

PRIMARY SCHOOL EDUCATION ASSESSMENT

AUGUST ENGAGEMENT ACTIVITIES 2026

GRADE 4 – SCIENCE AND TECHNOLOGY

Time: 1 Hour 30 Minutes



LEARNER'S DETAILS

Name: _____ . School: _____ .

Assessment Number: _____ . Date: _____ .

School Code: _____ . Signature: _____ .

Instructions for Learners

1. Write your name, school name, and assessment number in the spaces provided.
2. Check the question paper carefully to ensure all pages are printed and no questions are missing.
3. Answer all the questions in the spaces provided.
4. Answer **all** questions.
5. Write your answers clearly in the spaces provide.

FOR EXAMINER'S USE

SECTION	TASK 1	TASK 2	% SCORE	EE1	EE2	ME1	ME2	AE1	AE2	BE1	BE2
SCORE RANGE	20 MARKS	30 MARKS		90-100	75-89	58-74	41-57	31-40	21-30	11-20	1-10
POINTS				8 POINTS	7 POINTS	6 POINTS	5 POINTS	4 POINTS	3 POINTS	2 POINTS	1 POINT
LEARNER'S TOTAL SCORE											

Answer **ALL** questions in this section.

1. Moraa and Juma took a walk around the school farm to study how different living things interact and function within their environment.

(a) **Match** each characteristic of living things observed by the students with its correct description. (4 Marks)

Observation Item	Characteristic of Living Things
1. A sunflower bends slightly toward the direction of morning sunlight.	A. Reproduction
2. Beans pods dry up, split open, and scatter seeds to create new seedlings.	B. Removal of waste
3. A cow breathes out carbon dioxide and passes urine near the shed.	C. Growth
4. A maize seedling increases in height from 5 cm to 15 cm over two weeks.	D. Responding to changes

(b) Animals can be grouped into two major categories based on their internal skeletal structure: **vertebrates** and **invertebrates**.

(i) **Name** the main physical internal feature used to distinguish a vertebrate from an invertebrate. (1 Mark)

(ii) Read the following list of farm animals:

Snail, Earthworm, Chicken, Goat

Identify and write down the two animals from the list that are **vertebrates**. (2 Marks)

(c) Plants have external structures that help them survive. **State** the specific function performed by each of the following parts:

(i) Roots (1 Mark)

(ii) Leaves (1 Mark)

(d) **State** one simple way learners can show care for plants within their school compound to prevent them from drying up. (1 Mark)

2. During a science laboratory lesson, students were provided with three sealed containers. Container X holds a wooden block, Container Y holds fresh water, and Container Z holds compressed air.

(a) **Match** each container with the correct state of matter it represents. (3 Marks)

Container Code	State of Matter
1. Container X	A. Gas
2. Container Y	B. Solid
3. Container Z	C. Liquid

(b) The different states of matter have unique properties regarding their **mass**, **shape**, and **volume**. Complete the property table below by **stating** whether the property is *Definite* (fixed) or *Not Definite* (changes). (3 Marks)

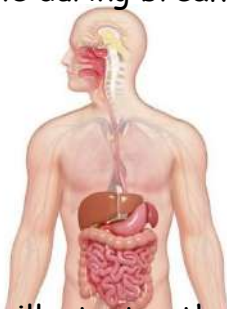
State of Matter	Shape	Volume
Solid	Definite	(1) _____
Liquid	(2) _____	Definite
Gas	Not Definite	(3) _____

(c) **Explain** what happens to the shape of a liquid when you pour 500 ml of milk from a round glass bottle into a flat, square plastic container. (2 Marks)

(d) Gas is a very useful state of matter in daily life. **Identify** and **Name** one practical use of compressed gas in health centers or households. (2 Marks)

SECTION B: (30 MARKS)

3. Kibet ate an apple during break time.



The image above illustrates the internal pathway that the food follows through his body to be broken down and absorbed.

(a) Look closely at the digestive system diagram provided above. **Identify** and **Name** the parts described below:

(i) The long pipe or tube that pushes food down from the mouth into the stomach. (1 Mark)

(ii) The organ where digestion is completed and water absorption begins. (1 Mark)

(b) Kibet's younger sister has been crying due to a sharp stomach pain, a bloated belly, and unexpected vomiting.

