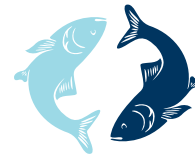


# Helping the Shad with epic engineering!



**UNLOCKING  
THE SEVERN**

## TEACHER & PARENT NOTES

### You will need:

All you need for these activities is a pencil and paper. There are opportunities for extra creativity, but they are optional.

### Discussion ideas to support learning throughout activities:

Begin by discussing the learner's prior knowledge of the river and its inhabitants. Where does the river go? What differences are there between the river and the sea? What lives beneath the surface? What do they already know about their habitat, food chains etc? What is the river used for? Has this changed over time? For older learners encourage reflection on the water cycle and explore terms such as precipitation, condensation etc.

For engineering sections consider practicalities of designing and building a fish pass. Think about cost, limitations to space, public perception, safety to workers etc.

### Extension activities for further research:

Write a story or poem from the point of view of a fish migrating upstream to spawn, and encountering the fish pass for the first time.

Create fish fact file including characteristics, habitat, diet and a 'did you know?' for your three favourite fish on the Unlocking the Severn website: <https://www.unlockingthesevern.co.uk/our-river/fish-of-the-severn/>

Research the life cycles of different river species including caddis fly, eel, dragonfly, otter, heron etc. Draw and annotate each of these and compare their similarities and differences. Make a vocabulary list of defined river terminology including source, estuary, tributary, meander, ox bow lake.

These activities are suitable for Key Stage: 1 and 2

### Learning outcomes:

Name the stages in the shad lifecycle.

Describe the barriers to fish migration – human built weirs.

Explore designs for own solution for fish migration.

Discover the role of modern engineers in designing solutions for fish migration.

### Curriculum Links:

**History:** a local history study: weirs and local industry.

**Science:** animals including humans, living things and their habitats, lifecycles, engineering.

**Geography:** physical and human geography, water cycle.

Complete the other exciting activity packs found on the Unlocking the Severn website by visiting <https://www.unlockingthesevern.co.uk/>

