



Conquesta 2019

(International Multiple Choice Primary School Olympiads – Est. 1998)
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Natural Sciences – Grade 8

Welcome to your Conquesta Olympiad. When you have decided which of the answers is correct, scratch out the letter in the matching square on your answer sheet. Example:- If the answer to question 4 is c, then scratch out the letter c in the square containing c next to the number 4 (see example 1 below). If you've made a mistake and b should have been the answer, neatly cross out the mistake and then scratch out b (see example 2 below).

Example 1:-

4.	a	b	c	d
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Example 2:-

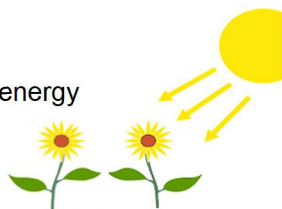
4.	a	b	c	d
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1. A scientist wants to investigate the effects of fish tank size on the growth rate of certain species of fish. Which one of the following groups of experiments will make a 'fair test'?

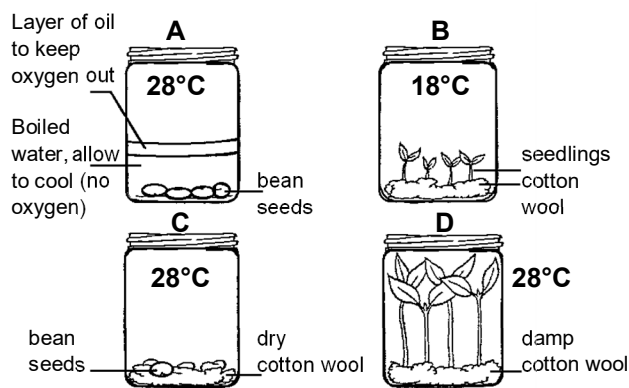
		Size of tank	Number of fish	Amount of food
(a)	Tank 1	50 l	10	50 g
	Tank 2	75 l	12	50 g
	Tank 3	100 l	14	50 g
(b)	Tank 1	50 l	10	50 g
	Tank 2	75 l	12	60 g
	Tank 3	100 l	14	70 g
(c)	Tank 1	50 l	10	50 g
	Tank 2	75 l	10	50 g
	Tank 3	100 l	10	50 g
(d)	Tank 1	50 l	10	50 g
	Tank 2	75 l	10	60 g
	Tank 3	100 l	10	70 g

2. Which of the following word equations correctly represents the process of photosynthesis?

- (a) Water + carbon dioxide → glucose + oxygen + energy
 (b) Carbon dioxide + water → glucose + oxygen
 (c) Glucose + carbon dioxide → water + oxygen
 (d) Carbon dioxide + glucose + energy → water + oxygen



Under the right conditions, a seed will grow into a new plant. This is 'germination'. Zuko predicted seeds would not germinate without water, warmth and oxygen. He put 25 bean seeds each into four jars (without lids) and labelled them jar A, B, C and D. The diagram and the table, show Zuko's results.



	Jar A	Jar B	Jar C	Jar D
Water	Yes	Yes	No	Yes
Temperature	28°C	18°C	28°C	28°C
Oxygen	No	Yes	Yes	Yes

3. Which jar A, B, C or D meets all three conditions?
 (a) Jar A. (b) Jar B. (c) Jar C. (d) Jar D.

4. A suitable conclusion for Zuko's investigation would be

- (a) seeds germinate best with water, warm temperatures and oxygen.
 (b) seeds need only water and oxygen to germinate.
 (c) in colder temperatures seeds germinate faster.
 (d) seeds germinate without oxygen but require water and warmth.

The diagrams W, X, Y and Z on the right, show the steps carried out when testing a leaf disc (a portion of a leaf) for starch, in the incorrect order.

5. The chemical used in X to show the colour changes is known as

- (a) alcohol. (b) sodium hydroxide.
 (c) ethanol. (d) iodine.

6. The correct order in which the steps, for the experiment on the right, are carried out are

- (a) W, X, Y, Z. (b) Y, W, Z, X.
 (c) Z, W, Y, X. (d) Z, Y, W, X.

