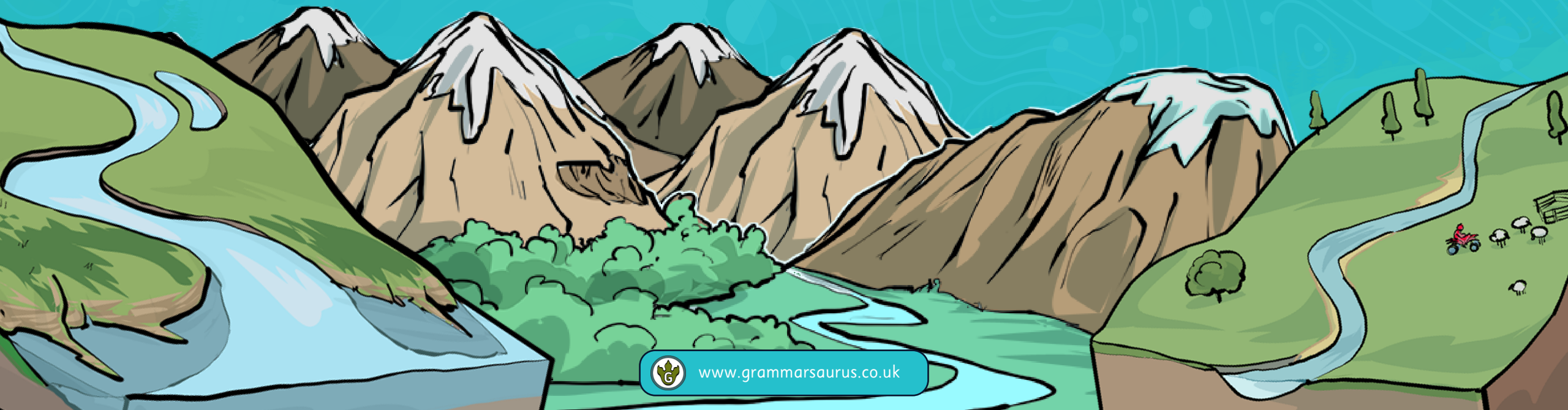
Rivers

What are rivers, and how are they formed?



What are the features of my local river?

Key question we will answer:

What are rivers, and how are they formed?

Key geographical knowledge we will use: **Locational Knowledge, Place Knowledge, Human and Physical Geography**

Key geographical concepts we will use: **Place, Space, Scale, Physical and Human Processes and Interdependence**

Key question we will answer:

What can I learn about rivers from studying the River Trent?

Key geographical knowledge we will use: **Locational Knowledge, Place Knowledge, Human and Physical Geography**

Key geographical concepts we will use: **Place, Space, Scale, Physical and Human Processes and Interdependence**

Key question we will answer:

What data can I collect from rivers in my region?

Key geographical knowledge we will use: **Locational Knowledge, Place Knowledge, Human and Physical Geography, Geography Skills and Fieldwork**

Key geographical concepts we will use: **Place, Space, Scale, Physical and Human Processes and Interdependence**

Key question we will answer:

How can I collect data from conducting fieldwork at a local river?

Key geographical knowledge we will use: **Locational Knowledge, Place Knowledge, Human and Physical Geography, Geography Skills and Fieldwork**

Key geographical concepts we will use: **Place, Space, Scale, Human Processes, Environmental Impact and Interdependence**

Key question we will answer:

How will I present the data collected from conducting fieldwork at a local river?

Key geographical knowledge we will use: **Locational Knowledge, Place Knowledge, Human and Physical Geography, Geography Skills and Fieldwork**

Key geographical concepts we will use: **Place, Space, Scale, Human Processes, Environmental Impact and Interdependence**

