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PRACTICE TEST

Practice test · Term 2
Version 1.5 · 20 October 2026

Natural Sciences and Technology · Grade 4

Matter and Materials

Term 2 | 10 questions | CAPS-aligned

TOTAL 60 MARKS

NAME AND SURNAME _____ CLASS _____ DATE _____

Instructions

1. This question paper consists of TWO sections. Answer all the questions.
2. Answer all the questions on the question paper itself, in the spaces provided.
3. Read each question carefully before you begin writing.
4. Write neatly and legibly. Work that cannot be read cannot be marked.
5. You may use a pencil and a ruler for drawings and diagrams.

Question	Content of the question	Marks	Obtained
1	Multiple choice	4	
2	Matching	4	
3	Short questions	6	
4	Properties of materials	6	
5	Heating and cooling	10	
6	Technology: structures	4	
7	Investigation: the strongest paper pillar	5	
8	Technology: the design process	8	
9	Strong frame structures	4	
10	Raw and processed materials	9	
	Total	**60**	
	Percentage		%

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Section A Short questions

1 Multiple choice

4 marks

Choose the correct answer and circle the letter next to it.

PRACTICE EXAMPLE · DO THIS ONE TOGETHER FIRST

Which one is a LIQUID?

a Ice b Juice c Steam

Juice flows and takes the shape of its container, so the answer is b. Circle the b.

This example does not count for marks. It only shows you how to answer.

1.1 Water in a glass is an example of which state of matter? **(1)**

(a) A solid (b) A gas (c) A liquid

1.2 What happens to ice if you leave it in the sun? **(1)**

(a) It melts (b) It freezes (c) It gets harder

1.3 Which material would work best for making a raincoat? **(1)**

(a) Paper (b) Plastic (c) Wool

1.4 An eggshell is an example of which kind of structure? **(1)**

(a) A frame structure (b) A strut (c) A shell structure

2 Matching

4 marks

Match the description in COLUMN A with the correct word in COLUMN B. Write only the LETTER. One word is left over.

2.1 **(4)**

COLUMN A	COLUMN B	Answer
1. A substance that keeps its own shape	A. Melting	1 = _____
2. When ice turns into water	B. Transparent	2 = _____
3. When water vapour becomes water again	C. Solid	3 = _____
4. A material that you can see through clearly	D. Evaporation	4 = _____
	E. Condensation	

3 Short questions

6 marks

3.1 Write next to each substance whether it is a SOLID, a LIQUID or a GAS. **(4)**

Substance	State of matter
Milk	
Stone	
Air in a balloon	
Sugar	

3.2 Name TWO properties of glass that make it a good material for a window. **(2)**

Section B — Longer questions

4 Properties of materials — 6 marks

4.1 Write ONE property that makes each material good for its job: rubber for a car tyre; a sponge for wiping up water; steel for a bridge. **(3)**

4.2 Name ONE material that is light AND waterproof. **(1)**

4.3 Mum puts a pot of water on the stove. After a while she sees steam above the pot. Explain what happened to the water. **(2)**

5 Heating and cooling — 10 marks

5.1 Write the name of the process next to each change. **(4)**

Change	Process
A solid becomes a liquid	
A liquid becomes a gas	
A gas becomes a liquid	
A liquid becomes a solid	

5.2 What must be ADDED to ice to make it melt? Give ONE example of where this can come from. **(2)**

5.3 Why does a can of cold drink straight from the fridge sweat on the outside? **(2)**

5.4 Nadia leaves an ice cream in the sun. Explain what happens and why. **(2)**

6 Technology: structures

4 marks

6.1 Study the structures below and write next to each letter whether it is a FRAME STRUCTURE or a SHELL STRUCTURE. **(3)**



A: _____ B: _____ C: _____

6.2 Some traditional South African homes are built on a frame of bent sticks or branches. Name ONE such home. **(1)**

7 Investigation: the strongest paper pillar

5 marks

7.1 Thabo folds sheets of paper into three hollow pillars: one ROUND, one TRIANGULAR and one SQUARE. He stands each pillar upright and puts books on top, one at a time, until the pillar falls over or is crushed. His results: round pillar 9 books; triangular pillar 5 books; square pillar 6 books. **(3)**

a. Which factor does he CHANGE? _____

b. Name ONE factor he must keep the SAME. _____

c. What does he measure? _____

7.2 Which pillar shape was the strongest? Use his results to explain your answer. **(2)**

8 Technology: the design process

8 marks

THE DESIGN BRIEF

The school's bird bath is blown over by the wind every afternoon. Design a bird bath that will not fall over.

8.1 Write the PROBLEM in ONE sentence. **(2)**

8.2 Name TWO things your design must do. **(2)**

8.3 Draw a labelled sketch of your design. Label at least THREE parts. **(3)**

8.4 How will you TEST whether your design works? **(1)**

9 Strong frame structures

4 marks

9.1 Why are triangles used in frame structures such as power pylons and bridges? Explain. **(3)**

9.2 How can you make a square frame stronger? **(1)**

10 Raw and processed materials

9 marks

10.1 What is the difference between a RAW and a PROCESSED material? **(2)**

10.2 Write next to each raw material what is made from it. **(4)**

Raw material	What is made from it
A tree	
Clay	
Wool from a sheep	
Sand	

10.3 Write RAW or PROCESSED next to each thing. **(3)**

Thing	Raw / Processed
Milk from a cow	
A plastic bag	
A stone	

Total **60 marks**



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