basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

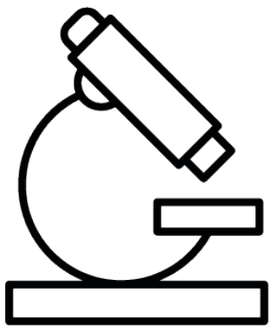
NATIONAL EDUCATION COLLABORATION TRUST

2030 NDP

Read to Lead
A Reading Nation is a Leading Nation

Planner & Tracker for Recovery ATP

Natural Sciences



Grade 7 Term 4

Table of Contents

Introduction

Dear Natural Sciences 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.

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, 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.

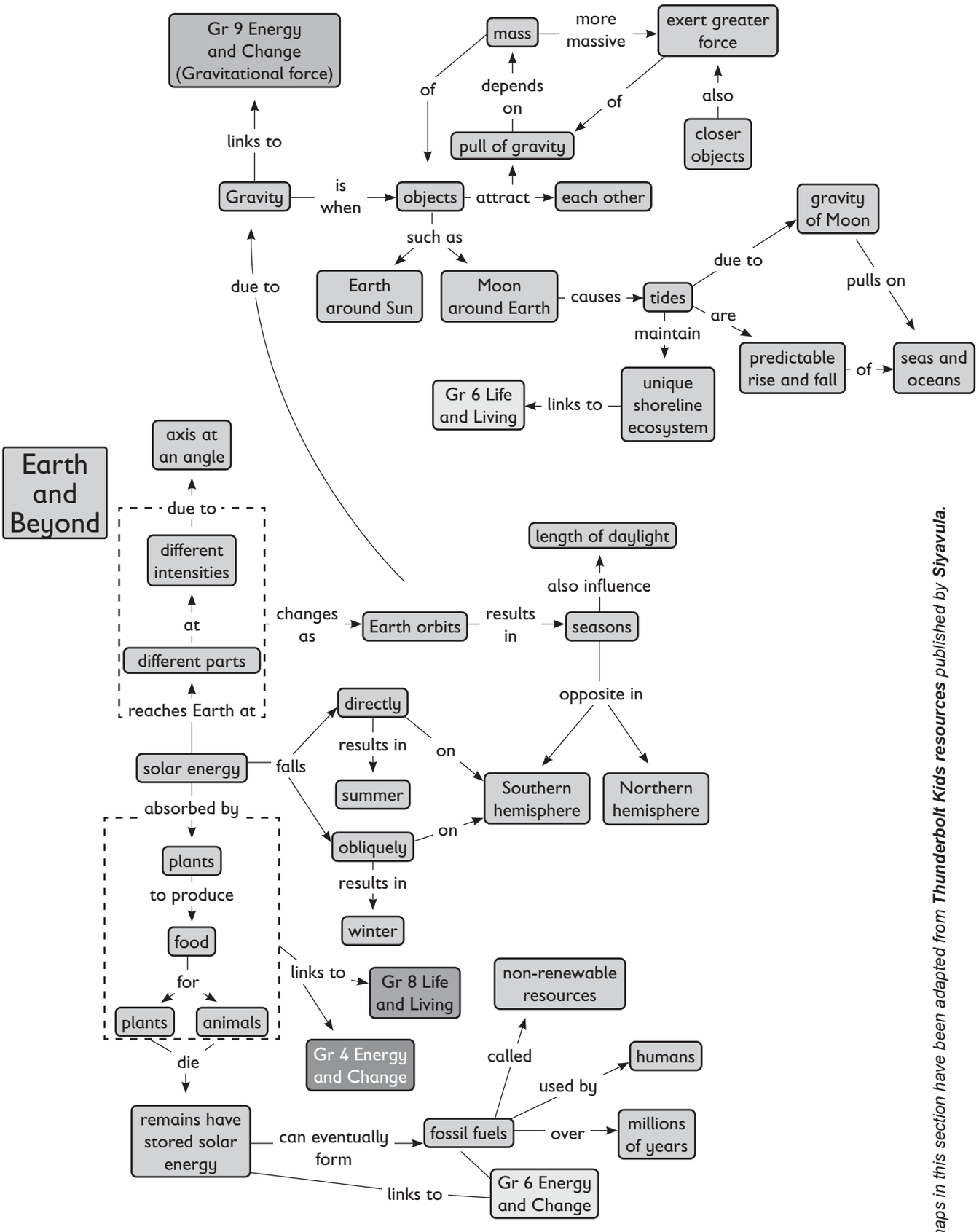
- At the end of every topic, come back to the topic overview, and **reflect on what has been learnt and taught**. In particular, it is important to note your challenges and ideas for future improvement, so that you can improve your teaching the next year.