Key vocabulary for this lesson:

erosion – moving water or wind causing tiny pieces of the Earth's surface to be moved from one place to another

source – the point at which a river starts

upper course – the first stage of the river, often located on high ground

middle course – the second stage of a river, where the land is flatter and the river wider

lower course – the land is flat, and the river is at its widest

valley – an area that lies between ranges of hills or mountains that a river flows through

channel – the river bed and banks in which water flows

silt – solid, dust-like sediment that water, ice and wind transport and deposit

Key vocabulary for this lesson:

tributaries – small streams that join the larger river

meander – the natural bend in a river

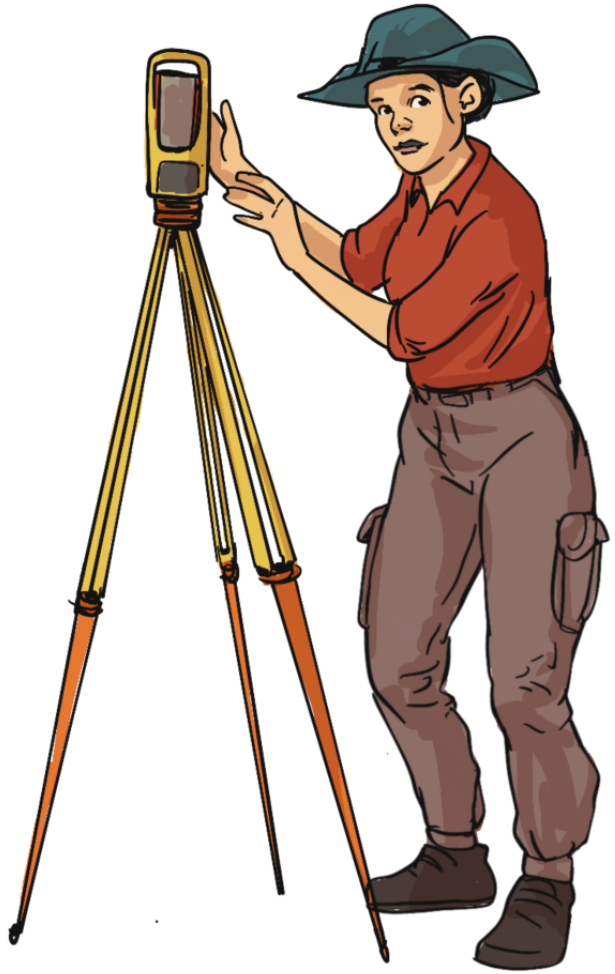
oxbow lake – a section of a meander that becomes isolated from the main river channel and eventually dries out

mouth – the point where the river ends

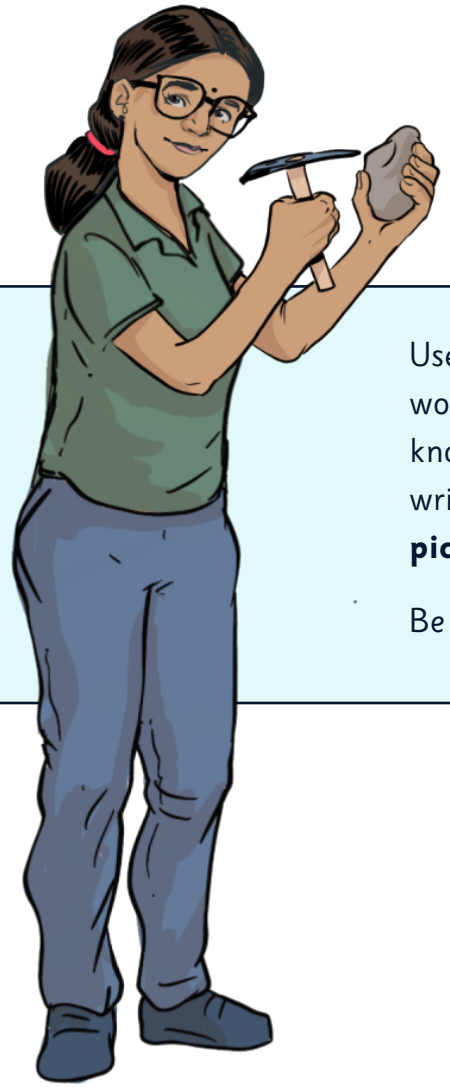
estuary – the point where the river meets the sea in the lower course

floodplain – a flat area surrounding a river or stream

delta – a wetland area that forms as river waters empty into a larger body of water

