

WARM-UP

Work in pairs to discuss the questions and think about the answers.

1. Write down two things you know about rivers.

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2. Where do you think a river begins?

3. Where do you think a river ends?

4. Do you think rivers look the same from beginning to end?

5. What do you think people use rivers for?

6. What types of water do you know?

1. THE WATER CYCLE

The scientific name for *the water cycle* is the **hydrological cycle**. The water cycle is a system that circulates non-stop between the ocean, the atmosphere and the land. Water is constantly moving around the earth and its atmosphere. The total amount of water on the earth always remains the same. The amount of water taken out of the ocean through evaporation is exactly the same as the amount washed in by rivers. All water eventually lands up in the ocean.

PROCESSES

Activity 1: Match-up these terms (in bold) and definitions (in italics):

1. Evaporation:

2. Transpiration:

3. Precipitation:

4. Infiltration:

5. Run-off:

6. Condensation:

- water that soaks into the soil and rocks and then forms part of the groundwater;
- liquid water that is given off by plants;
- water that reaches rivers and flows towards the sea;
- water vapour changes into liquid;
- liquid water changes to water vapour;
- water falling from the atmosphere as rain, hail, snow, sleet, frost or dew;

What happens to the precipitation when it reaches the earth?

Well, it could:

- be taken up by plant roots;
- soak into the soil and rocks;

This is called infiltration. This water forms part of the groundwater. Groundwater is stored in rocks as part of the water table.

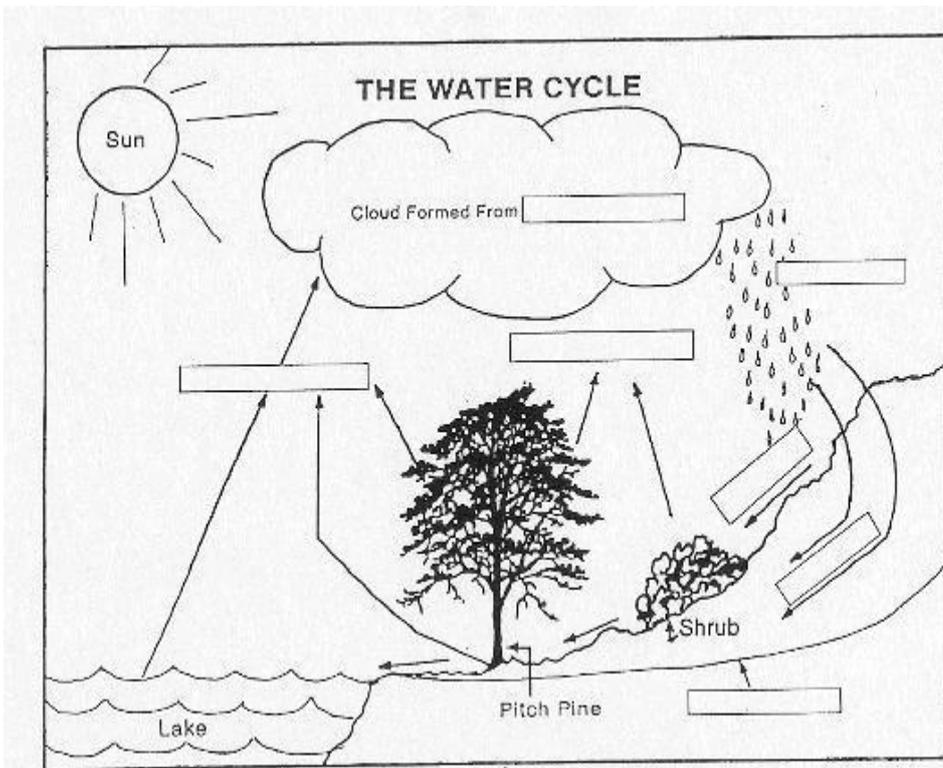
Or it could:

- remain frozen and be stored as ice as part of an ice sheet or glacier.
- stay on the earth's surface in a river or a lake.

Water that reaches rivers will flow towards the sea. This is called **surface runoff**.

Activity 2: Now, let's have a go at creating our own water cycle!

Look at the terms to the right of the diagram and write them in the appropriate box so that the water cycle makes sense.



