

# PRIMARY FIVE SELF STUDY MATERIALS

## ENGLISH LANGUAGE

### Lesson 1: Parts of a Vehicle

#### Learning Outcomes

By the end of this lesson, you should be able to use:

- words related to parts of a vehicle to construct oral and written sentences.
- the present perfect tense to make sentences.

#### You will need:

- A pen
- Sheets of paper/an exercise book/a notebook

#### What to do

You need to remind yourself of how verbs change their forms in different tenses.

#### Examples

Infinitive	Continuous	Past	Past Participle Form
go	going	went	gone
write	writing	wrote	written
pick	picking	picked	picked

#### Introduction

**Step 1:** Think about any action that has happened in just a few seconds ago; for example, open a book. When you finish, mention what you have done. I am sure you will say, "I have opened a book." The tense you have used is known as the **present perfect tense**.

**Step 2:** The present perfect tense is used to talk about actions which have just happened. That is actions which happened in the recent past but whose effects are still witnessed in the present.

In this tense, the action occurs a few seconds/minutes before the present time.

- It is formed by the use of helping verbs **has** and **have** + a main verb in past participle form.
- Singular subjects: **he, she, it** use **has**
- Plural subjects: **I, we, you, they** use **have**

#### Common Words, sometimes Used with this Tense

- already
- just
- yet
- ever
- never etc.

#### Examples

- The mechanic has repaired their father's bicycle.
- The visitor has driven away.
- The children have already gone out swimming.
- My uncle has just returned from the US.
- The passenger has tightened her seat belt.

#### Activity

**Rewrite the following sentences in the present perfect tense.**

- The cyclist is buying new spokes.
- Our teacher starts the engine of his motorcycle.
- He rides his bicycle.
- The birds fly high in the sky.
- I lie on my bed.
- Rodah teaches science.

### Lesson 2: Parts of a Vehicle

#### Learning Outcome

By the end of this lesson, you should be able to use the given materials to make a toy vehicle

#### You will need:

- scrap
- fibres
- wires
- sticks
- pieces of wood
- clay
- boxes
- crashed papers mixed with flour or glue
- manila
- plastics etc.

#### Introduction

You may not be able to get all the materials above. Try to get any materials within your reach and come up with a toy vehicle of your choice.

In this project work, you will need the assistance a parent/guardian or an older person at home.

The toy vehicles you can make include:

- a bicycle
- a motorcycle
- a car

**Please note:** You are expected to make one of the above, but not all.

#### You may follow these steps:

**Step 1:** Identify the vehicle you want to make.

**Step 2:** Make a sketch or draw the vehicle you have identified on a sheet of paper.

**Step 3:** Collect the materials and tools you need for that vehicle.

**Step 4:** Start making the measurements which suit the size of the vehicle you want.

**Step 5:** Start making the bicycle/motorcycle/car.

### Lesson 3: Parts of a Vehicle

#### Learning Outcomes

By the end of this lesson, you should be able to:

- i) read a dialogue about parts of a vehicle.
- ii) act the dialogue.
- iii) answer the questions about the dialogue.

#### You will need:

- a bicycle/ a motorcycle if there is one at home
- a book and a pen/a pencil

#### Introduction

Test yourself to see if you know these parts of a bicycle: handlebars, carrier, pedals, chain, spokes, tyre.

You can now read the dialogue carefully then take turns with any other person at home.

**Fatuma:** Good afternoon, Tonny.

**Tonny:** Good afternoon, Fatuma.

**Fatuma:** Why are you rolling the bicycle?

**Tonny:** My bicycle has got a mechanical problem. I am taking it to the mechanic.

**Fatuma:** Oh sorry about it! Which parts need to be repaired?

**Tonny:** The tyre is flat, as you can see. Some of the spokes are broken and the chain needs to be replaced.

**Fatuma:** I can see. What happened to the carrier?

**Tonny:** It has no problem. My elder brother painted it maroon.

**Fatuma:** Remember to ask the mechanic to check your brakes. They might be

loose.

**Tonny:** Thank you for reminding me. I need to ask him to check them too. Let me go now.

**Fatuma:** Ok, I wish you the best.

**Tonny:** Thank you.

#### Now answer these questions.

- a) Who was rolling the bicycle?
- b) Where was he going?
- c) Which part of the bicycle needed replacing?
- d) Mention the part of the bicycle which was maroon in colour.
- e) Why did Fatuma advise Tonny to have his brakes checked

### LESSON 4: Equipment Used in Vehicle Repair

#### If (1)

#### Learning Outcomes

By the end of this lesson, you should be able to:

- i) learn about If (1).
- ii) construct sentences using (If 1).

#### Learning Materials:

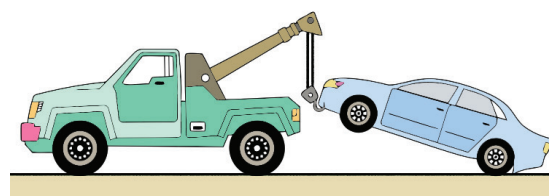
- an exercise book
- a pen/a pencil

#### Assistance you need

You will have instructions to follow to help you learn. You can ask your parent or guardian, friend, brother or sister to help you where you don't understand.

#### Introduction

In this lesson you will learn how to use **If (1)** in sentences. The lessons you learnt in Primary Four on the use of the future tense will be very useful in this lesson.



#### Step 1: Study the picture

#### Step 2: Answer the following questions about the picture.

1. Which types of cars can you see in the picture?
2. Describe what is happening in the picture.

#### Step 3: Use these words to make sentences in the future tense. Remember to use 'will' or 'shall' in your sentence.

- i) spanner
- ii) mechanic

Compare your answers with the sentences in step 4

#### Step 4: Below are more examples of how to use 'will' and 'shall' in sentences.

- i) Mrs Buyinza will buy a toolbox next week.
- ii) Mrs Buyinza will get money next week.
- iii) Mr Obita will get a car jack next week.
- iv) Mr Obita will fix the tyre next week

**Note:** All these sentences are in the future tense.

#### Step 5: The use of 'If' to join sentences.

#### Read the sentences

- i) If Mrs Buyinza gets money, she will buy a toolbox.
- ii) Mrs Buyinza will buy a toolbox if she gets money.
- iii) If Mr Obita gets a car jack, he will fix the tyre.
- iv) Mr Obita will fix the tyre if he gets a car jack.

**All the sentences above are in If (1). If (1) is used to show that an action will take place only after a certain condition happens. A comma is used in a sentence that begins with 'If'.**

**Note:** The part of the sentence with **If** is called the 'if-clause'.

- The **main clause** is part of the sentence where the **future tense** is used.
- The present simple tense is used after 'if'.

**Step 6: Think about the conditions that happened in the following**

- Before Mrs Buyinza bought the toolbox.
- After Mr Obita got a car jack.

**Exercise**

Complete these sentences correctly

**Examples**

- If you play with the reflector,.....

**If you play with the reflector, you will break it.**

- If Mr Kebba asks the mechanic, .....

**If Mr Kebba asks the mechanic, he will repair his car.**

- If Mrs Izio gets the screwdriver, .....
- The car engine will reduce friction, .....
- If you grease your bicycle chain, .....
- You will throw the luggage, .....
- If you buy a toolbox, .....
- Mrs Karuhanga will buy new spanners, .....
- The mechanic will get a lot of money, .....

**LESSON 5: Equipment used in Vehicle Repair**

**Picture Composition**

**Learning Outcome:**

By the end of this lesson, you should be able to describe the given pictures using the present continuous and present perfect tenses.

**You will need:**

- an exercise book
- a pen/a pencil

**Introduction**

In this lesson you will study pictures before reading the story. The lessons you learnt in Primary Four on the use of the present continuous and present perfect future tenses will be very useful in this lesson.

**Step 1: Before you study the pictures, answer the following questions.**

- What should one do before riding a bicycle?
- Why do you think a driver may stop before reaching where he or she is going?
- How do you call a road found between a narrow strip of trees?

