

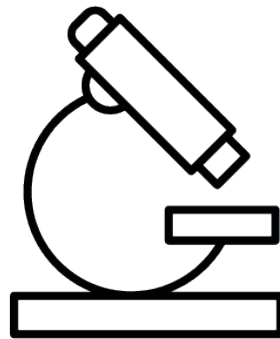


basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA



Planner & Tracker for Recovery ATP

Natural Sciences



Grade 8 Term 1

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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,

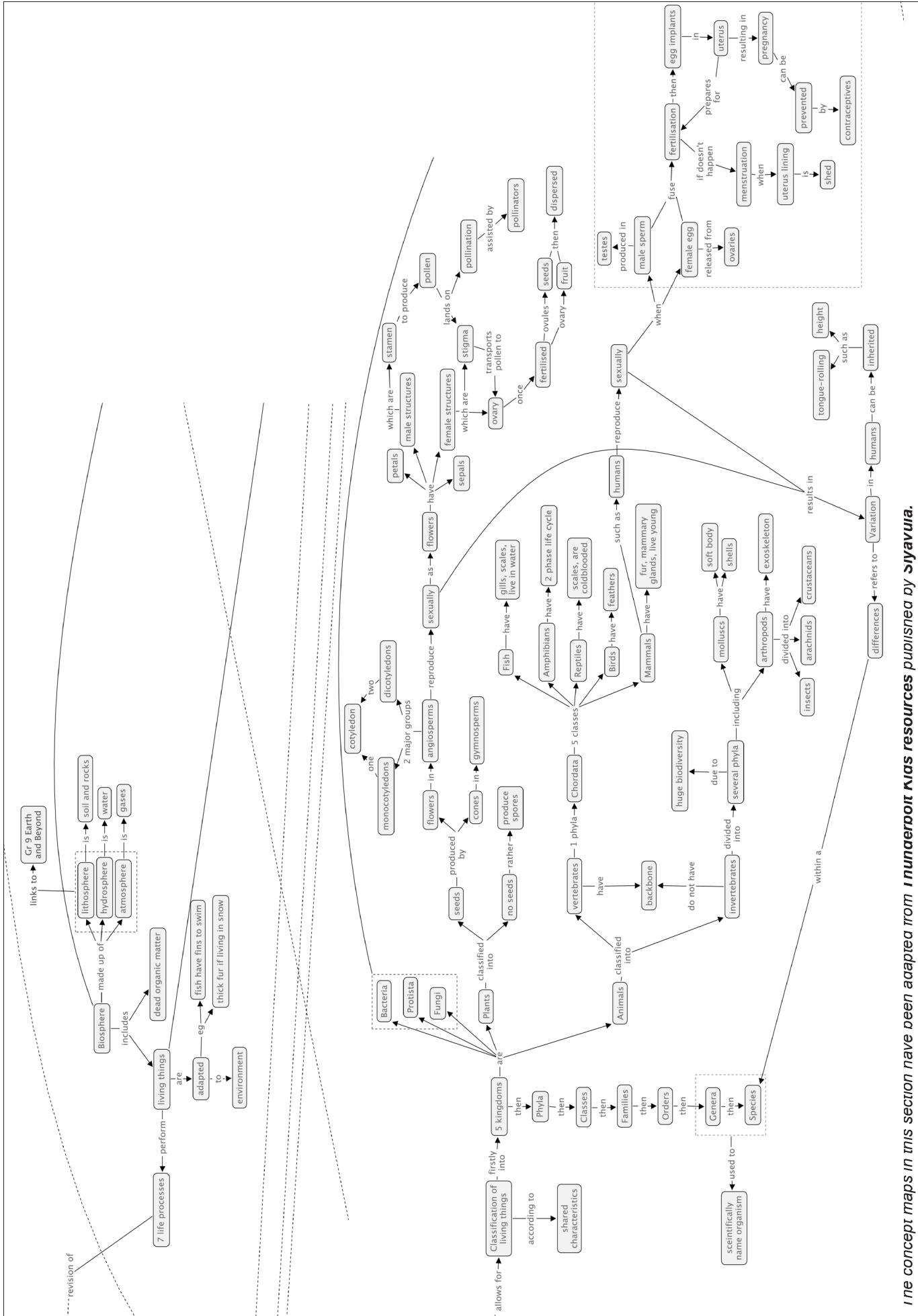
The DBE / NECT Recovery ATP Trackers Team