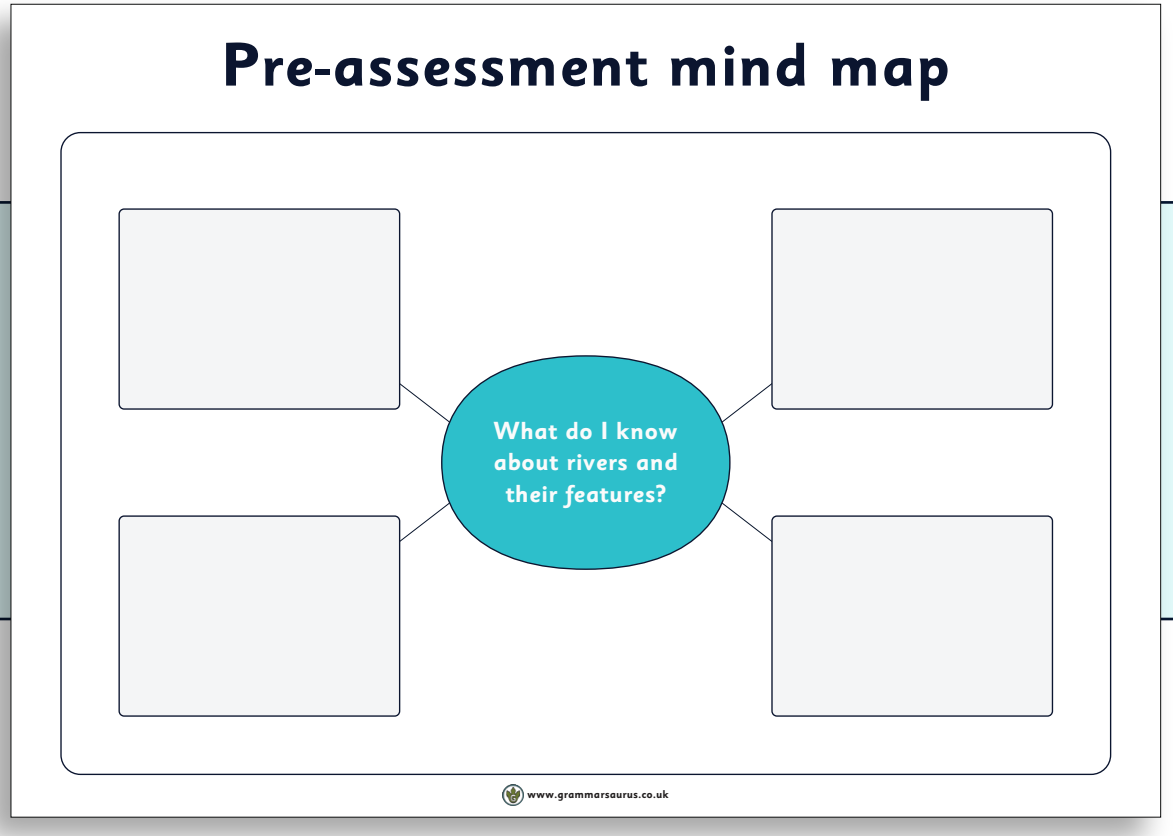


Pre-assessment mind map



Use the **mind map** on your pre-assessment worksheet to write down everything you already know about **rivers and their features**. You can write down **keywords or facts or draw pictures**.

Be ready to **share your feedback** with the class.



What is a river?

Hi! My name is **Charlotte.** I am a **hydrologist**. I study rainfall, rivers and other waterways as part of my job.

