

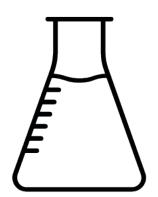






Planner & Tracker for Recovery ATP

Natural Sciences & Technology



Grade 5 Term 4

Table of Contents

Introduction	3				
Overview	4				
Intermediate Phase Conceptual Chain: NS & Tech					
Amendments to the Annual Teaching Plan	8				
Amendments to the Programme of Assessment	8				
ATP / NECT Lesson Plan / Textbook Alignment: Grade 5 Term 4	9				
Tracker: Grade 5 Term 4	10				
Programme of Assessment					
Test: 50 marks	22				
Test: memorandum	25				

Introduction

Dear Natural Sciences & Technology Teachers,

The COVID-19 Pandemic has left us with an enormous challenge in education. As we return to 'normal schooling', we all have to work smarter and harder to ensure that our system recovers.

This document is designed to help you achieve this. By systematically working through this plan, we are confident that you can address the loss of teaching and learning time, and bring your learners to the level where they need to be in terms of NS & Tech.

We thank you in advance for the commitment, dedication and hard work that is required of you. You are truly building our nation.

With very best wishes for the term ahead,

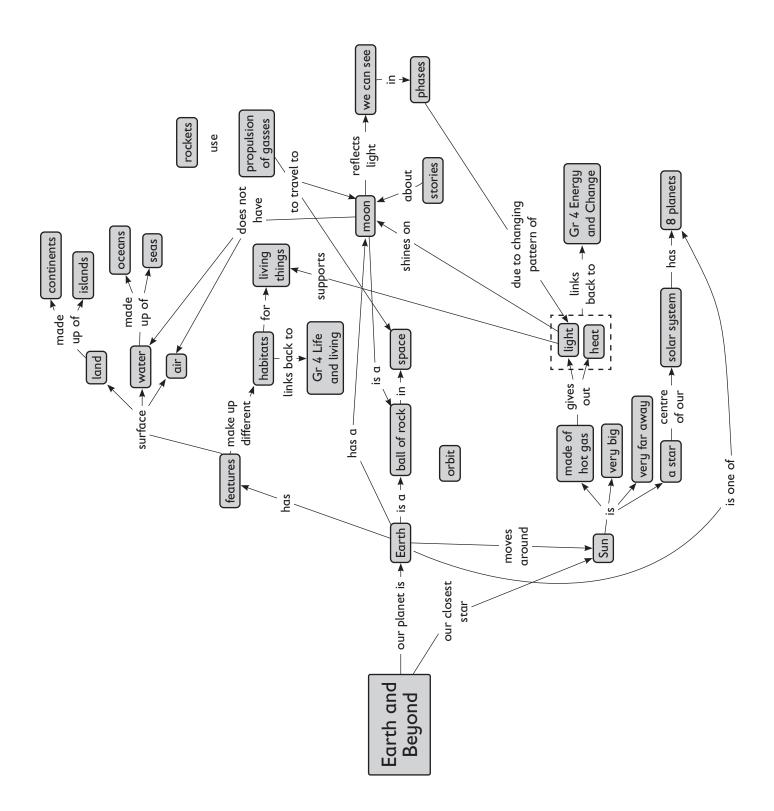
The DBE / NECT Recovery ATP Trackers Team

