PaperSetter Sample School

Grade 8 Integrated Science

GRADE 8 — 2026

KENYA JUNIOR SCHOOL EDUCATION ASSESSMENT

Candidate's Name		**Assessment Number**	
School Name		**School Code**	
Candidate's Signature		**Date**	

INTEGRATED SCIENCE

Grade 8

Time: 2 hours

INSTRUCTIONS TO CANDIDATES

1. Write your name and assessment number in the spaces provided above.
2. Write the name and code of your school in the spaces provided above.
3. Sign and write the date of the assessment in the spaces provided above.
4. This paper may consist of multiple sections.
5. Answer questions as instructed on the paper.
6. Do all the necessary rough work on the question paper.
7. Do not remove any page from this question paper.

STRANDS AND SUBSTRANDS TESTED

Strand	Substrands Tested
Scientific Investigation	Laboratory Safety, Laboratory Apparatus and Instruments
Mixtures, Elements and Compounds	Mixtures, Acids, Bases and Indicators, Physical and Chemical Changes, Classes of Fire, Structure of the Atom, Metals and Alloys, Water Hardness
Living Things and their Environment	Human Reproductive System, Human Excretory System
Force and Energy	Electrical Energy, Magnetism, Transformation of Energy, Curved Mirrors, Waves
Living Things and the Environment	The Cell, Movement of Materials In and Out of the Cell, Reproduction in Human Beings, Nutrition in Plants, Reproduction in Plants, The Interdependence of Life, Nutrition in Animals

Section A: 30 marks | **Section B: 40 marks** | **TOTAL: 70 marks**

Candidate's Score: **Sec A:** ☐ **Sec B:** ☐ **Total:** ☐ / 70

Fill candidate's score per section; Teacher to sum and write total

TEACHER ASSESSMENT OF LEARNER PERFORMANCE

Tick (✓) the appropriate box based on learner's overall performance:

Below Expectation (BE)	Approaching Expectation (AE)	Meeting Expectation (ME)	Exceeding Expectation (EE)
☐	☐	☐	☐

SECTION A

1. What is the correct way to smell a gas produced during an experiment?

A. Waft the gas gently towards the nose using the hand

B. Put the nose directly over the container and inhale deeply

C. Ask another learner to inhale it first

D. Pour the gas into the mouth

2. Wanjiku wants to get the hottest part of a Bunsen burner flame for heating. Which type of flame should she use?

A. A yellow luminous flame

B. A blue non-luminous flame

C. A smoky yellow flame

D. A flickering orange flame

3. Wanjiru mixes sand and common salt in a cup. She wants to separate them to recover clean salt. Which combination of methods should she use, in the correct order?

A. Evaporate first, then add more sand

B. Dissolve in water, filter, then evaporate the filtrate

C. Use a magnet to remove the salt

D. Filter first, then dissolve the residue

4. A farmer adds lime (calcium hydroxide) to acidic soil to

A. neutralise the acidity

B. increase the acidity

C. remove water from the soil

D. add nitrogen to the soil

5. The developing baby is nourished in the uterus through the

A. placenta

B. fallopian tube

C. ovary

D. cervix

6. The tube that carries urine from the kidney to the bladder is called the

A. ureter

B. urethra

C. aorta

D. vein

7. In a simple electric circuit, which component is used to open and close the circuit so that current flows only when needed?

A. Connecting wire

B. Battery

C. Switch

D. Bulb

8. Which of the following materials is magnetic?

A. Iron nail

B. Wooden stick

C. Plastic spoon

D. Glass marble

9. A nail left in the rain for several weeks turns reddish-brown and flaky. This change is BEST described as:

A. Condensation, a chemical change

B. Evaporation, a physical change

C. Melting, a physical change

D. Rusting, a chemical change

10. Which extinguishing agent is MOST suitable for putting out a Class A fire involving wood and paper?

A. Dry sand only

B. Foam designed for oils

C. Carbon dioxide gas

D. Water

11. A learner observes an onion cell and a cheek cell under a light microscope. Which structure will be present in the onion cell but ABSENT in the cheek cell?

