

7.2.1 Levels of organisation

AQA GCSE Biology (Higher) Question and answer notes

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How to use these notes

These notes cover everything you need to know for this part of the specification. They have been written in question-answer format to make them easier for you to study from.

In order to study successfully, I recommend you do the following for each question and answer:

- Read it carefully and make sure you **understand** it.
- **Memorise** the answer.
- **Practice** applying your understanding to past exam questions.

A good way to memorise information is to use **retrieval practice**. This is when you practise retrieving information from your memory. You could do this by making a flashcard for each question with the question on one side and the answer on the other. Or you could use a flashcard app. Alternatively, use a sheet of paper to cover up the answer so you can only see the question. Try to answer the question and then check how you did.

You should practise retrieving each answer from your memory until you can do it perfectly. Even once you can retrieve the answer perfectly, your ability to retrieve it will probably fade as time passes without practising. Therefore you will need to keep going back to the questions that you have previously mastered and practising them again. However, each time you re-learn the answer, the memory will be stronger and will last longer than the time before.

What is biomass?

Biomass is the mass of living organisms.

What are producers?

Producers are organisms that produce biomass through the process of photosynthesis. This includes plants, algae and some bacteria. These organisms use photosynthesis to make glucose and other food molecules.

What happens to the food molecules that producers create?

Two things happen to the food molecules that producers create:

- Some are broken down to release energy through the process of respiration.
- The rest are used to build biomass.

What are consumers? What are the different types of consumers?

Consumers are organisms that obtain food by eating other organisms.

Primary consumers are organisms that eat producers.

Secondary consumers are organisms that eat primary consumers.

Tertiary consumers are organisms that eat secondary consumers.

How can feeding relationships within a community be represented?

Feeding relationships within a community can be represented by drawing food chains and food webs. Within these diagrams, arrows are used to show which organisms eat which other organisms. An arrow from one organism to another indicates that the second organism eats the first.

What are predators?

Predators are animals that kill and eat other animals.

What are prey?

Prey are animals that are killed and eaten by other animals.

In a stable community, what happens to the numbers of predators and prey over time?

In a stable community, the numbers of predators and prey rise and fall in cycles. There are usually more prey than predators at any given time.

What equipment can ecologists use to determine the distribution and abundance of species in an ecosystem?

Ecologists can use the following equipment to determine the distribution and abundance of species in an ecosystem:

- Quadrats - A quadrat is a square frame which is thrown on the ground. The number of individuals of each species within the quadrat is then counted (note: quadrats are mainly used to count plants and fungi).
- Transects - A transect is a line along which species are counted. A simple transect could be created by stretching a string between two points.