Overview

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

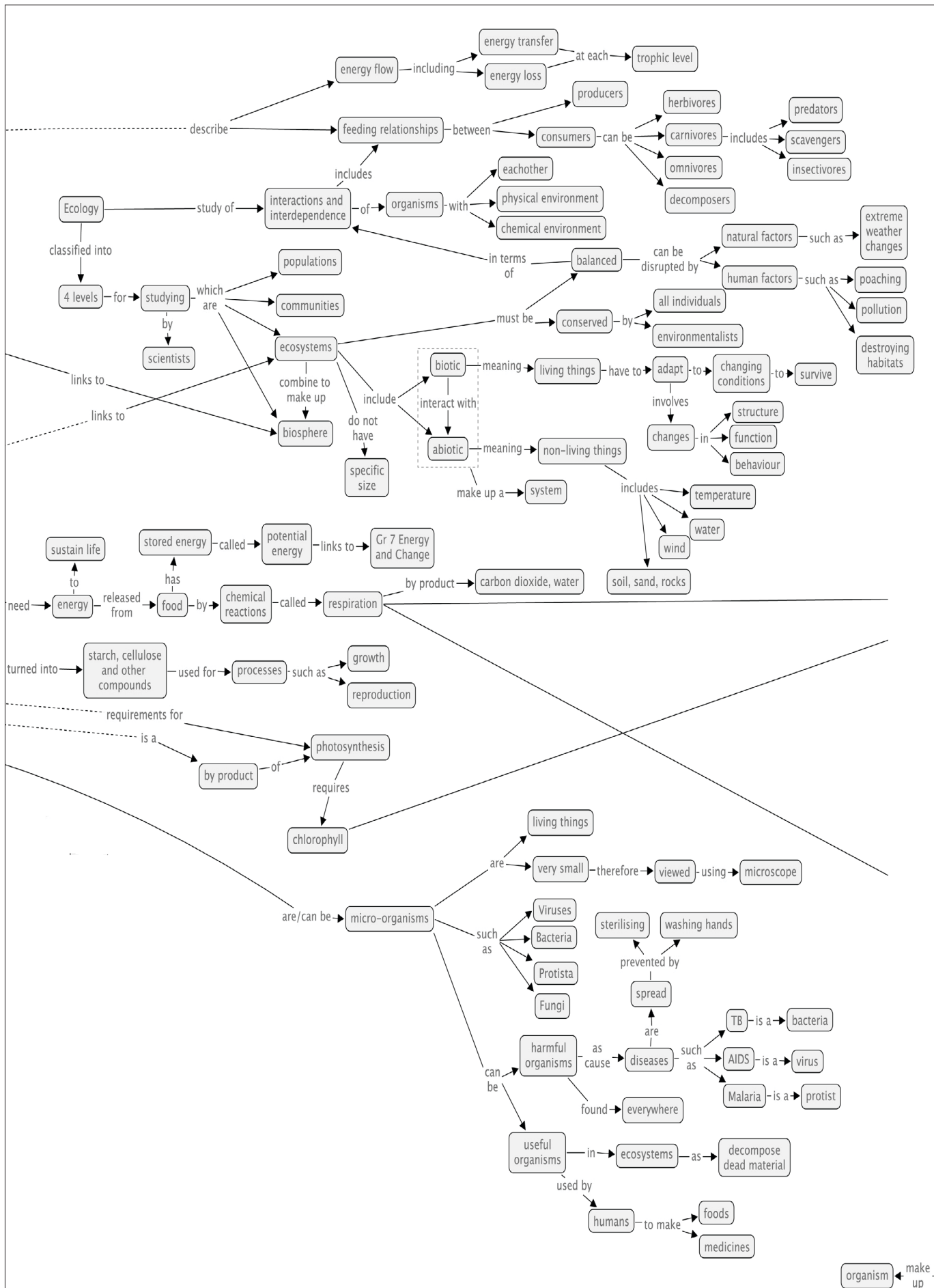
- The development of **Science Process Skills** is key to the teaching and learning of the subject. Focussing on these skills is critical.
- Learners should be given as many opportunities as possible to **write regularly and read for meaning, in Natural Science, in order** to develop **language skills** 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



