

MERRYLAND HIGH SCHOOLS ENTEBBE

HOLLIDAY WORK

SENIOR TWO

Christian Religious Education

1 "There are so many religions in the world with different beliefs and practices"

(a) Explain two ways in which learning about other religions than one's own is important in society today (04 Marks)

2 (a) Give an account of what happens at a believer's baptism (10 Marks)

(b) In your view explain the importance of baptism to a Christian (10 Marks)

GEOGRAPHY

PROJECT WORK

PROJECT THEME: RECYCLING PLASTIC BOTTLES.

Description: Learners will create their own model of re-using the plastic bottles as a way of conserving our environment and some interesting facts about them

Leading Question

What are the various ways of re-using plastic bottles?

Total Time Required

4 hours over 3 days

Supplies Required

Pen/pencil, ruler, colour pens, paper, paper/plastic bottles, cutter/ sharp object,

Source of heat, Apron, paint, piece of cloth, binding wire, threads.

Learning Outcomes

1. Understanding of the materials that degrade our local environment.
2. Understanding how to conserve our environment through recycling.
3. Understanding how manufacture useful commodities from the wastes in our respective communities.

Previous Learning

- Familiarity with weather and climate.
- Operations with factors that affect our climates.
- caring for our environment and issues concerning climate change.

Steps/ Activities.

1. Observe the surrounding environment in your home area and identify the various forms of waste management.
2. Design simple products as a way of Re-cycling the plastic bottles and other undecomposable materials dumped in the community.
3. Compile data on how you have come up with such a product and how it can conserve and save our environment.
4. Present a power point presentation on how the above products were developed step by step.

BIOLOGY S.2

1. Table 2.1 shows the composition of 100 g of cow’s milk compared with the same quantities of commercial formula milk and human milk.

Table 2.1

nutrient	cow’s milk	formula milk	human milk
carbohydrate / g	6.5	7.3	7.5
protein / g	3.3	1.3	1.3 – 1.6
fat / g	3.9	3.6	4.1
calcium / mg	120	42	34
iron / mg	0.02	0.64	0.07
vitamin D / µg	0.05	1.20	0.06
vitamin A / µg	19	66	58

Some women do not breast-feed their babies but bottle-feed them using formula milk. Health authorities advise against the use of cow’s milk until babies are about 9 months old.

- (a) Use the information in Table 2.1 to explain the advantages of using formula milk rather than cow’s milk.
- (b) One of the components of human milk is the enzyme lysozyme that is present in many body fluids and is responsible for breaking down the cell walls of bacteria.
 - (i) Define the term *enzyme*.

(c) The effect of human lysozyme on two common species of bacteria, **A** and **B**, was investigated at two different values of pH.

The investigation was set up as shown in Fig. 2.1.

The test-tubes were kept at 37 °C for 24 hours.


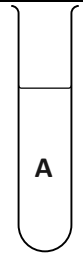






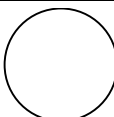
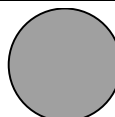
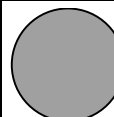
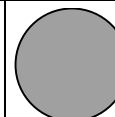
tube number	1	2	3	
species of bacteria				
pH of medium	4.0	4.0	9.0	4.0
fresh lysozyme				
boiled lysozyme				

Fig. 2.1

After 24 hours, samples were taken from each test-tube. Each sample was placed onto nutrient agar in Petri dishes. The dishes were incubated at 28 °C for a further 24 hours to allow any bacteria to grow.

The results are shown in Fig. 2.2.

sample from testtube	1	2	3	
result after incubation for 24 hours				

Key:



-  no growth of
 -  bacteria growth of
- bacteria

Fig. 2.2

Explain the results shown in Fig. 2.2 by comparing the following pairs:

(1) 1 and 3

[2] 1 and 4

[3] 1 and 2

- (f) Human milk also contains antibodies. Explain the benefits of antibodies to a newborn child.
- 2 **Microorganisms** in the soil release enzymes to digest dead leaves.
- (a) Explain how enzymes catalyse chemical reactions.
- (b) Protease and cellulase are two enzymes secreted by soil microorganisms. Protease digests protein.
Suggest what part of the dead leaf cells are digested by the enzyme cellulase.