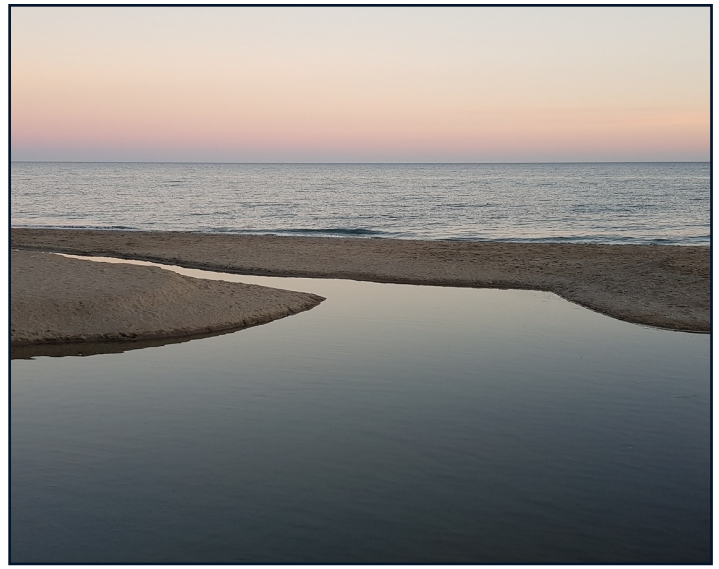
A river is a **moving body of water** that drains the land. It flows from its **source** on high ground, across land and into another body of water such as a lake, the sea, an ocean or even another river. A river flows along a **channel** with **banks** on both sides and a **bed** at the bottom.

Let's discuss

Study the **photographs** on the slide and discuss the ***following questions*** with your learning partner:

- What are the **photographs** showing?
- What does the **landscape** look like?
- What ***features*** can be seen?

Be ready to **share your *feedback*** with the class before the answers are revealed.



Let's discuss

answers

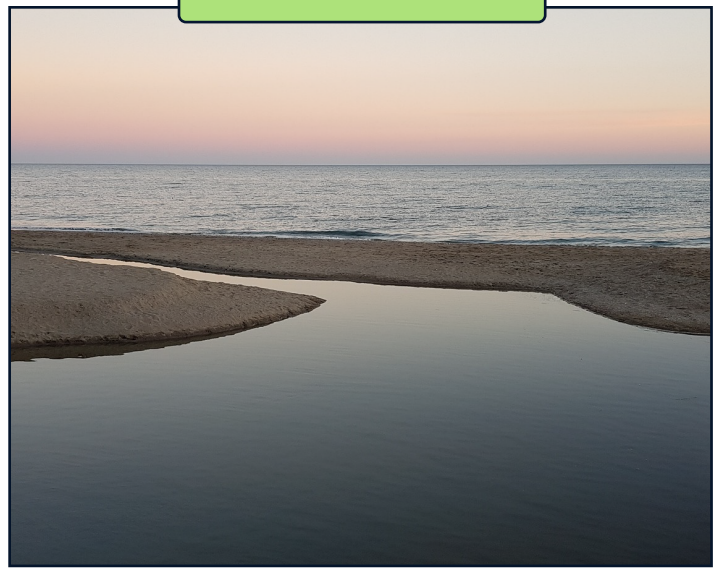
These images show a river at different points in its journey: **upper, middle and lower course.** A river can take on **different characteristics** at each course.

You can see how the river begins its journey in **woodlands** before passing through **towns** and finally entering the **sea**.

