

ANSWERS - River Drainage Basins

Please MARK your work in green and then complete your CORRECTIONS in purple.

L.O. To understand the meaning of 'the river basin', name its features and complete a labelled a diagram

Drainage Basin: An area of land drained by one river and its tributaries.

Drainage Basin System

ACTIVITY 1: Match the keywords to the correct definition

STORAGE

OUTPUT

FLOW

INPUT

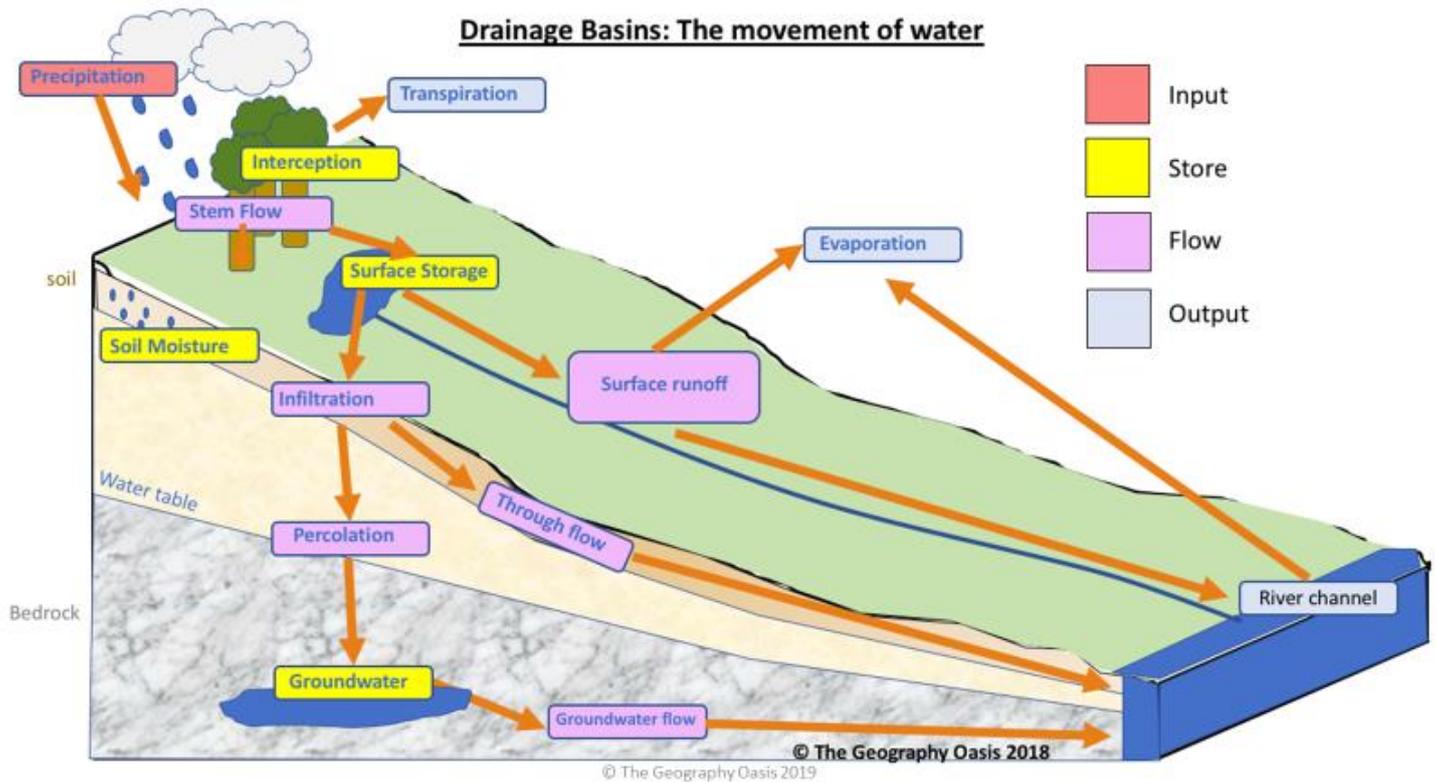
KEYWORDS	DEFINITIONS
INPUT	Water entering the system/area
STORAGE	A place where water is held and does not move for a period of time.
FLOW	A movement of water from one place to another.
OUTPUT	Water leaving the system/area

The diagram below shows the movement of water through a drainage basin system.

