

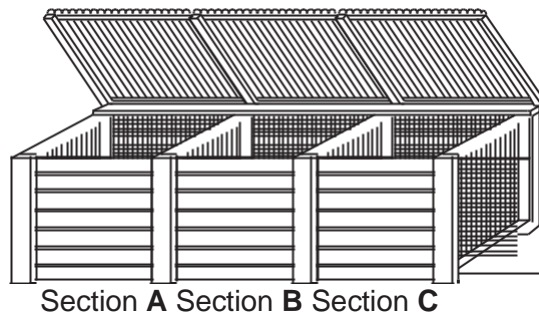
GCSE Biology A (Gateway)

J247/02 B4-B6 and B7 Foundation (Foundation Tier)

Question Set 14

1

A gardener buys a composter to decay plant material as quickly as possible. The composter has three sections.



She designs an experiment to see if watering makes the plant material decay faster.

She waters:

- Section **A** once a week
- Section **B** once a month
- Section **C** is not watered.

(a) The gardener wants valid results.

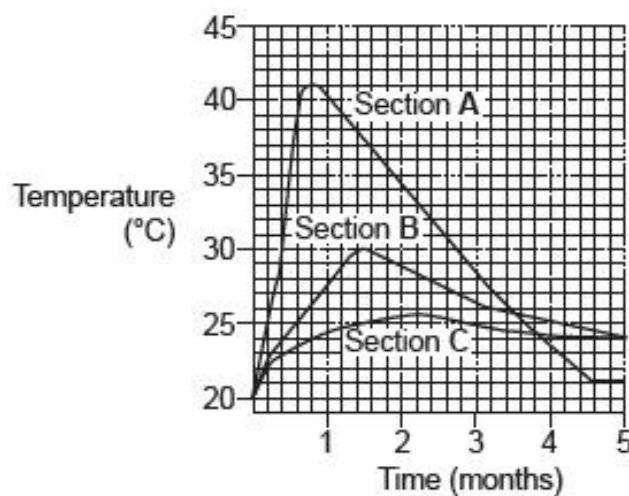
Explain **one** factor that the gardener should keep constant.

The mass of plant material as it will affect the rate of microbes decomposing / rate of decomposition

[2]

(b) The gardener measures the temperature in each section for five months. She knows that heat is given off when plant material decays.

The graph shows her results.



- (i) Write down **two** differences between the change in temperature in Section **A** and the change in temperature in Section **C**.

1 A reaches the highest temperature

2 Temperature increases quicker in A

[2]

- (b) (ii) The gardener decides that she should water all sections every week.

Explain why she decides this.

[1]

Because decay is fastest in A (which is watered the most out of three.)

- (c) Each section of the composter has holes in it to let oxygen in.

Explain why this helps the material to decay.

[2]

Oxygen is needed for microbes that cause decay for aerobic respiration.

Total Marks for Question Set 14: 7

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