upper course

middle course

lower course



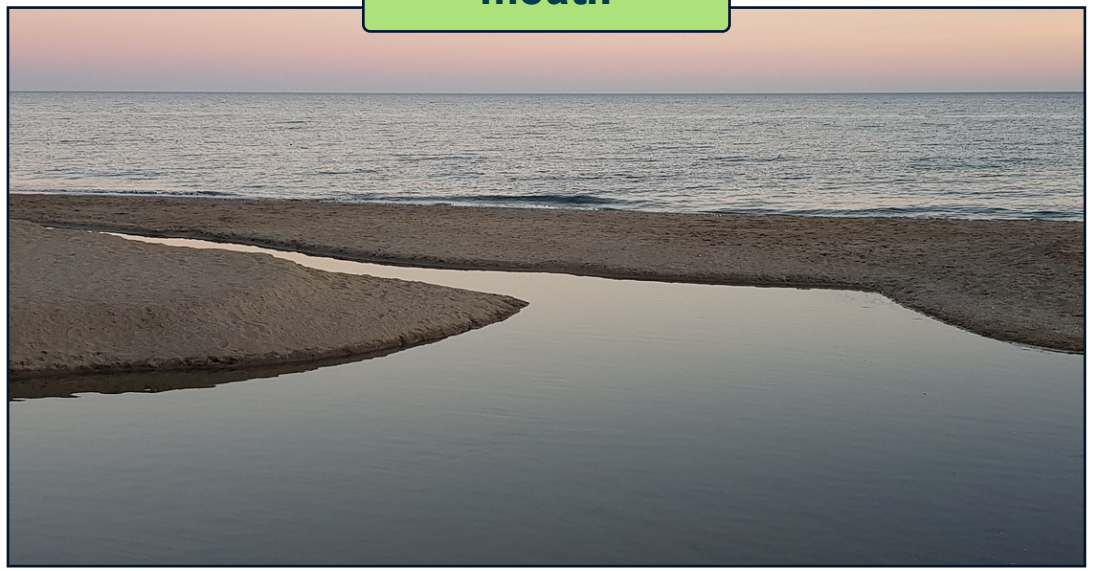
Let's discuss

answers

The river begins its journey at the **source**, and eventually, it widens as it passes through the **middle course**, twisting and turning (**meandering**) before entering the sea at the **river's mouth**.

source

mouth



What are the courses of a river?

To learn more about how a river is formed and its courses, let's watch this video:

https://www.youtube.com/watch?v=PDHvt7pNEc4&ab_channel=Grammarsaurus

Make sure you have a pen and some paper ready to take notes!

Let's recap

Now that we have learned about a **river's upper and middle courses** let's recap what you know. Use the **keywords** below as prompts and discuss what you know about each ***feature of a river*** with your learning partner:

- waterfall
- meander
- oxbow lake

Be ready to **share your *feedback*** with the class.

Matching activity

Look at the **courses, features and definitions of a river**.

Match each one correctly with your learning partner. There will be **several matches for each course**!

Be ready to **share your feedback** with the class before **answers are revealed**.

upper course

middle course

lower course

meander

estuary

floodplain

waterfall

oxbow lake

A steep drop in the course of a river caused by rock being worn away.

A bend in the river channel caused by erosion.

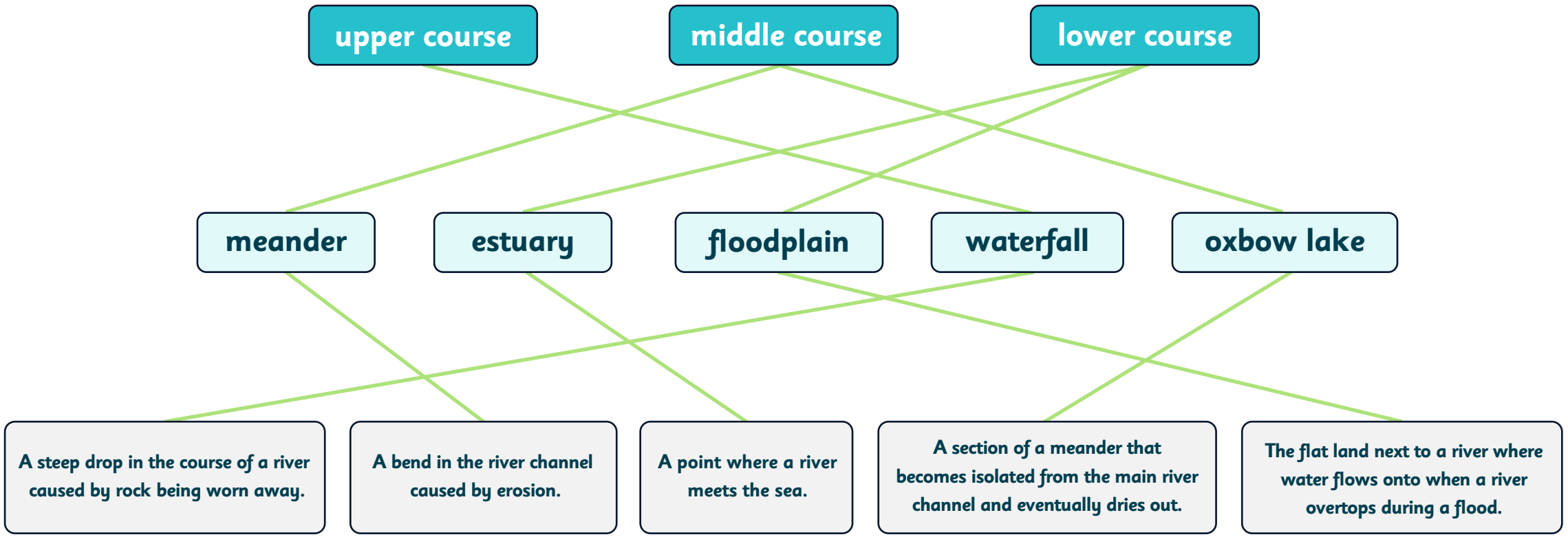
A point where a river meets the sea.

