Meandering river deposits

Making meanders ***D***

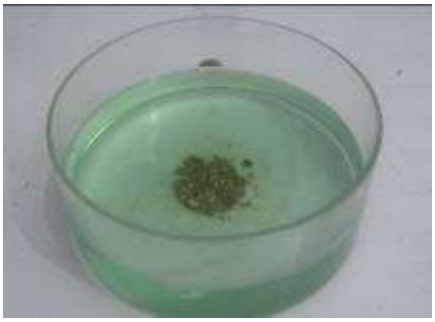
A trickle of water is allowed to run down a sheet of glass 60cm by 60cm. The water will meander, the meanders will enlarge and move down slope and will form swan's necks which will break through.

Beach meanders ***D***

Beautiful meanders can be seen forming on many sandy beaches and they show terraces formed by changing erosion level. This can be examined on a field trip and related to earlier or future teaching. They are not easy to make in stream table.

Spiral motion of the water ***D or A P 2 min***

Students put a small amount of unsorted sediment (8mm down to silt) into a 1 litre beaker of water. When the water is stirred it spirals inwards at the bottom causing the sediment to form a cone in the centre of the beaker with the fine material in the centre and the coarse on the outside of the cone. This is the same size distribution as in a meander and it helps to explain what happens as water moves around a meander curve and the sediment is moved towards the point bar. Use a flat bottomed transparent basin for a demonstration.



3D Motion of water around a bend ***D***

It is difficult for students to visualise the spiral motion of the water. It can be shown using a piece of wire bent into a spiral that fits into a curved trough.

Lateral accretion in meanders ***A I F 10 min***

This activity is to show lateral accretion, and how the fining upward sequence is built up. Students are given diamond shaped coloured slips of paper each representing deposition after one flood. They place these

side by side and note how the vertical sequence is built up from several floods.

Magnetic meander ***D***

As above but made of card with magnetic tape stuck to it.