

Soil Grain size– Student Worksheet

Clay soils are very fine grained and feel smooth and silky to touch.
Silty soils are mostly fine grained but have a slightly gritty texture.
Sandy soils are mostly medium to coarse grained, individual grains being easily seen.

In Soil Science laboratories they sieve soil through expensive brass or stainless steel sieves of different mesh grades. A quite efficient, and much cheaper estimation can be made using the natural subconscious ability of our hindbrain or cerebellum to measure the difference between what is sensed by nerves in each hand.

Student Activity

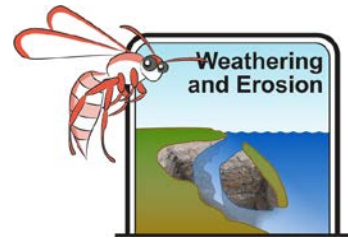


A Materials to make the standard **C, M & F** batten

- 1 batten (stiff cardboard or plastic)
- 1 square each of coarse, medium and fine garnet paper
- Glue
- A pen

Method

1. Write your name on the back of the batten
2. Collect a square of each grade of sandpaper
3. Stick the sandpaper onto the batten with the:
Coarsest at the top.
Medium at the middle.
Finest at the foot.
(You may wish to label them **C, M & F**).



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B To measure the grain size of a soil



- A container of dry soil.
- A CMF batten.
- A hand lens (option)

Method

1. Gently shake the soil a little to separate out the larger grains to one edge of the container (see above).
2. Hold the CMF batten in one hand with your thumb gently rubbing against the coarse sandpaper at the top.
3. Rub the soil between the finger and thumb of the other hand.
4. Is the soil coarser or finer than the sandpaper?
5. Repeat with the medium and fine sandpapers.

Observation

Which grain size (or sizes) is in your soil specimen? _____

What proportion of each was there? _____

Discussion

Would the grain size measurements you have collected be considered as good scientific data? Explain your answer.