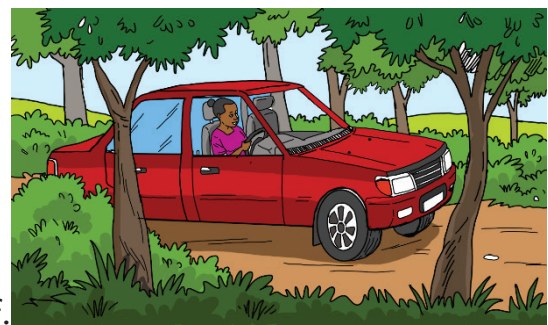
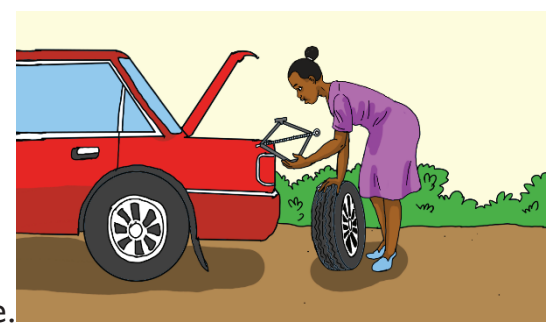
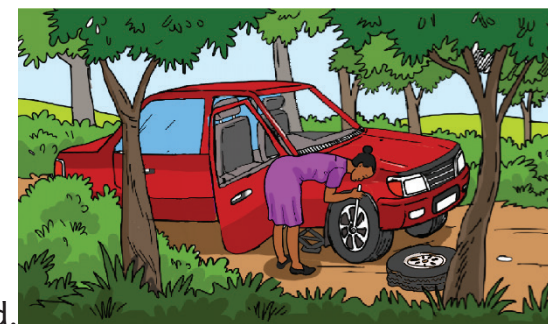
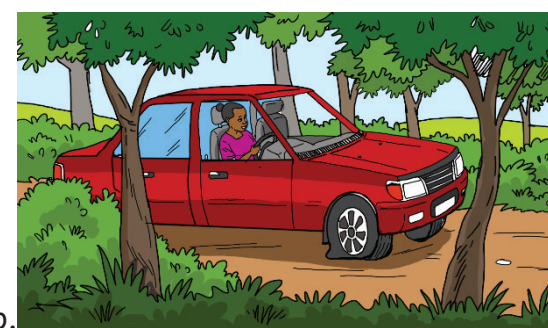
**Step 2: Study the pictures A – F**

**Step 3: Answer the following questions**

- How many people can you see in the picture?
- What part of the car has the woman opened in picture A?
- Which tool is the woman holding in picture E?
- From which part of the car has the woman got the tools?
- Which activity is the woman carrying out in picture F?
- How are old tyres used in the area where you stay?

**Exercise**

You are going describe what is happening in pictures A – F. Remember to use the present continuous or present perfect tenses when describing the pictures.



You may use the following words

condition, boot, woman, tyre, bonnet, check, drive, spare, fix, car jack, puncture, stop, open, avenue, flat

**Lesson 6: Use of Articles**

**Learning Outcomes**

By the end of this lesson you should be able to:

- speak fluently.



- ii) make your own sentences using articles.

- ii) An umbrella is useful

complete the passage.

drug	chloroquine	kick
appetite	signs	prevent
vomiting		hospital
Africa	mosquito nets	

When you get malaria, you go to a \_\_\_\_\_ immediately. The \_\_\_\_\_ of malaria include: high temperature, \_\_\_\_\_, loss of \_\_\_\_\_ and sunken eyes.

The doctor may give you \_\_\_\_\_ or quinine and the disease will be treated in three days' time. If it persists, go back to the doctor and this time he may give you Fancidar or any other stronger \_\_\_\_\_.

We should \_\_\_\_\_ malaria by sleeping under \_\_\_\_\_, clearing the bush around us and removing stagnant water. Let us join hands and \_\_\_\_\_ malaria out of \_\_\_\_\_.

## Introduction

Articles are words that talk about particular things or people mostly in singular form. However, article "the" is used for both plurals and singulars.

The common articles used are: a, an, the.

Article "a" is used for singular nouns and adjectives that begin with consonant sound while "an" is used for singular nouns and adjectives that begin with vowel sound, e.g. an ewe, a European, an hour, an air, an heiress, an M.P., an honourable.

## Activity

Write down any eight correct sentences using articles **an**, **a** and **the**; for example:

- i) Apio is an Indian girl.

## LESSON 6: Complete the Passage

### Learning Outcomes

By the end of this lesson, you should be able to:

- read the passage and answer the questions which follow.
- make correct sentences using the learnt new words.

### You will need:

- a book
- a pen or pencil

### Activity

Choose from the words in the table below and fill the blank spaces to

# INTEGRATED SCIENCE

## What is COVID-19

COVID-19 stands for Corona Virus Disease. It is an infectious disease caused by a virus which started in China, in December 2019.

**Before we start our lesson, do not forget that COVID-19 is a disease affecting every country in the world:**

To protect yourself from COVID-19;

- Stay at home.
- Keep a distance of at least 1 metre from other people.
- Wash your hands very well with soap and water regularly.
- Do not touch the **soft parts (eyes, nose, mouth)** because the virus can pass through these to enter the body.
- Do not spit anywhere.
- Cover your mouth with a tissue when **coughing**.
- Use a tissue for your nose when **sneezing**.

## LESSON 1: Measurement

### Introduction

Measurement is the action of finding out the exact size, degree, strength, etc. of something. We can measure time, weight, height, temperature, length, speed, and many more. There are many instruments that can be used for measuring. In case you do not have the right instrument, you can use estimations.

### Activity 1

#### Instructions

- Identify the regular objects/shapes in your environment. These objects/shapes may be inside the house or even outside in your compound. They may include things like a book, bed, table, chair, box, rooms, compound, flower gardens, crop gardens and many more.
- With the help of a ruler, arm length, foot, leg stride, hand span or any other measuring instrument, measure the sides of this object and record your measurements in a table as shown below.

Name of object	Number of sides	Measurements

- Use your measurements to find the surface area of each of these objects.
- Use the measurements to calculate the density of the regular objects from the general formula:  $\text{Volume} = \text{Area} \times \text{Height}$
- Objects like a box have more than four sides. They have a length, width and height. Measure the sides of at least one of the objects and calculate its volume.

### Density of objects

The volume and mass of an object are related by density. Density is the mass per volume of an object. It is calculated using the formula

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}}$$

Given that the mass of the three

objects you measured were 1 kg, 5kg and 0.5kg, calculate their densities.

### Comparing densities in liquids

When two objects of different densities are put together, the one with less density moves on top. This is called floating. The object with higher density moves below. This is called sinking.

#### Activity 2

Get a bucket or basin and pour water in it. Pick three small stones of different sizes, some sand, 3 leaves and a piece of paper. Put these items in the water carefully.

1. Which materials remained on top of water (float)?
2. Name the materials that moved to the bottom of the bucket/basin.
3. Suggest a reason why the objects in (i) above float on water.
4. Think of a reason why those objects listed in (ii) above sink in water.
5. From your activity, identify objects that are;
  - i) Less dense than water
  - ii) Denser than water

### LESSON 2: Immunisation

Read the following story and answer the question that follow

#### Body immunity

When we are sick or not feeling well, we go to the hospital or clinic for treatment. Some people fall sick many more times in a year than others. Every person's body has soldiers to protect it from getting diseases. The ability of the body to protect itself against diseases is called **immunity**. Body immunity can be natural or artificial.

People who do not fall sick easily, have **strong immunity**. People who fall sick many times have bodies with **weak immunity**. There are two types of immunity. These are natural immunity and artificial immunity.

A person can improve on their natural immunity by eating healthy foods such as fruits, vegetables, proteins and carbohydrates. Drinking enough water is also good for your health.

#### Questions about the story

1. What is body immunity?
2. Which are the two types of body immunity?
3. Give two examples of each category of food listed below which are eaten at home to improve body immunity.
  - i) Fruits
  - ii) Vegetables
  - iii) Proteins and
  - iv) Carbohydrates

#### Childhood immunisable diseases

Immunisation is an artificial way of increasing body immunity. When children are taken for immunization, they are given a vaccine to protect them from diseases. Examples of immunisable diseases include polio, tuberculosis, tetanus, whooping cough, measles and diphtheria. Before immunization was discovered, these diseases killed many children and left others permanently disabled.

#### Activity 2

Write a short story about the importance of immunization and encouraging parents to always take their children for immunization.

### LESSON 3: The Digestive System

#### Introduction

Every time you eat food, you get hungry after some time. What happens to the food? Where does it go? In this topic, we are going to learn about how this food we eat is broken down until it is used by the body.

