

Clay

Uses of clay

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Make a demonstration of the following: brick, clay pipe, china, shiny paper, non-drip paint, cement, cat litter, mud pack. If you photograph the demonstration then next time you can just use the photo.

Flocculation

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To show how when salt water mixes with muddy water as in estuaries it causes the clay to flocculate. Two 200cc measuring cylinders are each filled with muddy water. The muddy water must be made up from distilled water.

The mud can be made from cat litter or river mud. Add salt water to one and mix. Leave to stand. Mud in cylinder with salt water will begin to settle within an hour the other will take days.

Causes of flocculation

E P F 60 min

Students add the chemicals found in sea water to muddy water to see which causes flocculation. Students try out different concentrations of NaCl to see how much is needed for flocculation to occur.

Shale and slate

A P 5min

Students often confuse hand specimens of shale and slate. Students are given one labelled sample of each and must describe the differences between the two.

Shrinkage of clay

A P 10 min

Students roll out a sheet of clay 5mm thick by using a rolling pin resting the two wooden strips 5mm thick with the clay between. From this sheet of clay they cut strips 2cm wide and exactly 10cm long. They should put their initials on the clay. The strip should be weighed and then left it dry for 24 hours.. Its length and weight are measured again and the percentage contraction and loss of water calculated.

