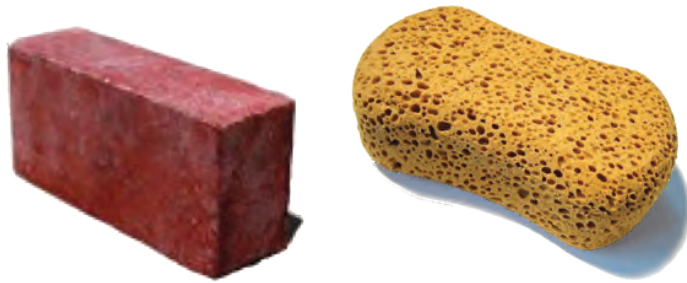


# Test your soil



## Is your soil a Brick or a Sponge?

If you have a brick you will need to take this into consideration when planning your contours. You will need to spend some time and effort to turn the soil back into a sponge. If the soil does not drain well, you will need to take special care when you plant that you do not drown your new plants.

We want to have soil in our landscape that can capture water and allow it to soak into the plant root zone within 24 - 48 hours. Building **Living Soil** therefore becomes important in our plan to capture rainwater and save it for a dry day, so you will need to follow the Soil Lasagna Recipe (see pp. 38-39).

Before we figure out how to grow better soil, we need to figure out what kind of soil we have. Sand, Silt and Clay, are the basic soil types. The smallest particles create clay soil and the largest make sandy soil, with loam (an even blend of sand, silt and clay) considered the "just right" medium. Professional designers will take soil samples and send them off to a lab for soil analysis and recommendations.

### You Will Need:



### Percolation Test

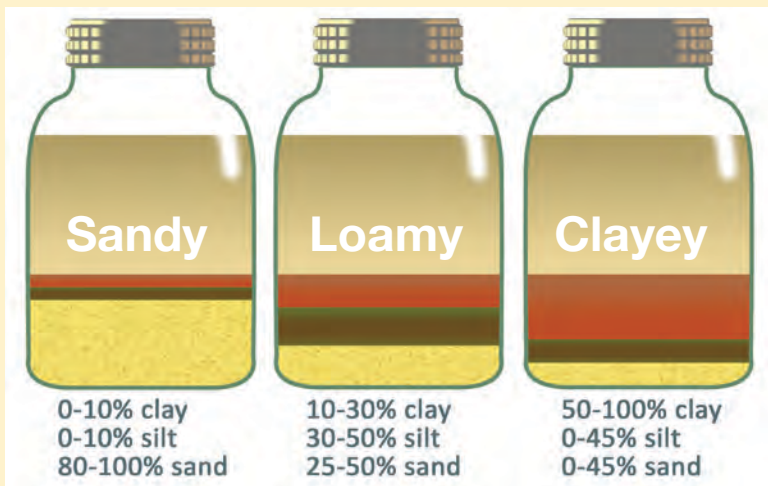
1. Dig a hole about 12" deep and 12" wide (that's a little larger than a 1 gal. plant container).
2. Fill the hole with water and wait. Note how long it takes to drain completely. This is necessary to completely saturate the soil.
3. Fill the hole all the way when all the water has drained out from first filling, and see how long it takes to drain out again.
4. Lay a stick or shovel handle across the hole and measure the distance from the top of the water to the stick each hour until it has drained completely.

### Results:

>4" per hour - You have sand and need to add more organic matter to improve the soil (see pp. 40-41).

<1" per hour - **You have a brick!** Your soil needs some extra help so try sheet mulching to build the sponge (see pp. 38-39).

1" - 4" per hour - Congratulations! Your soil drains well! **You have a sponge!**



### Determine Soil Type Using A Jar Test

(This is fun to do with kids!)

#### You Will Need:

- 1 Qt. size glass container with lid
  - 1 Cup of soil from the garden (Select one area per container, or take samples from several holes and blend them together.)
  - 1 Teaspoon of alum (Find in baking section of grocery.)
  - 3 Cups of distilled water
1. **Add soil and water together** in the glass container and shake until all solids are suspended in water.
  2. **Place container on a shelf** and wait 24 hours.
  3. **Wait another 24 hours**, if the container is still cloudy. After 48 hours, the layers should be settled: **Sand** on the bottom, **Silt** in the middle, and **Clay** on top.
  4. **Measure the layers** in proportion to each other.
  5. **Use the graphic** to determine the Soil Type based on the proportions of Sand, Silt or Clay.

Which jar does your sample most look like?

**For Example:** If there are equal proportions of Sand and Silt, and very little Clay, then the proportions are something like 40% Sand and 40% Silt and 20% Clay.

Loam best describes the jar with 40% Sand, 40% Silt, and 20% Clay.  
**Your soil is Loam.**

Determine your Soil Type so that you can better program your "smart" irrigation controller and so you can select plants best adapted to your site.