- 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 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.

Senior Phase Conceptual Chain: Grade 7



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

Senior Phase Conceptual Chain: Grade 8

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

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

Amendments to the Annual Teaching Plan

The Recovery ATP for Natural Sciences has the **same content as in CAPS**, however, this content has been arranged as follows for Term 4::

- **Some topics from Grade 6 have been included/recovered:**
  1. The solar system (1 week)
  2. Movements of the Earth and planets (1 week)
  3. The Movement of the moon (1 week)

- **Some topics remain:**
  1. Relationship of the Sun to the Earth (reduced in time from 4 weeks to 3 weeks)
  2. Relationship of the moon to the Earth (2 weeks)

- **Some topics have been removed completely:**
  1. Historical Development of Astronomy

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 7 are as follows:

	TERM 1	TERM 2	Term 4	TERM 4
Practical Task/Investigation/Projects	20 marks	20 marks	30 marks	-
Test	60 marks	80 marks	60 marks	80 marks

A sample Assessment Test and Memorandum for Grade 7 Term 4 is included in this document.

ATP / NECT Lesson Plan / Textbook Alignment: Grade 7 Term 4

Notes:

- **Column 1** shows the **time allocation** per topic.
- **Column 2** shows the **Recovery ATP requirements** for Grade 7 Term 4.
- **Column 3** shows **where in the NECT lesson plans** this is covered.
- **Column 4** shows **where in the approved textbooks** this is covered.
- Finally, if, for any reason, the **Term 4 teaching time** for NS **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 Sciences Grade 7 Cambridge University Press
VIVA	Viva Natural Sciences Grade 7 Vivlia
PLAT	Platinum Natural Sciences Grade 7 Maskew Miller Longman
SFA	Solutions for All Natural Sciences Grade 7 MacMillan
DbD	Day by Day Natural Sciences Grade 7 Maskew Miller Longman
OX	Oxford Successful Natural Sciences Grade 7 Oxford University Press
SO	Spot On Natural Sciences Grade 7 Pearson
TC	Top Class Natural Sciences Grade 7 Shuter and Shooter
SIBB	Sasol Inzalo Bk B Natural Sciences Grade 7 Sasol
SbS	Step-by-Step Natural Sciences Grade 7 Van Schaik
VA	Via Afrika Natural Sciences Grade 7 Via Afrika
PEL	Pelican Natural Sciences Grade 7 Global MBD Africa

ATP / NECT Lesson Plan / Textbook Alignment: Grade 7 Term 4

NOTE: These are approved Grade 6 textbooks for the included/recovered Grade 6 topics on Electric Circuits, Electrical Conductors and Insulators.

S&M	Study & Master Natural Science and Technology Grade 6 Cambridge University Press
VIVA	Viva Natural Sciences and Technology Grade 6 Vivlia
PLAT	Platinum Natural Sciences and Technology Grade 6 Maskew Miller Longman
SFA	Solutions for All Natural Sciences and Technology Grade 6 MacMillan
DbD	Day by Day Natural Sciences and Technology Grade 6 Maskew Miller Longman
OX	Oxford Successful Natural Sciences and Technology Grade 6 Oxford University Press
SO	Spot On Natural Sciences and Technology Grade 6 Pearson
TC	Top Class Natural Sciences and Technology Grade 6 Shuter and Shooter
SIBB	Sasol Inzalo Bk B Natural Sciences and Technology Grade 6 Sasoll

TIME ALLOCATION	DBE RECOVERY ATP REQUIREMENTS	NOTES	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS		DATE COMPLETED
Week 1 3 hours	The Solar System 1. The Sun, planets and asteroids 2. Moons	***This section has been recovered from Gr6 Term 4***	<u>Gr6 Term 4 Lesson Plans</u> Lesson 1A & 1B: The Sun, planets and asteroids (these 2 lessons must be combined into 1 lesson) Lesson 1C & 2A: The rocky and gas planets (these 2 lessons must be combined into 1 lesson) Lesson 3A: moons	S&M Gr6	139 – 148	
				VIVA Gr6	152 – 166	
				PLAT Gr6	167 – 178	
				SFA Gr6	252 - 271	
				DbD Gr6	152 - 159	
				OX Gr6	116 – 121	
				SO Gr6	78 – 83	
				TC Gr6	122 – 126	
				SIBB Gr6	94 – 129	

