

RIVER LANDSCAPES REVISION



Activity Booklet

What is a drainage basin?

Rivers begin in upland areas and make their way down to the sea. Label the diagram below of a drainage basin using the labels provided.

- Watershed
- Tributary
- Confluence
- Source
- Mouth
- Channel



Complete the table below.

Feature of drainage basin	Meaning
Watershed	
Tributary	
Confluence	
Source	
Mouth	
Channel	

How do rivers erode?

There are 4 ways in which rivers are eroded. Complete the table below.

<u>Hydraulic action</u>	<u>Corrasion (abrasion)</u>
<u>Corrosion (solution)</u>	<u>Attrition</u>

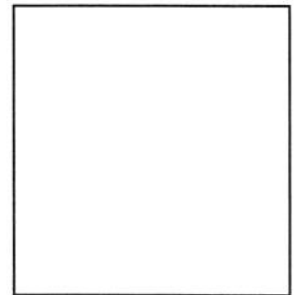
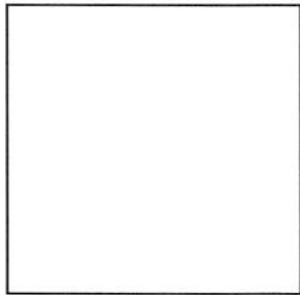
Weathering

There are 3 types of weathering. They are:

- Physical
- Chemical
- Biological

Physical weathering is where water gets into cracks in rocks. When the temperature falls below freezing, the water will expand and turn into ice. This puts pressure on the rock and eventually it will break.

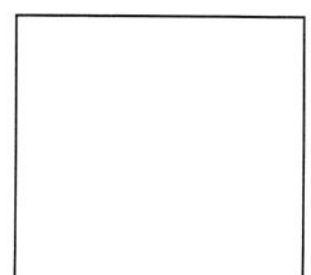
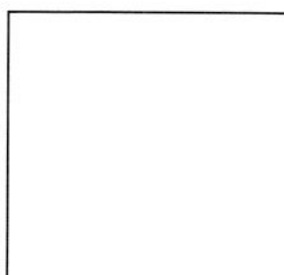
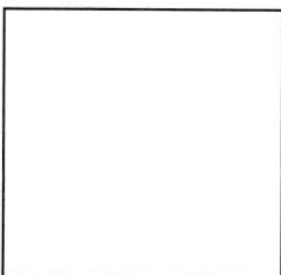
Draw and annotate 3 diagrams to show this process.



Chemical weathering is when rainwater contains weak acids than can react with certain rock types. The carbonates in limestone are dissolved by these weak acids and this causes the rock to break.

Biological weathering is the action of plants and animals on the land. Seeds that fall into cracks in rocks will start to grow when moisture is present. The roots plants put out force their way into cracks and in time can break up rocks. Burrowing animals, such as rabbits can also be responsible for the further break up of rocks.

Draw and annotate 3 diagrams to show this process.