### The digestive system

**Digestion** is the process by which food is broken down into soluble particles that can be absorbed into the blood stream. What cannot be absorbed is passed out as human waste. There are **two** types of digestion:

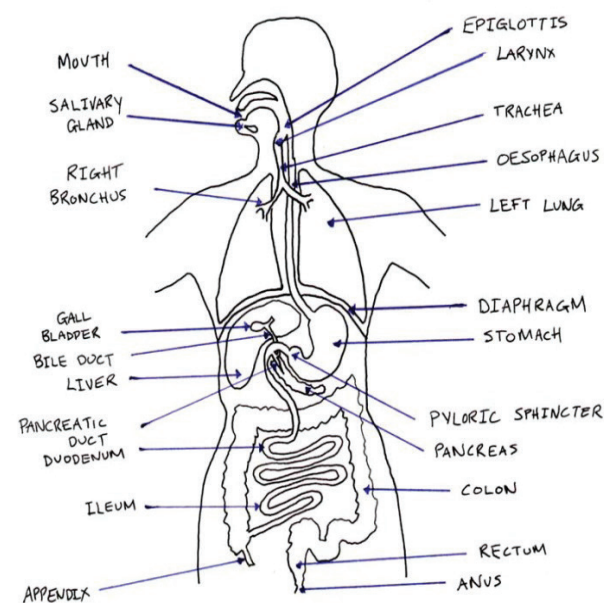
- i) Mechanical digestion
- ii) Chemical digestion

**Mechanical** digestion is the breakdown of food by **the teeth** in the mouth.

**Chemical** digestion is the breakdown of food by **enzymes**. **Enzymes** are chemical substances that speed up the rate of digestion.

#### Parts of the digestive system

The diagram below shows the parts of the human digestive system. Trace the path which food takes from the mouth to the anus.



#### Activity 3

List down in your notebook the order of parts where food passes starting with the mouth.

# SOCIAL STUDIES

## Lesson 1: Location of Uganda

By the end of this lesson you should be able to:

1. locate the district where you live.
2. identify the districts in the different directions that neighbour the one district where you live.

### Materials you need:

- a notebook
- a pen
- an atlas
- a textbook: Pupil's Book 5 (if you have one at home)

### Introduction

In Primary Four you learnt about your district. In this lesson you are going to learn about other districts of Uganda.

### Step 1

Find out in which district and region of Uganda your school is located.

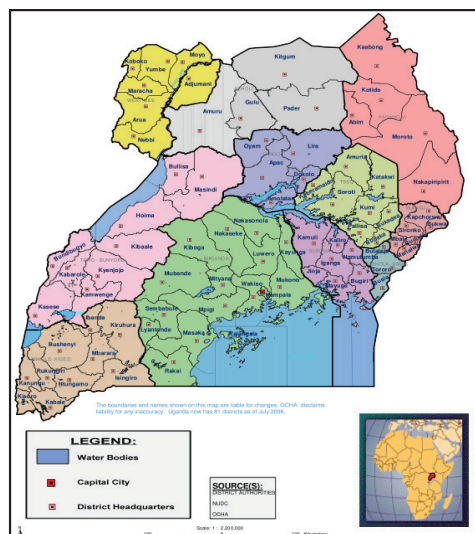
Uganda has four regions namely:

- Northern
- Eastern
- Western
- Central

It is important to note that Uganda has many districts, totalling 135 in number (by 2019).

Each region has a specific number of districts.

**Step II** A map of Uganda showing the different districts



Lemukol is a resident of Moroto in north-eastern Uganda.

- Locate Moroto on the map given above and the region where it is found.

**Study the map of Uganda above and do the following:**

1. Find out the district where your home is located.
2. Find the region where your home district is found.
3. Identify the districts neighbouring your home district in the north, west, east and north-east.

### Activity 1: Locating Uganda on the map of East Africa

By the end of this activity you should be able to:

- i) give the meaning of the following terms: latitudes and longitudes.
- ii) Locate Uganda on the map of East Africa.

### Materials you need:

- i) a notebook
- ii) an atlas, if you have one
- iii) a pen
- iv) coloured pencils, if possible

### Introduction

In this lesson you are going to look at the location of Uganda on the map of East Africa.

- i) Draw a circle on a sheet of paper. In the circle you have drawn add lines that cross one another. Try describing those lines using a compass direction which you learnt about in Primary Four. For example, the lines run from east to west.
- ii) Draw another circle in your exercise book. This time draw lines moving from the top to the bottom. Try describing those lines you have drawn using a compass direction.

- iii) Now we can name those lines as
  - a) lines of latitude
  - b) lines of longitude

### Summary

Lines of latitude run from east or west while lines of longitude run from north or south of the Equator.

### Activity 2: Uganda's neighbours

At the end of this activity you will be able to:

- i) locate countries that share boundaries with Uganda.
- ii) identify compass directions of Uganda's neighbours.

### Materials you need:

- pencils
- a notebook
- a pen

### Introduction

In this lesson you will be learning about the countries that are neighbours of Uganda and the compass directions in which they are found.

- i) Uganda shares boundaries with the following countries:
  - a) South Sudan
  - b) Democratic Republic of the Congo
  - c) Tanzania
  - d) Rwanda
- ii) You will find out that these countries are found in different directions from Uganda.

### Materials you will need:

- Water
- Sheets of paper
- A cutting blade
- Hardboard

### Activity 3

1. Identify the countries neighbouring Uganda in the following directions:
  - a) North –
  - b) East –
  - c) South –
  - d) West –
2. With the help of an adult, prepare



some clay/mud and model the map of Uganda using clay/mud and show its neighbours using seeds.

## Lesson 2: Elements of a Map

By the end of this activity, you should be able to:

- write down elements of a map.
- identify some of the functions of each element.

### Materials you need:

- pencils
- a ruler
- a notebook

### Introduction

In Primary Three and Four you learnt about the meaning of a map. Today you are going to describe the elements of a map.

### Step I

- There are five elements of a good map. Can you list them?
- Give the functions of each element.

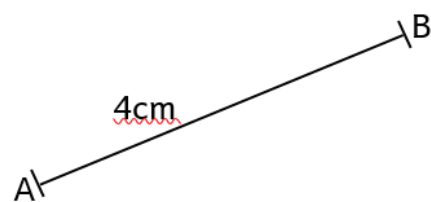
### Step II

A scale is used to find the distance between places on a map.

You need the following materials to measure the distances between places on a map.

- a pencil
- a ruler
- a compass
- thread

The distance from A to B is 4 cm. What is the distance if the scale is 1cm representing 20 km?



$$1\text{cm} = 20\text{ km}$$

$$4\text{ cm} = (20 \times 4)$$

$$= 80\text{ km}$$

### Types of scale

- Statement scale – written in a sentence.



- Linear scale –

- Fractional representative scale –  $\frac{1}{4}$

A key interprets the symbols used on a map.

To prevent congestion on a map, symbols are used which need interpretation. For example:

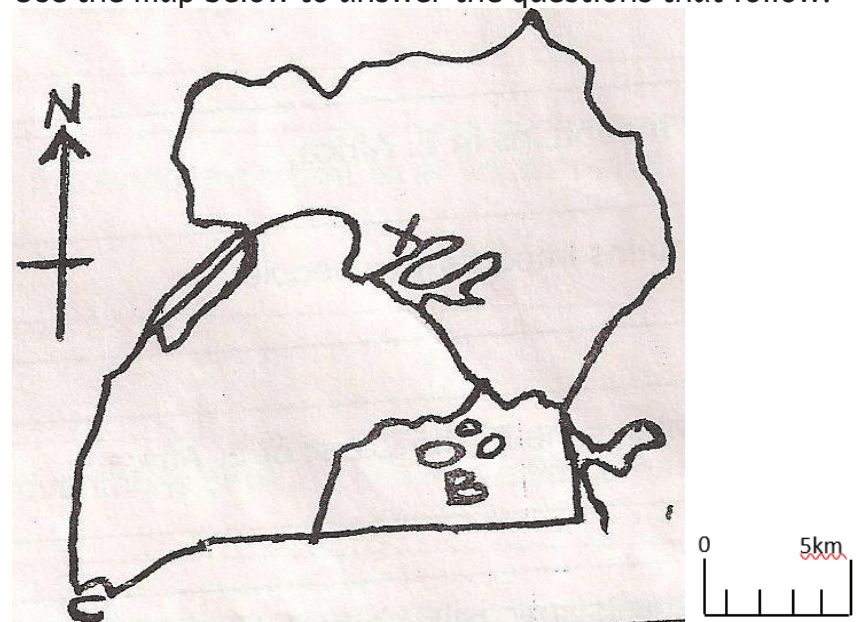
- waterfall
- swamp
- bridge
- dam

- A title is used to show what the map is about.
- A compass direction is used to show the direction of places on a map.
- A frame is used to show the limits of a map.

### Activity

- Give the meaning of the term map.
- Write down the importance of the following elements on a map.
  - Frame
  - Key
  - Title

Use the map below to answer the questions that follow.