Overview

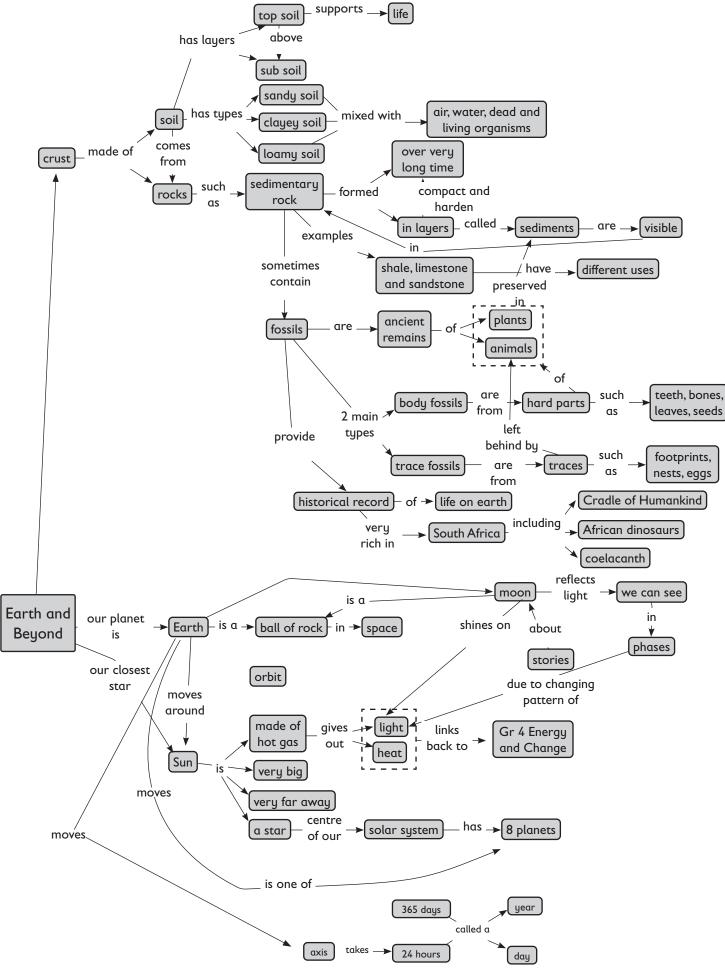
Please continue to keep the following key principles in mind throughout the recovery journey:

- The development of Science Process Skills is key to the teaching and learning of the subject.
 Focussing on these skills is critical.
- Learners should be given as many opportunities as possible to write regularly and read for
 meaning in Natural Science and Technology, in order to develop language skills as well. Due
 to learning losses, as a result of the Covid pandemic, it is the responsibility of every educator to
 develop these literacy skills.
- It is very important to give learners a sense of **how science applies to their daily lives**, and of **the value that science adds to their lives**. Hold a brief discussion on this point when introducing a new topic, and invite learners to contribute their ideas on the uses and value that this topic has.
- At the end of every topic, come back to the topic overview, and **reflect on what has been learnt and taught**. In particular, it is important to note your challenges and ideas for future improvement, so that you can improve your teaching the next year.
- At the core of all scientific activities is the need to ask questions. These questions help us seek answers through observation and experimental design. The results of these questions should raise more questions. It is this natural curiosity that all teachers, and especially science teachers, should be encouraging in their classrooms. Encourage curiosity and questions that investigate, inquire and probe.
- Build a solid conceptual foundation for learners. A conceptual chain for the phase is provided at the start of this document. It is important for all NS & Tech teachers to work cohesively to ensure that learners are equipped with a solid understanding of the required concepts, by the time they leave the phase.
- Using the **CONCEPTUAL CHAIN** provided, **work together** as a department to:
 - a. Check that all concepts for the phase are covered in your school's recovery plan.
 - b. Check for overlaps across the grades.
 - c. **Identify the weak links in the conceptual chain** points where learners struggle and may be the source of misconceptions or common errors.
 - d. Decide how to **emphasise critical concepts from previous grades**, especially where topics have moved from a different grade in the revised ATP.

