MeerkatSkool

PAPER 2

Practice test · Term 3–4
Version 1.6 · 21 October 2026

Natural Sciences and Technology · Grade 6

Energy, Earth and Technology

Term 3–4 | 10 questions | CAPS-aligned

TOTAL 87 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 questions	6	
2	Short questions	9	
3	Electric circuits	10	
4	Fossil fuels and electricity	8	
5	The Solar System	11	
6	The Moon	6	
7	Exploring space	9	
8	Electricity from a power station	10	
9	Technology: design a model rover	10	
10	Circuits that solve problems	8	
	Total	**87**	
	Percentage		%

Free sample · feel free to print and share

This test is a free sample from MeerkatSkool. Print it for your child and feel free to share it with other parents and teachers. Ask us about the full booklet with all the tests and memos: meerkatskool.co.za or WhatsApp 066 462 7629. This sample may not be sold.

Section A — Energy, electricity and the solar system

1 Multiple choice questions — 6 marks

Choose the correct answer and circle its letter.

1.1 Which planet is closest to the Sun? **(1)**

(a) Venus (b) Mercury (c) Earth

1.2 Which one of these is a FOSSIL FUEL? **(1)**

(a) Natural gas (b) Wind (c) Sunlight

1.3 An electric circuit is: **(1)**

(a) a complete, unbroken path for electricity (b) a machine that makes electricity (c) a kind of battery

1.4 The Earth rotates once on its own axis in about: **(1)**

(a) 24 hours (b) 7 days (c) 365 days

1.5 Which planet is the LARGEST? **(1)**

(a) Earth (b) Jupiter (c) Mercury

1.6 Which one of these is a DWARF PLANET? **(1)**

(a) Pluto (b) Mars (c) The Moon

2 Short questions — 9 marks

2.1 Read the labels of these appliances. **(4)**

Appliance	Power on the label
Iron	1200 W
Television	100 W
Geyser	3000 W
Cellphone charger	5 W

a. Which TWO appliances use the MOST electricity? (2)

b. What do these two appliances have in common? (1)

c. Which appliance uses the LEAST electricity? (1)

2.2 Fill in the missing word in each sentence. **(3)**

a. The Sun is the centre of our _____ .

b. The side of the Earth that faces the Sun has _____ .

c. A body that travels around a planet is called a _____ .

2.3 A family wants to use sunlight at home. They can buy SOLAR PANELS or a SOLAR WATER HEATER. Explain the difference between what these two things do. **(2)**

3 Electric circuits

10 marks

3.1 Draw a circuit diagram of a circuit with ONE cell, ONE bulb and a CLOSED switch. Use the correct symbols. **(3)**

3.2 A learner builds a circuit with a cell, a bulb and a gap between two crocodile clips. She puts each object into the gap, one at a time. **(3)**

Item in the gap	Does the bulb light? Yes / No
A steel nail	
A piece of chalk	
A strip of cardboard	

3.3 Explain why the bulb lights when the steel nail is in the gap, but not when the cardboard is in the gap. **(2)**

3.4 Give TWO reasons why it is useful to have a switch in a circuit. **(2)**

4 Fossil fuels and electricity — 8 marks

4.1 Explain how coal formed in the Earth's crust, and why coal is called a NON-RENEWABLE resource. **(4)**

4.2 Answer the questions about where the energy for a TV comes from. **(4)**

a. Write these in the correct order to show where the energy for a TV comes from. Start at the TV and go back to the ORIGINAL source of the energy: power station · Sun · TV · substation · coal · power lines (pylons) (3)

b. Why do we say that the Sun is the ORIGINAL source of this energy? (1)

Section B Space, electricity and technology

5 The Solar System — 11 marks

5.1 Name the FOUR rocky planets closest to the Sun, in order. **(3)**

5.2 Why can we not live on Mars? **(2)**

5.3 What is the difference between a PLANET and a STAR? **(2)**

5.4 Why does Jupiter take much longer than Earth to go around the Sun? **(2)**

5.5 Name TWO things that scientists have learnt by sending spacecraft to other planets. **(2)**

6 The Moon

6 marks

6.1 Answer the questions about the Moon's movements. **(3)**

a. About how long does the Moon take to ROTATE once on its own axis?

b. About how long does the Moon take to REVOLVE once around the Earth?

c. The Earth and the Moon move together. Around what do they move?