Scaling down

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

<u>The Solar System</u>

- Describe the Solar system with the Sun at the centre.
- A star produces its own heat and light, a planet does not produce heat and light.
- Nname the eight planets in order of distance from the Sun.
- Draw the solar system, model the solar system.
- Identify the gas planets and rocky planets, know the features of, and differences between, gas planets and rocky planets.
- Know how many moons each planet has, how the moon gets its light, there is no water, air, wind or rain on the moon.
- Describe the first landing on the moon.

TIME ALLOCATION	DBE RECOVERY ATP REQUIREMENTS	NOTES	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS		DATE COMPLETED
Weeks 2 3 hours	Movements of the Earth and planets 1. Rotation (Earth) 2. Revolution (Earth)	***This section is recovered from Gr6 Term 4***	***<u>Gr6 Term 4 Lesson Plans</u>*** Lesson 2C: The planets and their orbits Lesson 3B: Rotation of the Earth Lesson 3C: Day and Night	S&M Gr6	140 – 144 149 - 150	
				VIVA Gr6	156 169 - 171	
				PLAT Gr6	170 – 172 184 - 186	
				SFA Gr6	262 – 263 276 - 279	
				DbD Gr6	154 162 - 166	
				OX Gr6	118 122 - 123	
				SO Gr6	79, 84, 185	
				TC Gr6	125 129 - 130	
				SIBB Gr6	101 – 102 137 - 138	

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

<u>Movements of the Earth and Planets</u>

- Compare the orbits if the planets.
- What rotation of a planet means, the concept of an axis of a planet.
- Demonstrate how the Earth rotates on its axis.
- Demonstrate how day and night happens.
- Explain how the rotation of the Earth causes day and night.

TIME ALLOCATION	DBE RECOVERY ATP REQUIREMENTS	NOTES	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS		DATE COMPLETED
Week 3, 4 & 5 9 hours	Relationship of the Sun to the Earth 1. Solar energy and the Earth's seasons 2. Solar energy and life on Earth 3. Stored solar energy	***This topic has been reduced in time from 4 to 3 weeks.***	***Grade 7 Term 4 Lesson Plans*** Lesson 1A: The movement of light from the Sun outward onto the Earth Lesson 1B: Movement of the Earth on its axis Lesson 1C: Movement of the Earth around the Sun Lesson 2C: Investigating the effect of direct and indirect light on the Earth Lesson 3A: The Four Seasons Lesson 3B: Solstice Lesson 3C: The Sun and photosynthesis Lesson 4A: Energy flow in a food chain Lesson 4B & 4C: Fossil fuels, advantages and disadvantages of fossil fuels (these 2 lessons must be combined into 1 lesson)	VA Gr7	146 - 153	
				PLAT Gr7	194 - 205	
				SFA Gr7	285 - 305	
				OX Gr7	140 - 156	
				SO Gr7	141 - 149	
				TC Gr7	159 - 169	
				SbS Gr7	166 - 174	
				PEL Gr7	247 - 264	
				SIBB Gr7	146 - 171	

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

Relationship of the Sun to the Earth

- Identify features of the Sun that make it the major source of energy for Earth. Draw diagrams to illustrate how the Sun radiates light and heat energy.
- The Earth's axis as an imaginary line, how the Earth's rotates on its axis, north and south pole, the 2 hemispheres, the equator. How the Earth orbits/revolves around the Sun – 1 revolution takes 365,25 days (1 year).
- How direct and indirect light affect the temperature of the Earth. How the position of the Earth changes, in relation to the Sun, as it orbits the Sun in 1 year.
- Compare the Earth at different times of the year. Explain why some places receive more light and heat at specific times of the year depending on the seasons.

