



## What is Soil? - Teacher Notes

Soil is made up of broken pieces of rock (of a range of sizes, often referred to as sand, NOTE: sand is a specific size fraction of broken rock), humus (living or once living things also known as organic matter), air and water.

Getting students to examine soil closely by touching and feeling it is one of the best ways to show them what soil is. A word of caution though - choose clean soil for the students to touch - it should not have a high amount of fertiliser, manure, compost or potting mix in it due to possible health effects. You may choose to get students to wear gloves or other protective equipment but as a minimum, hands should be washed thoroughly with soap after handling soil, especially before eating. Please rescue any bugs or worms found also and return them to a safe place after a quick look.

You may be fortunate to have a garden area where the students can dig and explore what 'treasures' they may find. If you don't have a garden suitable for digging, this can be done as an indoor activity (with lots of newspaper spread out) so students can dig through trays of soil. As they explore the soil, they could record what they find by drawing pictures of it or even making a collage by sticking the things they find on a piece of card.





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Whilst the air and water components are tricky to show students, the rock particles and humus can be easily separated from each other.

Add some soil to a glass jar or clear plastic container with a lid that seals well. Top the jar or container up with water and put the lid on. Give it a good shake then leave it to settle for a few minutes. You will find that you get a very visible separation of the humus and the broken rock parts of the soil. The humus portion will float to the top and the denser, heavier rock particles will sink. In between these two layers you will have water. At first the water may be a little murky as the finer particles float around but eventually the water may become completely clear.