Intermediate Phase Conceptual Chain: Grade 4

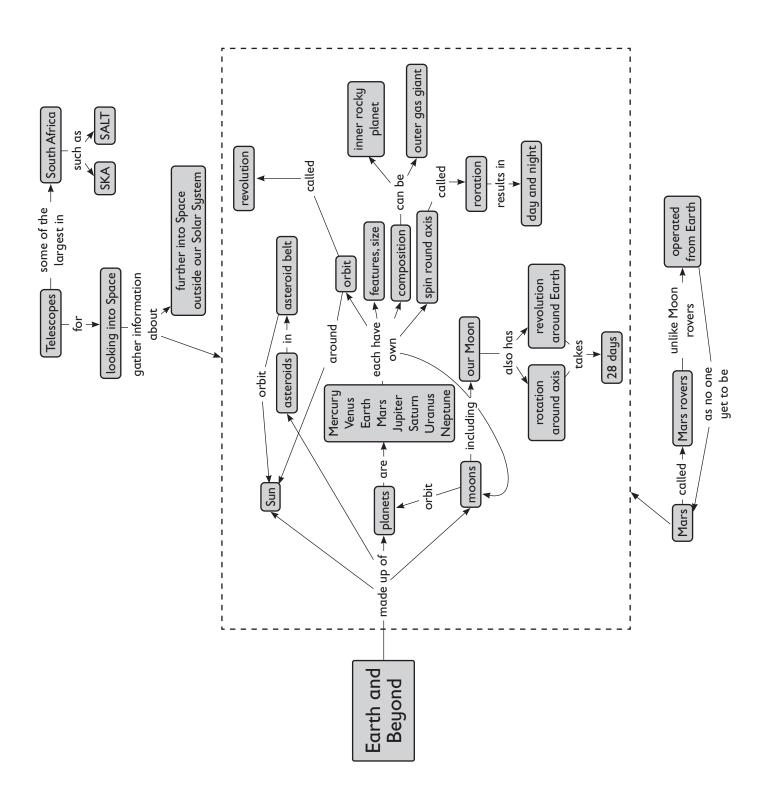


Intermediate Phase Conceptual Chain: Grade 5



The concept maps in this section have been adapted from Thunderbolt Kids resources published by Siyavula.

Intermediate Phase Conceptual Chain: Grade 6



7

Amendments to the Annual Teaching Plan

The Recovery ATP for Natural Sciences & Technology has the **same content as in CAPS**, however, this content has been arranged as follows for Grade 5 Term 4, in order to ensure key conceptual development, and to address common learning losses:

· Some topics remain the same:

The sun
 The moon
 (1 week)
 (1 week)

Some topics have been cut out completely/removed:

1. Planet Earth (2 weeks)

• Some topics from Grade 4 have been included/recovered:

Surface of the Earth (2 weeks)
 Sedimentary rocks (1 week)

3. Fossils (1 week)

Directions on how to cover all required topics are provided in the Tracker that follows.

Amendments To The Programme Of Assessment

- The Programme of Assessment is aligned to the Revised Section 4 of CAPS.
- Both formal and informal assessment should continue as normal.
- Recording of the informal assessment is left to the discretion of the teacher.
- The 2021 formal assessment tasks for Grade 5 are as follows:

	TERM 1	TERM 2	Term 4	TERM 4
Practical Task/Investigation	20 marks	20 marks	20 marks	-
Test	35 marks	50 marks	35 marks	50 marks

Sample Assessment Tasks and Memoranda / Rubrics for Grade 5 Term 4 are included in this document.

ATP / NECT Lesson Plan / Textbook Alignment: Grade 5 Term 4

Notes:

- Column 1 shows the time allocation per topic.
- Column 2 shows the Recovery ATP requirements for Grade 5 Term 4.
- Column 3 explains any changes that have been made to the teaching plan.
- Column 4 shows where in the NECT lesson plans this is covered.
- Column 5 shows where in the approved textbooks this is covered.
- Finally, if, for any reason, the Term 4 teaching time for NS & Tech is reduced, please
 ensure that the KEY CONCEPTS listed below each table are thoroughly covered.

Key To	Approved Textbook Abbreviations:
S&M	Study & Master Natural Science and Technology Grade 5 Cambridge University Press
VIVA	Viva Natural Sciences and Technology Grade 5 Vivlia
PLAT	Platinum Natural Sciences and Technology Grade 5 Maskew Miller Longman
SFA	Solutions for All Natural Sciences and Technology Grade 5 MacMillan
DbD	Day by Day Natural Sciences and Technology Grade 5 Maskew Miller Longman
ОХ	Oxford Successful Natural Sciences and Technology Grade 5 Oxford University Press
so	Spot On Natural Sciences and Technology Grade 5 Pearson
тс	Top Class Natural Sciences and Technology Grade 5 Shuter and Shooter
SIBB	Sasol Inzalo Bk B Natural Sciences and Technology Grade 5 Sasol

ATP / NECT Lesson Plan / Textbook Alignment: Grade 5 Term 4

Note: These are the Grade 4 textbook references for the Grade 4 included/recovered topics.

