



**Adult Education and Training (AET)
Site-Based Assessment
Portfolio of Evidence**

Natural Sciences: NQF Level 1
Total: 50 marks
Duration: 8 Hours
Task 2: Assignment

Learner Information

Name : _____
Surname : _____
**Identity/
Passport Number** : _____
Employee Number : _____
Company : _____
Centre : _____
Date : _____

Declaration

I declare that this portfolio of evidence is my own work: _____

Signature



INSTRUCTIONS

1. This task is based on **LIFE AND LIVING & MATTER AND MATERIALS**.
2. This assignment consists of **FOUR ACTIVITIES**.
3. Answer **ALL QUESTIONS**.
4. Learners should work on this assignment as individuals.
5. Facilitators/Educators are encouraged to find extra information and make resources available for learners to do this assignment.



ACTIVITY 1

- 1.1 The table below shows three types of breakfast cereals and their nutritional information and values per 100 gram serving.

Cereals	Protein (g)	Carbohydrates (g)	Fibre (g)	Fat (g)
Oat meal	16,9	66,3	10,6	6,9
Corn flakes	8,0	84	3,3	0,4
Weetbix	18,7	58	0,5	2,1

- 1.1.1 Name the cereal with the least fat content.

(1)

- 1.1.2 Name the cereal containing the most carbohydrates.

(1)

- 1.1.3 Name the disease caused by the lack of protein in the diet.

(2)

- 1.1.4 Provide ONE reason why is fibre important in the diet.

(2)



1.1.5 Identify the cereal best for relieving constipation. Give a reason for your answer.

(3)

1.2 List THREE health problems associated with being obese.

(3)

TOTAL MARKS FOR ACTIVITY 1

[12]



ACTIVITY 2

2.1 Read the article below and answer the questions.

South Africa is hot in summer and people like to drink cool drinks and cold water. But many people don't have money for cool drinks or fridges to make cold water. A good way to make water cold is to fill a clay pot with water and put it outside in the shade. If the clay is porous (it lets a little water through the clay), the water on the outside the pot evaporates in the hot air. If there is a bit of wind, this speeds up the evaporation of the water on the surface of the pot. The pot keeps very cold and the water inside the pot becomes cold as well and is good to drink.

(adapted from middleschoolchemistry.com, Lesson 2.3: Changing State: Condensation)

2.1.1 Name the process of changing liquid to gas.

(1)

2.1.2 Classify clay as a natural or non-natural material. Give a reason for your answer.

(3)

2.1.3 Which TWO factors increase the rate of evaporation?

(2)



2.1.4 Identify ONE reason why is it best to use clay pot to make cold water than to use fridges.

(2)

2.1.5 Define the term “**evaporation**”.

(2)

2.2 Identify separation techniques that can be used to separate the following:

2.2.1 Coins and notes (1)

2.2.2 Mud and water (1)

TOTAL MARKS FOR ACTIVITY 2

[12]



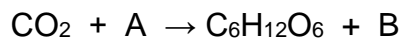
ACTIVITY 3

3.1 Photosynthesis consists of a number of chemical reactions. The survival of all living organisms, including humans, depends on photosynthesis.

3.1.1 What is photosynthesis?

(2)

3.1.2 The following chemical equation is for photosynthesis:



(a) What chemical substance is represented by A?

(1)

(b) In which plant organelle does photosynthesis takes place?

