

AQA Geography GCSE

A Freshwater Pond Ecosystem

Case Study Flashcards

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What abiotic factors have a major effect on the freshwater pond ecosystem?



What abiotic factors affect the freshwater pond ecosystem?

Light, oxygen, water.



Give an example of a producer in the freshwater pond ecosystem.



Give an example of a producer in the freshwater pond ecosystem.

Algae, microscopic plants, bulrushes, marsh marigolds.



Give an example of a consumer in the freshwater pond ecosystem.



Give an example of a consumer in the freshwater pond ecosystem.

Midge larvae, fish, herons, frogs etc.



Give an example of a decomposer in the freshwater pond ecosystem.



Give an example of a decomposer in the freshwater pond ecosystem.

Bacteria, maggots, worms.



How can interactions between biotic components be illustrated?



How can interactions between biotic components be illustrated?

Food chains and food webs.



Give an example of a food chain present in the freshwater pond ecosystem.



Give an example of a food chain present in the freshwater pond ecosystem.

(For example)

Algae → Midge larvae → Small fish →
Carnivorous fish → Heron.



What does the term 'interrelated' mean in the context of the freshwater pond ecosystem?



What does the term 'interrelated' mean in the context of the freshwater pond ecosystem?

The biotic and abiotic components within the freshwater pond ecosystem are connected to each other and depend on each other.



Interactions seen above the water in a freshwater pond ecosystem.



Interactions seen above the water in a freshwater pond ecosystem.

Birds and other terrestrial animals may scavenge in and around the pond.

Hérons, for example, take fish from ponds.



Interactions seen on the pond's edge in
a freshwater pond ecosystem.



Interactions seen on the pond's edge in a freshwater pond ecosystem.

Lots of oxygen and light - perfect for plants that like boggy but bright conditions. Provides shelter for insects, frogs and small animals.



Interactions seen on the pond's surface
in a freshwater pond ecosystem.



Interactions seen on the pond's surface in a freshwater pond ecosystem.

Plants and algae live on the surface and provide food and shelter for insects and ducks. Lots of oxygen and light here.



Interactions seen in the mid-water in a freshwater pond ecosystem.



Interactions seen in the mid-water in a freshwater pond ecosystem.

Fish and aquatic insects live in this area as they are adapted to less oxygen and light. Fish rely on food in the pond or on the pond's surface.



Interactions seen at the bottom of the pond in a freshwater pond ecosystem.



Interactions seen at the bottom of the pond in a freshwater pond ecosystem.

Low oxygen and little light. Organic matter falls to the bottom of the pond, providing shelter and food for decomposers like maggots, worms and bacteria.



What are the 3 sources of nutrients in a freshwater pond?



What are the 3 sources of nutrients in a freshwater pond?

- Weathering breaks down rocks and minerals and releases nutrients.
- Chemicals in the atmosphere can be washed out within precipitation.
- Bacteria absorb chemicals from the air and store them in soil.



How do nutrients transfer from soils, to plants and animals, back into soils?



How do nutrients transfer from soils, to plants and animals, back into soils?

Via nutrient cycling.

