

WALT understand the journey of a river from source to sea.

WILF: - Locate rivers on a map.

- Understand the terms 'source' and 'estuary'.
- Explain the river's journey at different stages.

What do you think a river's journey involves?

1) The Upper Course is the first stage of the river, often on high ground.

In the upper course, precipitation feeds the emerging river. Additionally, rivers can begin as snow melts off hills and mountains. The mountains are where most rivers start flowing downhill.

While rivers mostly start on high land, some also have their source in lowland valleys. Here the throughflow (underwater), rather than overland flow of water is important. Water stored deeper, as ground water, also helps to form lowland rivers.



Peru - Cusco Sacred Valley & Incan Ruins 153 - steep-sided Urubama valley © McKay Savage

2) Waterfalls

Waterfalls are formed when a river or stream goes over a steep drop. They can create high sided gorges, where they erode the softer rock below to create a gap. The waterfall moves back (recedes). The water either drops into a lake or continues movement down a river.



High Force Waterfall © Lincoln Eye, Flickr

3) The Middle Course - here the rivers become wider and deeper.

The water here moves with high velocity (faster in its direction), usually underneath the surface. It has therefore more energy to erode the bank of the river, making it become wider or meandering (curving, see picture).

Meandering happens because water particles never flow in a straight line.



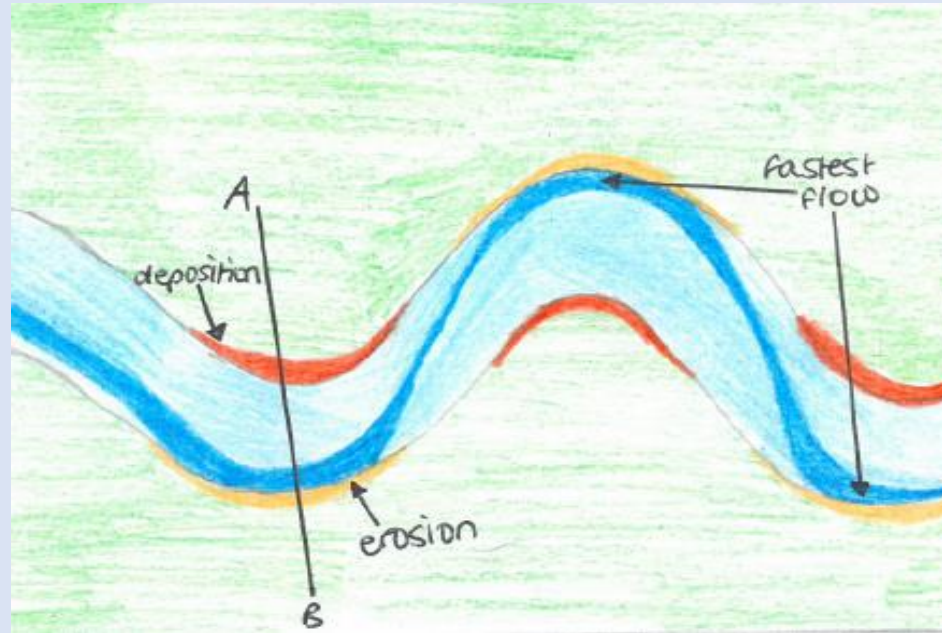
Cuckmere Meander © Dave Moyes, Flickr



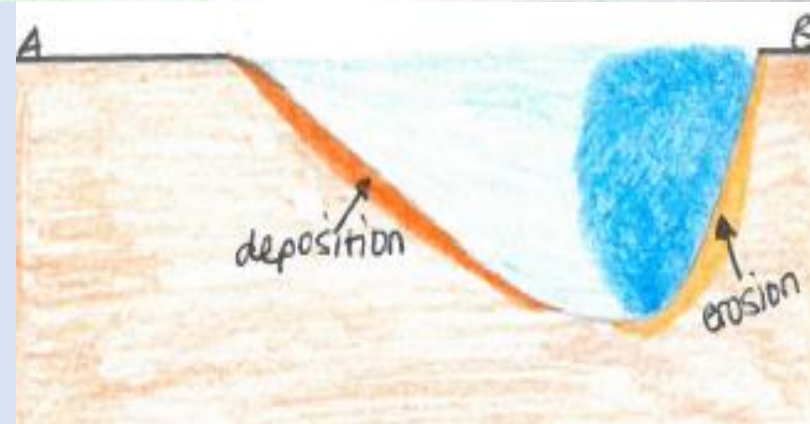
Thames Path © Gabriella Szekely, Flickr

Erosion and Deposition helps to form the shape of the river – it erodes the land by the river, then deposits (releases) the materials as the water passes by with a current.

