



# All About Rivers



Our rivers flow through pretty countryside, great cities, towns and villages too

**This Fact File is designed to help you with homework and other projects.**

It will help you to discover:

- \* Where rivers come from
- \* How rivers shape the landscape
- \* Why rivers are different to canals
- \* Why rivers are important
- \* Who looks after rivers.

River Witham  
at Lincoln



The Severn, Thames and Trent are the three longest rivers in Britain



# What's the difference between rivers and canals?

## Rivers are natural

Rivers are formed at a source such as a natural spring or a glacier and flow down the land to the sea.

## Canals are built by people

Canals are built to carry goods by boat from one place to another.



Many rivers and canals are linked up. You could start a journey on a river or canal and go all the way to the sea!

Here are four pictures of waterways. Which one is a canal?

Answers at the bottom of the page



1



2



3



4

Answers: 1 River Severn; 2 Bridgewater Canal; 3 River Soar; 4 River Trent.

# Where do rivers come from?

**All rivers begin at a source**

Little streams feed into bigger streams (tributaries), tributaries feed into rivers, and small rivers feed into large rivers.



**Rivers have three sections:** upper, middle and lower courses. The **upper** course consists of **small streams** that **flow slowly** due to friction with the river bed. The **middle** course **gains energy** and **flows more quickly**. The **lower** course has the **most water** and the least friction so it is **fast flowing**.

# Rivers shape our landscape

## Rivers erode mountains

They **wear away** mountains, **cut through** rocks and **dump** vast amounts of sand, silt and mud into lakes and seas.



© Joan Gravell/Alamy Stock Photo

A natural spring

## The source

The source of a river can be a natural spring, a lake, a marsh or a glacier.

## The flood plain

The lower courses of many rivers have a wide, flat plain and flows across it to the sea. Heavy rain in the upper course can cause flooding on the flood plain.



© Andy Lovell/Alamy Stock Photo

A river meanders towards the sea



© Ken Edwards/Alamy Stock Photo

An oxbow lake

## Oxbow lakes

Sometimes a meander develops such a curve that the banks on one side are cut back into the bank on the other side. The river finds a short cut and the old meander becomes a semi-circular lake.

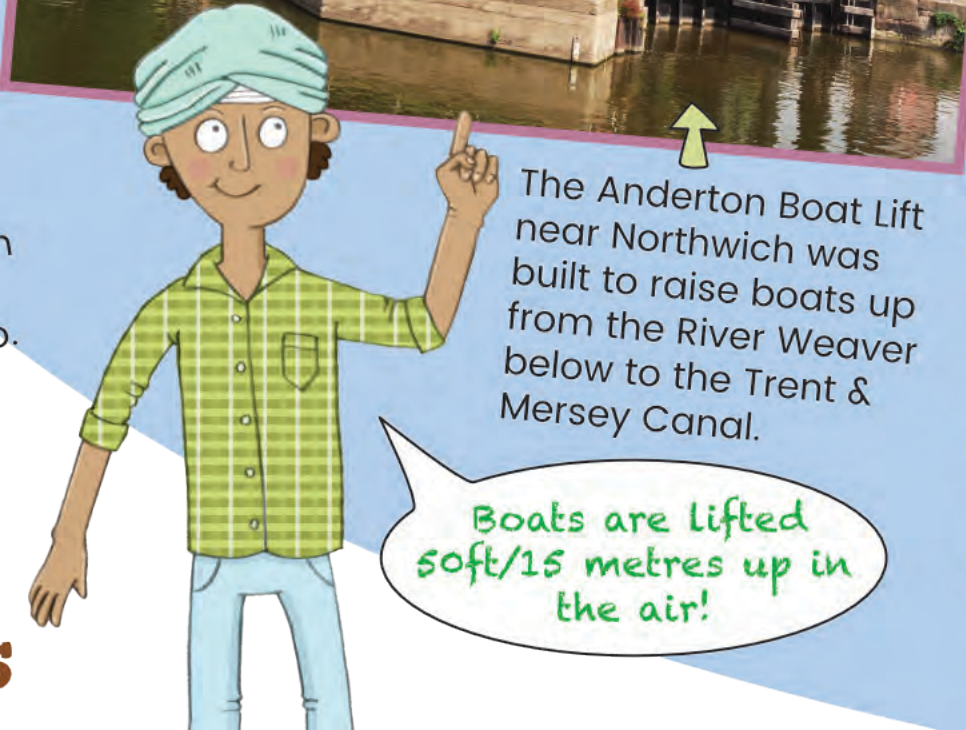
# Risky Rivers

Rivers have been used as highways since earliest times. But rivers can be tricky to navigate with strong currents and dangerous sandbanks.