- Explain how plants use light energy from the Sun to make food and oxygen – photosynthesis.
- Explain and draw a simple food chain showing how energy flows through the chain. Describe an ecosystem – how humans, animals and plants interact and depend on each other.
- How fossil fuel is formed. Know the advantages and disadvantages of using fossil fuels.
-

TIME ALLOCATION	DBE RECOVERY ATP REQUIREMENTS	NOTES	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS		DATE COMPLETED
Week 6 3 hours	The movement of the moon 1. Rotation (moon) 2. Revolution (moon)	***This section has been recovered from Grade 6 Term 4.***	***Grade 6 Term 4 Lesson Plans*** Lesson 4B: The rotation of the moon Lesson 4C: The moon and how it revolves around the Earth Lesson 5A: Revolution of the Earth	S&M Gr6	156 - 159	
				VIVA Gr6	175 - 179	
				PLAT Gr6	189 - 194	
				SFA Gr6	287 - 295	
				DbD Gr6	173 - 177	
				OX Gr6	126 - 129	
				SO Gr6	86 - 87	
				TC Gr6	133 - 135	
				SIBB Gr6	148 - 153	

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

The movement of the Moon

- Explain the length of a single rotation of the moon.
- Explain the rotation and revolution of the moon around the Earth.
- Compare the Sun, Earth and moon in terms of: shape, composition, size, movement and emitting light.
- Compare how the Earth and moon revolve around the Sun.

TIME ALLOCATION	DBE RECOVERY ATP REQUIREMENTS	NOTES	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS		DATE COMPLETED
Weeks 7 and 8 6 hours	Relationship of the moon to the Earth 1. Relative positions 2. Gravity 3. Tides		***Grade 7 Term 4 Lesson Plans*** Lesson 5A: The moon Lesson 5B: Solar and lunar eclipse Lesson 5C: Gravity Lesson 6A: Gravitational pull Lesson 6B: How the moon affects tides Lesson 6C: Shoreline ecosystems	SbS Gr 7	175 – 181	
				PLAT Gr 7	156 – 157, 202 - 205	
				SFA Gr 7	309 – 318	
				OX Gr 7	155 – 164	
				SO Gr 7	151 – 155	
				SIBB	170 – 198	
				TC Gr 7	171 – 180	
				VA Gr 7	146 – 159	
				PEL Gr 7	270 - 280	

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

Relationship of the Moon to the Earth

- The rotation of the moon and its revolution around the Earth.
- Compare solar and lunar eclipses, draw a diagram of how they occur.
- How gravity works, the effect of Earth's gravity on the moon, and the moon's gravitational force on the Earth.
- Tides - the rise and fall of sea levels, what causes tides, low tides and high tides, spring tides and neap tides.
- Different zones in a tidal pool, different organisms in a tidal pool.

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.

Test
Term 4 Test
80 Marks

NOTES 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.

Which planet in our solar system is closest to the sun?

a. Neptune
b. Mercury
c. Earth
d. Saturn.

You have answered correctly if you have circled (b)

Grade 7 Natural Sciences Term 4 Assessment

SECTION A: Energy and Change

QUESTION 1: MULTIPLE CHOICE **[5]**

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

1a. I grab a metal spoon standing in a pot of boiling water and it burns my hand.

Why did the spoon burn my hand?

a. Due to a chemical reaction
b. Electrical charges
c. Heat conduction
d. Convection of heat

1b. The two energy sources we use to dry our washing in the garden are?

a. Gravity and electricity
b. Solar winds and light
c. Wind and heat
d. Wind and light

1c. I use a solar geyser to heat up my water, I am using …

a. Renewable resources
b. Electrical energy
c. Non-renewable resources
d. Fossil fuels

1d. Thermal insulators are best described as:

a. Metals
b. A non-conducting substance of both electricity and heat
c. Any substance that does not conduct heat
d. Not able to conduct electricity

1e. The energy we get from moving water is called …

a. Hydro-electricity
b. Hydrogen
c. Thermal energy
d. Potential energy

Grade 7 Natural Sciences Term 4 Assessment

QUESTION 2 - TRUE OR FALSE **[5]**

Write true or false next to the following statements:

2a. All living things need energy. _____

2b. Fossil fuels are a non-renewable source of energy. _____

2c. A stretched elastic band has gravitational potential energy. _____

2d. Variables are factors that repeat in an experiment. _____

2e. A Styrofoam cup is a good insulating material. _____

QUESTION 3 **[5]**

Write one or two words that mean the same as the sentence:

3a. Ability to do work.

_____

3b. Transfer of heat energy between solid objects that are touching each other.

_____

3c. Substances formed in the Earth from dead plant and animal remains.

_____

3d. Energy produced by heat.

