

# Understanding the Soil

Before you undertake planting it is worth finding out a bit more about the soil you have in your school grounds. You can carry out a simple texture test, which looks at the sand, silt and clay in your soil.

Soil is fundamental for life. All soil is made up of four key components which are:

1. **Air** helps provide structure and enables good root growth
2. **Water** needed for plant growth and helps with structure
3. **Minerals** are in the form of sand, silt and clay particles. There are three particles that make up soil texture and their relative proportions give the overall texture. These are sand (the largest), silt, and clay (really fine particles). When they are fairly equally represented, the soil texture is loam.
4. **Organic matter** which determines moisture retention and cation exchange capacity (CEC). CEC is the ability of the soil to retain cations (positively charged nutrients: Ca, Mg, Mn, Fe, Cu, Zn, NH<sub>4</sub><sup>+</sup>) and is strongly related to soil texture and soil organic matter content and Organic matter is also vital for microbial activity.

## Let's get started!

To complete this survey you will need:

- soil texture key
- soil texture triangle
- a teaspoon of soil from your growing area per person (with no stones in it)
- a few drops of water to moisten the soil.
- If handling soil it is advisable to wear disposable gloves and wash your hands thoroughly after the activity.

You can then carry out a texture test to look at the minerals in the soil (please note this test doesn't work with compost which you will often find in raised beds).

## Results

Soil type

Approximate % mineral breakdown (remember the total needs to equal 100%)

Sand

 %

Silt

 %

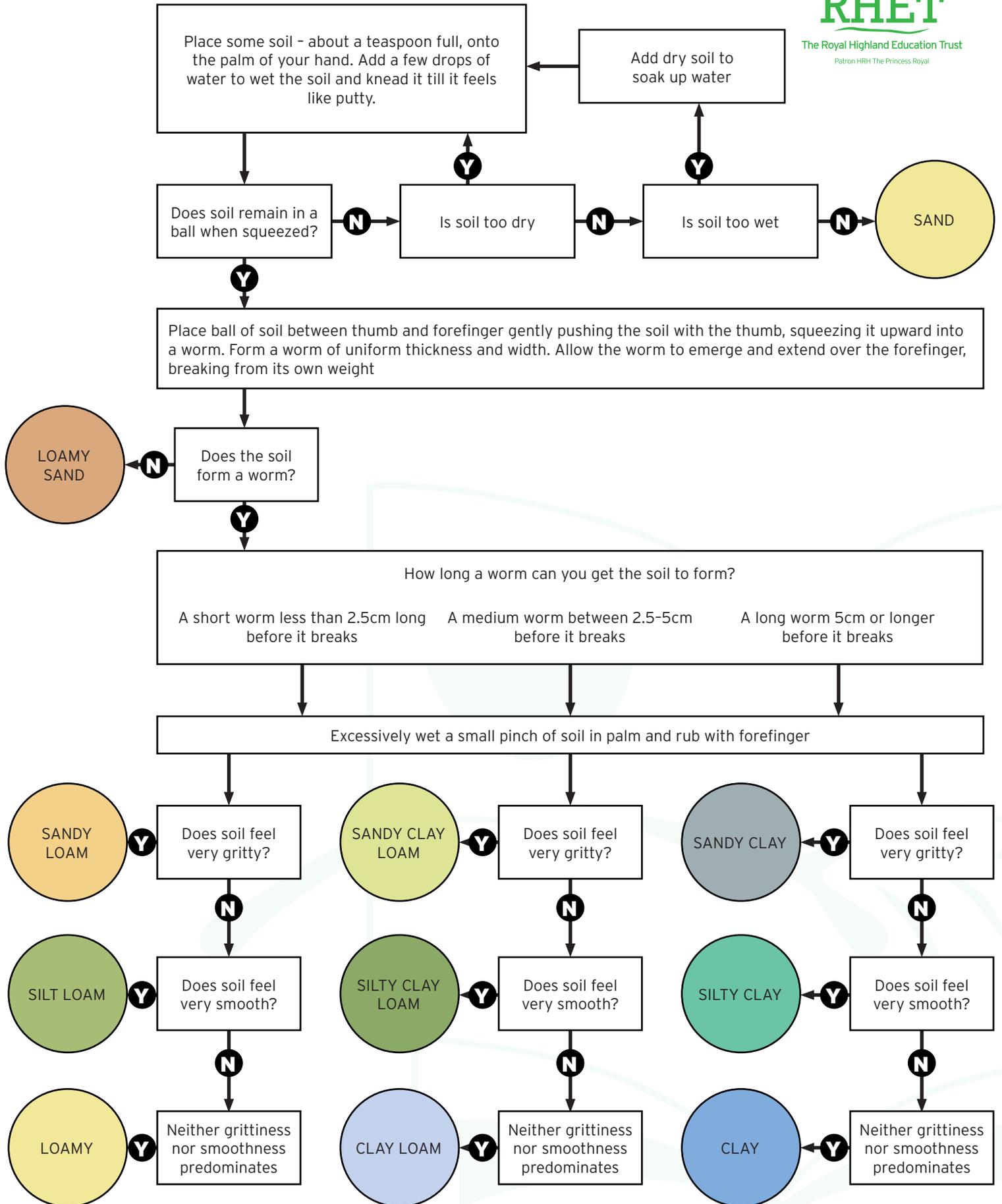
Clay

 %

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# Soil Texture



# Soil Textural Triangle



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