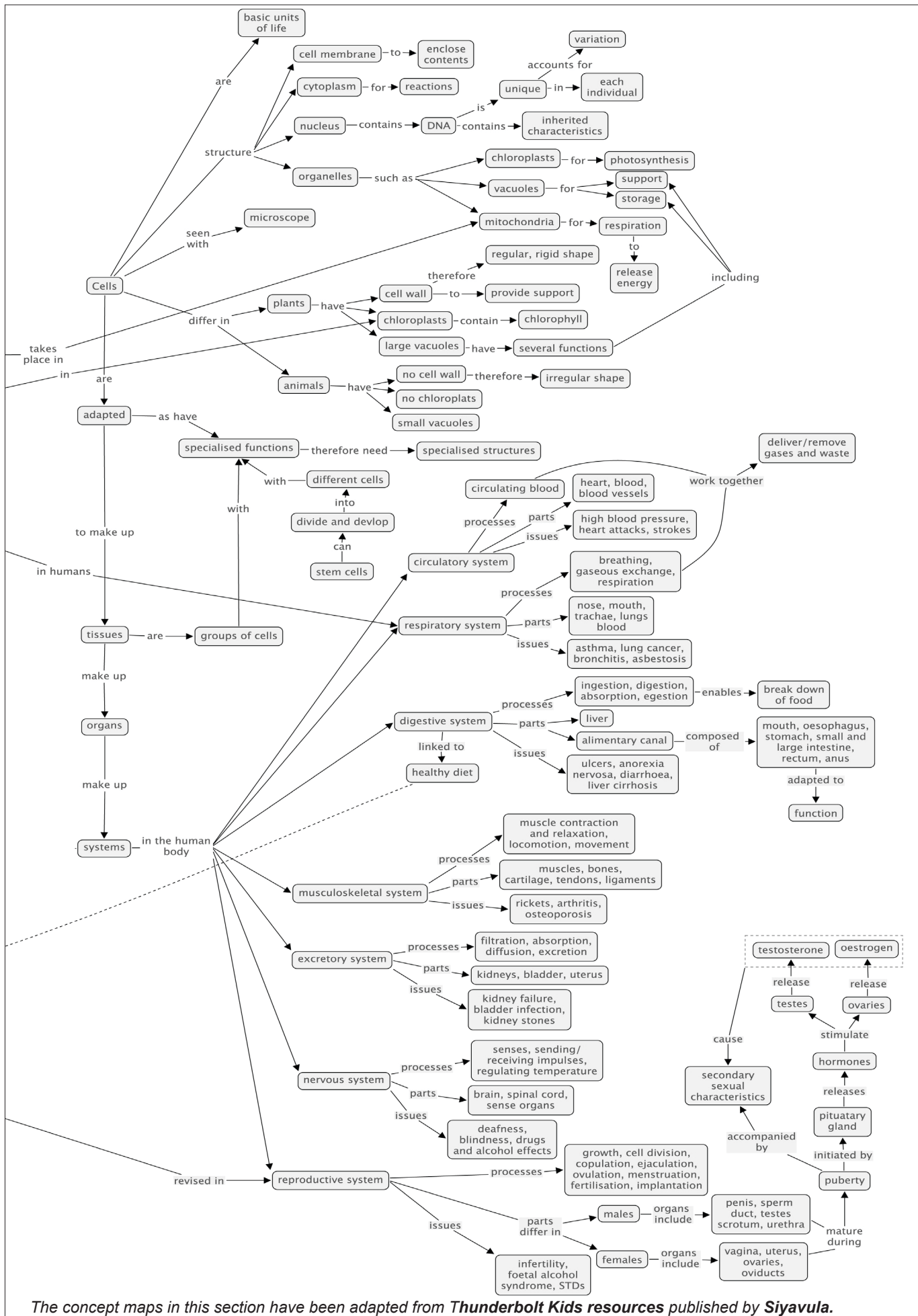
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Senior Phase Conceptual Chain: Grade 8



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

Senior Phase Conceptual Chain: Grade 9



Amendments to the Annual Teaching Plan

It is important to note that all the topics for Grade 8 Term 1, NS, remain as per CAPS (Grade 8). Therefore, there is no change to the topics and time allocation.

- **Some topics remain the same:**

1. Photosynthesis and respiration (2 weeks)
2. Interactions and interdependence within the environment (5 weeks)
3. Micro-organisms (2 weeks)

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 2022 formal assessment tasks for Grade 8 are as follows:

	TERM 1	TERM 2	TERM 3	TERM 4
Practical Task/Investigation/Projects	20 marks	20 marks	30 marks	-
Test	60 marks	90 marks	60 marks	90 marks

Sample Assessment Tasks and Memoranda / Rubrics for Grade 8 Term 1 are included in this document.

Notes:

- **Column 1** shows the **time allocation** per topic.
- **Column 2** shows the **Recovery ATP requirements** for Grade 8 Term 1.
- **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 1 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 8 Cambridge University Press
VA	Via Afrika Natural Sciences Grade 8
PLAC	Placatum Natural Sciences Grade 8 Maskew Miller Longman
SFA	Solutions for All Natural Sciences Grade 8 MacMillan
DbD	Day by Day Natural Sciences Grade 8 Maskew Miller Longman
OX	Oxford Successful Natural Sciences Grade 8 Oxford University Press
SO	Spot On Natural Sciences Grade 8 Pearson
TC	Top Class Natural Sciences Grade 8 Shuter and Shooter
SIBB	Sasol Inzalo Bk B Natural Sciences Grade 8 Sasol
SNS	Successful Natural Sciences Grade 8
SbS	Step by Step Natural Sciences Grade 8
NS	Natural Sciences Grade 8