ACTIVITY 2: Read the keywords below and add them to the correct place on the diagram.

KEYWORD	DEFINITION	KEYWORD	DEFINITION
1. PRECIPITATION	The transfer of water from the air to the land. Water can fall to the Earth as rain, hail, sleet or snow	8. INTERCEPTION	Where some precipitation is temporarily caught by plant leaves before reaching the ground by dripping or stem flow.
2. STEM FLOW	Water running down a plant stem or the trunk of a tree.	9. INFILTRATION	A process by which surface water enters the soil by filtering it through soil pores / small openings
3. SOIL MOISTURE	Water stored in the soil.	10. GROUNDWATER FLOW	The down slope movement of water through underlying rocks
4. TRANSPIRATION	A process by which plants return moisture to the atmosphere, having taken it through their roots.	11. SURFACE RUNOFF	The transfer of water over the grounds surface. It is easiest to see where it forms rivers.
5. EVAPORATION	The transfer and change of water from the ground into water vapour in the air. This is caused by the heat from the sun.	12. PERCOLATION	The downwards flow of water through cracks and joints in underlying rock
6. GROUNDWATER	A store of water held below the surface in the ground zone above the base rock.	13. GROUNDWATER FLOW	The downhill transfer of water through pores and small cavities in the soil.
7. SURFACE STORAGE	Water held on the surface in lakes, ponds and puddles.		

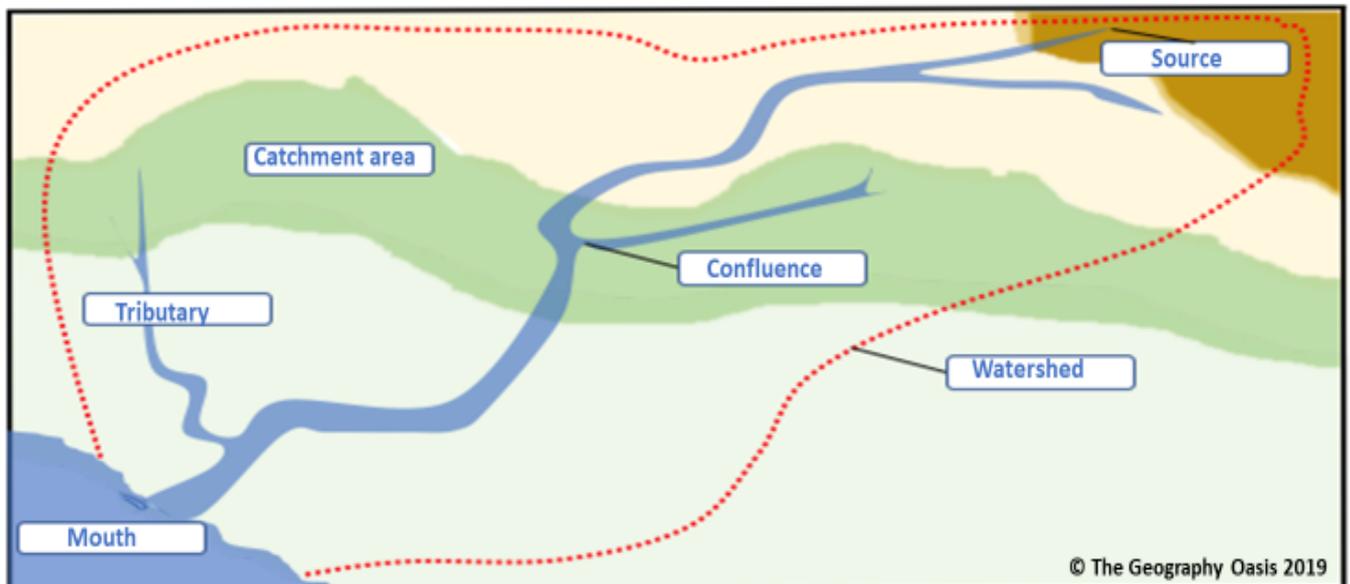
A Drainage Basin System- The movement of water