(i) **List** two possible symptoms or indicators of an unhealthy digestive system shown by the sister. (2 Marks)

(ii) **State** one common medical cause of these symptoms related to internal parasites that requires regular deworming. (1 Mark)

(c) A clean mouth prevents dental cavities and maintains a healthy digestive entry. **Outline** two essential steps of dental hygiene a learner must practice daily. (2 Marks)

i.

ii.

(d) **Explain** how a proper diet containing dietary fiber (found in fruits and vegetables) prevents a digestive issue known as constipation. (3 Marks)

i.

ii.

iii.

4. The community clean-up group found an open dumping site in the estate, similar to the one shown in the image below.



They need to sort the waste and plan for better management.

(a) Look at the waste items in the picture. **Classify** them by sorting them into the correct categories below:

(i) **Decomposing Waste**

(Write down two examples from your knowledge of kitchen/natural waste). (2 Marks)

i.

ii.

(ii) Non-Decomposing Waste

(Write down two examples visible in the image or general plastic/metal waste). (2 Marks)

- i. _____
- ii. _____

(b) Leaving non-decomposing solid waste openly dumped in the environment causes serious dangers. **State** two environmental dangers of plastic and metal waste. (2 Marks)

- i. _____
- ii. _____

(c) The school environment club wants to practice the **3Rs** (Reduce, Reuse, Recycle) method to manage solid waste.

Identify which of the 3Rs matches each action below:

(i) Turning old plastic water bottles into decorative plant holders for the classroom window. (1 Mark)

(ii) Carrying a reusable canvas bag to the market instead of taking new plastic wrappers every time. (1 Mark)

(d) Water conservation is vital for schools during dry seasons. **Describe** one practical method a school can use to practice **reusing** water to minimize general water wastage. (2 Marks)

5. Atieno is carrying out small experiments at home using basic household items. She drops a plastic ball, slides a heavy box across the floor, and opens the windows to let the midday sun light up the room.

(a) Atieno noticed that when she releases a ball from her hand, it instantly falls downward to the ground instead of floating upward.

(i) **Name** the specific type of natural force pulling the ball toward the ground. (1 Mark)

(ii) **Explain** one effect that a force can have on a moving object, such as a rolling football when a goalkeeper blocks it. (2 Marks)

(b) Pushing a heavy wooden crate across a rough concrete floor is very difficult because of the force of friction. **State** two effective ways Atieno can minimize friction between the bottom of the box and the floor surface to make it slide easily. (2 Marks)

- i. _____
- ii. _____

(c) Natural and artificial light sources are necessary for day-to-day survival.

(i) **Identify** the primary natural source of light and heat in our environment. (1 Mark)

(ii) Houses should be well-lit during the daytime without consuming electricity. **State** one structural way of lighting a house naturally using transparent or open building materials. (1 Mark)

(d) Heat energy is used daily for various household chores.

(i) **List** two common uses of heat energy at home. (2 Marks)

(ii) **State** one essential safety precaution a person must observe when handling hot objects or open fires to avoid injury. (1 Mark)

SECTION A: (20 MARKS)

Question 1: Living Things & Their Environment (10 Marks)

(a) **Match the characteristics:** (4 Marks total; 1 mark each)

1. A sunflower bends slightly... -> **D. Responding to changes**
2. Beans pods dry up, split open... -> **A. Reproduction**
3. A cow breathes out... -> **B. Removal of waste**
4. A maize seedling increases in height... -> **C. Growth**

(b) **Vertebrates and Invertebrates:**

(i) **Presence of a backbone** (or internal skeletal spine). (1 Mark)

(ii) **Chicken and Goat.** (2 Marks; 1 mark each)

(c) **Functions of plant parts:**

(i) **Roots:** Anchor the plant firmly in the soil OR absorb water and mineral salts from the soil. (1 Mark)

(ii) **Leaves:** Make food for the plant (photosynthesis) OR allow the plant to breathe/transpire. (1 Mark)