TIME ALLOCATION	DBE RECOVERY ATP REQUIREMENTS	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS	DATE COMPLETED
Weeks 1,- 2	Photosynthesis and respiration 1. Photosynthesis 2. Respiration	<u>Gr 8 Term 1 Lesson Plans</u> Lesson 1A: The need for energy Lesson 1B: The process of photosynthesis Lesson 1C: The food of plants Lesson 2A: The process of respiration Lesson 2B: Respiration and breathing Lesson 2C: The cycle of photosynthesis and respiration It,	SNS Gr8 12 – 15 TC Gr8 2 – 5 VA Gr8 8 – 11 SFA Gr8 2 – 7 SO Gr8 1 – 5 PLAC Gr8 2 – 4 SbS Gr8 4 – 5 NS Gr8 3 – 8 SIB Gr8 4 - 8	

Scaling down

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

Photosynthesis and Respiration

- Interactions and interdependencies in an ecosystem are driven by the need for energy to sustain life. The Sun is the important energy source.
- Green plants depend on the energy from the Sun to make food. Animals depend on plants for food and energy.
- Energy is measured in joules (J) or kilojoules (kJ). An average learner needs 7150 kJ of energy each day to perform all activities.
- Photosynthesis is the process where plants use carbon dioxide, water and energy from the Sun to produce glucose in its leaves. Oxygen is released into the air as a by-product.
- Plants change glucose into starch, cellulose to enable growth and reproduction. Starch is stored in the roots, stems, leaves, fruit and seeds of plants. This is the food for humans and animals.
- Food contains energy that can be released – this is called respiration..
- Compare photosynthesis and respiration

TIME ALLOCATION	DBE RECOVERY ATP REQUIREMENTS	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS	DATE COMPLETED
Weeks 3 - 7	Interactions and interdependence within the environment 1. Introduction to Ecology 2. Ecosystems 3. Feeding relationships 4. Balance in an ecosystem 5. Adaptations 6. Conservation of the ecosystem	Gr 8 Term 1 Lesson Plans Lesson 3A: Ecology: the bigger picture Lesson 3B: Biotic and Abiotic factors Lesson 3C: Inside an ecosystem Lesson 4A: Producers and consumers Lesson 4B: Herbivores, carnivores and omnivores Lesson 4C: Decomposers Lesson 5A: Food chains Lesson 5B: Food webs Lesson 5C: Tropic levels Lesson 6A: Factors that influence balance in an ecosystem Lesson 6B: Impact of an imbalance on an ecosystem Lesson 6C: Adaptions Lesson 7A: Adaption strategies and extinction Lesson 7B: Managing ecosystems Lesson 7C: Ways to conserve ecosystems	SNS Gr8 20 -49 TC Gr8 12 -41 47 - 49 VA Gr8 14 - 41 45 SFA Gr8 17 - 46 75 - 77 SO Gr8 10 - 30 PLAC Gr8 18 - 37 SbS Gr8 14 - 28 NS Gr8 17 - 33 SIB Gr8 26 - 74 82 - 86 DbD Gr8 30 - 35 48 - 49 OX Gr8 40 - 47	

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

Interactions and interdependence within the environment

- Ecology is the study of interactions between living organisms and their environment. All ecosystems combined, make up the biosphere.
- There are 4 levels of ecological interactions: populations, communities, ecosystems and biospheres.
- Examples of ecosystems: grasslands, bushveld, forests, lakes, oceans.
- Biotic factors are all living organisms. Abiotic factors are non-living things.
- Ecosystems contain producers and consumers. Consumers can be herbivores, carnivores, omnivores or decomposers. There are primary, secondary and tertiary consumers. Define, describe and give examples of each.
- Plants and algae capture energy from the Sun by the process of photosynthesis. They produce food.
- Energy is passed along a food chain from producers to consumers and decomposers. Describe, draw and interpret food chains. Draw food chains and food webs (linking names with arrows) in different ecosystems.
- Food webs are groups of food chains that are connected. Energy flows through an environment through a series of feeding levels. Each feeding stage is called a trophic level – trophic levels form a food pyramid -each level has an amount of energy available for the next level. Draw and analyse energy pyramids.
- Identify natural and human factors that disturb the balance in an ecosystem. Evaluate disruptions to an ecosystem; giving causes, effects and solutions.
- Describe how the different organisms are adapted to live in their specific environments. 3 types of adaptation: structural, functional, behavioural.
- Explain the adaptation strategies of mimicry and camouflage. Explain how animals become extinct.
- Conservation – sharing resources in an ecosystem fairly and using them sustainably. Conservationist – person trained to conserve and manage an ecosystem.
- Ways we can help to conserve ecosystems. Reduce, recycle, reuse. Saving water, reducing energy consumption, planting trees.