_____

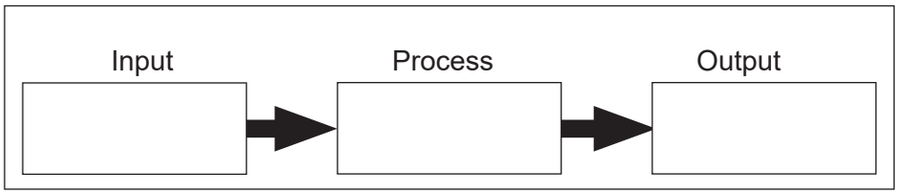
3e. Transfer of heat by electromagnetic waves.

_____

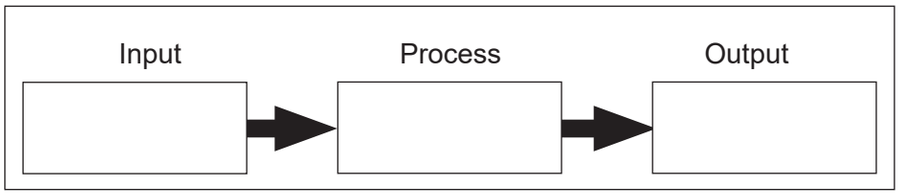
QUESTION 4 [6]

Show the energy transfer by completing the blocks:

4a. A battery is connected to a buzzer.



4b. A fan motor connected to an electric circuit and the blades of the fan rotate.



QUESTION 5 [9]

Answer the following questions:

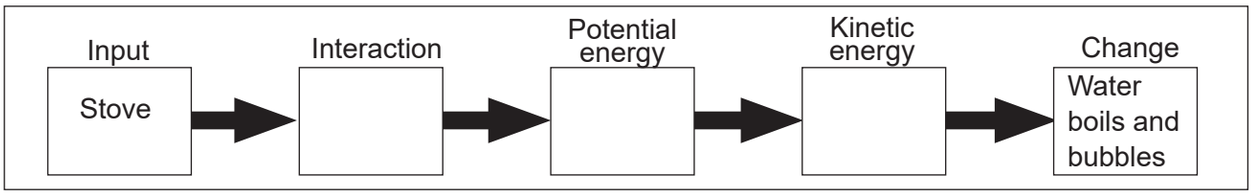
5a. Name tthree ways in which heat can be transferred. (3)

_____ _____

5b. In which direction is heat transferred? (1)

5c. Complete the diagram below to show energy transfer in a thermal system by putting the following words in the correct boxes. (3)

stove heats pot/ pot heats water/ stove heats up



5d. What does the law of conservation state? (2)

_____

_____

_____

SECTION B: Planet Earth and Beyond

QUESTION 1: MULTIPLE CHOICE **[8]**

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

1a. In an experiment using ice, heat and distance, which one of the statements is true?

a. A block of ice will melt faster when placed further away from the heat source.

b. A block of ice will melt slower when placed further away from the heat source.

c. A block of ice will melt slower when placed closer to the heat source.

d. Distance from a heat source will not make a difference on how long the ice takes to melt.

1b. A spring tide occurs when the sea level rises higher than normal. Why?

a. Both the sun and the moon act together.

b. There is little gravity in the north.

c. There is a full moon.

d. The sun and moon's gravities act on the sea.

1c. Which one of these is **not** a requirement for photosynthesis to happen?

a. Oxygen

b. H_2O

c. CO_2

d. Sunlight

1d. A new moon is a phase of the moon:

a. Where the whole moon is completely invisible.

b. Where the whole moon is visible.

c. Where a small crescent of moon becomes visible.

d. Where a gibbous moon is visible.

1e. In science we have learned that all matter exerts gravity on the objects around it. Choose the factors that will affect the strength of this gravity.

a. Both tilt and axis

b. Both mass and distance

c. Weight

d. Both mass and size

1f. Earth's axis is tilted at …

a. 24.5°

b. 365°

c. 23.5°

d. 28°

1g. About how long does it take the moon to rotate once on its axis?

a. 48 hours

b. 24 hours

c. 30 days

d. 28 days.

1h Which one of the following statements is **not** true about the moon?

a. The moon is about half the size of the Earth

b. The moon orbits the Earth which orbits the Sun

c. The Sun is 1 300 000 times the size of the Earth

d. The moon is a natural satellite of the Earth

QUESTION 2 **[7]**

Write one word that means the same as the sentence:

2a. Days on which day and night are equal length.

_____

2b. The process of giving off energy in the form of waves or particles.