ACTIVITY 3: Colour the boxes in the diagram above to show the inputs, stores, flows and outputs. Don't forget to colour in the key.

ACTIVITY 4: Read the keywords below and add them to the correct place on the diagram below.

Key features within a drainage basin



KEYWORD	DEFINITION	KEYWORD	DEFINITION
1. Source	A place on higher land where the river begins.	4. Confluence	The point at which two rivers join.
2. Mouth	The end of the river, where it meets the sea.	5. Watershed	A boundary between drainage basins. Usually along highland and ridges.
3. Tributary	A smaller river that joins a larger river.	6. Catchment area	The area within a drainage basin.

ACTIVITY 5: Study an OS map and identify as many of the features above.

Just in case you don't have an OS map, I've included these simple examples for you to study. Here are some examples of how to identify river features on maps. This is a simple sketch map.

What is a drainage basin?

Mouth
Where the river flows into the sea, or sometimes a lake.

Watershed
The boundary dividing one drainage basin from another- a ridge of high land.

Tributary
A river which joins a larger river.

Catchment
The area from which water drains into a particular drainage basin.

Source
The upland area where the river begins.

Confluence
The point at which two rivers join.

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Now have a go yourself using this OS map extract. Match the correct letter to the river feature.

Match the label to the correct letter

Watershed

Confluence

Tributary

Source

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Watershed = Confluence = Tributary = Source =

ANSWERS

Watershed = **d**

Confluence = **c**

Tributary = **a**

Source = **b**

ACTIVITY 6: YORKSHIRE RIVERS worksheet **answers**

1. The start of the river is its **SOURCE**. As it flows it is joined by smaller rivers called **TRIBUTARIES**. They meet at a **CONFLUENCE**. The place where a river enters the sea is **MOUTH** Which may be an **ESTUARY** or a **DELTA**. The area which is drained by a river and its tributaries is **DRAINAGE BASIN** whose boundary is called its **WATERSHED**
- 2a. The source of the River Swale is in the **Pennines**.
- b. The River Calder is a **tributary of the River Aire**.
- c. The confluence of the River Don and the River Rother is **at Rotherham**.
- d. The mouth of the River Esk is **at Whitby**.
- e. The Yorkshire rivers **flow into the North Sea**.
- f. The River Humber is **an estuary**.

EXTENSION TASK – Match the picture with the correct description

Cut out the picture and match with the correct word box. Glue in your book or onto a piece of paper.



Confluence: the point where 2 rivers meet – the point where a tributary joins the main river.



Tributary: a smaller river that flows into the main river.



The river flows in a 'ditch' called a: **River channel**. It has a bed and 2 banks.



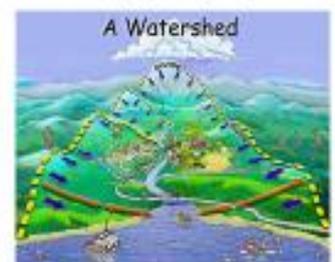
Floodplain: flat land on either side of the river that gets submerged when the river floods.

Source; where the river begins, it's starting point.

A drainage basin: the area surrounding a river where it gets its water from e.g. from rain and from other rivers. It is also called a catchment. .



Mouth: where the river ends its journey and flows into either a lake, the sea or the ocean..



Watershed – an imaginary line that separates 2 drainage basins

It's not just about the river!