Terms

1. Condensation
2. Infiltration
3. Run-off
4. Precipitation
5. Evaporation
6. Water table
7. Transpiration

2. DRAINAGE BASIN

All rivers begin as a small trickle high up in the mountains. The beginning of the river, in a highland area, is known as the **source**. As the river flows down the mountain, it makes a channel that can then flow along. Like anything that is just beginning, this channel is narrow and small at the source. As the river moves downhill and more water flows into the river, the channel will obviously become wider. Many smaller streams can also join together to make a bigger river. We call these smaller streams tributaries.

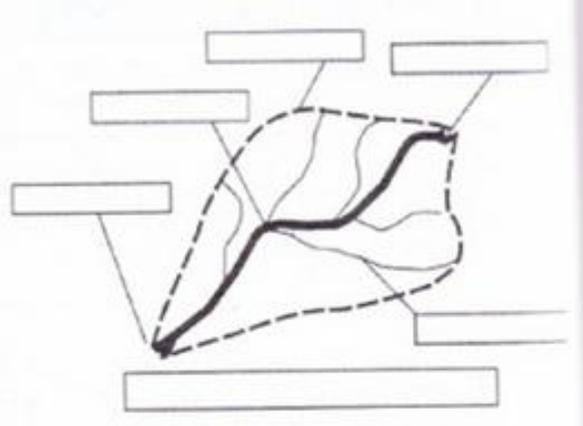
As a river flows from its source to its mouth, it passes through three different stages. We call these stages:

- the upper stage
- the middle stage
- the lower stage

Each stage has its own characteristics and features that make it stand out from the other stages.

The point where two rivers join is called the **confluence**. The entire area of land into which a river and its tributaries drain is called a **drainage basin** or **catchment area**. The high-lying area, like a mountain, that separates one drainage basin from another is called a **watershed**. The river will continue to flow downstream until it flows into the sea. We say that the river ends at the **mouth**, in a lowland area.

Activity 3. Use the words in bold to complete the figure below.



Activity 4: Use your knowledge to fill in the answers.

Drainage basin

confluence	watershed	mouth	steepest area	area where most deposition is likely to take place
flattest area	tributary	drainage basin	source	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9

Activity 5. Man-made/Artificial Features of a River System

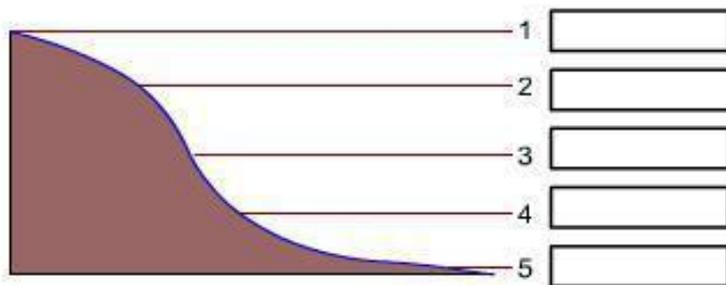
Here is a list of some man-made features. Unscramble the letters to name them.

ADM	
RESOIVRER	
OCHL	
RIBDGE	
TOPR	

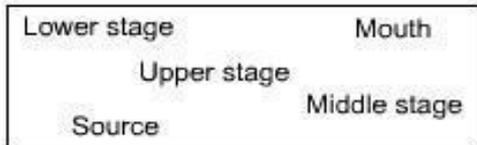
3. A RIVER'S PROFILE

Activity 6.

If we were to draw a simple profile of a river from its source to its mouth, it would look like this:



In other words, the diagram is showing what the path of the river would look like from the side.



4. UK's RIVERS

As a consequence of so many hills, Britain is rich in waterways. A lot of towns and villages stand on a river, a fact obvious from their names; some of the places are quite famous, others are less known: Stratford upon- Avon, Stockton-on-Tees, Stoke-on-Trent and many others.

Activity 7. Search on the internet to fill in the chart with information about the UK's rivers. (suggested site:http://en.wikipedia.org/wiki/Longest_rivers_of_the_United_Kingdom)

River	Length (km)	Country	Rank
Severn			
Trent			
Thames			
Tyne			
Clyde			
Dee			

THE THAMES

LISTENING 1. Listen and fill in the gaps.