A section of a meander that becomes isolated from the main river channel and eventually dries out.

The flat land next to a river where water flows onto when a river overtops during a flood.

Matching activity

answers



True or false activity

Read the statements below with your learning partner and decide whether they are **true or false**.

Be ready to **share your feedback** with the class before the answers are revealed.

	True	False
A river has three different course stages called **upper, middle and lower.**	☐	☐
Waterfalls are formed in the lower course of a river.	☐	☐
A river will **meander** most in its lower course.	☐	☐
Oxbow lakes do not dry over time but remain as permanent features.	☐	☐
Salt water mixes with fresh water to become what is known as **brackish water**.	☐	☐
When rivers flood, they can leave behind a **layer of silt** which in time, raises the river bank.	☐	☐
The mouth of a river is where a river begins.	☐	☐

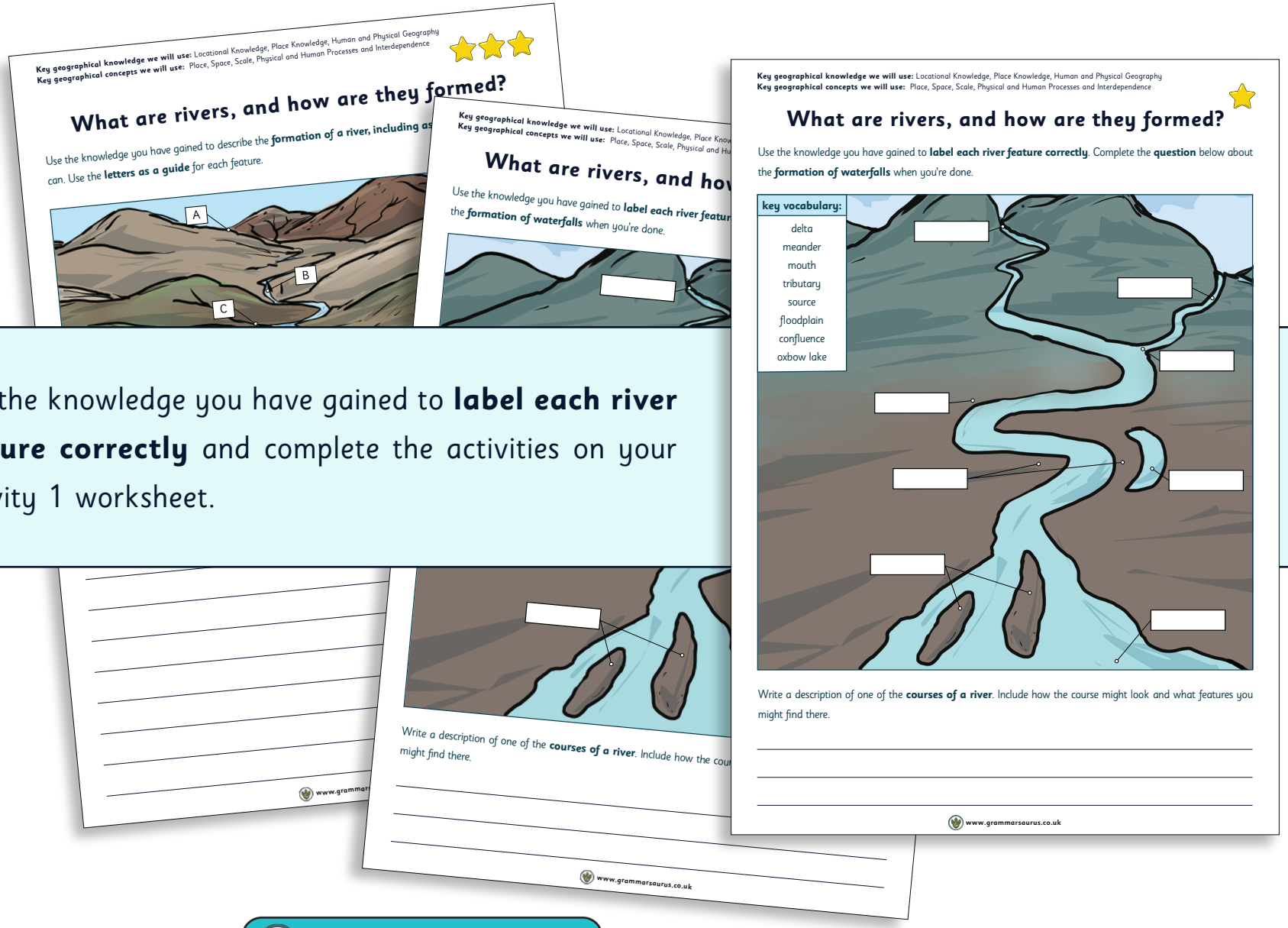
True or false activity

answers

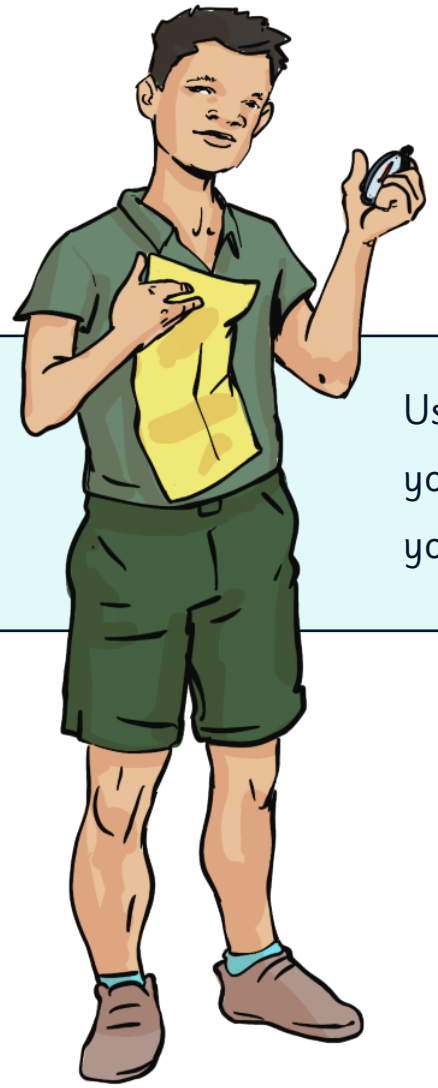
	True	False
A river has three different course stages called **upper, middle and lower.**	☑	☐
Waterfalls are formed in the lower course of a river.	☐	☑
False. Waterfalls are formed in the upper course.		
A river will **meander** most in its lower course.	☐	☑
False. A river will have the most meanders in the middle course. When a river reaches the lower course, it follows a more direct path.		
Oxbow lakes do not dry over time but remain as permanent features.	☐	☑
False. Oxbow lakes do dry up over time and are not permanent features.		
Salt water mixes with fresh water to become what is known as **brackish water**.	☑	☐
When rivers flood, they can leave behind a **layer of silt** which in time, raises the river bank.	☑	☐
The mouth of a river is where a river begins.	☐	☑
False. The source of a river is where a river begins.		

