

Organisation of an ecosystem What are producers?	Organisation of an ecosystem Why are photosynthetic organisms important?
Organisation of an ecosystem What is a predator? What is prey?	Organisation of an ecosystem What do primary consumers eat?
Organisation of an ecosystem What are quadrats and transects used for?	Organisation of an ecosystem How do you estimate a population size using quadrats?
Organisation of an ecosystem Why place quadrats at random?	Organisation of an ecosystem How do you investigate the effect of a factor on distribution?

They are the producers of biomass for life on Earth.

Organisms that make their own glucose by photosynthesis, usually green plants or algae. All food chains begin with one.

Producers. Secondary consumers eat primary consumers, and tertiary consumers eat secondary consumers.

A predator is a consumer that kills and eats other animals. Prey are the animals that are eaten.

Place quadrats at random, count the organisms, find the mean per square metre and multiply by the total area.

To find the distribution and abundance of species in an ecosystem.

Lay a transect across the change in the factor, place quadrats at regular intervals, count the species and measure the factor.

To avoid bias, so the sample represents the whole area.

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What are the mean, mode and median?

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In predator-prey cycles, which peak comes first?

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Why do predator numbers fall after prey numbers fall?

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What does the carbon cycle return to the atmosphere?

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Which process takes carbon dioxide out of the atmosphere?

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Which process puts carbon dioxide into the atmosphere from organisms?

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What does the water cycle provide?

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Name the two main processes in the water cycle.

The prey peak. The predator peak follows a short time later.

Mean: total divided by number of values.
Mode: most common value. Median: middle value when in order.

Carbon, as carbon dioxide, to be used by plants in photosynthesis.

There is less food available for the predators.

Respiration, by plants, animals and decomposing microorganisms.

Photosynthesis.

Evaporation and precipitation (water is continuously evaporated and precipitated).

Fresh water for plants and animals on land before it drains into the seas.

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What is the role of microorganisms in cycling materials?

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Which cycle are you not expected to study?

Organisation of an ecosystem **Triple only**

How does temperature affect the rate of decay?

Organisation of an ecosystem **Triple only**

How do water and oxygen affect the rate of decay?

Organisation of an ecosystem **Triple only**

What is compost used for?

Organisation of an ecosystem **Triple only**

What does anaerobic decay produce?

Organisation of an ecosystem **Triple only**

How do you calculate the rate of decay?

Organisation of an ecosystem **Triple only**

Required practical 10: what is investigated?

The nitrogen cycle.

They return carbon to the atmosphere as carbon dioxide and mineral ions to the soil.

More water and more oxygen increase the rate of decay, because decomposers need them.

Warmer conditions speed up decay until an optimum. Too hot and enzymes denature; cold slows decay.

Methane gas. Biogas generators use it as a fuel.

A natural fertiliser for growing garden plants or crops.

The effect of temperature on the rate of decay of fresh milk, by measuring pH change.

Change in amount of material divided by time.

Organisation of an ecosystem **Triple only** **Higher tier**

**Name three environmental changes
that affect the distribution of species.**

Organisation of an ecosystem **Triple only** **Higher tier**

**What three types of environmental
change are there?**

Seasonal, geographic, or caused by human interaction.

Temperature, availability of water and composition of atmospheric gases.