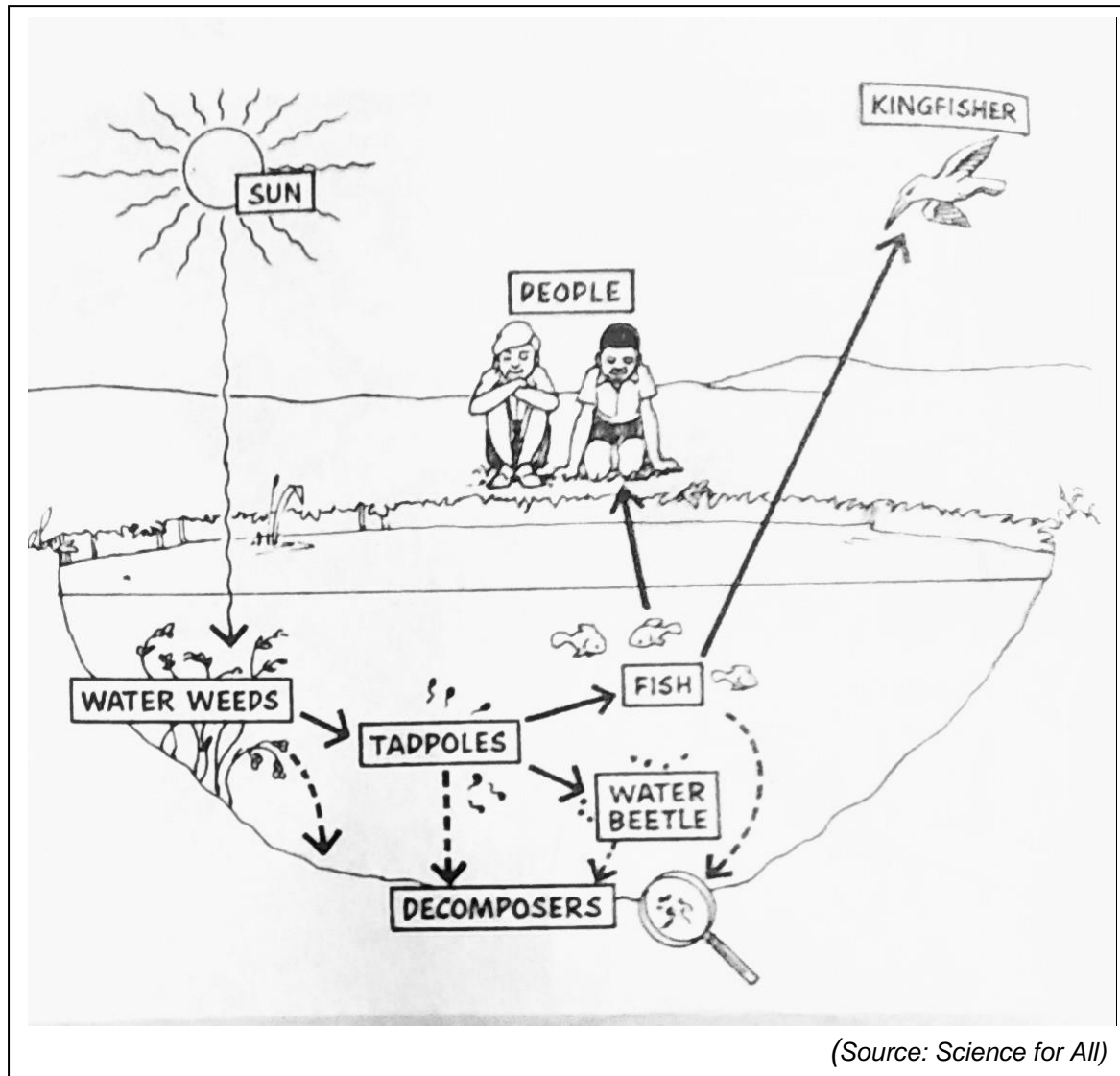
(2)

(c) What is the name of $\text{C}_6\text{H}_{12}\text{O}_6$?

(1)



3.2. Study the diagram given below and answer the questions.



3.2.1 Is the diagram representing food chain or food web?

(2)

3.2.2 Identify a producer.

(1)

3.2.3 What is the function of decomposers?

(2)

3.2.4 Is the kingfisher a carnivore, herbivore or omnivore? Give a reason for your answer.

(3)

TOTAL MARKS FOR ACTIVITY 3

[14]



ACTIVITY 4

Study the table below and answer the questions:

SUBSTANCES	DENSITY in g/cm ³
Air	0.0013
Wood	0.85
Water	1.00
Gold	19.3
Ethanol	0.94

4.1 Define the term “**density**”.

(2)

4.2 Name the substance that will sink to the bottom in water. Give a reason for your answer.

(3)

4.3 Identify from the table a substance that is:

(a) A mixture

(1)



(b) An element

(1)

4.4 Calculate the mass of wood if it is floating on 200 cm³ of water.

Use the formula:

$$\text{Mass} = \text{Density} \times \text{Volume}$$

(3)

4.5 Identify TWO natural resources from the table.

(2)

TOTAL MARKS FOR ACTIVITY 4

[12]

GRAND TOTAL FOR TASK 2

[50]



Total for Task 2: 50 Marks

Task	Activity	Maximum Mark	Learner's Mark	Moderated Mark
Task 2	Activity 1	12		
	Activity 2	12		
	Activity 3	14		
	Activity 4	12		
	Total: Task 2	50		