SFA	Solutions for All Natural Sciences and Technology Grade 4 MacMillan
S&M	Study & Master Natural Science and Technology Grade 4. Cambridge University Press
DbD	Day by Day Natural Sciences and Technology Grade 4 Maskew Miller Longman
PLAT	Platinum Natural Sciences and Technology Grade 4 Maskew Miller Longman
VIVA	Viva Natural Sciences and Technology Grade 4 Vivlia
so	Spot On Natural Sciences and Technology Grade 4 Pearson
os	Oxford Successful Natural Sciences and Technology Grade 4 Oxford University Press
тс	Top Class Natural Sciences and Technology Grade 4 Shuter and Shooter
SIBB	Sasol Inzalo Bk B Natural Sciences and Technology Grade 4 Sasol

TIME	DBE RECOVERY ATP REQUIREMENTS	NOTES	NECT LESSON PLANS: LESSONS	API	APPROVED TEXTBOOKS	DATE
Week 1	The Sun	This section has been	Grade 4 Term 4 Lesson Plans	SFA Gr 4	206	
		recovered from Grade 4	Lesson 3A: The Sun Lesson 3B: The Sun and Life	S&M Gr 4	146	
		term 4	Lesson 3C: The Sun and Life	DbD Gr 4	147	
				PLAT Gr 4	164	
				VIVA Gr 4	138	
				SO Gr 4	87	
				OS Gr 4	118	
				SIBB Gr 4	100	
				TC Gr 4	119	

Scaling down

If the Term 4 teaching time is reduced, ensure that learners have a thorough understanding of the following key content and concepts:

- The Sun as our closest star. The Earth's position from the Sun. Sizes of Earth and Sun
- Characteristics of the Sun made of hot gas
- Why we need the Sun gives off light and heat vital for life on Earth
- The dangers of the Sun

DATE									
COMI									
APPROVED TEXTBOOKS	223 - 231	158 - 164	163 - 168	176 - 184	153 - 160	91 - 94	126 - 132	154 - 164	125 - 130
APPF	SFA Gr 4	S&M Gr 4	DbD Gr 4	PLAT Gr 4	VIVA Gr 4	SO Gr 4	OS Gr 4	SIBB Gr 4	TC Gr 4
NECT LESSON PLANS: LESSONS	Grade 4 Term 4 Lesson Plans Lessons 5A & 5C: Features of the moon	(These 2 lessons need to be combined into 1 lesson. Focus must be on Section	D & E of 5A, and Section D of 5C. Section E of 5C can be done if time	permits. The moon needs to be tracked over a 1 month period)	(these 2 lessons need to be combined	D and E of 6A, and Section D of 6B.)			
NOTES	This section has been	recovered from Grade 4	Ierm 4						
DBE RECOVERY ATP REQUIREMENTS	The moon 1. Features of the	moon 2. Phases of the moon	3. moon Stories						
TIME	Week 2 3 hours								

If the Term 4 teaching time is reduced, ensure that learners have a thorough understanding of the following key concepts:

- Features on the moon.
- Why life cannot exist on the moon.
- The differences between the Earth and the moon: size, temperature, light, heat, water, air, features
- Size difference between the Sun and the moon.
- The various phases of the moon.
- Why the Moon looks so bright..
- Why we only see part of the Moon. The lunar cycle.