Activity 1

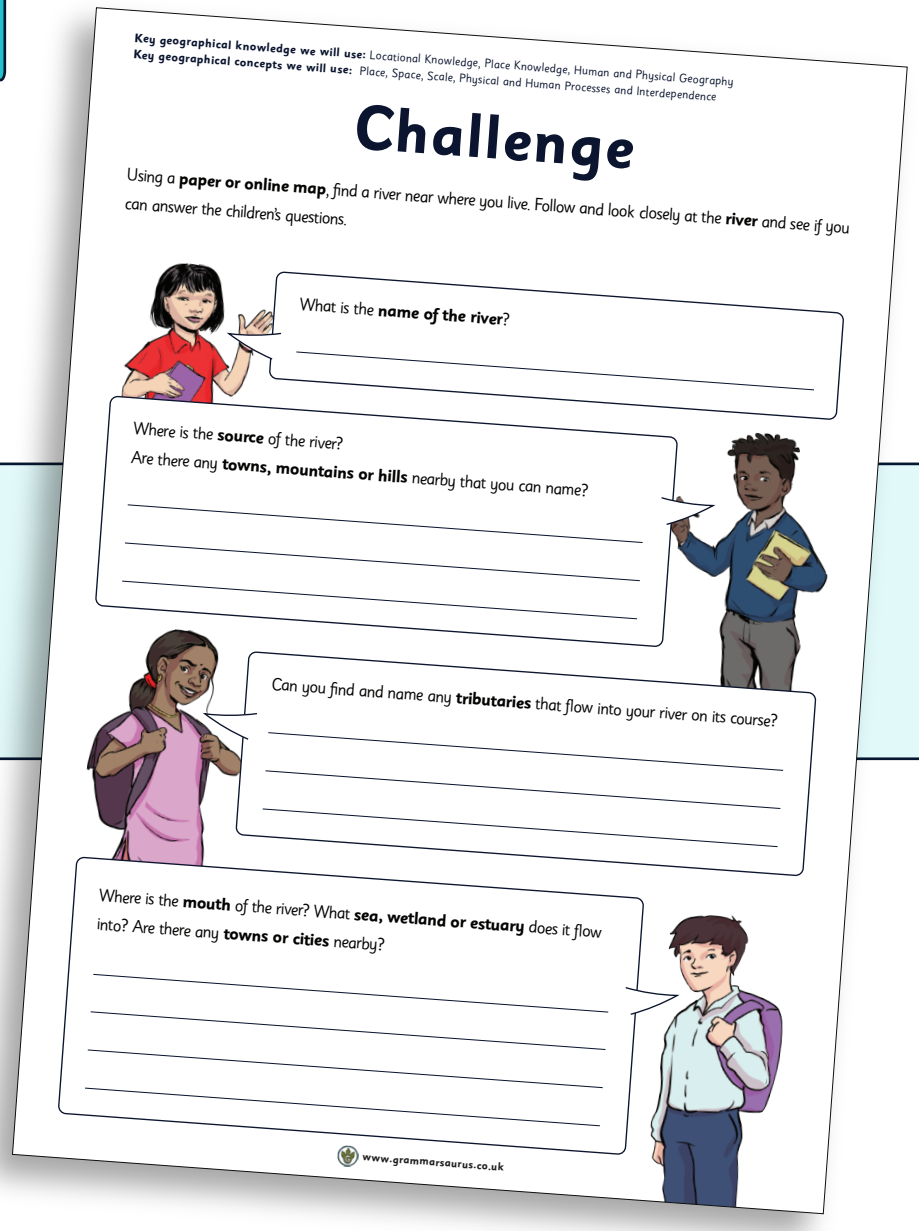
Use the knowledge you have gained to **label each river feature correctly** and complete the activities on your activity 1 worksheet.



Challenge



Using a **paper or online map,** find a river near where you live. Follow and look closely at the river and see if you can **answer the children's questions**.



Key geographical knowledge we will use: Locational Knowledge, Place Knowledge, Human and Physical Geography
Key geographical concepts we will use: Place, Space, Scale, Physical and Human Processes and Interdependence

Challenge

Using a **paper or online map**, find a river near where you live. Follow and look closely at the **river** and see if you can answer the children's questions.

What is the **name of the river**?

Where is the **source** of the river?
Are there any **towns, mountains or hills** nearby that you can name?

Can you find and name any **tributaries** that flow into your river on its course?

Where is the **mouth** of the river? What **sea, wetland or estuary** does it flow into? Are there any **towns or cities** nearby?

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