

# SMARTWIZ

## GRADE 5 NATURAL SCIENCE EXAM

**MARKS: 50**

MARKS	

**TIME: 1 hour**

**SCHOOL** \_\_\_\_\_

**CLASS (e.g. 4A)** \_\_\_\_\_

**SURNAME** \_\_\_\_\_

**NAME** \_\_\_\_\_

MYST PATHWORKS

### Instructions for Students:

- > Read all instructions carefully before beginning the exam.
- > Write your name and student ID clearly on the answer sheet/booklet.
- > Answer all questions unless otherwise stated.
- > Show all your work/calculations where applicable.
- > Write clearly and legibly.
- > Use blue or black ink only. \* Do not use correction fluid/tape.
- > No electronic devices (calculators, phones, etc.) are allowed unless explicitly permitted.
- > Raise your hand if you have any questions.
- > Do not talk to other students during the exam.
- > Any form of cheating will result in disqualification.

**GRADE 6 NATURAL SCIENCES EXAM PAPER**  
**TOTAL: 50 MARKS**

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**QUESTION 1: SOURCES OF ENERGY (7 MARKS)**

1.1 Name two renewable sources of energy. (2)

- \_\_\_\_\_
- \_\_\_\_\_

1.2 Why is coal considered a non-renewable energy source? (2)

\_\_\_\_\_  
\_\_\_\_\_

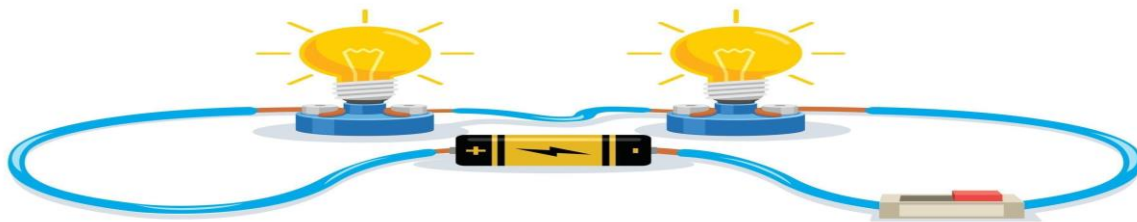
1.3 Give one advantage and one disadvantage of using solar energy. (3)

Advantage: \_\_\_\_\_

Disadvantage: \_\_\_\_\_

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**QUESTION 2: ELECTRICAL CIRCUITS (7 MARKS)**



2.1 What is the function of a switch in an electric circuit? (2)

\_\_\_\_\_  
\_\_\_\_\_

2.2 Complete the sentence: A circuit that allows electricity to flow is called a \_\_\_\_\_ circuit. (1)

\_\_\_\_\_

2.3 List two components needed to build a simple circuit. (2)

- \_\_\_\_\_
- \_\_\_\_\_

2.4 What happens when a bulb in a series circuit blows? (2)

\_\_\_\_\_  
\_\_\_\_\_

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**QUESTION 3: PLANTS AND PHOTOSYNTHESIS (7 MARKS)**

3.1 What gas do plants take in during photosynthesis? (1)

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3.2 Where in the plant does photosynthesis mainly take place? (1)

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3.3 Complete the table below. (5)

Plant Part	Function
Leaf	
Stem	
Roots	
Flower	
Fruit	

**QUESTION 4: SOLAR SYSTEM (7 MARKS)**

4.1 Name the planet closest to the Sun. (1)

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4.2 What do we call a group of planets and other objects that orbit the Sun? (1)

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4.3 Why is Earth able to support life but not other planets? Give two reasons. (4)

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- ---

4.4 Name the natural satellite that orbits the Earth. (1)

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**QUESTION 5: MATTER AND MATERIALS (7 MARKS)**

5.1 Name the three states of matter. (3)

- ---
- ---
- ---

5.2 What state of matter is water when it boils? (1)

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5.3 Give two examples of materials that can dissolve in water. (2)