For centuries, the River Thames has been at the _____ of English life. From its source, in the Cotswolds, right down to the city of _____ and beyond, the river flows through more than _____ miles of beautifully historic countryside and iconic cityscape. Once, one of the country's principal _____ routes, the river is now as _____ as it's ever been, a heaven for _____ and for those who just want to enjoy one of the world's most beautiful _____. If you don't own a _____, there are plenty of places to hire them for a few hours, a day or much longer. The river is _____ from the Thames _____ right up to the Lachlade, Gloucestershire, the non-tidal stretches divided into reaches¹ by well-maintained and easily operated locks². Take a trip on the Thames and you'll be on the company of a whole family of fellow-boaters, those taking the river at their leisure and those looking for a bit more of excitement.

Off the water, the Thames is just as absorbing, interesting and _____ with the walking, the Thames path along its _____, dining in one of the river's excellent _____ restaurants or simply watching the world go by. The river Thames has something for everyone. Whether you're _____ a day trip or a full family holiday, to find out more about the river Thames, give it a visit thames.co.uk/boating. (Discover the River Thames.)

LISTENING 2. Listen and fill in the gaps: (source: BBC)

- A) The Thames Barrier located in _____;
 -ranked _____ on the list of the world's largest movable flood barriers;
 - the flood of _____: 300 people _____;
 - became operational in _____;
 - stretches across _____ m of the Thames;
 - the most recent closure: _____, due to a large storm surge in the North Sea;
 - a landmark worth visiting: _____
- B) The Thames has provided easy access to the _____;
 - London prides itself on being well defended: _____ miles of floodwall and _____ barriers;

- in _____ The Queen opened what was called “ the _____ in the flood defence crown”;
 - was an _____ marvel, the biggest in the world;
 - without it, the water levels would be at the top of the _____;
 - Environment Agency- runs a project: “ _____ ”→come up with a long-term solution to the growing threat of flooding;
 - flood defences- getting _____;
- The Thames barrier- designed to last up to _____; at first, closures expected every _____ times a year; today, it closes _____ times every year;
- The worst scenario: - by _____, it will be closing on almost every tide, it’ll be overtopped on some tides;
- _____ people left without living and working in the flooding area;
 - over £ _____ bil. worth of property;
 - _____ underground stations, _____ schools, _____ hospitals, power stations and an _____;
- another threat to London: _____ flooding;

5. Lakes

Activity 8. Match the words with the countries in which they are used.

<i>Lake</i>	Wales
<i>Loch</i>	England
<i>lough</i>	Scotland
<i>Llyn</i>	Northern Ireland

SCOTLAND. Loch Ness was formed about 10,000 years ago, when the Ice Age ended. The sides of the loch are very rocky and steep but the bottom of the Loch is flat. It is fed by seven rivers and never freezes. The temperature of the water changes at about 100 feet down in the loch.

Loch Lomond deserves a special mention for its wonderful scenery, while Loch Ness is a famous place for the largely debated monster which is supposed to live there.

ENGLAND. Lake District or Lake Country or Lakeland- the region is well known for its great natural beauty – it is considered the most beautiful part of England, – the lakes occupying many ice deepened valleys and showing a wonderful variety. The largest lakes are Windermere, Coniston Water, Derwent Water and Ullswater.

NORTHERN IRELAND. Lough Neagh is a vast lake that is formed by volcanic lava.

Activity 9. Search on the Internet the necessary information to fill in the chart. (suggested site: http://en.wikipedia.org/wiki/List_of_lakes_and_lochs_in_the_United_Kingdom)

Name	Location	Area (sq. km)	Max. depth (m)
Lough Neagh			
Loch Lomond			
Loch Ness			

Activity 10. Translate into English the following terms:

1. meandru
2. scurgere de suprafata
3. baraj
4. afluent
5. acumulare
6. curs superior

Activity 11. Label the following rivers and lakes on the map: R. Thames, R. Trent, R. Humber, R. Tyne, R. Forth, R. Clyde, R. Severn, Loch Ness, Loch Lomond, Lough Neagh;

