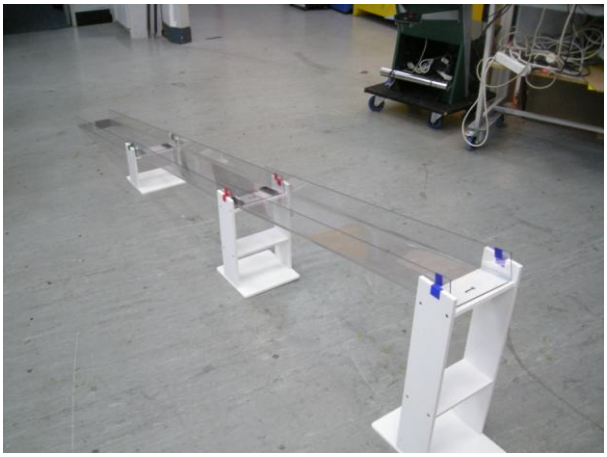
Flume Tube – Teacher Demonstration



The size of clasts a river can erode and carry varies with the strength of its flow and the distance from its source. Large heavy fragments are deposited first and grain size decreases with distance. After rain, river flow strength decreases and sediments become increasingly finer.

To copy a river's course to the sea, a flume tube can be created from a length of guttering. One end is raised and the other rests on the ground or in a trough to collect water and debris. Mixed coarse debris (gravel, road metal, and pebbles), medium (sands) and fine (silts) form a "sandcastle" at the top of the slope.

Erosion and deposition by water.
A watering can with rose can pour "rain" down onto the sandcastle for a short while. Students can observe which sediments drop out earliest. This is best carried out outside or with the end of the tube over a bucket or sink.

Erosion and deposition by wind.
A hair dryer can be used to blow on the sandcastle. Ask students not to stand towards the end of the tube as they may get dust in their eyes. Students can be asked to explain how they can limit variables to make their observations scientific.

If neither flume tube or guttering is possible, lay a long line of newspaper along the floor. Make sure the sheets overlap away from the direction of airflow.