_____

2c. An imaginary line that divides the Earth into two equal southern and northern hemispheres.

_____

2d. The force that attracts a body towards any other physical body that has mass.

_____

2e. A community of living organisms and their interaction with the environment.

_____

2f. The Earth's movement on its axis.

_____

2g. The Earth's movement around the Sun.

_____

QUESTION 3 [10]

Answer the questions below.

3a. Here are five words that are used in explaining the formation of fossil fuels like coal and oil. On the lines below arrange these five words in the correct order that would explain the formation of such fuels: (4)

peat/ death/ sinks deeper/ bake

a._____ b._____ c. pressure d._____ e._____

3b. Complete the table below with facts to **compare** Earth and the moon (6)

Earth	Moon
Surface -	Surface –
Size -	Size –
Light -	Light –

QUESTION 4: MATCH THE COLUMNS [6]

Instructions:

- Match the sentences in COLUMN A with the words in COLUMN B.
- Draw a line to join the sentence in COLUMN A with the correct word in COLUMN B. Do this as shown in the example below.

COLUMN A	
example	An animal that only eats meat
4a.	Longest day and shortest night in South Africa
4b.	Moon passes directly between the sun and the earth and blocks the light of the Sun
4c.	Shortest day and longest night in South Africa
4d.	Equal length of day and night in Spring in South Africa
4e.	Earth passes directly between the sun and the moon
4f.	Equal length of day and night in Autumn in South Africa

COLUMN B
A.23 September
B.Solar eclipse
C.21 December
D..Lunar eclipse
E.Carnivore
F.20 March
G.21 June

QUESTION 5 **[3]**

5a. Give three reasons to explain why we should not continue to use fossil fuels.

_____

_____

_____

_____

_____

QUESTION 6 **[8]**

6a. What are the 3 very important things that the Sun provides for the Earth, so that life can exist on our planet?

_____

6b. Write a paragraph explaining what Indirect and Direct Sunlight are, and how they affect the temperature of the Earth. Your paragraph must contain at least 3 facts.

_____

_____

_____

_____

6c. Fill in the correct words in the sentence below.

When it is summer in South Africa, the Southern Hemisphere is tilted _____ the sun, and when it is winter, the Southern Hemisphere is tilted _____ from the sun.

QUESTION 7 **[8]**

7a The Earth rotates on its axis. Which 2 points on the Earth's surface does its axis run through?

_____

7b Why does Jupiter take longer to revolve around the Sun than the Earth?

_____

_____

7c. Give 2 features of our Sun.

_____

_____

7d. Imagine you have been chosen to join the Mars One mission as part of the first human settlement on Mars.

- When you land on Mars, what would you see on the surface of the planet?

  _____

  _____

- What kind of weather/climate would you expect to experience?

  _____

  _____

- How would you manage to survive on Mars?

  _____

  _____

TOTAL: 80

Grade 7
Natural Sciences
Term 4
Test
Memorandum

CAPS Topic	Questions	Expected answer(s)	Marks
	1		
Sources of energy	1a	C ✓	1
Sources of energy	1b	C ✓	1
Sources of energy	1c	A ✓	1
Sources of energy	1d	C✓	1
Sources of energy	1e	A✓	1
	2		
Sources of energy	2a	True ✓	1
Sources of energy	2b	True ✓	1
Potential and Kinetic energy	2c	False ✓	1
Heat transfer	2d	False ✓	1
Insulation and energy saving	2e	True ✓	1
	3		
Sources of energy	3a	Energy ✓	1
Heat transfer	3b	Conduction ✓	1
Sources of energy	3c	Fossil fuels ✓	1
Heat transfer	3d	Thermal energy ✓	1
Heat transfer	3e	Radiation ✓	1
	4		
Energy transfer	4a	Input - Chemical potential energy in the cell ✓ Process – Kinetic energy as the buzzer vibrates ✓ Output – Chemical potential energy in the cell is transferred to kinetic energy ✓	3
Energy transfer	4b	Input – Chemical potential energy in the cell ✓ Process – Kinetic energy as the current flows ✓ Output – Rotation of the blades, kinetic energy ✓	3