- What is the distance between towns A and B.

## Lesson 3: Different Types of Physical Features in Uganda

By the end of this activity, you should be able to:

- write down the importance of mountains and highlands.
- write down the activities that are carried out on a plateau.
- write down the names of the different types of physical features found in Uganda.
- locate the rift valley on the map of Uganda.
- draw the map of Uganda showing major physical features.

**Materials you will need:**

- i) a pencil
- ii) a notebook
- iii) a rubber
- iv) an atlas (if you have one)
- v) coloured pencils (if possible)

**What to do:**

- i) Read the instructions carefully before completing each activity.
- ii) Ask an adult to help where you find difficulties when doing the activity.

**Introduction**

In Primary Four, you learnt about physical features. In this activity, you are going to learn about the importance of different types of physical features.

**Step I**

- i) List down examples of various physical features of Uganda:

Mountains and highland, Lakes and rivers, Plateau Rift valley

- ii) Give the importance of each of the physical features mentioned above.

- iii) Using an atlas and guidance from an adult, locate and draw the Western Rift Valley.

**Activity**

1. Outline the different activities done in the following physical features in Uganda.

- a) Mountains
- b) Plateau
- c) Lakes and rivers
- d) Rift valley

2. Draw the map of Uganda and show the major physical features.

**Lesson 4: Identifying Problems Associated with Different Types of Physical Features**

By the end of the lesson, you should be able to:

- i) identify the problems that some physical features cause.
- ii) identify waterborne diseases.
- iii) mention problems brought about by lakes and rivers.

**Materials you need:**

- i) notebooks
- ii) pencils
- iii) a pen

**What to do**

- i) Read the instructions carefully before completing each activity.
- ii) Ask an adult to help you where you find difficulties when doing the activity.
- iii) Mind your spelling, handwriting, drawing skills and observation.

**Introduction**

In Primary Four you learnt about the dangers of different physical features. In this lesson you are going to identify problems associated with different types of physical features.

**Step I**

- i) Write down the problems caused by the presence of physical features in the area.
- ii) Identify the types of waterborne diseases.

**Examples of waterborne diseases:**

- cholera
- typhoid
- dysentery
- diarrhoea
- bilharziasis

**Step II**

- d) Problems brought about by lakes and rivers:

- i) Floods
- ii) Disease vectors like mosquitoes
- iii) Attacks from dangerous water animals
- iv) Difficulty in road construction

**Activity**

1. Write down any four problems caused by different physical features.
2. Give any two examples of waterborne diseases.
3. Mention any one problem caused by the presence of rivers and lakes in the area.
4. Using any of the physical features in your area:
  - write the problems that physical feature cause to the people of the area.

- record four findings in the notebook under the guidance of an adult.

5. Give the possible solutions to the problems caused by physical features.

**Lesson 5: Different Activities Carried Out on the Physical Features in Your Area**

By the end of the lesson, you should be able to:

- i) identify activities done by females on different physical features.
- ii) give the activities done by males on different physical features.

**Materials you need:**

- i) a notebook
- ii) pens
- iii) a pencil
- iv) a ruler

**What to do:**

- i) Read the instructions carefully before completing each activity.
- ii) Ask an adult to help you where you find hardships while doing this work.
- iii) Mind your handwriting, spelling, drawing skills and observation.

**Introduction**

In Primary Four you learnt about ways of caring for physical features. In this lesson you are going to learn how to care for physical features in your area.

**Step I**

Activities done by females around physical features like mountains, lakes and rivers.

- Crop cultivation
- Fish smoking
- Trade
- Making crafts

Activities done by men around physical features.

- Pottery
- Fishing
- Craft making
- Quarrying
- Tourism
- Mining

**Step II**

Caring for physical features.

- Avoiding pouring dirty things



- into lakes and rivers.
- Using physical features carefully.
- Covering pits with soil after sand mining.
- Plant crops that keep water within the features.

### Activity

You are going to carry out a project on how people care for the physical features in your area.

With the guidance of an adult person, find out and record the following:

- Activities that males and females do to conserve the environment.
- The role of the government in the conservation of physical features.

### Lesson 6: Describing How Physical Features Influence the Climate Conditions

By the end of the lesson you should be able to:

- locate the physical features of Uganda.
- explain how different physical features influence climatic conditions.
- show the different physical features with their climatic conditions.

### Materials you will need:

- notebooks
- pens
- pencils
- textbooks (where possible)
- An atlas (if you have one at home)

### What to do:

- Read the instructions carefully before attempting each activity.
- Ask an adult to help where you find difficulties when doing this activity.
- Mind your handwriting, spelling, drawing skills and observation.

### Introduction

In the previous lesson you learnt the meaning of climate and its aspects. In this lesson you are going to look at how physical features influence the climatic conditions.

### Step I

Note that the climate of Uganda changes from one place to another.

Things that cause these changes include physical features like:

- highlands
- water bodies
- plains

### Step II

- Highlands lead to the formation of relief rainfall
- Water bodies lead to the formation of convectional rainfall
- Plains lead to the formation of frontal rainfall

Another name for relief rain is orographic rain while frontal rain is cyclonic rain. Show areas that receive the above-mentioned types of rainfall.

### Activity

- Write down any one example of a physical feature which influences the climate of an area.
- Draw a diagram showing the formation of convectional rainfall.
- Using an atlas or guidance from an adult, draw a map of Uganda showing different physical features and their climatic condition.

### Lesson 7: Explain How Climate Influences Human Activity

By the end of the lesson you should be able to:

- locate the wet and dry areas of Uganda.
- name the different crops grown in dry and wet climatic conditions.
- draw a map of Uganda showing major agricultural and cattle keeping areas.

### Materials you will need:

- notebooks
- a pencil
- pens
- a ruler

### What to do:

- Read the instructions carefully before completing each activity.
- Mind your spelling,

handwriting and drawing skills.

### Introduction

In the previous lesson you learnt how physical features influence the climatic conditions. In this lesson, you are going to look at how climate influences human activities.

### Step I

Note that the wet areas of Uganda are those that receive heavy rainfall throughout the year, for example:

- shores of lakes
- river banks
- swampy areas
- slopes of mountains
- areas near forests

What human activities are carried out in the above areas?

Dry areas of Uganda are those that experience high temperatures all year round like

- the Karamoja sub-region
- the Ankole-Masaka cattle corridor
- Gomba in Mpigi and Gomba district
- Singo in Kiboga and Kyakwanzi

Which human activities are carried out in the areas above?

### Step II

Write down the crops grown in the dry areas. Examples of what is grown in the wet areas have been given to you.

#### Wet areas

- bananas
- sugarcane
- coffee
- oil palm
- cocoa
- millet
- sorghum
- maize
- cassava
- beans

#### Dry areas

### Activity

- Outline any two major activities carried out in:
  - Wet areas
  - Dry areas
- Draw a map of Uganda showing agricultural and cattle keeping areas.

## Lesson 8: Identifying Problems Associated with Wet and Warm Areas to Living Things and Possible Solutions

By the end of this lesson you should be able to:

- i) identify the different posts, viruses and vectors that cause diseases to plants and animals.
- ii) state the methods which are used to destroy animals and plant pests.

### Materials you will need:

- i) pencils
- ii) a notebook
- iii) a ruler
- iv) a pen

### What to do:

- i) Read the instructions carefully before completing the activity.
- ii) Mind your handwriting, spelling and drawing skills.

### Introduction

In the previous lesson you learnt how climate influences human activities.

In this lesson you are going to identify the problems associated with wet and warm areas and the possible solutions.

### Step I

Problems associated with wet areas to living things:

- Disease vectors
- Floods
- A poor transport network
- Crop pests

Problems associated with warm areas to living things:

- Disease vectors
- Drought
- Lack of pasture and water
- Wild bushfires
- Poor veterinary services

### Step II

Methods used to destroy animal and plant pests:

- i) Spraying
- ii) Dipping
- iii) Crop rotation
- iv) Using traps

### Activity

- i) Write down any two examples

of crop pests and animal parasites.

- ii) Give any two possible solutions to the problems faced by people living in warm and wet areas.
- iii) With the help of a textbook, draw examples of vectors.

## Lesson 9: Identify Factors that Influence Vegetation

By the end of the lesson, you should be able to:

- i) list down the factors that influence vegetation distribution.
- ii) explain how each factor influences vegetation distribution.
- iii) draw a map of Uganda showing areas with different rainfall patterns and vegetation.