6.2 Name THREE features that you can see on the surface of the Moon with a telescope. **(3)**

7 Exploring space

9 marks

7.1 SALT (the Southern African Large Telescope) is near Sutherland in the Karoo. **(3)**

a. What does a telescope such as SALT collect from stars and planets? (1)

b. Give TWO reasons why SALT was built far away from cities. (2)

7.2 Rovers are used to explore the surface of Mars. **(3)**

a. Why do rovers need wheels with deep grooves (treads)?

b. What is the ANTENNA on a rover used for?

c. The Moon Rover had seats. Why do Mars rovers have no seats?

7.3 Ayanda made a model of the Solar System. She put all eight planets in a straight row, touching each other, and made them all the same size. Name TWO things that are wrong with her model. **(2)**

7.4 Name ONE planet that has NO moons. **(1)**

8 Electricity from a power station

10 marks

8.1 Complete the sentences about a coal-fired power station. **(3)**

a. Burning coal heats water until it boils and becomes _____ .

b. This pushes against the blades of a _____ and makes it spin.

c. The spinning blades turn a _____ , which makes electricity.

8.2 Electricity is expensive, partly because a lot is needed to bring it from the coal mine to your home. Name THREE things (buildings, machines or equipment) that are needed. **(3)**

8.3 A hydro-electric power station uses flowing water to make electricity. Give ONE advantage and ONE disadvantage of hydro-electric power for South Africa. **(2)**

8.4 Many of South Africa's power stations are built right next to coal mines in Mpumalanga. Give TWO reasons why. **(2)**

9 Technology: design a model rover

10 marks

THE DESIGN BRIEF

Design and make a model Mars rover from recycled materials. It must roll at least 1 m after it leaves a ramp, and it must carry a matchbox (its 'camera') on top. You may use only: a small cardboard box, bottle tops, kebab sticks, drinking straws, sticky tape and glue.

9.1 Which of the materials will you use for the WHEELS, and which for the AXLES? **(2)**

Wheels: _____ Axles: _____

9.2 Name THREE specifications (requirements) that your rover must meet. **(3)**

9.3 How will you TEST your rover to see whether it meets the rolling specification? Describe a fair test. **(2)**

9.4 Draw a labelled sketch of your rover seen from the side. Label the box, a wheel, an axle and the 'camera'. **(3)**

10 Circuits that solve problems

8 marks

10.1 Write next to each system the main useful output energy that its circuit produces. **(3)**

System	Output energy
A traffic light	
An electric fan	
A fire alarm	

10.2 A burglar alarm has a switch under the doormat. When someone steps on the mat, the alarm rings. Explain how this works. **(3)**

10.3 Name TWO OTHER places in your community where electric circuits help to solve a problem. Do not use the examples in 10.1 and 10.2. **(2)**

Total **87 marks**



Free quizzes

Finished this test? Keep practising online!

More than 12 000 free questions for Grades 4 to 7, in every subject and aligned to CAPS. After every answer your child gets a short explanation. No registration needed, and it works on a phone.

meerkatskool.co.za

Scan with your phone to start right away

A small request from us

Thank you for supporting MeerkatSkool! We are a small South African business, and every paper is put together with great care.

This test and memo are a free sample: feel free to share them with other parents and teachers. Ask us about the full booklet: meerkatskool.co.za or WhatsApp 066 462 7629.

Thank you!
The MeerkatSkool team

Free quizzes
meerkatskool.co.za

Email
info@meerkatskool.co.za

WhatsApp and calls
066 462 7629

Help us improve

Found a mistake in this test? WhatsApp us straight away. We fix it within 24 hours and send you the new version.

Scan to WhatsApp us · 066 462 7629