

**AQA, OCR, Edexcel**

# GCSE Science

## GCSE Biology

Organising and Ecosystem  
Answers

Name:

**M M E**

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Total Marks: /21

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Q1: What term can be used to describe the feeding relationships within a community.

A= Food Chain

(1 mark)

Q2: What is a producer?

A= Plants/ Algae which produce biomass

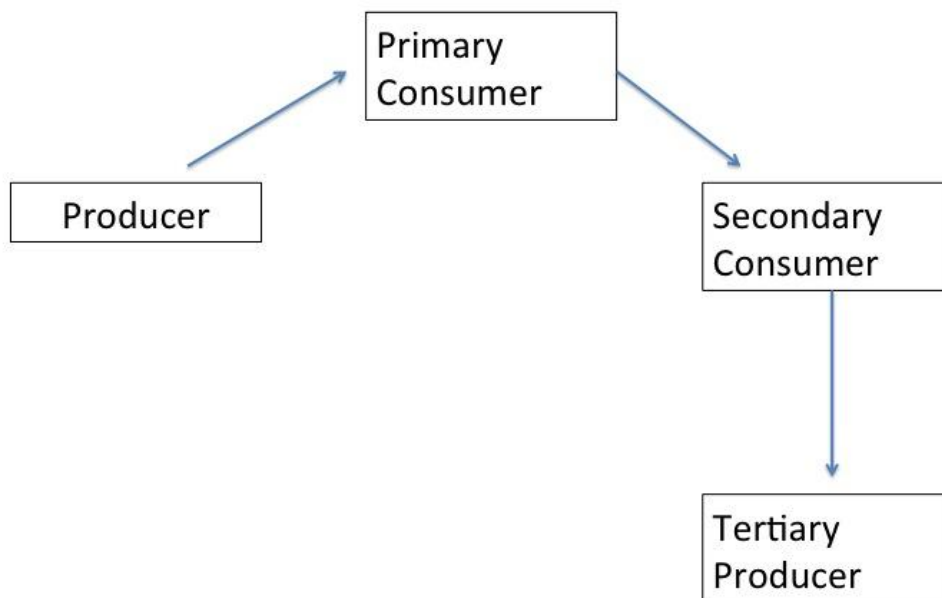
(1 mark)

Q3: Explain why a producer is the first part of a food chain?

A= Use photosynthesis to make glucose.

(1 mark)

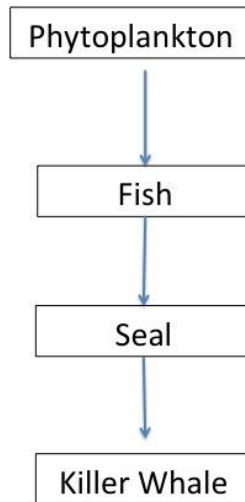
Q4: Fill in the missing levels of a food chain.



A= 1 mark for each correct label.

(3 marks)

Q5: Using the organisms below create a food chain.



A= 1 mark for 2 correct labels.

(2 marks)

Q6: Describe the trends in the populations of prey and predators seen within a community.

A= 1 mark for continuous prose.

4 marks for 4 of following points.

- Prey – Plenty of food – Reproduce
- Predators – Prey increase – More food
- Few Prey – lack of food/ population decreases
- Predators – Population decrease – lack of food
- Cycle resets its self as populations fluctuate

(5 marks)

Q7: Quadrats can be used to sample an area to determine population size.

Students want to determine mean, median and mode for the number of slugs present in a garden.

<b>3</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>1</b>
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i) Using the table above calculate the mean distribution of slugs.

A= 1 mark for working

1 mark for correct answer

$$= 37 \div 10 = 3.7 \text{ per m}^2$$

\_\_\_\_\_ Per m<sup>2</sup>

(2marks)

ii) Calculate the median for the slug population. Show your working.

A= 1 mark for correct ordering of numbers

$$= 1233334567$$

1 mark for correct answer

$$= 3$$

\_\_\_\_\_ per m<sup>2</sup>

(2 marks)

iii) Calculate the mode for the slug population. Show your working.

A= 1 mark for working – most frequent number

1 mark for correct answer

$$= 3$$

\_\_\_\_\_ per m<sup>2</sup>

(2marks)

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Q8: Explain how a transect is used for sampling the distribution and give an example of a habitat a transect can be used in.

A= 1 mark for explanation

- Line to measure populations across an environment using a quadrat

1 mark for any of the following examples:

- Shore
- Sand dunes
- Woodland
- Hillside
- Accept any other valid habitats

(2 marks)

Q9: How can the validity of the sampling be ensured?

A= Random sampling

(1 mark)