### Materials you will need:

- pens
- pencils
- a notebook
- an atlas (if you have one at home)
- a ruler

### What to do:

Read the instructions carefully before completing each activity.

### Introduction

In the previous lesson you learnt about vegetation and different examples of vegetation.

Uganda's vegetation is not the same everywhere. In today's lesson you are going to look at the factors that cause the differences.

### Step I

Factors that influence vegetation distribution.

- Rainfall
- Soil fertility
- Altitude
- Distance from large water bodies
- Reliefs (land forms)
- Human activities

### Step II

How the factors above influence vegetation distribution.

**Note:** The influence can be negative and positive, such as rainfall.

- i) Areas that receive reliable rainfall have thick vegetation.
- ii) Areas that receive little rainfall have scanty vegetation.

### Activity

- i) How do the following factors influence vegetation distribution?
  - Soil fertility
  - Human activities
  - Altitude
  - Landform
- ii) With the help of an adult, draw the map of Uganda showing areas with different rainfall patterns and vegetation.

## Lesson 9: Different Ways Vegetation Influence Human Activities

By the end of the lesson you should be able to:

- i) write down the human activities carried out in each of the vegetation zones.
- ii) suggest activities that can be carried out in different areas.

### Materials you will need:

- i) a notebook
- ii) a pen
- iii) a pencil
- iv) an atlas (if you have one at home)
- v) textbooks (where possible)

### What to do:

- i) Read the instructions carefully before completing each activity.
- ii) Try to complete all the activities.
- iii) Mind your spelling and handwriting.

### Introduction

In the previous lesson you learnt about the factors that influence vegetation. In this lesson you are going to learn about ways in which vegetation influences activities.

### Step I

Human activities carried out in the different vegetation zones

### Savannah grassland Rainforest vegetation

- Cattle keeping
- Cattle keeping
- Tourism
- Hunting
- Hunting

### Swamp vegetation

- Pottery, brickmaking
- Craft making
- Farming

### Step II

Suggest any other activity that can be carried out in the different types of vegetation given above.

### Activity

- With the help of an adult, visit any vegetation zone near your home.
- Observe and record the human activities which are carried out in that vegetation zone.

### Lesson 10: Conserving Vegetation

By the end of the lesson, you should be able to:

- list down the uses of vegetation.
- mention human activities that conserve the environment.

### Materials you will need:

- a notebook
- a pencil
- a pen

### What to do:

- Read the instructions carefully before completing each activity.
- Ask an adult to help you where you find difficulties when doing the activity.
- Mind your handwriting and spelling.

### Introduction

In Primary Four you learnt how to care for the vegetation and its importance.

In this lesson you are going to learn about human activities that help conserve the vegetation.

### Mountain

- Lumbering
- Tourism
- Lumbering
- Tourism

### Step I

- List down the uses of vegetation.
- Mention the human activities that conserve the vegetation.

### Step II

### What you will need:

- a notebook
- a pencil
- a pen

### Activity

- With the help of an adult, visit a nearby farm:
  - Observe the activities carried out on the farm.
  - Record the farm activities that conserve vegetation.
- You want to improve the home compound. You will be required to plant 1 – 2 trees and flowers in the compound. Using the guidance of an adult, show the steps you will take to carry out the project.

### Lesson 11: Human Activities that Affect Vegetation

By the end of the lesson, you should be able to:

- identify the human activities that negatively affect vegetation in Uganda.
- plant trees and flowers in your home compound.

### What to do:

- Try to complete all the activities. However, some activities may take you long to complete.
- Read the instructions carefully before completing each activity.
- Ask an adult to help you where you find hardships when doing this activity.

### Introduction

- You have to note that the work done in any given area affects the environment.
- Today, you will take a look at the human activities that affect vegetation negatively.

### Step I

- What are some of the ways in which people in your district have affected the vegetation?

### Step II

### What you will need:

- a notebook
- a pen
- a pencil

### Activity

1. With the help of an adult, visit, where possible, a site where vegetation has been destroyed and:

- find out the possible cause(s) of the destruction of the vegetation.
- record the human activities that are carried out there.

### Lesson 12: Identifying the Relationship Between Vegetation and Population Distribution

By the end of this lesson, you should be able to:

- identify the areas near your home that has few people and those with many people.
- find out the kind of vegetation that grows in areas with few and those with many people.

### Materials you will need:

- a notebook
- a pen
- a pencil

### What to do:

- Read the instructions before completing each activity.
- Ask an adult to help you where you find difficulties when completing this activity.
- Mind your handwriting and spelling.

### Introduction

- In the previous lesson, you found out the activities that affect vegetation negatively.
- Today, you are going to identify the relationship between vegetation and population distribution.

### Step I

- Population means the number of people living in an area whereas population distribution means how people are spread in an area.
- People choose to settle in an



area basing on factors that will suit their interest.

- With the guidance of your parent/guardian, find out the factors that influence patterns of settlement in your area.
- How do those factors (activities) affect vegetation?

### Activity

1. Locate two areas near your home, one with many people and the other with few people. (Your parent/guardian may help you to do this.)
2. Find out the kind of vegetation that is found in each area.

### Lesson 13: Types of Natural Resources in Uganda

By the end of this lesson, you should be able to:

- i) give the meaning of natural resources.
- ii) write down the different types of natural resources in Uganda.
- iii) trace the map of Uganda and show the major natural resources.

### Materials you will need:

- pens
- pencils
- a rubber/eraser
- an atlas of Uganda (if you have one at home)
- a Primary Five SST textbook (where possible)
- a cut-out of the map of Uganda

### What to do:

- i) Read the instructions carefully before doing the activity.
- ii) Mind your spelling and handwriting while attempting the work.
- iii) Feel free to get help from the adults near you in case of any difficulty.
- iv) Make use of the nearby environment to get more knowledge about this lesson.

### Introduction

In this lesson, you will learn the meaning of resources, natural resources, and environment. You are expected to identify examples of natural resources in the environment.

### Step I

Materials that people use in order to meet their needs are called **resources**.

Remember that in the previous lessons, you studied the basic needs of human beings. The things people need to live a better life are got from other things.

### Step II

Natural resources are the materials that exist on their own. The environment means human beings and their surroundings.

Have you heard of **renewable and non-renewable resources**? These two terms are used to mean types of natural resources.

Renewable resources can be replaced naturally once they are used up whereas non-renewable ones can never be replaced once they are used up.

The following are examples of natural resources in the environment. From this list identify those that can be replaced and those that cannot be replaced once used up:

**Water, people, animals, vegetation, land, minerals, climate.**

### Activity

- a) With the help of adults near you, move around in the community and make notes about things people use to get their needs.
- b) Which of those things in (1) are found:
  - i) on land?
  - ii) in water?
  - iii) in air?
- c) Discuss with the adults and later write notes on how people use the resources you saw in the community.
- d) Trace the map of Uganda and show the following: major lakes, rivers, mountains and forests.

### Lesson 14: Location of Natural Resources on the Map of Uganda

By the end of this lesson, you should be able to locate different natural resources on the map of Uganda.

### Materials you will need:

- a well sharpened pencil
- pens
- a ruler
- an exercise or notebook
- a primary school SST atlas

(where possible)

- a cut-out of the map of Uganda
- SST textbooks for P.5 (where possible)

### What to do:

- i) Read the instructions carefully before doing the activity.
- ii) Mind your spelling and handwriting as you do the activities.

### Introduction

Trace the map of Uganda, make a cut-out of that map and use it in your notebook or exercise book.

### Step I

Trace the map of Uganda and locate different resources.

### Step II

- i) On the map of Uganda, use your atlas or textbook to locate major lakes, rivers, natural forests, swamps and game parks.
- ii) Use a pencil to draw, using map symbols, the major:
  - mountains in Uganda, e.g. Mt. Elgon, Mt. Rwenzori, Mt. Moroto and Mt. Mufumbira.
  - lakes, i.e. Victoria, George, Edward, Albert and Kyoga.
  - rivers like Nile, Achwa, Kafu, Katonga and Kagera.
  - some game parks like Queen Elizabeth, Murchison Falls, Kidepo Valley.

### Activity

1. Using the map of Uganda, identify lake that occupies the central part of Uganda.
2. Name any four natural forests located in Uganda.

### Lesson 15: The Importance of Natural Resources

By the end of this lesson, you should be able to:

- i) discuss the importance of natural resources such as land, minerals, water, climate, people, animals and plants.
- ii) make your own notes about the importance of natural resources.

### Materials you will need:

- pens
- exercise books
- SST textbooks, where possible

- previous work about resources

### What to do

Read the instructions carefully before doing the activity and mind your spelling and handwriting.