TIME	DBE RECOVERY ATP REQUIREMENTS	NOTES	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS	VED	DATE COMPLETED
Week 3 - 4 6 hours	Planet Earth 1. Features of the Earth (Grade 4) 2. Earth and space (Grade 4) 3. The Earth moves	This section has been recovered from Grade 4 Term 4 and includes new Grade 5 content	Grade 4 Term 4 Lesson Plans and includes new Grade 5 content Lessons 1A & 1B: Features of the Earth (these 2 lessons need to be combined into 1 lesson. Check the learners' knowledge of what they learnt in Gr4. Focus on the gaps in their knowledge.) Lessons 1C & 2A: Features of the Earth seen from space (These 2 lessons need to be combined into 1 lesson. Focus must be on Section D and E of 1C and Section E of 2A.) Lessons 2B & 2C: Earth and space (These 2 lessons need to be combined into 1 lesson. Check the learners' knowledge of what they learnt in Gr4. Focus on the gaps in their knowledge.) Grade 5 Term 4 Lesson Plans Lesson 1A: The Earth moves Lesson 1B: The Earth spins	S&M Gr 4 Gr 5 VIVA Gr 4 Gr 5 SFA Gr 4 Gr 5 OX Gr 4 Gr 5 SO Gr 4 Gr 5 SIBB Gr 4 Gr 5 SIBB Gr 4 Gr 5	132 - 144 142 - 144 125 - 134 166 - 169 163 - 161 162 - 165 193 - 198 137 - 144 139 - 144 139 - 144 139 - 144 139 - 144 112 - 117 162 - 165 84 - 86 74 - 75 111 - 113 82 - 98 74 - 84	

If the Term 4 teaching time is reduced, ensure that learners have a thorough understanding of the following key concepts:

Planet Earth

- Recognise that the Earth's surface has land masses (continents & islands) and water masses (oceans and seas)
- Explain what Earth's atmosphere is layer of air with oxygen for life, like a blanket keeping the Earth's surface warm.
- Describe the main differences between the habitats: rivers, seas, grasslands, forests, mountains
- Identify the 7 continents and 5 oceans on a map
- Explain the main differences between oceans, seas and lakes. Distinguish between continents and islands.
- Identify features on the surface of the Earth from pictures
- Identify the shape of the Earth. Identify what Earth looks like from Space.
- Identify what people can see from Earth.
- Name the differences between stars and planets.
- Explain why the sun shines on only one half of the Earth at a time.
- Describe and draw the Earth's orbit around the sun
- Explain how the Earth takes 365 days to orbit the sun
- Draw the Earth and its axis, explain that the Earth takes 24 hours to spin once on its axis
- Demonstrate how day and night occur. Explain that the Earth takes 24 hours to rotate fully

TIME	DBE RECOVERY ATP REQUIREMENTS	NOTES	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS	VED	DATE
Week 5 - 6 6 hours	Surface of the Earth 1. Rocks	This topic has been	Grade 5 Term 4 Lesson Plans Lesson 2A: Rocks	S&M 14 Gr 5	147 – 151	
	 Soil from rocks Soil types 	reduced from 2,5 weeks to 2	<u>Lesson 2B</u> : Rocks and change (This lesson is reduced to 1 hour.	VIVA 17 Gr 5	172 – 184	
	;	Weeks	Section E: 5 & 6 – will be completed over 4 weeks at the beginning of each	PLAT 17 Gr 5	170 – 179	
			lesson.) <u>Lesson 2C</u> : Soil comes from rocks	SFA 20 Gr 5	202 – 211	
			<u>Lesson 3A</u> : Soil types <u>Lesson 3B</u> : Soil types	DbD 1.	148 -154	
			(This lesson is reduced to 1 hour. Section E: do as a demonstration	OX Gr 5	126 – 135	
			activity.) Lesson 3C & 4A: Soil types	SO 7	75 – 80	
			(These 2 lessons must be combined into 1 lesson.)	TC 11 Gr 5	115 – 125	
				SIBB 8	88 - 128	

If the Term 4 teaching time is reduced, ensure that learners have a thorough understanding of the following key concepts:

Surface of the Earth

- Draw and label a diagram of the crust of the Earth.
- Describe how rocks and soil make up the crust of the Earth.
- Explain how soil, water, air and sunlight support life on Earth, including plants.
- Explain how soil comes from rocks that are weathered. Describe the 3 different types of soil: sandy, clayey and loamey.
- Explain how to find out how much sand, silt and clay there is in soil, which types of soil hold water better and which type is best for plants to
- Identify the parts that make up soil, the importance of topsoil. Describe erosion.