TIME ALLOCATION	DBE RECOVERY ATP REQUIREMENTS	NECT LESSON PLANS: LESSONS	APPROVED TEXTBOOKS	DATE COMPLETED
Weeks 8 - 9	<p>Micro-organisms</p> <ol style="list-style-type: none"> Types of micro-organisms Harmful micro-organisms Useful micro-organisms 	<p><u>Gr 8 Term 4 Lesson Plans</u></p> <p>Lesson 8A: The real size of micro-organisms</p> <p>Lesson 8B: Types of micro-organisms</p> <p>Lesson 8C: Harmful micro-organisms</p> <p>Lesson 9A: Preventing the spread of diseases</p> <p>Lesson 9B: Useful micro-organisms</p> <p>Lesson 9C: The growth of micro-organisms</p>	<p>SNS Gr8 48 – 59</p> <p>TC Gr8 45 – 66</p> <p>VA Gr8 42 – 55</p> <p>SFA Gr8 57 – 73</p> <p>SO Gr8 37 – 48</p> <p>PLAC Gr8 56 – 67</p> <p>SbS Gr8 31 – 41</p> <p>NS Gr8 42 – 58</p> <p>SIBB Gr8 86 – 103</p>	

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

Micro-organisms

- Micro-organisms are living things. They are too small to see with the naked eye.
- There are a variety of micro-organisms. The 4 groups of micro-organisms are: viruses, bacteria, protista and fungi.
- Some micro-organisms cause diseases. E.g. AIDS, Covid, TB, malaria, ringworm.
- Waterborne diseases, like cholera, cause child deaths.
- Spread of diseases can be prevented through hand washing, sterilising and good hygiene practises. Scientists develop cures for diseases.
- Some micro-organisms are useful in ecosystems e.g. decomposers, for making foods e.g. wine, beer, yoghurt and in medicines e.g. vaccines.
- Micro-organisms can grow in almost any environment where there is warmth, moisture, oxygen and food.

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.

NS **Grade 8** **Practical Task** **Term 1** **20 Marks**

Time allocation: 60 minutes (20 minutes preparation, 40 minutes task time)

NOTES TO THE TEACHER

1. This practical activity will be completed as part of Section E of lesson 7C.
2. This practical will take place during the lesson after the teaching component in Section D, "Accessing Information".
3. The first 20 minutes will be used to teach section D and prepare learners for the practical task.
4. The next 40 minutes will be used to complete the practical activity as outlined in Section E.
5. You will need to prepare a dustbin with as many of the following items inside as possible: cooldrink can, paper bag, plastic bottle, glass bottle polystyrene tray, paper, tinfoil, apple core, plastic bag, food can, cabbage leaf, banana peel, chicken bones, egg shells, cardboard.
6. You will also need a few sheets of newspaper.
7. The instructions and content of the practical task should be written on the chalkboard for the learners.
8. The memorandum for assessing the practical task is provided.
9. The learners should complete the drawings and graphs with a sharp pencil and the written answers should be completed in pen.

1. Divide the learners into groups of 6.
2. For this activity you will need:
 - to prepare a dustbin with as many of the following items inside as possible: cooldrink, can, paper bag, plastic bottle, glass bottle polystyrene tray, paper, tinfoil, apple core, plastic bag, food can, cabbage leaf, banana peel, chicken bones, egg shells, cardboard.
 - a few sheets of newspaper.
3. This activity will take place in two parts: A classroom activity and an outside activity.
4. Write the following onto the chalkboard (always try to do this before the lesson starts):

PRACTICAL TASK

This task will be done individually.

You are going to do an environmental audit of some school and some home waste.

You must produce a set of written answers for assessment.

1. Explain to the learners that an environmental audit is an assessment of how well the school is looking after its environment.
2. Read through the practical task, as written on the board, with the learners.
3. Tell learners that the first task will be done outside the classroom.
4. The task will be to look at the school ground and identify all the areas that are affected by litter.
5. Write the following on the chalkboard (try to do this before the lesson starts):

Task 1

(5 marks)

- 1a. Are there areas around the school where there is litter lying around? If yes, name these areas.
- 1b. Without touching the litter, can you identify what the litter is mostly made up of?
- 1c. Are there dustbins in these areas?
- 1d. Does your school have recycling bins of any sort? If yes, what does your school recycle?
- 1e. Find a dustbin in the school grounds. Without putting your hands inside the dustbin, write down what seems to be the main source of waste in the dustbins?

10. Read through the task with the learners.
11. Tell the learners to write the questions down in their workbooks.
12. Ask the learners if they have any questions about what they need to do.
13. Tell the learners that they have 10 minutes to complete this task outside.
14. Allow the learners out of the classroom to complete the task.
15. While the learners are outside, supervise and answer any questions they may have.
16. After 10 minutes, call the learners back into the classroom.
17. Tell the learners they will now do task 2.
18. This task will be an analysis of the contents of a dustbin.
19. Write the following on the chalkboard:

Grade 8 Natural Sciences Term 1 Assessment

Waste Item	Time taken to break down in a landfill
Aluminium can (Coke)	250-500 years
Paper bag	1 month
Plastic bottle	450+ years
Glass bottle	1-2 million years
Polystyrene	Never
Paper	6 weeks
Tinfoil	Never
Apple core	1 month
Plastic bag	20-1000 years
Tin can (food)	50 years
Cabbage leaf	2 months
Banana peel	2 months
Chicken bones	6 months
Egg shells	4 months
Cardboard	2 months

20. Explain the following to the learners

- a. A landfill is the place where the rubbish or garbage trucks take the rubbish from our homes and schools.
- b. The rubbish is buried and left to decompose.
- c. Ask the learners if they can remember what the word “decompose” means?
(Answer: To breakdown or rot.)
- d. Ask the learners if they can remember what the word “recycle” means.
(Answer: Re-use waste materials or change waste materials into something that can be used again.)