View from above



Cross section



Estuaries

An estuary is where the river enters the ocean. Here, the fresh water and sea water mix together, causing tides to rise and fall. Debris that is left at this meeting point often forms a Delta, where the mixing currents backflow makes it difficult to carry the sediment away.

This is the Nile's Delta, in Egypt. It is one of the largest. It was important to the Ancient Egyptians - can you tell why?



This is the Thames Estuary.



On a Map...

Can you follow
the Nile from
Source to Sea?

Click on the map
to see it larger
and to click on
each country. Do
not click on
anything but the
map on the
website.

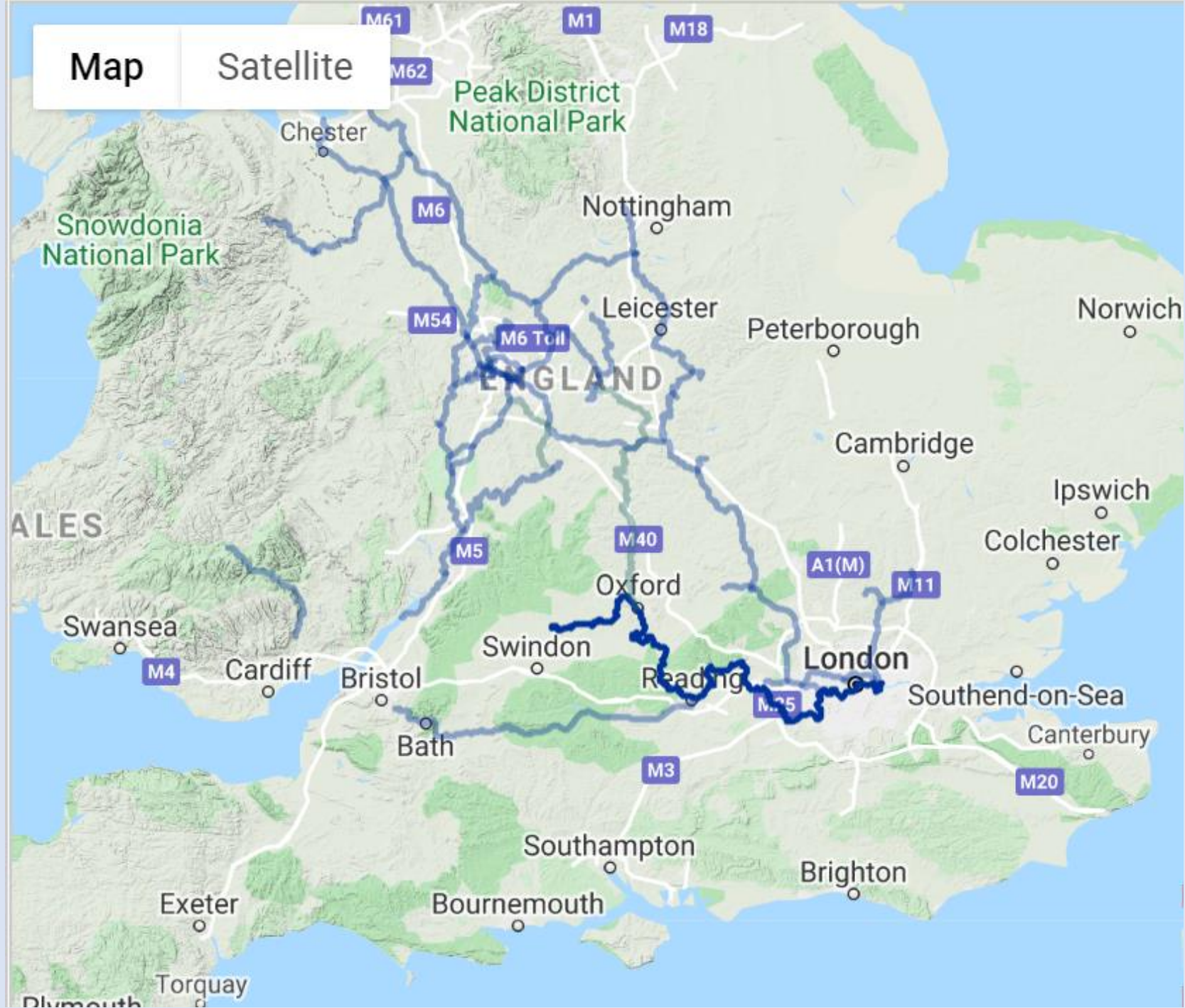


On a Map...

Can you follow
the Thames from
Source to Sea?

Where does it
end up?

Click on the map
to see it larger
and to zoom in.



Today's Activity:

Draw a diagram of a river from Source to Estuary and label the different parts of the journey using the following vocabulary:

Source
Upper course
Middle course
Meander
Waterfall
Erode
Estuary
Delta
Debris
Current

