LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF
EDUCATION

CAPRICORN SOUTH DISTRICT

SENIOR PHASE

GRADE 8

NATURAL SCIENCES

BASELINE TEST MEMORANDUM

TERM 3

2024

MARKS: 50 **DURATION: 60 MINUTES**

QUESTION 1

1.1

(a) Energy is the ability of a system to do work.✓ (1)

(b) A renewable energy source is one that cannot be used up.✓ (1)

(c) A non-renewable energy source will eventually be used up.✓ (1)

(d) Fossil fuels are fuels that were made from living matter a very long time ago.✓ (1)

(e) Solar energy is energy obtained from the Sun.✓ (1)

1.2 Fossil fuels were made from living matter a very long time ago,✓ whereas

biofuel is obtained by burning natural matter such as firewood and cow dung.✓ (2)

1.3

(a) False. A bullet train moves on a different track that is made for it to move

faster that a regular train hence is has more kinetic energy than a regular train.✓(1)

(b) True. A race car is allowed to drive faster than a regular car which is only allowed to drive at regulated speed.✓ (1)

(c) False. A motorbike runs on a engine than makes it move faster than a bicycle ridden by humans.✓ (1)

1.4

(a) Poorly✓ (1)

(b) Heat loss,✓ heat gain✓ (2)

(c) Good,✓ poor✓ (2)

(d) Gained,✓ loss✓ (2)

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QUESTION 2

2.1 Potential energy is the energy an object has when it is at rest.✓

Kinetic energy is the energy an object has because it is moving. ✓ (2)

2.2 Gravitational potential energy is the energy an object has as a result of its position from the centre of the earth. Johannes, who is at the bottom of the hill, has less gravitational energy because he is closer to the centre of the earth ✓ than Sipho who is on top of the hill and thus further from the centre of the earth than Johannes.✓ (2)

2.3 Kinetic energy is the energy an object has when it is moving. Maria has kinetic energy because she is moving down the hill. ✓✓ (2)

2.4 Sound energy✓ of the skateboards and heat energy ✓in the children's bodies and the skateboard wheels.✓ (2)

2.5 They use the chemical energy stored ✓in their bodies from food they have

eaten climbing the hill.✓ (2)[**10]**

QUESTION 3

3.1

3.1.1 Roof✓ (1)

3.1.2 Floors,✓walls ✓ (2)

3.1.3 Insulation, ✓such as fibreglass, traps air in the ceiling because air is a good insulator.✓ (2)

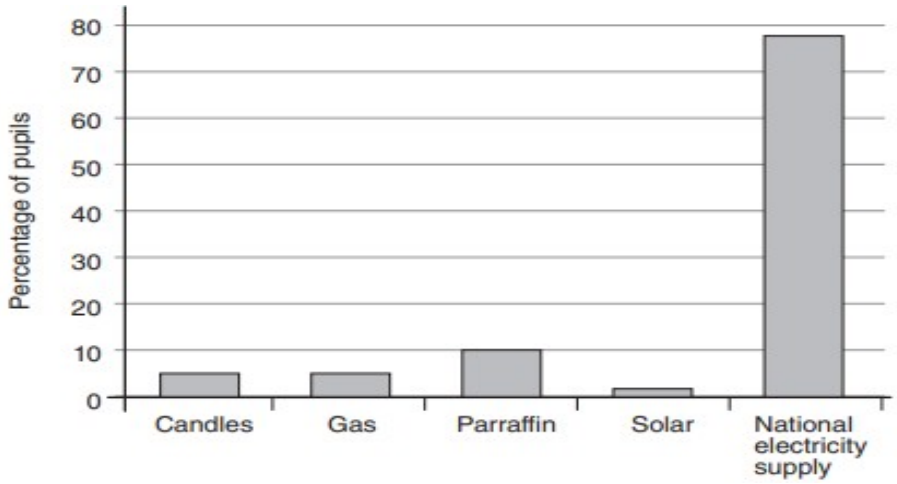
3.1.4 Curtains✓ (1)

3.1.5 Carpets✓ (1)

3.2

3.2.1

Percentage of pupils using different energy source



Different energy source

Marking guideline: *Title: 1 mark* *Axes: 2 marks* *Complete bar: 5 marks- 1 mark each*

3.2.2 National electricity supply✓ (1)

3.2.3 Power stations in South Africa ✓ (1)

3.2.4 Coal✓ (1)

3.2.5 Solar is renewable energy and the coal which is currently used to produce

power is non-renewable✓ and will run out one day✓. We need to increase our use of renewable energy resources. (2)

3.2.6 Gas, candles and paraffin are dangerous because they can cause fires in the homes✓. Often these lighting sources are left unattended ✓and can fall over or be blown over by the wind and cause devastating fires that can burn down homes and result in death.✓ (3)

[23]

TOTAL MARKS: 50