A. Cytoplasm

B. Cell membrane

C. Nucleus

D. Cell wall

12. Wilted vegetables (sukuma wiki) become firm and fresh again after being sprinkled with water. This is because water enters the plant cells by:

A. Active transport

B. Respiration

C. Osmosis

D. Combustion

13. Which part of the male reproductive system is responsible for producing sperm cells?

A. Testes

B. Scrotum

C. Prostate gland

D. Urethra

14. A solar panel on the roof of a house in Garissa is used to charge a phone. The main energy transformation taking place in the solar panel is:

A. Electrical energy to light energy

B. Heat energy to electrical energy

C. Light energy to electrical energy

D. Chemical energy to light energy

15. An atom is made up of three sub-atomic particles. These are

A. protons, neutrons and electrons

B. protons, molecules and ions

C. atoms, elements and compounds

D. neutrons, ions and electrons

16. A jeweller chooses gold to make ornaments because it stays shiny and does not tarnish over time. Which property of gold makes it especially suitable for jewellery?

A. Low melting point

B. Resistance to corrosion

C. High density

D. Good sonority

17. Temporary hardness can be removed by

A. boiling the water

B. adding more soap

C. filtration

D. distillation only

18. The process by which green plants make their own food using sunlight is called

A. photosynthesis

B. respiration

C. transpiration

D. digestion

19. The part of the flower that develops into a fruit after fertilisation is the

A. ovary

B. anther

C. petal

D. sepal

20. In the food chain: Grass → Grasshopper → Frog → Snake → Hawk, the secondary consumer is the

A. Frog

B. Grasshopper

C. Snake

D. Hawk

21. A convex mirror is commonly used as a

A. vehicle side mirror

B. magnifying mirror

C. torch reflector

D. telescope mirror

22. Sound travels fastest through

A. solids

B. liquids

C. gases

D. vacuum

23. Muddy water from a river is passed through a filter paper in a funnel. The clear liquid that passes through and is collected is correctly called the:

A. Solvent

B. Solute

C. Filtrate

D. Residue

24. A farmer's soil is too acidic for crops to grow well. Which substance is commonly added to reduce the acidity of the soil?

A. Agricultural lime

B. Common salt

C. Vinegar

D. Lemon juice

25. When the north pole of one magnet is brought close to the north pole of another magnet, what happens?

A. They stick together strongly

B. They attract each other

C. Nothing happens at all

D. They repel each other

26. The ability of a microscope to make an object appear larger than its actual size is known as:

A. Illumination

B. Focusing

C. Resolution loss

D. Magnification

27. A plant kept in darkness for several days will

A. not be able to photosynthesise

B. produce more food

C. grow faster

D. change colour to red

28. A shopkeeper installs a mirror at the corner of the shop to watch a wide area and deter theft. Which property of a convex mirror makes it suitable for this?

A. It converges light to a point

B. It forms real images

C. It magnifies distant objects

D. It gives a wide field of view

29. When black ink is spotted on filter paper and one end is dipped in water, the ink separates into different coloured bands. This separation technique is known as:

A. Sieving

B. Chromatography

C. Sublimation

D. Distillation

30. Which of the following is the BEST method a learner can use to make a steel bar into a magnet?

A. Rubbing it with a dry cloth

B. Stroking it in one direction with a magnet

C. Painting it with red and blue colours

D. Placing it in warm water

SECTION B

31. (a) State three safety rules that should be observed when working in a science laboratory. (3 marks)

(b) Explain why eating food is not allowed in the laboratory. (2 marks)

(5 marks)

32. A learner is given a mixture of common salt, sand and iron filings. Describe how the learner can separate the three components to obtain each one in a pure form.

(6 marks)

33. State **two** physical changes that occur in girls during puberty.

(2 marks)

34. State **three** safety measures to observe when handling electrical appliances.

(3 marks)

35. State the law of magnetism.

(2 marks)

36. (a) State two differences between a physical change and a chemical change.

(b) Give one example of each type of change from everyday life in your home.

(6 marks)

37. State the functions of the following cell structures:

(a) Nucleus (1 mark)

(b) Cell membrane (1 mark)

(c) Vacuole (1 mark)

(d) Cytoplasm (1 mark)

(4 marks)

38. State the law of conservation of energy and explain it using an example.

(4 marks)

39. Some water collected from a borehole does not form lather easily with soap and instead produces a white scum.

(a) State what is meant by hard water. (1 mark)

(b) Describe how the hard water sample can be made to form lather easily by boiling. (2 marks)

(3 marks)

40. A learner draws the human alimentary canal. (a) Arrange the following parts in the correct order that food passes through: small intestine, mouth, stomach, oesophagus, large intestine. (3 marks) (b) State the function of the oesophagus. (2 marks)

(5 marks)