	5		
Heat transfer	5a	conduction, convection, radiation ✓✓✓	3
Heat transfer	5b	From hot to cold✓	1
Energy transfer	5c	Stove – stove heats up ✓ - stove heats pot ✓- pot heats water ✓ - water boils and bubbles	3
Potential and kinetic energy	5d	Energy cannot be created or destroyed but it can be transferred from one form to another ✓ ✓	2
PART B: Earth and Beyond			
	1		
Relationship of the Sun to Earth	1a	B✓	1
Relationship of the moon and Earth	1b	D ✓	1
Relationship of the Sun to Earth	1c	A ✓	1
Relationship of the moon and Earth	1d	C ✓	1
Relationship of the moon and Earth	1e	B ✓	1
Relationship of the moon and Earth	1f	C ✓	1
Movement of the moon	1g	D ✓	1
Movement of the moon	1h	A ✓	1
	2		
Relationship of the moon and Earth	2a	Equinox ✓	1
Relationship of the Sun and Earth	2b	Radiate ✓	1
Relationship of the moon and Earth	2c	Equator ✓	1
Relationship of the moon and Earth	2d	Gravity ✓	1
Relationship of the Sun and Earth	2e	Ecosystem ✓	1
Relationship of the Sun and Earth	2f	Rotate ✓	1
Relationship of the Sun and Earth	2g	Revolve ✓	1

<table>
<tr><td></td><td>3</td><td></td><td></td></tr>
<tr><td>Relationship of the Sun and Earth</td><td>3a</td><td>a. death ✓
b. peat ✓
d. sinks deeper ✓
e. bake ✓</td><td>4</td></tr>
<tr><td>Relationship of the moon and Earth</td><td>3b</td><td><table><tr><th>Earth</th><th>Moon</th></tr><tr><td>rock, oil and water ✓</td><td>rock and lunar soil ✓</td></tr><tr><td>larger than the moon ✓</td><td>smaller than the Earth ✓</td></tr><tr><td>absorbs light from the sun and also reflects some light ✓</td><td>reflects light from the sun ✓</td></tr></table></td><td>6</td></tr>
<tr><td></td><td>4</td><td></td><td></td></tr>
<tr><td>Relationship of the moon and Earth</td><td>4a</td><td>C ✓</td><td>1</td></tr>
<tr><td>Relationship of the moon and Earth</td><td>4b</td><td>B ✓</td><td>1</td></tr>
<tr><td>Relationship of the moon and Earth</td><td>4c</td><td>G ✓</td><td>1</td></tr>
<tr><td>Relationship of the moon and Earth</td><td>4d</td><td>A ✓</td><td>1</td></tr>
<tr><td>Relationship of the moon and Earth</td><td>4e</td><td>D ✓</td><td>1</td></tr>
<tr><td>Relationship of the moon and Earth</td><td>4f</td><td>F ✓</td><td>1</td></tr>
<tr><td></td><td>5</td><td></td><td></td></tr>
<tr><td>Relationship of the Sun and Earth</td><td>5a</td><td>Any 3 below ✓ ✓ ✓
• Destroys the environment – CO2 is released into the air which causes global warming
• Causes pollution which leads to people getting diseases
• It is non-renewable
• Health of coal miners deteriorates.
• Oil spills lead to the death of animal and plant life
• Use solar and wind energy</td><td>3</td></tr>
</table>

	6		
Relationship of the Sun and Earth	6a	Heat ✓ Energy ✓ Light ✓	3
Relationship of the Sun and Earth	6b	Any 3 different facts below ✓ ✓ ✓ • When sunlight from the sun hits the Earth directly, the light is more intense than when sunlight hits the earth indirectly. • In summer, the sun is high in the sky and we receive direct sunlight. So the temperatures are higher/hotter. • In winter, the sun is lower in the sky and we receive more indirect sunlight. So the temperatures are lower/colder. • When sunlight from the sun hits the Earth at an angle (slanted), it shines on a larger area so the heat is not so intense/concentrated.	3
Relationship of the Sun and Earth	6c	towards ✓ away ✓	2
	7		
Movements of the Earth and planets	7a	North and South poles ✓	1
Movements of the Earth and planets	7b	Jupiter is further away from the Sun ✓ therefore its orbit around the Sun will be longer✓	1
The Solar System	7c	(any 2) ✓ ✓ • Makes its own heat and light • A big ball of fire/burning gas • Centre of our solar system • Is 1 300 000 times bigger than Earth	2
The Solar System	7d	rocky desert, volcanoes, valleys✓(at least 2) dust storms, windy, cold ✓(at least 2) Live in special structures/housing. Wear special astronaut suits with oxygen supply ✓(any 1)	1 1 1
			TOTAL: 80