21. Clear a large area in the front of the class. (If this is not possible, you may need to do this activity outside.)

22. Put down some sheets of newspaper and then empty your prepared bin onto the paper.

23. Use a stick to spread the items out so that they can be easily seen.

24. Tell the learners that this is the contents of a home dustbin.

25. Write the following task onto the chalkboard (try to do this before the lesson starts):

Task 2

(14 marks)

- 2a . Write down a list of the items that are in this home dustbin.
- 2b. Which 2 these items are not biodegradable?
- 2c. Name 4 items that will take more than 100 years to break down in a landfill?
- 2d. Which item in this bin will take the shortest amount of time to breakdown in a landfill?
- 2e. Name 4 items that can be recycled?
- 2f. Name 2 recyclable items that you have thrown away in the last day.

26. Read through the task with the learners.
27. Ask the learners if they have any questions.
28. Tell the learners to complete the answers in their workbooks.
29. Write the following task on the chalkboard:

Task 3

(1 marks)

Imagine you are the head of the recycling committee for the school.

Think of a slogan that you could put on a poster to encourage learners to recycle instead of littering, wasting or unnecessarily throwing away.

30. Read through the task with the learners.
31. Remind them that a slogan is a “short and memorable phrase that is used to advertise something.”
32. Allow learners time to complete task 3 in their workbooks.

Natural Sciences
Grade 8
Practical Task Memorandum
Term 1
20 Marks

Topic	Task	Expected answer / outcome	Marks
	1		
Interactions and interdependence with the environment	1a.	Answers may vary but could include playground, corridors, against the fence ✓	1
Interactions and interdependence with the environment	1b.	Answers may vary but could be paper/ plastic ✓	1
Interactions and interdependence with the environment	1c.	Answers may vary: Yes/no ✓	1
Interactions and interdependence with the environment	1d.	Answers may vary ✓	1
Interactions and interdependence with the environment	1e.	Answers may vary but could be paper/plastic/ food waste ✓	1
	2		
Interactions and interdependence with the environment	2a.	This will depend on what you have provided for your learners to look at. ✓	1
Interactions and interdependence with the environment	2b.	polystyrene ✓ tin foil ✓	2
Interactions and interdependence with the environment	2c.	Glass bottle ✓ Plastic bag ✓ Aluminium can ✓ Plastic bottle ✓	4
Interactions and interdependence with the environment	2d.	Apple core ✓	1
Interactions and interdependence with the environment	2e.	(Any 4) Aluminium can/ paper bag/ plastic bag/ plastic bottle/ cardboard/ tin can/ paper ✓ ✓ ✓ ✓	4

Grade 8 Natural Sciences Term 1 Assessment

Interactions and interdependence with the environment	2f.	Answers will vary ✓ ✓	2
	3		
Interactions and interdependence with the environment	3	Any suitable slogan to encourage recycling ✓	1
TOTAL			20

Grade 8 Natural Sciences Term 1 Assessment

Below is a sample assessment test and memorandum. Please feel free to use this test 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 Grade 8 Term 1 Test 60 marks

NOTE TO THE TEACHER:

If possible, photocopy this exam for each learner. If this is not possible, write the exam 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. carbohydrate
- B. glucose
- C. starch
- D. chlorophyll

You have answered correctly if you have circled (B)

QUESTION 1: MULTIPLE CHOICE

[4]

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

1a. Which one of these is NOT needed in the process of photosynthesis?

- A. Energy from the Sun
- B. Oxygen
- C. Water
- D. Carbon dioxide

1b. Which of these statements is false?

- A. Oxygen is released as a by-product during the process of photosynthesis.
- B. The green colour in leaves is made up of chlorophyll.
- C. Carbon dioxide is released as by-product during the process of photosynthesis.
- D. Plants absorb minerals from the soil through the roots.

1c. Which of these statements is true?

- A. Living organisms obtain energy from oxygen.
- B. Oxygen and water are released during human respiration.
- C. Respiration occurs in every cell of a living organism.
- D. Carbon dioxide and water are released during plant respiration.

1d. Which one of these group of words is the result and by-product of respiration in humans? :

- A. Glucose + carbon dioxide + water
- B. Energy+ oxygen + carbon dioxide
- C. Glucose + oxygen + water
- D. Energy + carbon dioxide + water

Grade 8 Natural Sciences Term 1 Assessment

Question 2: Match the columns

[5]

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			COLUMN B	
example	Cell walls of the plant		A. Water	
2a.	O ₂		B. Oxygen	
2b.	H ₂ O		C. Carbon dioxide	
2c..	Source of energy		D. Glucose	
2d..	CO ₂		E. Starch	
2e.	Complex sugar		F. Cellulose	

Question 3

[5]

Complete the following sentences using words in the block below:

environment, ecosystems, population, biospheres, land

Rewrite the sentences and underline your answers.