Rivers don't always go where you want them



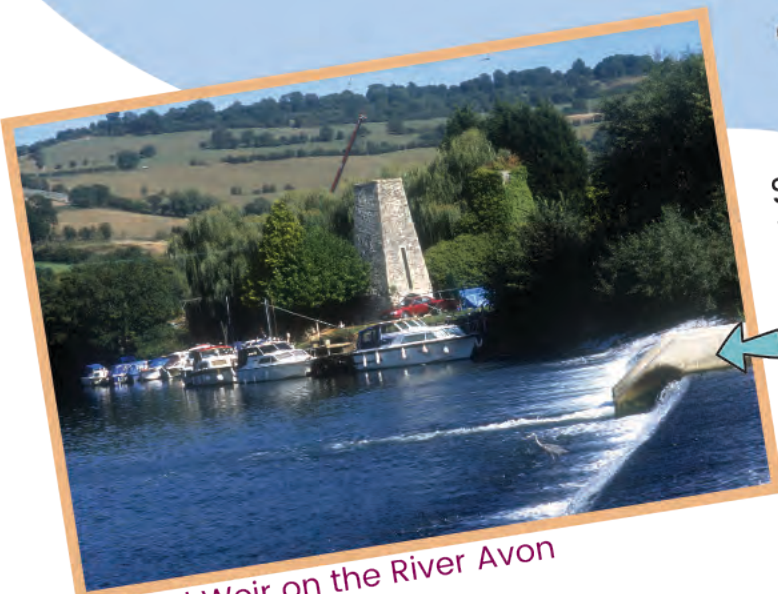
Rivers were often dredged and straightened to make them easier to navigate. These rivers are then called navigations.



Structures such as locks and weirs help to control rivers, making them easier for transporting cargo.

The Anderton Boat Lift near Northwich was built to raise boats up from the River Weaver below to the Trent & Mersey Canal.

Boats are lifted soft/15 metres up in the air!



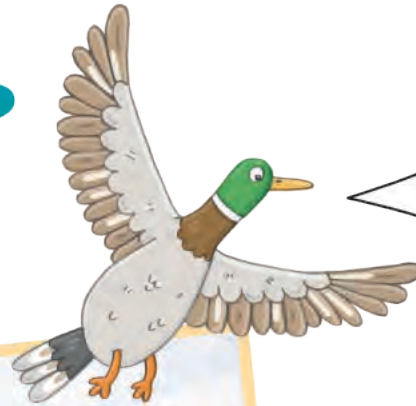
Salford Weir on the River Avon



# Why are rivers so important?

People have always settled near rivers as they provided drinking water, food, protection and transport.

Newark Castle on the River Trent was built to protect the town from invaders.



Water transport was cheaper, easier and safer than road transport

In the past, roads were often very poor ...

... and there was also the danger of robbers!



Stourport-on-Severn

Stourport-on-Severn was built to link the River Severn to the Staffordshire & Worcestershire Canal. Goods were imported from abroad into Gloucester Docks, taken to Stourport by river, transferred on to canal boats, and delivered to the industrial Midlands.



- Today rivers are used for:**
- Supplying water to homes, factories and farms
  - Harnessing energy e.g. hydro-electricity
  - Leisure.

# Working rivers



## All sorts of people earned a living from rivers

- People paid to unload cargo or store goods in factories on the river bank
- Pub owners made money from boat crews who stopped for a rest. This still happens today
- Mill owners used rivers to power machinery and charged people to use it.

