

MIGRATION - Eels and Fish

Migration for some species involves returning to the place they were born to breed after spending years many miles away getting bigger and stronger. Eels and Salmon do this.

Eel Migration – Eels in our rivers and lakes live in fresh water but they travel a long way to breed in Salt Water. Watch the animation explaining the extraordinary life-cycle of eels.

https://www.youtube.com/watch?v=WBRnNk_uo9Y



The River Severn is one of the most important places for eels in the UK.

- Mark Bristol on the map on the next page
- Mark the Severn Estuary on the map
- Put an arrow on the map pointing to the Sargasso Sea
- Which do you think is the largest of all the rivers that flow in England and Wales

Question - Why is the River Severn such an important place for eels?

Answer -



This short film explains the work of the Sustainable Eel Group on the River Severn

<https://www.youtube.com/watch?v=KIXHGfzOs70>

MIGRATION – Pupil Worksheet – FISH and EELS

Question. List some of the barriers mentioned in the film that the young eels (elvers) face when they reach the river Severn

Answer .

Question. People fish for the elvers as they are a very tasty food. Why is the fishing for elvers not seen as a barrier by the Sustainable Eel Group?

Answer.

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Salmon Migration – Salmon live in sea water and return to fresh water to spawn (lay eggs). These are long migratory journeys that these species have been repeatedly making for many thousands of years.



Take the Salmon Challenge (on-line game) – how many fish can you get up the river to spawn?

<https://americanindian.si.edu/nk360/pnw-history-culture/pnw1-salmon/>

Question. Why are Salmon showing up in the Arctic much further North than previously?

Answer.

Salmon fishing in the past was one of the main sources of income for people living on the banks of the River Severn.

Watch this short film that explains the process for catching salmon in the River Severn as they swim up river to spawn.

<https://www.aforgottenlandscape.org.uk/projects/remembering-salmon-fishing-severn/>

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Question The film suggests this process for catching fish is very old. Why does the narrator think it is so old?

Answer.

Barriers to Migration

There are many barriers to migration that Salmon and Eels may encounter.

There are very few wild salmon taken from the river now. There are many reasons for this. Cut up these possible reasons and put them in order of.

1. Easiest to fix to the hardest to fix. This could be the least expensive and most expensive
2. The most damaging to the least damaging to the fish

Over Fishing	Pollution
Changes in the habitat that the river passes through	Water Temperature
Fish farms with diseases they could catch	Rivers silting up
Weirs	Confusing new lakes
Dams	Power plants extracting water for cooling

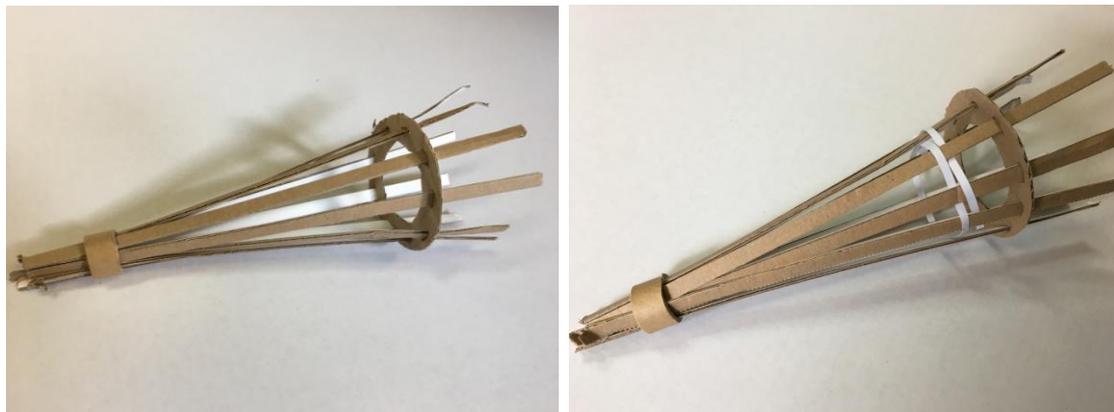
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Practical Extension Challenges

Work in pairs to make a model of a **putcher** or salmon trap – You will need nine long lengths of something bendy that is held together tight at one end and spread apart at the other.