2. Table 6.1 shows the results of a study comparing the decomposition of dead leaves at two locations **A** and **B**.

Table 6.1

	location A	location B
protease activity / $\mu\text{mol min}^{-1}$	2750	2670
cellulase activity / $\mu\text{mol min}^{-1}$	4790	2500
soil pH	6.0	3.5
soil water content / %	10	77

- (i) Compare the enzyme activity at location **A** with the enzyme activity at location **B**.
You will gain credit for using the data from Table 6.1 to support your answer
- (ii) Suggest possible reasons for any differences in the enzyme activity at location **A** and location **B**
- (d) Describe how nitrogen in proteins in dead leaves is recycled to be absorbed by plants
- (e) Microorganisms also process and convert atmospheric nitrogen to form a nitrogen compound that can be absorbed by plants.
- (i) Name this process of converting atmospheric nitrogen.
- (ii) Explain how this process happens
- (3) A group of students investigated the digestion of fat in milk.
- They added an alkaline solution to the milk.
 - They divided the milk into four test-tubes.
 - They added lipase and bile salts to some of the test-tubes, as shown in Table 5.1.
They did this at the same time for each test-tube.
 - They kept all test-tubes at 40 °C.
 - After 5 minutes, they added Universal Indicator solution to each test-tube.

Table 5.1

test-tube		colour of pH indicator after 5 minutes at 40°C
A	milk, alkaline solution, lipase and bile salts	orange
B	milk, alkaline solution, bile salts and water	blue
C	milk, alkaline solution, lipase and water	yellow
D	milk, alkaline solution and water	blue

Fig. 5.1 shows the colour of the indicator at different pH values.

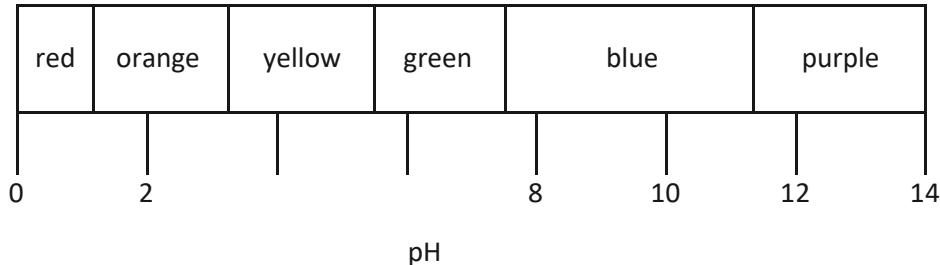


Fig. 5.1

- (i) Explain why test-tube D was included in the investigation.
 - (ii) Explain why the colour in test-tube A was orange
 - (iii) Explain the results for test-tubes B and C.
- test-tube B
test-tube C

ENT

1.(a) brainstorm on what you understand by the term

(i) Advertising

(ii) Sales promotion

(b) Study a range of advertisement and sales promotion used by business in your community.

(i) Find out the different types of advertising in your community

(ii) identify different sales promotion strategies used in your communities.

(c) (i) Brainstorm on the importances of advertising and sales promotion of products in business.

(d) (ii) Identify challenges faced by advertising and sales promotion of products in business.