- 3a. Ecology is studied on four levels, namely populations, communities, _____ and _____.
- 3b. A _____ is a group of organisms of the same species that live in the same area.
- 3c. An ecosystem consists of communities and their _____.
- 3d. The biosphere has air, water and _____ ecosystems.

Grade 8 Natural Sciences Term 1 Assessment

Question 4

[5]

Write the word that is being described in the sentence.

Only write the answer.

4a. Living organisms that break down the remains of dead plants and animals.

4b. The larvae of flies that feed on dead matter.

4c. A harmless animal takes on the characteristics of a dangerous animal to scare off predators.

4d. Example of small decomposer that is not visible to the naked eye.

4e. Example of a big decomposer (plant or animal) that can be seen easily.

Question 5

[4]

5a. Explain the following statement:

“Living organisms are arranged into groups according to the way in which they obtain their food.”

5b. Explain, using an example, the difference between producers and consumers,

Question 6

[6]

Read the following passage and answer the questions that follow:

Did you know that the praying mantis is a very good hunter? They kill small insects such as flies before eating them. Eagles are good hunters with sharp eyesight. They fly over large areas and catch rabbits and other small animals. Termites are a delicious meal for the aardvark. Lions will hunt for animals like zebras, warthogs and kudu. Hyenas will gladly eat the left-over meat and bones after the lions have finished. Vultures circle overhead looking for dead animals to eat.

Answer the following questions using examples from the passage:

6a. Name one example of a herbivore.

6b. Name one example of a carnivore.

6c. Name one example of a predator.

6d. Name one examples of a scavenger.

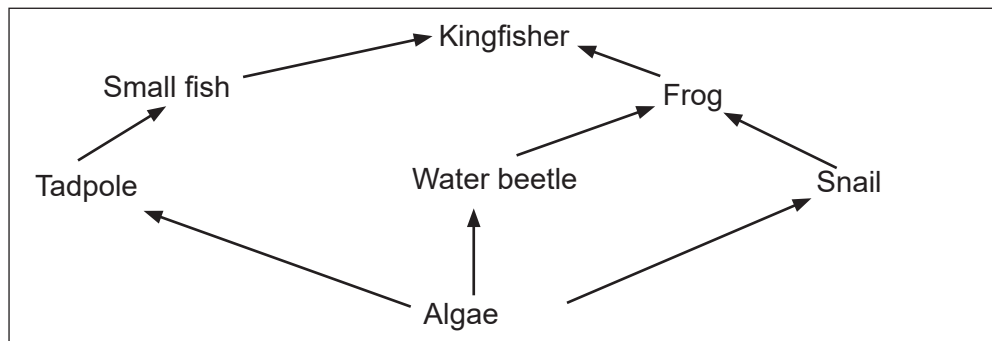
6e. Name one example of an insectivore.

6f. Name on example of an omnivore.

Question 7

[9]

Look at the following food web:



Answer the following questions:

7a. What ecosystem is shown in this food web?

7b. Name one factor that can disturb the balance in a wetland ecosystem.

7c. Give 2 functions of a wetland.

7d. Frogs are coloured so that they blend in with their surroundings. What is this type of adaption called?

7e. Write down one food chain from this food web.

7f. Where would the decomposers fit in on this food web?

7g. What is transferred through the feeding levels?

7h. What is energy measured in?

Grade 8 Natural Sciences Term 1 Assessment

Question 8

[4]

Read the words and phrases in the box below:

human interference, unable to adapt, last of the species, change in environment

Using these words, write 3-5 sentences explaining what you understand about extinction of a species.

Question 9

[5]

Write down the following sentences, choosing a word from the brackets to make the sentence true.

- 9a. The careful use and protection of natural resources is called
(conservation/ biodiversity)
- 9b. A plant that does not grow naturally in an ecosystem is called an
(annoyance/alien).
- 9c. An example of an alien tree is a (thorn tree/black wattle).
- 9d. The main problem with the black wattle is that they (use too much water/
they pollute the environment.)
- 9e. A natural resource is (suitable/sustainable) if it is used in a way that does
not destroy it.