(d) **Caring for plants:** Watering them regularly, weeding around them, adding manure, or protecting them from destruction by animals. (1 Mark for any valid point)

Question 2: Properties of Matter (10 Marks)

(a) **Match the states of matter:** (3 Marks total; 1 mark each)

1. Container X (Wooden block) -> **B. Solid**
2. Container Y (Fresh water) -> **C. Liquid**
3. Container Z (Compressed air) -> **A. Gas**

(b) **Properties of matter table:** (3 Marks total; 1 mark each)

(1) **Definite** (Solids have a fixed volume)

(2) **Not Definite** (Liquids do not have a fixed shape)

(3) **Not Definite** (Gases do not have a fixed volume)

(c) **Explanation:** The liquid will **change its shape to take the shape of the flat, square plastic container**, but its volume (500 ml) will remain the same. This is because liquids do not have a definite shape. (2 Marks)

(d) **Practical use of gas:** **Oxygen** used in hospitals for patients with breathing difficulties OR **Cooking gas (LPG)** used in households for cooking. (2 Marks)

SECTION B: (30 MARKS)

Question 3: Human Digestive System & Health (10 Marks)

(a) **Identify digestive parts:**

(i) **Gullet** (or Oesophagus). *(1 Mark)*

(ii) **Large Intestine** (Accept Small Intestine as this is where digestion officially completes, but water absorption happens in the large intestine). *(1 Mark)*

(b) **Unhealthy digestive system:**

(i) **Stomach ache/pain, bloating, and vomiting.** *(2 Marks for any two)*

(ii) **Worms** (or intestinal parasites). *(1 Mark)*

(c) **Dental hygiene steps:** Brushing teeth after meals, visiting a dentist for checkups, avoiding eating too many sugary foods/sweets. *(2 Marks for any two)*

(d) **Explanation of fiber:** Dietary fiber adds bulk to the food waste, making the stool softer and easier to move through the intestines and push out of the anus, which prevents the stool from becoming hard and dry (constipation). *(3 Marks for a complete logical explanation)*

Question 4: Environmental Management & Water Conservation (10 Marks)

(a) **Classifying solid waste:**

(i) **Decomposing Waste:** Kitchen food scraps, fruit/vegetable peels, dry leaves, animal waste. *(2 Marks for any two)*

(ii) **Non-Decomposing Waste:** Plastic bottles, metallic cans, glass bottles, nylon/polythene wrappers. *(2 Marks for any two)*

(b) **Dangers of plastic/metal waste:** They block drainage systems leading to flooding, they pollute the soil (preventing plant roots from growing), they can injure people or animals (sharp metals), and they create breeding grounds for mosquitoes if they hold stagnant water. *(2 Marks for any two)*

(c) **The 3Rs Method:**

(i) **Reuse / Reusing** (Using the bottle again for a new purpose). *(1 Mark)*

(ii) **Reduce / Reducing** (Minimizing the number of new plastics brought home). *(1 Mark)*

(d) **Reusing water at school:** Water that has been used to wash hands or rinse fruits can be collected and used to **water flowers/trees** in the school compound or to **clean the school toilets**. *(2 Marks)*

Question 5: Force, Light, and Heat Energy (10 Marks)

(a) **Effects of force:**

- (i) **Force of gravity** (or Gravity). (1 Mark)
- (ii) A force can **stop a moving object** (like a goalkeeper catching a rolling ball). (2 Marks)

(b) **Minimizing friction:** Placing rollers or wheels underneath the heavy crate, smoothening/polishing the rough concrete floor, or applying lubricants (like grease/oil) if applicable. (2 Marks for any two practical methods)

(c) **Light sources:**

(i) **The Sun.** (1 Mark)

(ii) Installing **windows** or using **translucent roofs (skylights)**. (1 Mark)

(d) **Heat Energy:**

(i) **Uses:** Cooking food, warming the house, ironing clothes, boiling drinking water, drying clothes. (2 Marks for any two)

(ii) **Safety precaution:** Wearing protective gear (like oven gloves/mitts) when handling hot pots, turning off gas/electricity immediately after use, or keeping highly flammable items (like paper or fuel) away from open fires. (1 Mark)