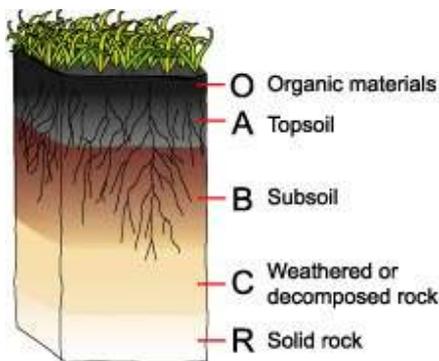


## Investigating soils

### Looking at a soil profile

A soil profile is a view of soil layers. You can see a soil profile by digging a deep hole into the soil or by viewing a steep bank where soil has already been exposed or by visiting a construction site. The top layer is usually natural *litter*, decaying leaves and other vegetation. Over time the litter eventually forms *humus*, a black, sticky nutrient-rich material found beneath the litter. The next layer is *topsoil*, generally dark, moist and crumbly, with fragments of organic matter. It can range in thickness from a few centimetres to over a metre. Underneath the topsoil is a lighter brown layer of *subsoil*. It contains less water and organic matter and so is less fertile than topsoil. There may be several centimeters of partially broken-down rock beneath the subsoil. Underneath this is a solid layer of *bedrock*.



**Soil profile**

1. Using a magnifying glass children examine the plant litter on the ground surface and record their findings. Long, stringy white threads indicate molds which help plant material to decompose.
2. They count the number of separate layers (horizons) visible in the soil profile.
3. They draw and label the layers; topsoil, subsoil and bedrock also record the colour of each.
4. They examine each layer, note and record which has the most rocks particles, the most organic matter and the most animal life.
5. They measure and record the height of each layer.



6. They then make a permanent record of the soil profile by running a wide strip of glue down a sheet of white paper. They add some soil from each layer to the glue in the same order as the layers in the profile, gently shake away any loose soil and label the layers.
7. Make sure you fill-in any holes dug in the environment.