

NATURAL SCIENCES GRADE 8
TOPIC: PHOTOSYNTHESIS and RESPIRATION**INFORMAL TEST 1.1**
MARKS: 15

Name and Surname: _____

Gr. 8 _____

SECTION A**QUESTION 1**1.1 Write the **LETTER** (A, B, C or D) of the correct answer on the line provided.

1.1.1 The gas needed for photosynthesis is ..., and the gas needed for respiration is ...

- A oxygen; carbon dioxide
- B water; oxygen
- C carbon dioxide; water
- D carbon dioxide; oxygen

Answer: _____ (1)

1.1.2 The sugar (food) plants produce during photosynthesis.

- A Glucose
- B Water
- C Starch
- D Cellulose

Answer: _____ (1)

1.2 Provide the correct **WORD** for each of the following descriptions:

1.2.1 The process that releases energy from the food we eat. _____ (1)

1.2.2 The process through which plants produce food. _____ (1)

1.2.3 The green pigment in plant cells that absorbs the energy from the Sun. _____ (1)

[5]**SECTION B****QUESTION 2**

Answer all the questions by writing your answers on the lines provided.

2.1 Study the words in the word box below.

glucose	carbon dioxide	chlorophyll
water	radiant energy	oxygen

Use all the words in the word box to write down the **WORD EQUATION** for the process of photosynthesis.

_____ (3)

2.2 Two samples of food are tested for the presence of starch by using iodine solution. The diagrams below show the results of the test.



Food sample 1:
The iodine solution turns
blue-black.



Food sample 2:
The iodine solution remains
a brownish colour.

2.2.1 Which food sample does NOT contain starch? _____ (1)

2.2.2 Give a reason why the other sample does contain starch.

 _____ (1)

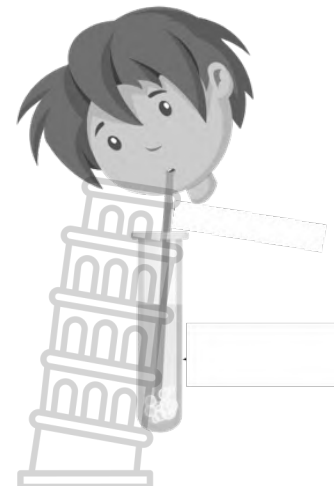
2.3 Complete empty spaces in the table below to tabulate all the requirements and products of respiration.

Requirements of respiration	Products of respiration
Oxygen	
	Carbon dioxide

(3)

2.4 The diagram shows a boy who is exhaling (blowing) through a drinking straw into a solution in a test tube.

Explain how you will prove that the boy exhales carbon dioxide.

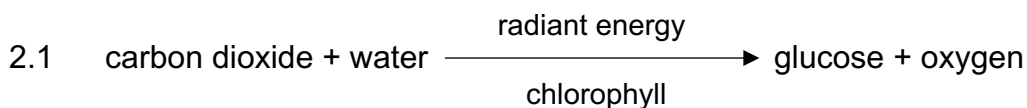


 _____ (2)

TOTAL MARK: 15

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- 1.1.1 D ✓ (1)
- 1.1.2 A ✓ (1)
- 1.2.1 (Cellular) Respiration ✓ (1)
- 1.2.2 Photosynthesis ✓ (1)
- 1.2.3 Chlorophyll ✓ (1)
- [5]**

SECTION B**QUESTION 2**

Marking criteria	Marks
BOTH carbon dioxide AND water on the left-hand side of the equation	1
BOTH radiant energy AND chlorophyll above / below the arrow	1
BOTH glucose AND oxygen on the right-hand side of the equation	1

(3)

- 2.2.1 Food sample 2 ✓ (1)
- 2.2.2 The iodine solution turns blue-black. ✓ (1)

2.3

Requirements of respiration	Products of respiration
Glucose ✓	Energy ✓
Oxygen	Water ✓
	Carbon dioxide

(3)

- 2.4 Fill the test tube with clear lime water. ✓
 The clear lime water turns milky ✓ as the boy blows through the straw.
 This proves that carbon dioxide is exhaled. (2)

TOTAL MARK: 15



TOTAL: 15