DATE									
APPROVED TEXTBOOKS	156 -158	187 – 194	189 – 195	219 – 227	158 - 161		83 – 88	127 – 132	136 - 146
AP	S&M Gr 5	VIVA Gr 5	PLAT Gr 5	SFA Gr 5	DbD Gr 5	OX Gr 5	SO Gr 5	TC Gr 5	SIBB Gr 5
NECT LESSON PLANS: LESSONS	Grade 5 Term 4 Lesson Plans Lessons 4C, 5A & 5B:	Formation of sedimentary rocks (These 3 lessons must be combined	into 2 lessons of 1,5 hours in total. Lesson 5A: Section E will need to be	omitted.)	Uses of sedimentary rocks	into 2 lessons of 1,5 hours in total.)			
NOTES	This topic has been reduced	to 1 week.							
DBE RECOVERY ATP REQUIREMENTS	Sedimentary rocks 1. Formation of	sedimentary rocks 2. Uses of sedimentary	rocks						
TIME	Week 7 3 hours								

If the Term 4 teaching time is reduced, ensure that learners have a thorough understanding of the following key concepts:

Sedimentary Rocks

- Explain the four main stages of sedimentary rock formation draw a flowchart.
- Draw a sketch of how the layers are formed.
- Identify sedimentary rock by their layers. Name the different sedimentary rocks and explain their origins.
- Describe the uses of limestone. Explain how cement is made.
- Name some products made from shale and sandstone.
 - Explain why they are chosen for certain products.

DATE									
APPROVED TEXTBOOKS	159 – 169	195 – 207	197 – 209	231 – 246	165 – 174		26 – 68	133 – 140	152 -173
AP TE	S&M Gr 5	VIVA Gr 5	PLAT Gr 5	SFA Gr 5	DbD Gr 5	OX Gr 5	SO Gr 5	TC Gr 5	SIBB
NECT LESSON PLANS: LESSONS	Grade 5 Term 4 Lesson Plans Lesson 6B: Fossils in rock	(This lesson must be reduced to 1 hour. Section E must be omitted.)	Lessons 6C & 7A: Body and Trace fossils (These 2 lessons must be	combined into 1 lesson.) Lessons 7C, 8A, 8B & 8C:	Importance of South African fossils (These 4 lessons must be combined	into 1 lesson of 1,5 hours.) The focus must be on:	The sites where the fossils were found The types of fossils found in these	areas.	
NOTES	This topic has been reduced	to 1 week.							
DBE RECOVERY ATP REQUIREMENTS	Fossils 1. Fossils in rock	Body and trace fossils	Importance of South African	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
TIME	Week 8 3 hours								

If the Term 4 teaching time is reduced, ensure that learners have a thorough understanding of the following key concepts:

Fossils

- How fossils are made up of the remains of ancient plants and animals and provide evidence of the environment at that time.
- Defining and categorising of fossils into trace and body fossils assumptions that can made from each.
- The importance of South African fossils important fossil areas and the types of fossils found in those areas.
- .e. Karoo, Sterkfontein Caves, Cradle of Humankind, Swartberg mountains, West Coast Fossil Park., Golden Gate National Park.
 - Coelacanth, dinosaurs, hominids, fossil skulls Taung child and Mrs Ples, fossil skeleton Little Foot, Sediba.

Below is a sample assessment test and memorandum. Please feel free to use this task as is, or to adapt for your context. It is important to ensure that learners are only assessed on work that has been taught.

Natural Sciences & Technology

Grade 5

Test

Term 4

Marks: 50

NOTE TO THE TEACHER:

If possible, photocopy this test for each learner. If this is not possible, write the test on the chalkboard.