- \_\_\_\_\_
- \_\_\_\_\_

5.4 What is a solution? (1)

\_\_\_\_\_

## QUESTION 6: FOOD CHAINS (7 MARKS)



6.1 What is a food chain? (2)

\_\_\_\_\_  
\_\_\_\_\_

6.2 Name the role of each in the food chain: (3)

- Grass: \_\_\_\_\_
- Rabbit: \_\_\_\_\_
- Eagle: \_\_\_\_\_

6.3 What would happen if all the plants in a food chain died? (2)

\_\_\_\_\_  
\_\_\_\_\_

### QUESTION 7: MIXTURES (8 MARKS)



7.1 What is a mixture? (2)

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7.2 Give two examples of mixtures found in the kitchen. (2)

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- ---

7.3 What method would you use to separate sand and water? (1)

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7.4 What method would you use to separate salt and water? (1)

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7.5 Give one reason why we separate mixtures. (2)

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**TOTAL: 50 MARKS**

## GRADE 6 NATURAL SCIENCES MEMO

**TOTAL: 50 MARKS**

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### QUESTION 1: SOURCES OF ENERGY (7 MARKS)

**1.1** Solar energy, Wind energy (*Any 2 renewable sources*) (2)

**1.2** Coal is non-renewable because it takes millions of years to form and cannot be replaced once used. (2)

**1.3**

- Advantage: It is renewable / does not pollute the environment. (1)
  - Disadvantage: It depends on sunlight / not available at night or on cloudy days. (1)
  - Any suitable answer. (1)
- 

### QUESTION 2: ELECTRICAL CIRCUITS (7 MARKS)

**2.1** A switch controls the flow of electricity in a circuit; it can turn it on or off. (2)

**2.2** Closed (1)

**2.3** Battery, bulb (*Any 2 of: wire, switch, battery, bulb, etc.*) (2)

**2.4** The whole circuit stops working and the other bulbs go off. (2)

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### QUESTION 3: PLANTS AND PHOTOSYNTHESIS (7 MARKS)

**3.1** Carbon dioxide (1)

**3.2** In the leaves (1)

**3.3 Table Answers:** (5)

Plant Part	Function
Leaf	Makes food / photosynthesis
Stem	Transports water and nutrients / supports the plant
Roots	Absorb water and nutrients / anchor the plant
Flower	Helps with reproduction / makes seeds
Fruit	Protects the seeds / helps in seed dispersal

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### QUESTION 4: SOLAR SYSTEM (7 MARKS)

**4.1** Mercury (1)

**4.2** Solar System (1)

**4.3**

- Has water (1)
  - Has oxygen / suitable temperature / supports life (any 2 valid reasons) (1 + 1)
  - Earth has an atmosphere that protects living things. (1)
- 4.4 The Moon (1)**

### **QUESTION 5: MATTER AND MATERIALS (7 MARKS)**

**5.1** Solid, Liquid, Gas (3)

**5.2** Gas (1)

**5.3** Sugar, Salt (*Any 2 that dissolve in water*) (2)

**5.4** A solution is a mixture where a substance dissolves in a liquid. (1)

### **QUESTION 6: FOOD CHAINS (7 MARKS)**

**6.1** A food chain shows how energy moves from one organism to another. (2)

**6.2**

- Grass: Producer (1)
- Rabbit: Herbivore / Primary consumer (1)
- Eagle: Predator / Carnivore / Tertiary consumer (1)

**6.3** Animals would die because they depend on plants for food / there would be no energy source. (2)

### **QUESTION 7: MIXTURES (8 MARKS)**

**7.1** A mixture is made when two or more substances are combined without a chemical reaction. (2)

**7.2** Salt and water, sugar and tea, cereal and milk (*Any 2*) (2)

**7.3** Filtration (1)

**7.4** Evaporation (1)

**7.5** To get useful substances / to remove unwanted parts (*Any valid reason*) (2)

✓ **TOTAL: 50 MARKS**

# MAP

MYST PATHWORKS