### Introduction

In P.4 and P.5, you studied about the importance of different examples of natural resources.

In this lesson, you are going to give different ways in which natural resources are important to people.

### Step I

- With the help of an adult, visit the nearest natural resource (forest, swamp, lake, river, mine, land) and find out how it is used.
- Ask your parents or an adult about the ways resources are used and the problems facing each natural resource.
- Find out the activities people do on land, water bodies, forests, rivers and mountains (use a resource near you).

### Activity

- With the help of an adult, visit a nearby forest or garden, observe and record different plants, grass, trees or crops you see.
- State any two ways in which each of the following resources are important:
  - Land
  - Water
  - Animals
  - People
  - Climate
  - Vegetation
- Why is land regarded as the most important resource?
- Give any one challenge facing:
  - land
  - water bodies
  - vegetation

### Lesson 16: Identify Problems Associated with the Development of Various Natural Resources

By the end of the lesson you should be able to:

- List down problems associated with developing various natural resources.
- Give solutions to the

problems associated with the development of various natural resources.

- Write down ways in which people misuse natural resources.

### Materials you will need:

- a notebook
- pens
- a pencil
- the nearby environment

### What to do:

- Read the instructions carefully before completing each activity.
- Ask an adult to help you where you find difficulties when doing the activity.

### Introduction

In the previous lesson you learnt about importance of natural resources. In this lesson you are going to learn about problems associated with the development of various natural resources.

### Step I

- State the problems faced by each of the natural resources listed below:
  - Land
  - Animals
  - Minerals
  - Plants
  - Water
  - Climate
  - People

### Step II

How has man misused the natural resources in our country?

- By over-cultivating
- By over-grazing
- By over-mining
- Through deforestation
- Through swamp drainage
- Through bush burning
- By over-stocking

### Activity

With the help of an adult, give the problems associated with the development of the various natural resources:

- Lakes and river/water bodies
- Plants
- Mineral

- People
- Land

### Lesson 17: Ways of Caring for Natural Resources

At the end of this lesson, you should be able to demonstrate ways of caring for natural resources.

### Materials you will need:

- a notebook
- a pen

### What to do:

- Read the instructions carefully before completing each activity.
- Ask an adult to guide you where you find hardships in completing this activity.
- Mind your spelling and handwriting as you do this activity.

### Introduction

In the previous lesson, you learnt about problems that are associated with natural resources.

Today you are going to find out ways in which people should care for natural resources.

### Step I

In your home, ask an adult to guide you on how best you can care for the resources in your area such as:

- forests.
- wetlands.
- mines.

### Step II

Think of ways in which you can involve all the people in the area to conserve land (resources) in your area.

### Activity

- Identify ways of caring for natural resources
- Visit a nearby natural resource, like a forest, with the guidance of an adult and observe and record what you have seen.
- How can you care for the above resource in your area?

# MATHEMATICS

## THEME: SETS

### Directions and tips/ instructions

- There is a lesson for each day. Try to complete all the activities in order. Remember that some activities may take you more than one hour to complete.
- Read the instructions carefully before completing each activity.
- Ask an adult to help you where you find difficulties when doing the activity.

### Topic: Set concepts

#### Lesson 1: Equivalent sets

##### You will:

- form equivalent sets
- Count the number of members in a pair of sets to find out whether the sets are equivalent or not equivalent.

##### Materials needed:

- Fruits
- Seeds
- Crayons, pencils

##### Introduction

A set is a collection of well-defined objects or things. Each of the things found in a set is called a member or an element. In this lesson, you are going to learn about equivalent sets. You can use equivalent sets to compare number of objects.

##### Procedure

###### Step 1:

- a. Get some fruits and make two sets of five members each.

- b. One is a set of 5 mangoes and the other is a set of 5 oranges.
- c. Count the members in each set.
- d. What do you notice?

###### Step 2:

- a. Write the sets that you have made in your note book.
- b. Count and write the number of members in each set
- c. Note that the sets with the same number of members are called equivalent sets.

###### Step 3:

You can use equivalent sets to group and compare objects. Now study these examples

1.  $A = \{\text{boy, girl, baby, woman, man}\}$   
 $B = \{\text{aunt, uncle, father, mother, cousin}\}$

Set A has five members and Set B has five members.

We write  $n(A) = 5$  and  $n(B) = 5$   $n$  stands for number of members in a set. The symbol for equivalent sets is  $\leftrightarrow$

$$\text{So } A \leftrightarrow B$$

2.  $W = \{\text{zebra, monkey, giraffe, lion}\}$

$$X = \{\text{cow, goat, sheep}\}$$

$$n(W) = 4 \quad n(X) = 3$$

Set W has 4 members and Set X has 3 members. These two sets are not equivalent.

$$\text{So we write } W \not\leftrightarrow X$$

Now get your pen and write equivalent or not equivalent for each pair of sets

##### Exercise

- 1) Set  $A = \{a, b, c\}$  and set  $B = \{1, 2, 3\}$  Set A and Set B are \_\_\_\_\_
- 2) Set  $P = \{\text{mango, orange, guava}\}$  and Set  $Q = \{\text{pineapple, melon, pawpaw}\}$  Set P and Set Q are \_\_\_\_\_
- 3) Set  $X = \{\text{hen, duck, turkey}\}$  and Set  $Y = \{\text{rabbit, goat}\}$  Set P and Set Q are \_\_\_\_\_
- 4) Set  $E = \{\}$  and Set  $F = \{\}$  Set P and Set Q are \_\_\_\_\_
- 5) Set  $M = \{\}$  and Set  $N = \{\}$  Set P and Set Q are \_\_\_\_\_
- 6) Set  $R = \{\}$  and Set  $S = \{\}$  Set P and Set Q are \_\_\_\_\_
- 7) Set  $W = \{\}$  and Set  $X = \{\}$  Set P and Set Q are \_\_\_\_\_
- 8) Set  $G = \{\}$  and Set  $H = \{\}$  Set P and Set Q are \_\_\_\_\_
- 9) Set  $Y = \{\}$  and Set  $Z = \{\}$  Set P and Set Q are \_\_\_\_\_
- 10) Set  $K = \{\}$  and Set  $L = \{\}$  Set P and Set Q are \_\_\_\_\_

#### Lesson 2: Empty sets

##### You will:

- form and describe Empty sets
- observe and name empty sets

##### You will need:

- Fruits
- Seeds
- Crayons, pencils
- Empty boxes, sacks, tins

##### Introduction

A set is a collection of well-defined objects/ things. Each of the things found in a set is called a member or an element. In this lesson, you will



learn about empty sets. You can use empty sets to describe things which are missing or those that do not exist. You will use the mathematical symbols  $\{\}$  or  $\emptyset$  to describe the empty sets.

### Procedure

#### Step 1:

- Get two empty boxes or tins.
- Put some things in one box or tin.
- Describe the boxes or tins. One box is empty and the other has some content.
- Note that the box without anything is the Empty set.

#### Step 2:

Study this example

Set  $W = \{\}$  this is an empty set. It has no members.

Set  $X = \{\text{pink, red, black, yellow, green}\}$ . This is not an empty set because it has members.

Empty sets are sets without members.

- Practice making empty sets and describe them.
- Work with a friend.

#### Step 3:

Get your pen and a book and write against each set Empty set or not empty set.

#### Exercise

- Set  $Q = \{2, 4, 6, 8, 10, 12, 14\}$
- Set  $M = \{a, b, c, d, e, f, g\}$
- Set  $X = \{\text{monkey, leopard, tiger}\}$
- Set  $Y = \{\text{rice, millet}\}$

- Set  $A = \{\text{table}\}$
- Set  $B = \text{a bag with nothing inside}$
- Set  $W = \{\}$
- Set  $P = \emptyset$
- Set  $G = \text{an empty cup}$
- Set  $N = \{\emptyset\}$

### Lesson 3: Equal Sets

#### You will:

- form equal sets
- count the number of members in a pair of sets to find out whether the sets are equal or not.

#### Materials that you will need:

- Fruits
- Seeds
- Crayons, pencils

#### Introduction

A set is a collection of well-defined objects/ things. Each of the things found in a set is called a member or an element. In this lesson, you will learn about equal sets. You can use equal sets to compare number of objects.

#### Procedure

##### Step 1:

- Make two sets of five members each
- Both sets have 4 pencils each.
- Observe and describe the sets. What have you noticed?
- Have you noticed that the members in both sets are the same?
- Note that equal sets have exactly the same members and number of members.

##### Step 2:

Study this example.

