

B B C BITESIZE

There are many types of river fieldwork that can be carried out. Today we're going to be looking at how a river changes from the upper to the lower course.

I'm here on the beautiful Neath River in Wales. The upper course where the river rises is in the Bannau Brycheiniog National Park and the lower course where it flows into the sea is at Baglan Bay. This particular part of the river is called the middle course.

I'm here to undertake river fieldwork, testing a model of how river characteristics change at different stages along its course.

If you're doing fieldwork with your class, follow your teacher's instructions.

Stay with your group and tread carefully as rocks beneath the water can be slippery.

This model suggests that bedload will decrease in size along the course, that velocity will generally increase and that the river will become deeper and wider as it goes down the course.

Bedload is the material at the base of the river. Our model indicates that we're more likely to find bigger, more angular rocks near the upper course and smaller, rounder material in the lower course.

We can use the Power's Index to analyse how bedload changes.

I'm taking a small amount of sediment from the edge of the river. If the rocks are bigger, I find it easier to use my hands.

But if the rocks are smaller or like sand or silt, I find it easier to use a scoop like this one.

Using the index, we can now analyse the bedload's shape.

Next we're going to measure velocity.

Rivers tend to start off as a slow trickle and then get faster downstream.

To measure velocity, we can measure the time it takes to float an orange five metres downstream.

We can also measure the width and depth of a river, both of which our models predict will become greater as the river flows towards the lower course.

While completing fieldwork, it's a good idea to make notes or sketches, to help compile your data and analyse your findings back in the classroom.