History

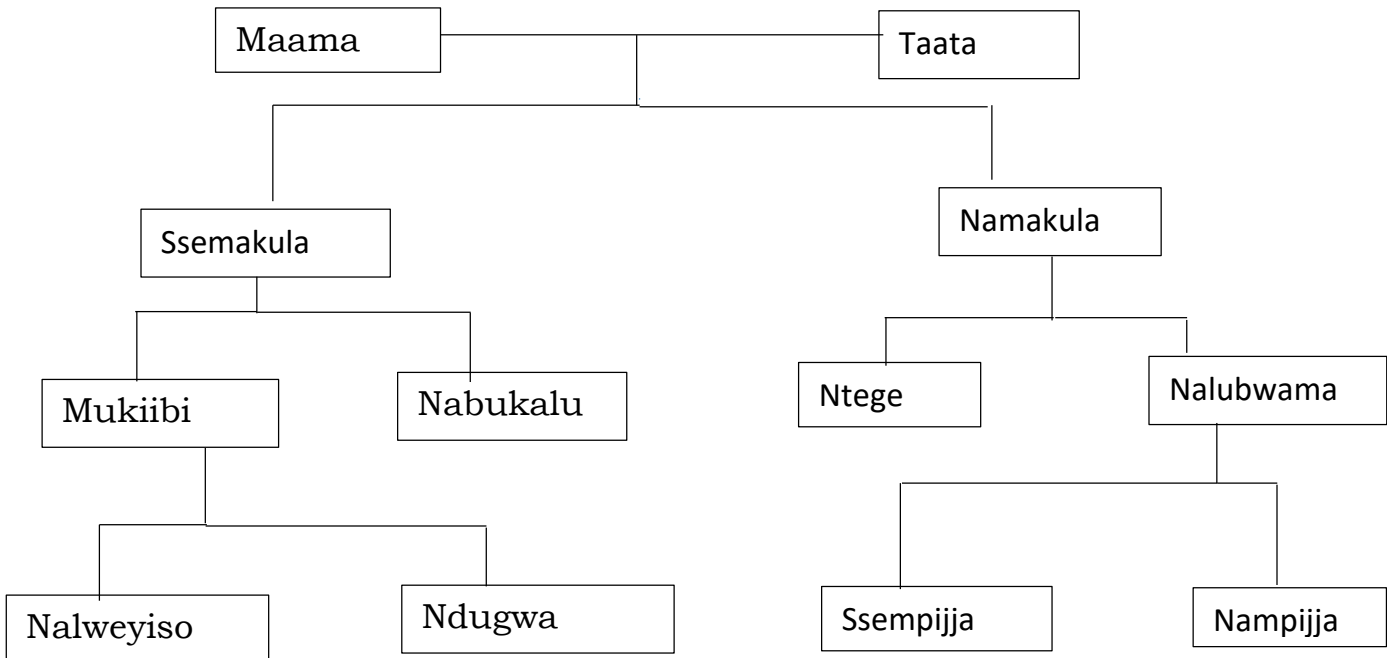
(a) Why did the Germans apply direct rule system in Tanganyika

(b) How was the system applied.

S.2 HOLIDAY WORK LUGANDA

1. Menya ebivuga ebitali bimu ebikozesebwa mu kuzina amazina amaganda?
2. Yunifoomu y'essomero erina mugaso ki?
3. Biki ebibeera mu ssomero lyo okuva lwozuukuse okutuuka lweweebaka. (obubonero 10)
4. Nokolayo amateeka g'essomero lyammwe attaano(5) gemumanyi obulungi era mugawandiike mu bitabo byammwe.
5. Weetegerenze omuti guno n'oluvannyuma oddemu ebibuuzo ebikuweereddwa.

OMUTI OGULAGA EḡḡANDA



Laga oluganda wakati w'abantu bano.

ABANTU	OLUGANDA WAKATI WAABWE		ABANTU	OLUGANDA WAKATI WAABWE
Maama eri Taata			Taata eri Maama	
Ssemakula eri Maama			Namakula eri Maama	
Namakula eri Taata			Ssemakula eri Taata	
Mukiibi eri Ssemakula			Ntege eri Taata	
Nabukalu eri Ssemakula			Nakubwama eri Taata	
Mukiibi eri Taata			Ssempijja eri Taata	
Nabukalu eri Taata			Nampijja eri Taata	
Nalweyiso eri Taata			Mukiibi eri Ntege	
Nalweyiso eri Ndugwa			Nalweyiso eri Ntege	
Ndugwa eri Nabukalu			Nabukalu eri Nampijja	
Ndugwa eri Taata			Maama eri Saempijja	
Mukiibi eri Nabukalu			Taata eri Nalubwama	

6. Wandikira taata wo ebbaluwa nga omwebaza olw'okukusasulira ebisale byessomero, omulage n'ebirungi ebiri mu ssomero lyo.

BIKOMYE