

Aspire International School
Year 8



Science Department

2023/2024

Year 8

Challenging Questions

Model answer

Name:

Class:

Aspire International School
Year 8

- 1 a photosynthesis [1]
b Arrow drawn from carbon compounds in plants to carbon compounds in animals. [1]
c Organisms that break down organic material. [1]
d respiration [1]
glucose combined with oxygen [1]
carbon released as carbon dioxide [1]
e Sea levels will rise.
There will be more flooding in some countries. [both correct 1]
- 2 a The distance of the lamp from the plant.
The temperature of the water that the plant is kept in. [both correct 1]
b oxygen [1]
c He is correct because there are more bubbles per minute with orange light than any other colour. [1]
d Repeat his experiment. [1]
e To provide energy (for the reaction). [1]
- 3 a L = ureter [1]
M = bladder [1]
b The kidneys remove **urea** from the blood.
This dissolves in water and is passed out of the body as **urine**. [both correct 1]

[Total: 15]

Aspire International School

Year 8

2 a [Deduct 1 mark for each incorrect placement.]

[1]

Diamond	Graphite
The carbon atoms in this substance form a lattice structure and each	The carbon atoms in this substance are arranged in layers the bonds between
This substance is the hardest material on Earth	This substance is very soft.
This substance has a very high melting point	This substance has a low melting point.

b Diamond: accept any use, such as for tips of drills or jewellery. [1]

Graphite: accept any use, such as for the 'lead' in pencils or lubrication in locks. [1]

3 a magnesium carbonate + hydrochloric acid \rightarrow magnesium chloride + water + carbon dioxide [1]

b potassium + water \rightarrow potassium hydroxide + hydrogen [1]

Note: equations MUST be written on one line.

4 a $\text{CuO} + \text{H}_2\text{SO}_4 \rightarrow \text{CuSO}_4 + \text{H}_2\text{O}$ [1]

b $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$ [1]