INSTRUCTIONS TO THE LEARNERS

- 1. Answer all questions in blue or black ink.
- 2. Read each question carefully before answering it.
- 3. Pay attention to the mark allocations.
- 4. Plan your time carefully.
- 5. Write your answers in the spaces provided.
- 6. Write neatly.

PRACTICE QUESTION

Read the question and circle the letter that shows the correct answer.

- 1. Which of the following is an example of a liquid fuel?
 - a. gas
 - b. petrol
 - c. wood
 - d. coal

You have answered correctly if you have circled (b)



SECTION A QUESTION 1: MULTIPLE CHOICE [5] Read each question and circle the letter that shows the correct answer. 1a. For fuel to keep burning it needs _____ and ____. a. Heat and oxygen b. Fuel and fire c. Carbon dioxide and oxygen d. Oxygen and fuel 1b. Stored energy in cells and batteries ... a. is always the same b. can be changed into potential energy c. can be changed into electrical energy d. cannot be changed 1c. To give stored energy to a spring, you must... a. Stretch it b. Leave it as is c. Compress it d. Pull it 1d. When we burn wood, the energy in the wood is transferred into: a. light and heat b. ash and coal c. heat and smoke d. smoke and steam

QUESTION 2	[4]
Refer to the pictures below.	
2a. What type of fuel is being used in each of the pictures below?	
2b. What is the fuel being used for in each of the pictures? (How is the fuel being used?)	
2a 2a	
2b	

QUESTION 3	[6]
3 a. Where does an animal, like a dog for example, get energy from?	(1)
3b. What is a fuel?	(1)
3c. "I burned my paper by mistake," said Sarah.	
What two forms of energy can Sarah see when this happens?	(2)
3d. Explain the difference between input and output energy.	(2)

QUESTION 4		[11]
Study the picture below and answ	wer the questions that follow.	
metal fork		
4a.1. Why is this situation con	sidered a possible fire hazard?	(2)
4a.2. How can we prevent a fi	ire from breaking out?	(1)
4b. A house is connected to m substation to the use of a s	nains electricity. Explain the process of electricity flow fro stove in the house.	om the local (4)
4c. Name TWO disadvantage	s of fuel-burning power stations.	(2)
4d. Give TWO examples of ho	ow stored energy in an elastic band or spring can be use	ed. (2)
	91	ECTION A: 25

SECTION B

QUESTION 1: MULTIPLE CHOICE

[5]

Read each question and circle the letter that shows the correct answer.

- 1a. Which of the following term is used to describe Earth's journey around the Sun?
 - a. Eclipse
 - b. Rotate
 - c. Revolve
 - d. Pathway
- 1b. What occurrence takes place when the Earth spins on its own axis?
 - a. Lunar eclipse
 - b. Solar eclipse
 - c. Different seasons
 - d. Day and night
- 1c. Which one of the following statements is **not** true?
 - a. The Sun is made of hot gasses
 - b. The Sun is Earth's closest star
 - c. Planets provide their own light
 - d. Planets get their energy from the Sun
- 1d. Which of the following shapes of the moon shows the first quarter?
 - a.



b.



C.



d.



- 1e. Which one of the following is not a feature of the Earth?
 - a. It has 5 oceans.
 - b. Most of the surface is covered by land.
 - c. The small pieces of land are called islands
 - d. Habitats are the homes of animals and plant only.

QUESTION 2 [2]

2a. Fill in the missing words to complete the sentences below.

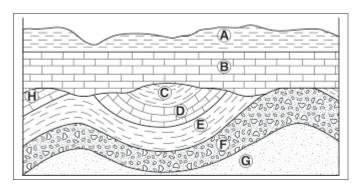
Earth is one of eight _____ that move around the Sun.

In Space there are gasses and dust but no _____.

Refer to the picture below.

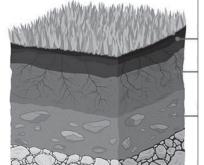
2b. Which layer of rock/soil (A – G) is the oldest?

2c. Which layer of rock/soil (A - G) is the newest?



