grass)



Ebitoogo
(Papayrus)



Ebbombo



Kamyu



Omwetango



**Ppamba
(Cotton)**



**Ssere
(Black jack)**



**Omujaaja
(Africa Basil)**



Ekikolo ky'ekyangwe
(Local sponge plant)



Ekyangwe
(Sponge)



Omuti gwe nsaansa
(Palm tree)



Mpirivuma
(Palm fruit)



Mukowewumbeko
(Sensitive plant)



Kisubi
(Lemon Grass)



Omuti gw'ebinazi
(Oil palm tree)



Ebinazi
(Oil palm)



Tteete
(Kikuyu Grass)

OBUTIKO (MUSHROOM)



Obutiko



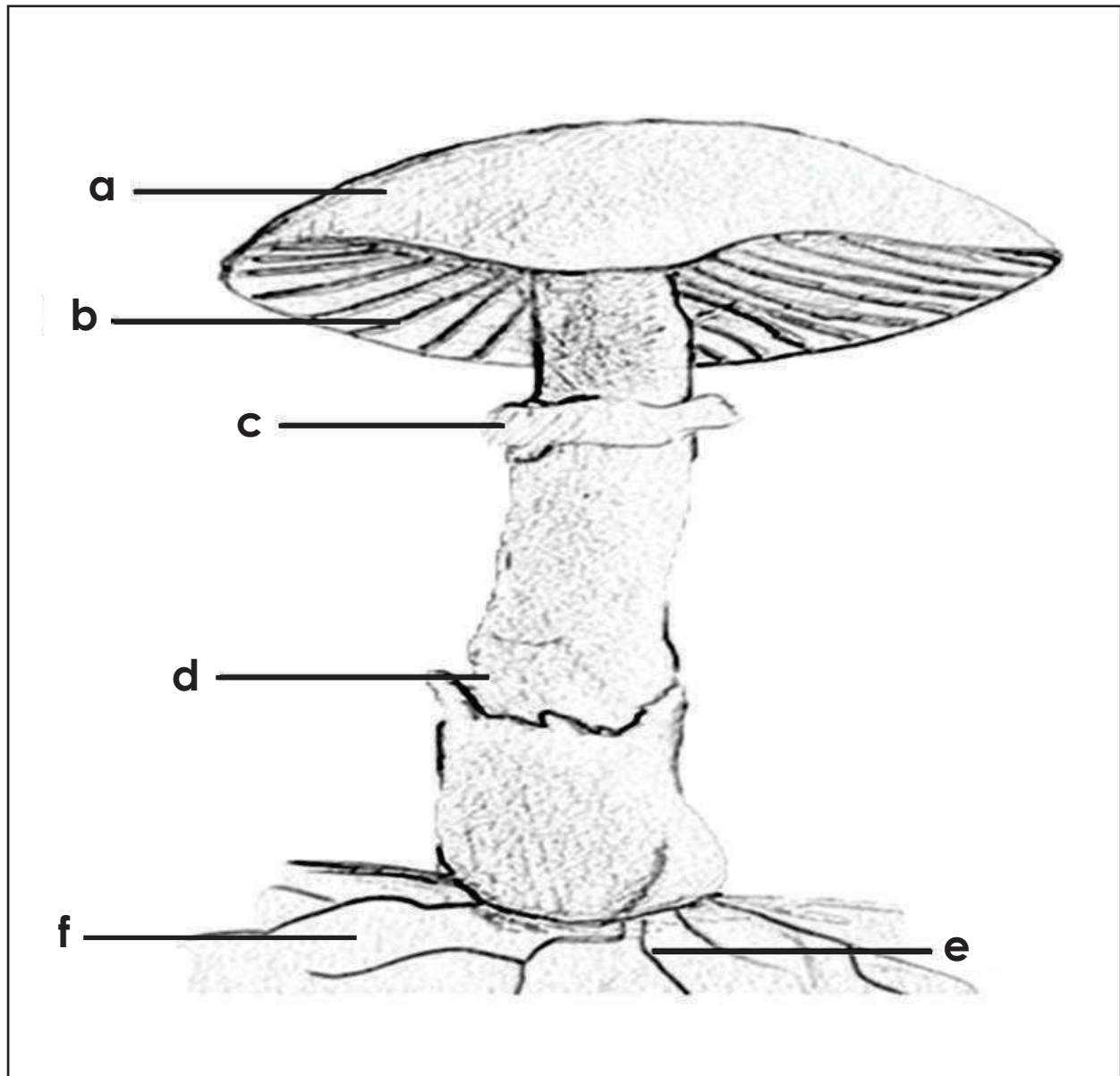
Obutiko



Obubaala

Omusomesa akole olukalala lw'ebimera n'obutiko ebiri mu Uganda.

EBITUNDU BY'AKATIKO (PARTS OF A MUSHROOM)



LUGANDA

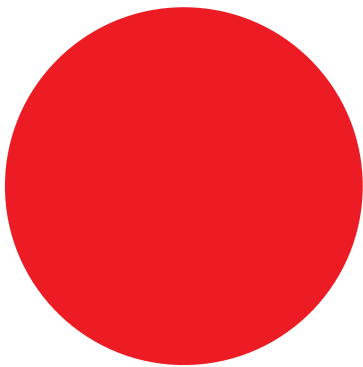
- a. Akakofiira / Akatikkiro
- b. Ebiviiri
- c. Enkulungo / Empeta
- d. Omukonda
- e. Emirandira
- f. Ettaka

