



SOUTH AFRICAN COMPREHENSIVE ASSESSMENT INSTITUTE
SUID-AFRIKAANSE KOMPREENSIEWE ASSESSERINGSINSTITUUT

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

Natural Sciences: NQF Level 1
Total: 50 marks
Duration: 4 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 Assignment consists of **FOUR QUESTIONS**.
2. Complete **ALL** the **QUESTIONS**.
3. Answer all the questions in the spaces provided.
4. Adhere to the numbering used in this Assignment.



Question 1

1.1 Read the passage below and answer the questions.

Every person inherits characteristics of being a human from his/her parent. For example, speaking tone, colour of eyes, type of teeth, etc. Although humans inherit certain characteristics, these are slightly different features of individuals of the same species which are called variations. Variations also classify different races of people all around the world - Chinese (which are from Asia) are generally shorter in stature and Kenyans (from East Africa) are generally taller and thinner in their stature.

Source: Handson Science, Gr. 8LB

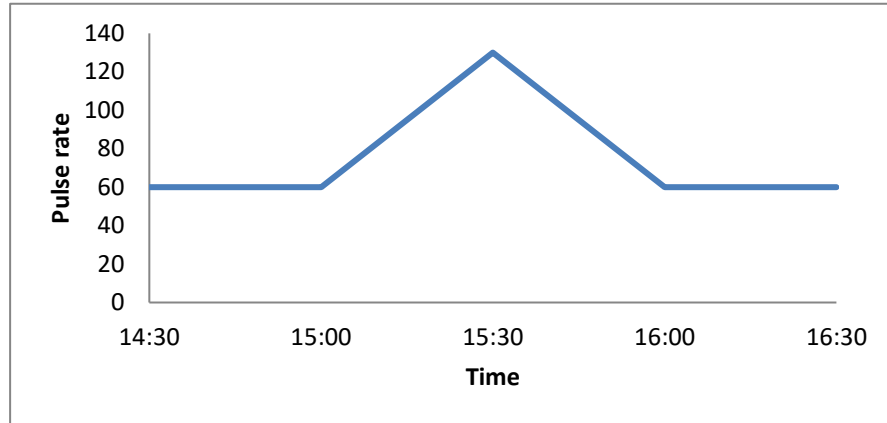
1.1.1 Define the term 'hereditary'. (2)

1.1.2 What is the name of medical technology used to determine whether people are related by testing their blood or mouth swab? (1)

1.1.3 List TWO other characteristics a person may inherit from another person biologically. (2)



1.2 The graph shows the pulse rate of a learner who went for a run during the afternoons.



Source: own creation

1.2.1 What was the learner's resting pulse rate? (1)

1.2.2 At what time did the learner started running? (1)

1.2.3 Explain what happened to the learner's pulse rate at the start of the run. (2)

1.2.4 Determine the learner's maximum pulse rate. (1)

Total for Question 1

[10]

Question 2

2.1 Study the picture below and answer the questions that follow.



2.1.1 What percentage of the world's mineral reserves are hosted in Africa? (1)

2.1.2 Identify TWO minerals that are mined on a larger scale in Africa. (2)

2.1.3 Name TWO major mining techniques used in Africa. (2)

2.1.4 Mention any TWO positive contributions of technology has made in the mining industry. (2)

2.2 List THREE products that can be manufactured from recycled rubber. (3)

2.3 Read the following passage and answer the questions that follow.

Change in the climate is as the results of careless human activities which increase levels of greenhouse gases in the atmosphere. Gases like chlorofluorocarbons (CFCs) deplete the ozone layer causing heat waves and higher volumes of rainfalls over a longer period of time.

Source:climatematters.nasa.org

2.3.1 What is the main function of ozone layer? (2)



2.3.2 Name ONE form of natural disaster caused by the climate change. (1)

2.3.3 Name ONE other greenhouse gas. (1)

2.3.4 Describe how deforestation negatively contributes to climate change (2)

Total marks for Question 2

[16]

Question 3

3.1 Ronald investigated the concept of diffusion by putting one teabag in a clear glass cup of cold tap water and another teabag in a clear glass cup of hot water from a kettle. He then observed that the teabag in the hot water diffused faster than the one in the cold water.

3.1.1 What is diffusion? (2)



3.1.2 Provide a reason why the teabag in hot water diffused faster than the one in tap water (3)

3.1.3 What safety precautions should Ronald be aware of when conducting the investigation? Mention TWO precautions. (4)

3.1.4 Recommend how Ronald can increase the rate of diffusion in both of the cups and provide how he can measure this change. (2)

3.1.5 Formulate a hypothesis for Ronald's investigation. (2)

3.2 Classify the following fields of study as Natural or Non-natural.

3.2.1 Radiology (1)



3.2.2 Physiology (1)

3.2.3 Criminology (1)

Total for Question 3 [16]

Question 4

The diagram shows the phase change of ice-cubes. Study the diagram answer the questions that follow.



Source: sciencing.com

4.1 State the phase change represented in the diagram. (1)

4.2 Is the process in 4.1 a chemical change or physical change? Explain the reason for your answer. (3)

4.3 What is the freezing point of water? (1)

4.4 Mention TWO substances that can be used to change ice to liquid. (2)

4.5 Provide an example of how ice cubes are used in our daily lives. (1)

Total for Question 4 [08]

GRAND TOTAL FOR TASK 2 [50]



Total for Task 2: 50 Marks

Task	Activity	Maximum Mark	Learner's Mark	Moderated Mark
Task 2	Question 1	10		
	Question 2	16		
	Question 3	16		
	Question 4	08		
	Total: Task 2	50		