What materials do you have?

This one is just made from card.

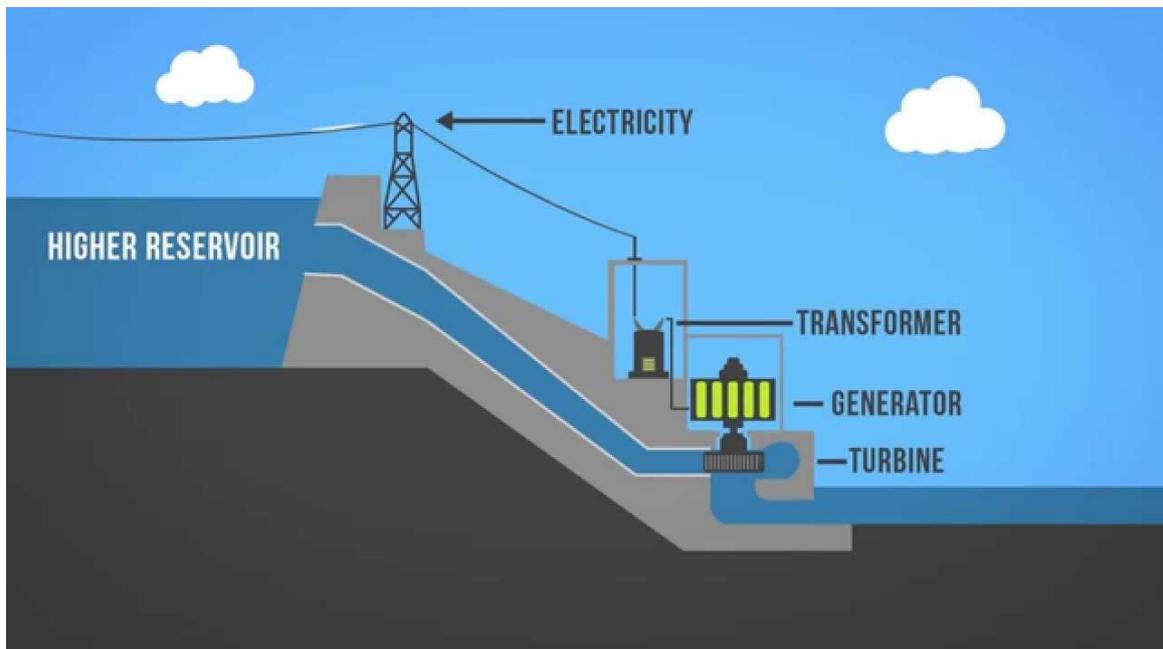


You could use, coffee stirrers, wire, an old plastic bottle cut into strips, a pizza base or even make a larger one using sticks or withies like in the film.

Make a drawing to show how you plan to build it.

Dam Challenge

Humans dam rivers to make lakes that store water and make electricity.



Turbine blades cut up eels and fish on their migration



How can the Salmon get up the river?

Work as a team to design a way to help salmon climb a very high dam wall to the lake above?

On rough paper draw diagrams for different ideas. Share ideas in the team and come up with a presentation about your best ideas and those that you think are too expensive or too impractical.



Warning – Salmon are programmed to head for fast moving water on their way upstream. This is because the most powerful current would indicate the way up to the top of the river where they spawn. This means they try and swim through the turbine rather than take a simpler safer route.

Work as a group to compare all ideas and create a presentation that explains

- Most expensive idea
- Least expensive idea
- Best idea
- Ideas that may reduce the power plants output of electricity
- Ideas that need ongoing human involvement to work – ‘high maintenance’
- Ideas that rely entirely on the fish – ‘low maintenance’
- Tell us who you think should pay for the installation of your idea

If you have time make a model to demonstrate your plan. (Water is not needed for the model)