Set  $J = \{\text{Math, Science, English, Art}\}$   
 Set  $K = \{\text{Art, English, Science, Math}\}$   
 The members in Set  $J$  are the same as those in set  $K$ . Therefore Set  $J$  and Set  $K$  are Equal sets.

- Write the sets in your note book
- Write the number of members in each set.

#### Step 3;

Practise making and drawing equal sets.

#### Exercise

Now get your pen and write equal or not equal for each pair of sets

- $M = \{\text{cow, goat, sheep}\}$

$N = \{\text{goat, cow, sheep}\}$

- $X = \{1, 4, 9, 16, 25\}$

$Y = \{1, 2, 3, 4, 5\}$

- $V = \{\text{school, hospital, church}\}$

$W = \{\text{hospital, school, church}\}$

- $S = \{\text{pen, pencil}\}$

$T = \{\text{pen, pencil, crayon}\}$

- $Q = \{\text{Arua, Jinja, Kampala, Soroti}\}$   
 $P = \{\text{Jinja, Soroti, Arua, Kampala}\}$

- $D = \{a, e, i, o, u\}$   $F = \{a, b, c, d, e\}$

- $A = \{\text{square, triangle, circle, rectangle}\}$

$B = \{\text{rectangle, triangle, square, circle}\}$

- $E = \{1, 3, 6, 10, 15\}$

$$F = \{10, 15, 1, 3, 6\}$$

---

$$9. K = \{8, 16, 24, 32, 40, 48\}$$

$$L = \{24, 32, 40, 48, 8, 16\}$$

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$$10. G = \{\text{camel, donkey, horse}\}$$

$$H = \{\text{camel, horse, cow, donkey}\}$$

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#### Lesson 4: Union of sets

##### You will:

- identify members of the union set
- draw union sets

##### Materials that you need

- Fruits
- Seeds
- Crayons, pencils, empty boxes, sticks, books, bottles

##### Introduction

The term union comes from the word unite. To unite is to put things together. In this lesson, you will learn about union of sets. You can use union of sets to form teams and school clubs.

##### Procedure

###### Step 1:

- Make two sets of six members each
- One is a set of 6 pens and the other is a set of 4 pencils.
- Now make another big set and put all the members in that set.
- What do you notice? The big set is the union of the

two sets. You will use the symbol  $U$  for the union of sets.

###### Step 2:

- Write the sets in your note book
- Describe the union set that you have formed.
- Do the two sets have common members?
- How many members has the union set got?

###### Step 3:

Now look at these examples

$$a) \text{ Set } A = \{1, 2, 3, 4, 5\} \quad \text{Set } B = \{10, 20, 30, 40, 50\}$$

$$A \cup B = \{1, 2, 3, 4, 5, 10, 20, 30, 40, 50\}$$

$$b) \text{ Set } M = \{\text{hen, duck, turkey}\} \\ \text{Set } N = \{\text{dove, turkey, cock}\} \\ A \cup B = \{\text{hen, duck, turkey, dove, cock}\}$$

Note that common members are not repeated because they are the same.

##### Exercise

Now get your pen and write the union of these sets.

$$1. A = \{\text{maize, beans, groundnuts}\}$$

$$B = \{\text{peas, soya,}\}$$

$$2. W = \{2, 4, 6, 8, 10\}$$

$$X = \{1, 3, 5, 7, 9\}$$

$$3. P = \{\text{Uganda, Kenya, Tanzania}\}$$

$$Q = \{\text{Kampala, Jinja, Arua, Soroti}\}$$

$$4. E = \{\text{square, triangle}\} \\ F = \{\text{pentagon, circle, rectangle, square, octagon}\}$$

$$5. C = \{\text{Sara, David, Maria, Meddie}\}$$

$$D = \{\text{Adam, Steven, Halima, Maria}\}$$

$$6. S = \{7, 14, 28, 35, 42\}$$

$$T = \{2, 4, 6, 8, 10, 12, 14, 16\}$$

$$7. J = \{a, e, i, o, u\}$$

$$K = \{a, b, c, d, e, f\}$$

$$8. L = \{\text{cup, knife, plate, pot}\}$$

$$M = \{\text{box, cupboard, drawer}\}$$

$$9. F = \{1, 4, 9, 16, 25, 36, 49, 64, 81, 100\}$$

$$G = \{9, 18, 27, 36, 45, 56, 63, 72, 99\}$$

$$11. I = \{\text{one, two, three, four, five, six}\}$$

$$H = \{\text{ten, twenty, thirty, forty, fifty}\}$$

#### Lesson 5: Intersection of sets

##### You will:

- identify members of the intersection set
- draw and write the intersection of sets

##### Materials needed

- Fruits
- Seeds
- Crayons, pencils, empty boxes, sticks, books, bottles

##### Introduction

Common members in two sets form the intersection set. In this lesson, you will learn about the intersection of sets.

You can use the intersection of sets to find common members in different school clubs. For example, children who are in the choir and are also in the drama club.

## Procedure

### Step 1:

- Make two sets of four members each
  - One is a set of yams, rice, potatoes and tomatoes. The other is a set of tomatoes, yams, pepper and onions.
  - Read the members in each set.
  - What do you notice? Some members are found in both sets. Name them!
- The set of common members that you have formed is called the intersection set.

### Step 2:

- Write the set in your note book.
- Describe the intersection set that you have formed.
- What are the common members?
- How many members has the intersection set got?

We use the set symbol  $\cap$  to show the intersection of sets.

### Step 3:

Now study these examples

- Set A = {lemon, pineapple, oranges, guavas, strawberries}  
Set B = {oranges, guavas, apples, melons, pears, passion fruits}  
The common members are oranges and guavas.

So  $A \cap B = \{\text{oranges, guavas}\}$

Set M = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

Set N = {2, 3, 5, 7, 11}

The common members are 2 and 3

So  $A \cap B = \{2, 3\}$

Note that common members are not repeated because they are the same.

- Practise forming intersection of sets.

### Exercise

Now get your pen and write the intersection of these sets.

- A = {white, red, blue, green}    B = {purple, orange, black, yellow, green}
- W = {3, 4, 6, 8, }    X = {2, 3, 5, 7, 9}
- P = {lorry, bus, truck}    Q = {ship, boat, canoe, lorry, train, aeroplane}
- E = {carrot, pepper, ginger, pumpkin}    F = {cassava, yam, millet, carrot, pumpkin, pepper}
- C = {Tom, Daniel, Mariam}    D = {Moses, Sophia, Mariam, Tom}
- S = {5, 10, 15, 20, 25}    T = {10, 20, 30, 40, 50, 60, 70}
- J = {a, e, i, o, u}    K = {a, b, c, d, e, f}
- L = {hoe, rake, panga, trowel, wheelbarrow}    M = {panga, rake, basket, wheelbarrow, axe}
- F = {6, 12, 18, 24, 30, 36, 42, 48, 54, 60}
- G = {4, 8, 12, 16, 20, 24, 28, 32, 36, 40}

10. I = {one, two, three, four, five, six}

H = {two, ten, thirty, forty, five, seventy, eighty}

## Lesson 6: Venn diagrams

### You will:

- Write down the union and the intersection of sets.
- Draw Venn diagrams to show union and intersection of sets.

### Materials that you will need

- Fruits
- Seeds
- Crayons, pencils, pens, rubbers, books
- Empty bottles, tins, boxes

## Introduction

The union and intersection of sets can be represented on a Venn diagram. In this lesson, you will learn about Venn diagrams. You can use Venn diagrams to compare union and intersection of sets.

### Procedure

#### Step 1:

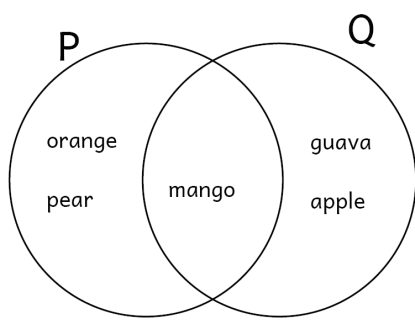
- Make two sets like the ones below.

Set P = {mango, orange, pears}    Set Q = {guava, mango, apples}

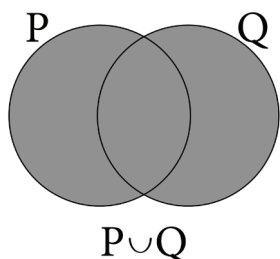
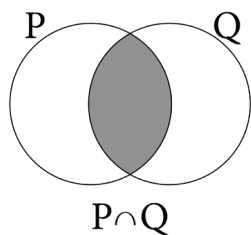
Find the intersection of the two sets.  $P \cap Q$

- Now represent the information on Venn diagrams like the ones below.