QUESTION 3 [6]

3a. Provide labels for the soil profile below.



a.

b.

C.

d.

e.

3b. What is important about topsoil?

(1)

(5)

QUESTION 4 [10			
4.a. Explain how fossils are formed	(3)		
4.b. Describe the difference between body fossils and trace fossils.	(2)		
4.c. What type of fossil would dinosaur droppings be?	(1)		
4.d. What sedimentary rock is used to make cement?	(1)		
4.e. What natural force moves mud and sand?	(1)		
4.f. Name TWO uses of sandstone in your home.	(2)		
SECTI	ON B: 25		
TOTAL: 50) MARKS		

Test Memorandum

CAPS Topic	Questions	Expected answer(s)	Marks
SECTION A (25 Ma	-		
Stored energy in fuels	1a.	A✓	1
Cells and batteries	1b.	C ✓	1
Stored energy	1c.	C✓	1
Energy transfer	1d.	A✓	1
	2		
Fuels	2a.	petrol ✓(fuel) used to make a car move ✓	2
	2b.	gas ✓(fuel) in stove used to boil water ✓	2
	3		
Stored energy in fuels	За.	The food it eats. ✓	1
Stored energy in fuels	3b.	A substance that can be eaten or burned to produce ✓ energy.	1
Burning fuels	3c.	Light energy ✓ and heat energy can be witnessed. ✓	2
Fuels	3d.	Input energy is the energy we need to 'put in' to start a fuel burning. ✓ Output energy is the energy (like heat and light) that is produced when a fuel burns. ✓	2
	4		
Safety with electricity	4a.1.	Metal conducts electricity ✓ so the fork will conduct electricity from the toaster to the man who will get electrocuted. ✓	2
Safety with electricity	4a.2.	Unplug the toaster before the fork conducts electricity. Use an insulator instead of a conductor. ✓	1
Mains electricity	4b.	National grid → ✓ power station → ✓ substation/ transmission lines → ✓ your home/ where electricity is needed ✓	4
Mains electricity	4c.	Burning coal- releases gases → affects peoples' health ✓ Nuclear- no gas or smoke → although it does produce	2
		dangerous nuclear waste (must be kept away from people and environment) ✓	
Stored energy	4d	Springs→ mattress/ bike/ pogo stick/ rat trap/ jack in the box (any one for one mark) ✓	2
		Elastic→ hand-held catapult/ elastic powered aeroplane (one for one mark) ✓	

CAPS Topic	Questions	Expected answer(s)	Marks
SECTION B (25 Ma	arks)		
The earth moves	1a.	D ✓	1
The earth moves	1b.	D ✓	1
Formation of sedimentary rock	1c.	C✓	1
The Moon	1d.	D ✓	1
The Moon	1e.	A✓	1
	2		
Planet Earth	2a.	plants ✓ air ✓	2
Formation of sedimentary rock	2b.	G√	1
Formation of sedimentary rock	2c.	A✓	1
	3		
Soil comes from rocks	3a.	A - topsoil ✓ B - subsoil ✓ C - smaller pieces of rock ✓ D - larger pieces of rock ✓ E - solid rock/ bedrock ✓	5
Soil comes from rocks	3b.	It contains rich, nutrient, organic (decaying) matter which is good for plants to grow healthily. ✓	1
	4		
Fossils in rock	4a.	Fossils form when an animal dies and sediments settle on it in layers. When living things get trapped in these layers and become compressed they become preserved in the rock as fossils.	3
Body and trace fossils	4b.	Body fossils- actual preserved part of the body ✓ Trace fossils- preserved signs of animals ✓	2
Body and trace fossils	4c.	Trace fossils ✓	1
Uses of sedimentary rock	4d.	Limestone ✓	1
Formation of sedimentary rock	4e.	wind ✓	1

CAPS Topic	Questions	Expected answer(s)	Marks	
Uses of sedimentary rock	4f.	Sandstone blocks for building; ✓ and sandstone tiles ✓	2	
TOTAL: 50 MARKS				