ENGLISH

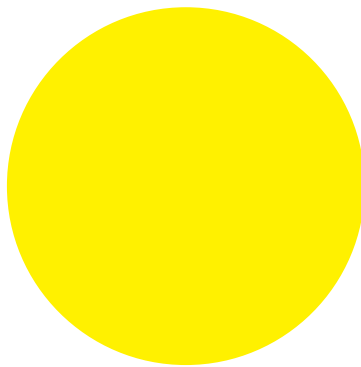
- a. Cap
- b. Gills
- c. Ring
- d. Stem / Stripe
- e. Mycelium / Roots
- f. Soil

7. LANGI (COLOURS).

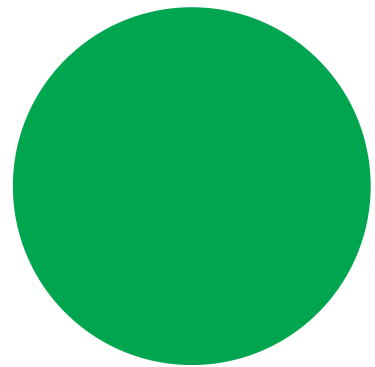
Learning about different colours entice learners to distinguish objects from one another i.e plants clothes, furniture, etc. Some learners find some colours more attractive than others. Some colours are brighter than others. Learners use colours to shed objects and to paint pictures. The naming of colours may differ in local language. Some colours do not have equivalent names in local languages



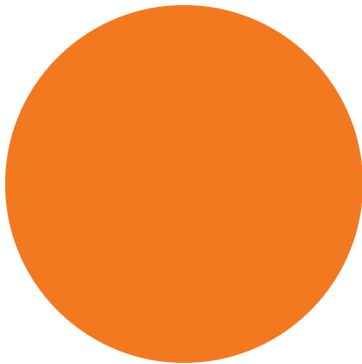
Myufu
(Red)



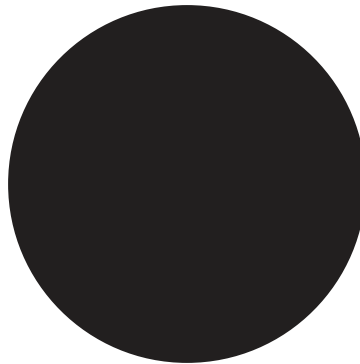
Kyenvu
(Yellow)



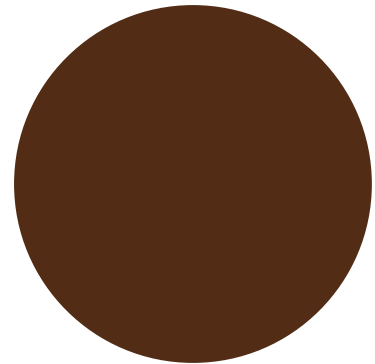
Kiragala
(Green)