Abbey Mill, in Tewkesbury, was built in 1865. It used the River Avon to power the machinery



The Olympic Park on the River Lea opened in 2012



© Chris Sargeant

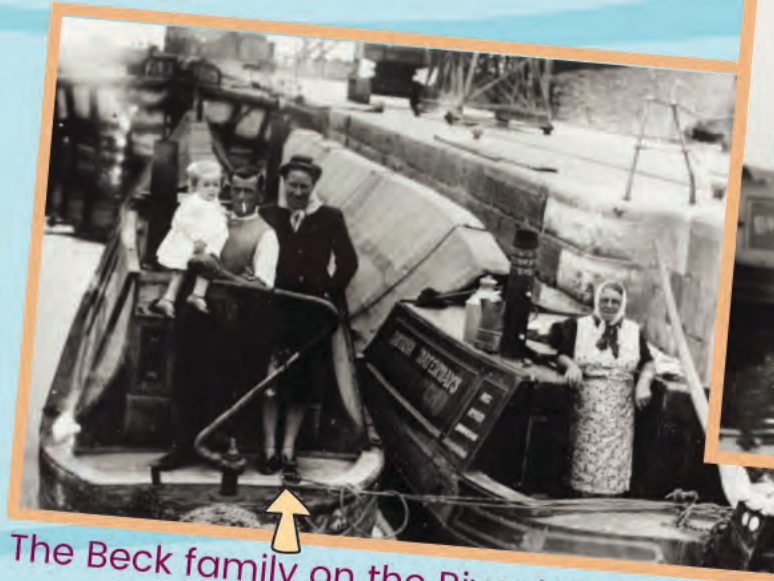


The River Lea carried over 1.75 million tonnes of building materials to build the Olympic Park

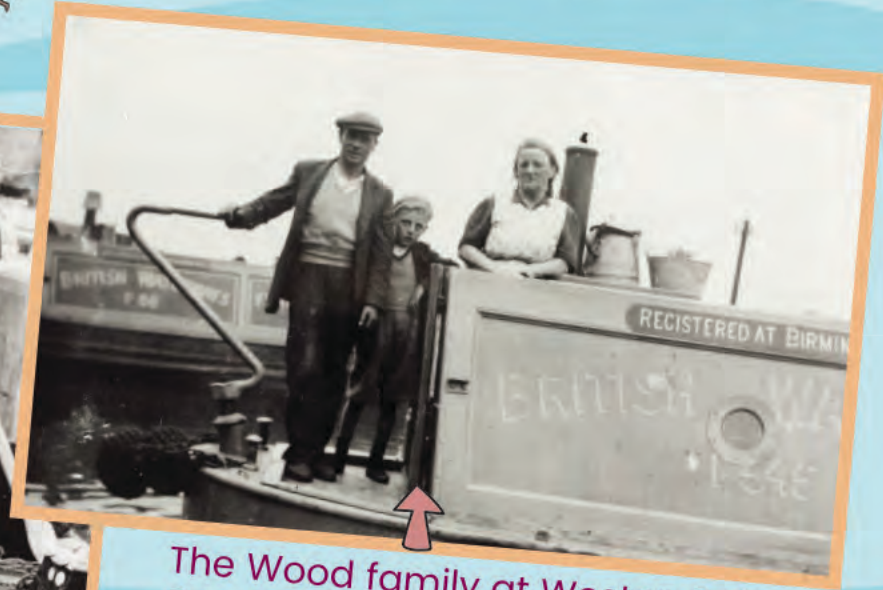


**Whole families lived on barges and earned a living transporting goods along rivers.**

Some men who operated the boats on the River Weaver went to work on Sunday night and returned on Friday night.



The Beck family on the River Weaver



The Wood family at Weston Point Docks on the River Weaver



These men are working on a dredger on the River Weaver





# Looking after rivers



Many river navigations are more than 200 years old and need **constant maintenance**. Banks need to be **repaired** to prevent flooding, and silt and mud need to be **cleared** to make sure rivers are deep enough for boats.



The Canal & River Trust manage over 2000 miles of waterways!



The River Calder in flood



## Climate change



Scientists expect an increase in rainfall because of global warming. This will have an effect on the flow of rivers and on flooding so it is very important that our rivers are well maintained.



This lock at Torksey, in Lincolnshire, controls the mighty River Trent