



[Lockdown Fieldwork: A biology practical that you can do in your garden or local park with no special equipment.](#)

Holt Hall

Minnow Movement

KS3 & 4 Biology

Minnows are affected by **abiotic** (non-living) factors and **biotic** (living) factors in the **river ecosystem**.

The **abiotic** factors include the speed of water flow, the temperature of the water and the oxygen concentration. In the film you can see the minnows feeding on material floating down stream. Minnows need both flowing water and very slow flowing water with plenty of oxygen to survive.



The **biotic** Factors include competition for food and the threat of predation. Minnows form shoals to reduce the threat of predation. There's safety in numbers. If a kingfisher spots a shoal of 20 minnows and dives to catch a fish, 19 fish survive. If a kingfisher spots one fish swimming on its own there is a much greater chance it would be caught. When a predator is spotted the minnow will move into the middle of the shoal, this reduces the chance of it being the one that the predator notices.

Other fish species, such as Bullhead, live alone and use camouflage to avoid predation.

The fish remains very still and rests on the river bed, often under stones.

Photo by Lauren



Activity- Go outside and have a look for wildlife. Can you find any examples of organisms gathering in groups to reduce the chance of predation?

Can you find any examples of animals using camouflage to avoid predation?

What other **biotic** and **abiotic** factors are likely to affect the animal's survival?