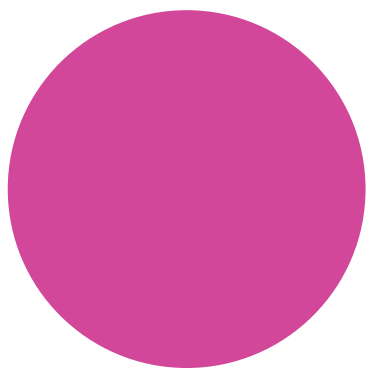
Kipapali
(Orange)



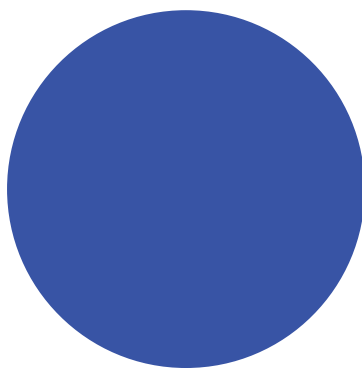
Nzirugavu
(Black)



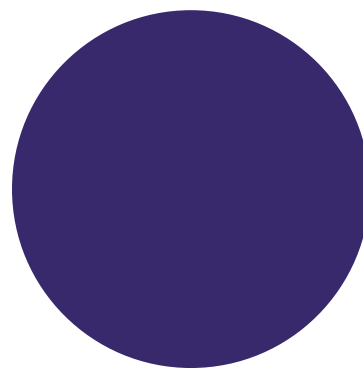
Kitaka
(Brown)



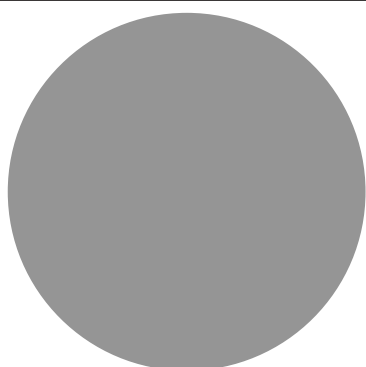
Pinka
(Pink)



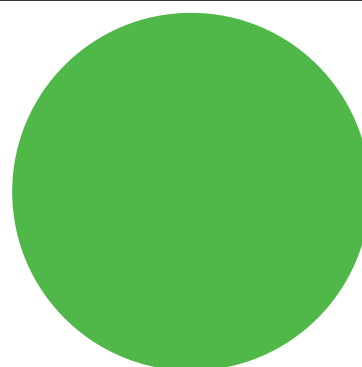
Bbululu
(Blue)



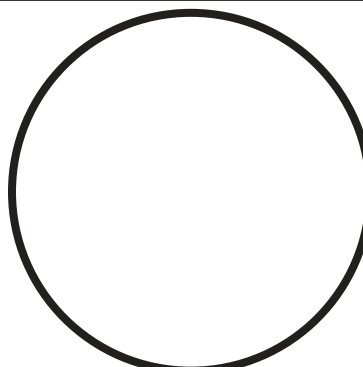
Kakobe
(Purple)



Kikuusikuusi
(Grey)



Kacungwa
(Lemon green)



