

Soil junior

The surface into which plants sink their roots and the land you walk on is called soil: a thin superficial layer that covers the Earth's crust. Soil is made up of different parts: one half consists of mineral and organic layers, one quarter of air and the other quarter of water. As we move deeper the rocky component becomes preponderant, and at a certain point the rock becomes homogeneous and compact: this is the mother rock.

Soil therefore consists of various layers. The first is properly known as **soil**, it is rich in substances that are important for plants. The second is the **subsoil**, formed of earth and gravel, and finally the **mother rock** that does not let water filter through.

Not all types of soil are the same: some are **permeable**, in other words they let water enter and plant life is possible, others are **impermeable** and water cannot penetrate. If on the surface the rocks are very fragmented and consist mainly of clay, the soil is impermeable, if instead the surface consists mostly of gravel or sand, it is permeable. The minerals on the surface are mixed with humus, formed by small fragments of human and vegetable remains, and for this it is rich in organic matter and favours the growth of vegetation.

As time passes, as for human beings, the soil becomes mature. Young soil is known as **regolith**, and very little grows on it, but as a layer of humus develops on it, also the vegetation that grows becomes increasingly luxurious.

The formation of the soil is also influenced by the climate. Here are some examples:

- **black soils** - typical of the arid areas, such as the Russian steppes, this soil is dark due to the presence of a large amount of organic substances and manganese oxides ;
- **red soils** – these form on a mother rock made of limestone in Mediterranean climates with humid winters and hot summers ;
- **desert soils** - these form in arid climates, due to the prevalent action of the wind that accumulates the material that it can lift and carry away, leaving pebbles that are cemented to each other uncovered;
- **tundra and high mountain soils** – these remain frozen deeply for many months of the year.

The soil is an important element for our life. It is the land on which we grow plants and agricultural products, where rivers flow and on which we build our houses. Soil too, like water and the air, is threatened by **pollution**. For example polluted underground courses of water bring poisonous substances into the ground, thus also polluting the ground. This problem is aggravated by the difficulty of eliminating wastes, particularly toxic waste and the use of chemical products in agriculture. A very severe consequence of soil pollution is that the agricultural products that we eat are often full of the poisonous substances produced by pollution. For this reason it is important that we start thinking of changing our daily habits!.