Question 10

[5]

List 5 ways that you can conserve your environment:

1. _____
2. _____
3. _____
4. _____
5. _____

Grade 8 Natural Sciences Term 1 Assessment

Question 11

[6]

Read the following statements and say whether each one is true or false:

- 11a. Malaria is a parasite spread by ticks. _____
- 11b. Micro-organisms grow very slowly, even in favourable conditions. _____
- 11c. Viruses are the smallest micro-organisms and can cause flu. _____
- 11d. TB is caused by a bacterium that attacks the lungs. _____
- 11e. AIDS is a disease caused by the HI virus. _____
- 11f. Louis Pasteur discovered Penicillin, which is a useful antibiotic. _____

Question 12

[2]

Write down two ways to reduce your chances of being infected with HIV

TOTAL: 60

**Grade 8
Natural Sciences
Term 4 Test
Memorandum**

Caps Topic	Questions	Expected answer(s)	Marks
	1		
Photosynthesis and respiration	1a.	B ✓	1
Photosynthesis and respiration	1b.	C ✓	1
Photosynthesis and respiration	1c.	C ✓	1
Photosynthesis and respiration	1d.	D ✓	1
	2		
Photosynthesis and respiration	2a.	B ✓	1
Photosynthesis and respiration	2b.	A ✓	1
Photosynthesis and respiration	2c.	D ✓	1
Photosynthesis and respiration	2d.	C ✓	1
Photosynthesis and respiration	2e.	E ✓	1
	3		
Interactions and interdependence with the environment	3a.	ecosystems ✓ biospheres ✓	1
Interactions and interdependence with the environment	3b.	population ✓	1
Interactions and interdependence with the environment	3c.	environment ✓	1
Interactions and interdependence with the environment	3d.	land ✓	1

Grade 8 Natural Sciences Term 1 Assessment

	4		
Interactions and interdependence with the environment	4a.	decomposers ✓	1
Interactions and interdependence with the environment	4b.	maggots ✓	1
Interactions and interdependence with the environment	4c.	mimicry ✓	1
Interactions and interdependence with the environment	4d.	bacteria/mould ✓	1
Interactions and interdependence with the environment	4e.	mushroom/earthworm/dung beetle ✓	1
	5		
Interactions and interdependence with the environment	5a.	Organisms either make their own food ✓ or have to get their food from a somewhere ✓	2
Interactions and interdependence with the environment	5b.	Producers, like plants, ✓ make their own food ✓ and consumers, like animals, ✓ need to eat plants or other animals to get food ✓	2
	6		
Interactions and interdependence with the environment	6a.	rabbit/kudu/zebra ✓	1
Interactions and interdependence with the environment	6b.	lion/hyena/vulture/eagle ✓	1
Interactions and interdependence with the environment	6c.	praying mantis/lion/eagle ✓	1
Interactions and interdependence with the environment	6d.	hyena/vulture ✓	1
Interactions and interdependence with the environment	6e.	aardvark ✓	1
Interactions and interdependence with the environment	6f.	warthog ✓	1

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	7		
Interactions and interdependence with the environment	7a.	a wetland ✓	1
Interactions and interdependence with the environment	7b.	flood/drought ✓	1
Interactions and interdependence with the environment	7c.	(Any 2) ✓ ✓ A wetland acts as a sponge that releases water slowly. A wetland acts as a sponge that helps with flooding. A wetland acts as a filter that removes toxins from the water	2
Interactions and interdependence with the environment	7d.	camouflage ✓	1
Interactions and interdependence with the environment	7e.	algae→water beetle→ frog→ kingfisher/ algae→ tadpole→ small fish→ kingfisher/ algae→ snail →frog→ kingfisher ✓	1
Interactions and interdependence with the environment	7f.	At all points on the food web ✓	1
Interactions and interdependence with the environment	7g.	Energy ✓	1
Interactions and interdependence with the environment	7h.	Kilojoules ✓	1
	8		
Interactions and interdependence with the environment	8.	<ul style="list-style-type: none"> • Extinction of a species happens when the last of that species has died out.✓ • If there have been big changes to the environment✓ and the species is unable to adapt, ✓it can become extinct. • Human interference in the environment is very often responsible ✓for a species becoming extinct. 	4

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		9	
Interactions and interdependence with the environment	9a.	conservation ✓	1
Interactions and interdependence with the environment	9b.	alien ✓	1
Interactions and interdependence with the environment	9c.	black wattle ✓	1
Interactions and interdependence with the environment	9d.	use too much water ✓	1
Interactions and interdependence with the environment	9e.	sustainable ✓	1
		10	
Interactions and interdependence with the environment	10	Any 5 ✓✓✓✓✓ • Save water • Don't litter • Recycle • Reuse items instead of throwing them away • Safely dispose of human and household waste • Reduce energy usage • Plant trees • Keep our water resources clean	5
		11	
Micro-organisms	11a.	false ✓	1
Micro-organisms	11b.	false ✓	1
Micro-organisms	11c.	true ✓	1
Micro-organisms	11d.	true ✓	1
Micro-organisms	11e.	true ✓	1
Micro-organisms	11f.	false ✓	1
		12	
Micro-organisms	12	Any 2 ✓✓ • Abstain from sexual activity • Use a condom during sexual activity • Use gloves when touching another person's blood • Do not use share needles with another person	2
TOTAL			60