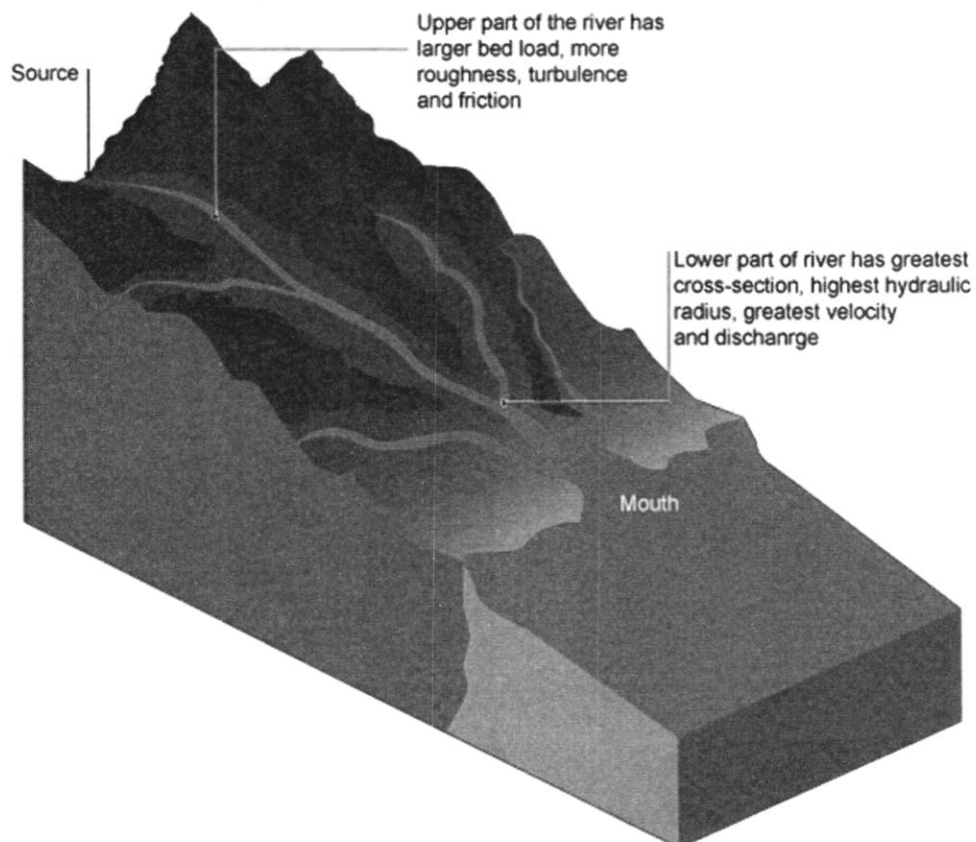


Mass movement

Mass movement is when material moves down a slope due to the pull of gravity.

<u>Soil creep</u>	<u>Slumping</u>
<u>Sliding</u>	<u>Rock fall</u>

The Long Profile of a River



Complete the table below with the features of the river and its valley.

Upper	Middle	Lower

Explain the shape of the valley and type of erosion found at the source of the river.

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Explain the shape of the valley and the type of erosion found at the mouth of the river.

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Landforms in River Valleys

Upper Course

V-shaped valleys

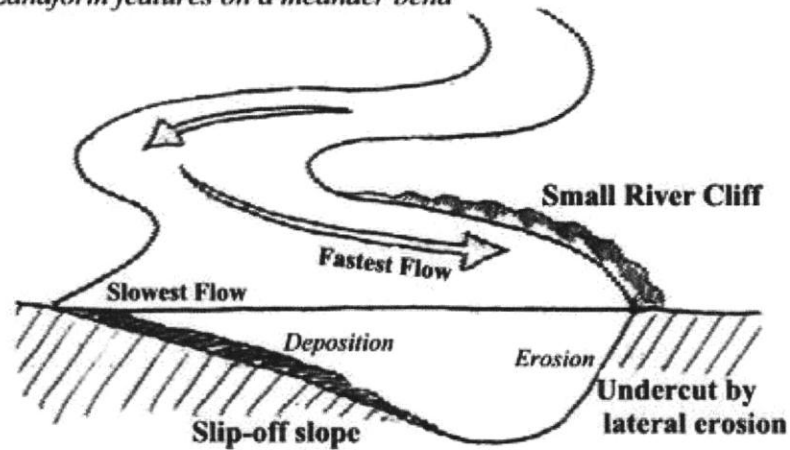
Interlocking spurs

Waterfalls

Draw and annotate a diagram in the box below to show the formation of a

Middle Course

Landform features on a meander bend



Above is a diagram of how a meander is formed. Write a paragraph to describe this process in your own words.

Lower Course

The rivers main process has now become deposition as a result of the large load of eroded material that it is carrying. A number of features such as ox-bow lakes, floodplains, levees and deltas can be found in the lower course.

Ox-bow lake formation

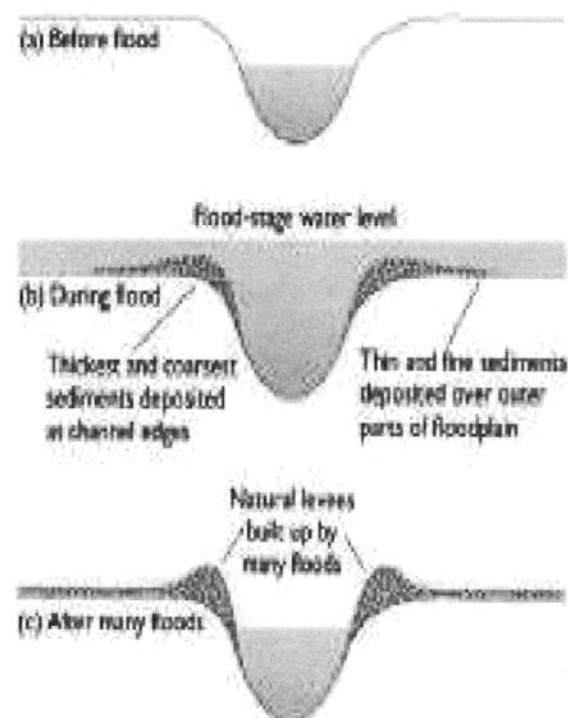
Draw and annotate a diagram below to show the formation of an ox-bow lake.





Oxbow lake

Formation of Natural Levees



Examine the processes involved in the formation of levees and floodplains in the space below.

Flooding and Flood Prevention

What are the human and physical causes of flooding?

HUMAN	PHYSICAL

Hard and Soft Engineering Techniques

Hard engineering technique	Description	Advantages	Disadvantages

Soft Engineering Techniques

Soft Engineering Technique	Description	Advantage	Disadvantage