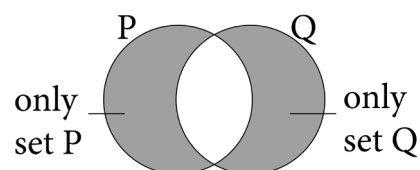


- Observe and say what you notice. The middle region is part of set P and set Q



### Step 2:

- Now study the Venn diagrams below and identify the intersection and the union.
- You can also identify other parts of the Venn diagrams.



### Step 3:

#### Exercise

Draw Venn diagrams for each pair of sets.

- $D = \{a, e, I, o, u\}$   $E = \{a, b, c, d, e\}$
  - $G = \{\text{egg, rice, beans, maize}\}$   $H = \{\text{tea, coffee, soya, egg}\}$

c.  $M = \{3, 5, 7, 9, 11, 13, 15\}$

$N = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

d.  $Y = \{\text{ten, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety,}\}$

$Z = \{\text{five, ten, fifteen, twenty, twenty five, thirty, thirty five, forty}\}$

2. Write the members of the intersection set.

3. Find

a.  $n(P)$

b.  $n(Q)$

c.  $n(P \cap Q)$

d.  $n(P \cup Q)$

**Topic:** Whole numbers

**Lesson 1:** Place value

**You will:**

- Name place value up to Hundred thousands
- Read and write numbers up to 999,999

**Materials that you will need**

- Seeds
- Place value chart
- Abacus
- A book for reading

**Introduction**

Can you tell the number of people in your village?

Try to find out all the people playing in your village playground. Can you count them all?

You are going to find place values of big numbers up to 999,999

Place values help you to read and write big numbers in figures and words.

**Procedure**

**Step 1:**

- You can use an abacus as a way to read big numbers
- Make an abacus using five sticks and beads.
- Place the beads on the sticks.
- Read the number represented by the beads on the abacus that you have made.

Remember that the position of each digit is the place value

- Make cards and write on them: Ones, Tens, Hundreds, Thousands, Ten thousands and Hundred thousand.
- Put the place value cards on the correct digit.
- Keep practising with different numbers

**Step 2:**

- Think about all the words in your text book.
- Do you think it is a small or big number?
- Note that the number of words is big. Guess the number of words.
- Write the number you think and name the place values of each digit

Hundred thousand	Ten thousands	Thousands	Hundreds	Tens	Ones
2	4	5	3	8	3

**Exercise**

Now that you have understood, write the place value of each digit

- |            |             |             |
|------------|-------------|-------------|
| 1. 901,128 | 6. 151,842  | 11. 882,719 |
| 2. 812,936 | 7. 261,633  | 12. 999,999 |
| 3. 723,848 | 8. 371,424  | 13. 764,937 |
| 4. 634,759 | 9. 481,215  | 14. 435,063 |
| 5. 545,687 | 10. 591,006 | 15. 216,288 |

## Lesson 2: Values of numbers up to 999,999

### You will:

- Name place values and values of numbers up to 999,999

### You will need:

- An abacus
- Number cards
- Place value cards

Place values and values will help you to read and write numbers in figures and in words. You can understand the value of numbers you use every day for example the number of people in your village.

### Step 1:

- Write a big number in your book
- Read the number
- Can you read the number correctly?

### Step 2:

Draw a place value chart like this one below

H/TH	T/TH	THOUSANDS	HUNDREDS	TENS	ONES
2	8	5	3	9	6
200,000	80,000	5,000	300	90	6

Say the values of each digit

- The value of 2 is 200,000
- The value of 8 is \_\_\_\_\_
- The value of 5 is \_\_\_\_\_
- The value of 3 is \_\_\_\_\_

- The value of 9 is \_\_\_\_\_
- The value of 6 is \_\_\_\_\_

### Step 3

You can find the value by multiplying the digit by the place value

Hundreds	Tens	Ones	Hundreds	Tens	Ones
2	4	3	5	6	8
200,000	40,000	3000	500	60	8

H/Thousands	T/Thousands	Thousands	Hundreds	Tens	Ones
2	8	5	3	9	6
2×100,000	8×10,000	5×1,000	3×100	9×10	6×1
200,000	80,000	5,000	300	90	6

### Exercise

Name the place value and write the value of each underlined digit.

- |                    |                        |
|--------------------|------------------------|
| 1. 19 <u>2</u> 645 | 6. <u>7</u> 56835      |
| 2. 901 <u>7</u> 26 | 7. 4 <u>4</u> 5 7 1 2  |
| 3. 289 <u>2</u> 37 | 8. 6 3 <u>4</u> 6 5 7  |
| 4. 8781 <u>4</u> 2 | 9. 5 2 <u>3</u> 5 4 6  |
| 5. 3679 <u>5</u> 1 | 10. 5 1 2 <u>4</u> 6 7 |

## Lesson 3: Natural numbers

### You will:

- read and write natural numbers up to 999,999
- write numbers in expanded form

### You will need:

- Counters
- Squared papers
- Place value chart
- Models

Did you know that writing numbers in expanded form will help you read and write numbers correctly?

Look at these examples

### Step 1:

- Write 243,568 in words.
- Draw a place value chart like the one below

THOUSANDS	UNITS
-----------	-------

243 Thousand 568

Two hundred forty three thousand, five hundred sixty eight,

### Step 2:

Note that after every three digits from the right we write a coma. The three digits make a period. Each period is made up of **Hundreds, Tens and Ones**.

This makes it easier for us to write the number in words or figures.

### Look at this example too!

The World Health Organization has so far reported one hundred eighty seven thousand five hundred thirty six cases of Covid-19 in the whole world.

Write the number in expanded form

### Step1:

Draw a place value chart and write the number

THOUSANDS			UNITS		
H	T	O	H	T	O
1	8	7	5	3	6
<u>1</u> ×100,000	<u>8</u> ×10,000	<u>7</u> ×1000	<u>5</u> ×100	<u>3</u> ×10	<u>6</u> ×1
100,000	80,000	7000	500	30	6

The expanded form is a way of writing a number as the sum of its digits.

### Exercise

Write the expanded form of each number below

- a. 46726
- b. 358376
- c. 549583
- d. 730491
- d. 821304

2. Write each of these numbers in word form.

- a) 105623
- b) 294796
- c) 383875
- d) 472958
- e) 561234

**Lesson 4:** Rounding off numbers to 10,000

**Materials that you will need**

- A number line
- A book for reading

**Introduction**

When we round off numbers we estimate the number to the nearest whole number.

You are going to round off big numbers up to 5 digits.

Rounding off numbers helps us to estimate the amount of an item that is too big to count.

**Procedure**

**Step 1:**

Read the number story below.

There are 18 children in a bus. If you do not count the children what number will you use to name them?

You may say there are 20 children in the bus. See! You have estimated and that is rounding off the number to the nearest Tens.

**Step 2:**

- Think about all the words in your text book.
- Can you count all the words?
- Do you think it is a small or big number?

You can estimate the number of words in your text book!

**Step 3:**

**Note that there are rules we follow when we are rounding off numbers.**

When a number to the right of the number in the mentioned place value is more than 5, we round up and if it is less than 5 we round down.

Now study these examples.

**Note that there are rules we follow when we are rounding off numbers.**

When a number to the right of the number in the mentioned place value is more than 5, we round up and if it is less than 5 we round down.

Now study these examples.

**Example 1**

Round off 45,467 to the nearest Ten thousand.

- Look at the place value of 10,000

T/Th	Th	H	T	o
4	5	4	6	7

4 is in the place value of 10,000.

The digit to its right is 5. 5 is equal to 5 so we round up. The ten thousands are 40,000 and 50,000.

This number becomes 50,000. It is nearer to 50,000 than 40,000

**Example 2**

Round off 89,936 to the nearest Ten thousand.

- Look at the place value of 10,000

T/Th	Th	H	T	O
8	9	9	3	6

8 is in the place value of 10,000.

The digit to the right is 9. 9 is greater than 5 so we round up. The ten thousands are 80,000 and 90,000.

This number becomes 90,000. It is nearer to 90,000 than 80,000.

**Step 4:**

**Exercise**

Round off each number to the nearest Ten thousands.

- 1. 41,198
- 2. 12,986
- 3. 23,878
- 4. 34,769
- 5. 45,652
- 6. 51,812
- 7. 61,733
- 8. 71,425
- 9. 81,278
- 10. 91,226
- 11. 82,779
- 12. 19,999
- 13. 64,335
- 14. 35,000
- 15. 26,238