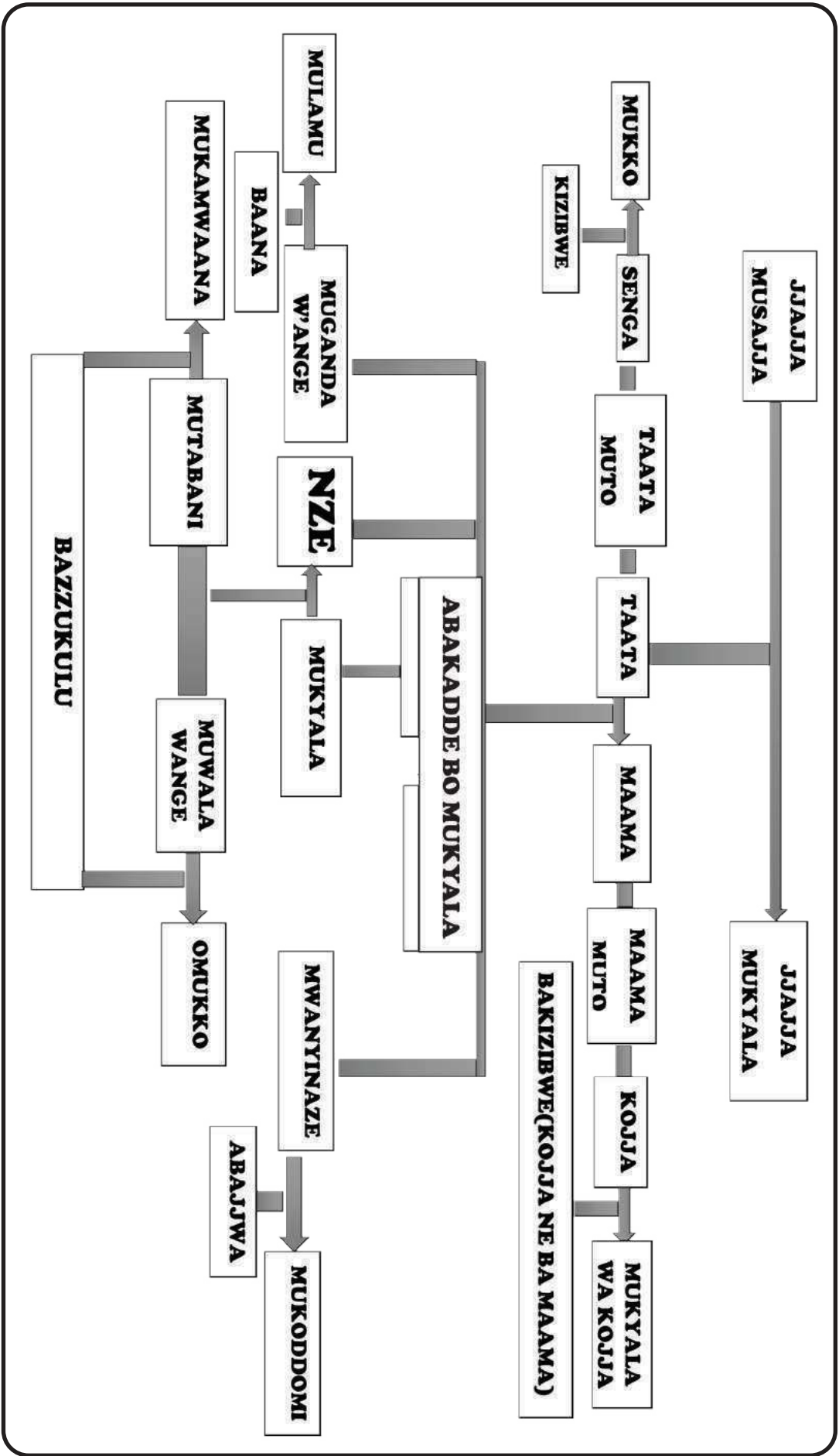
Njeru
(White)

8. OLUGGYA (FAMILY TREE).

Its important to learn about the family tree for learners to appreciate the relatives close to them in their environment.

The family tree is the main source of social capital in our home, community culture and gender. The sustainability of family relationships depends on knowledge of the wider membership of the extended family. From the family tree learners may put actual names of real life situations to understand who is who in their family.

OLUGGYA LWAFFE (MY FAMILY TREE)



Very important actions and practices

With assistance from the teacher, help learners make the following using local materials?

- a) Kite
- b) A ball
- c) A bag
- d) A boat
- e) A rope
- f) A pot
- g) A mat
- h) A dam
- i) A broom
- j) A carpet
- k) A basket
- l) A shirt
- m) A blouse
- n) A dress
- o) A skirt
- p) Flute
- q) Gun
- r) Cow
- s) Baby