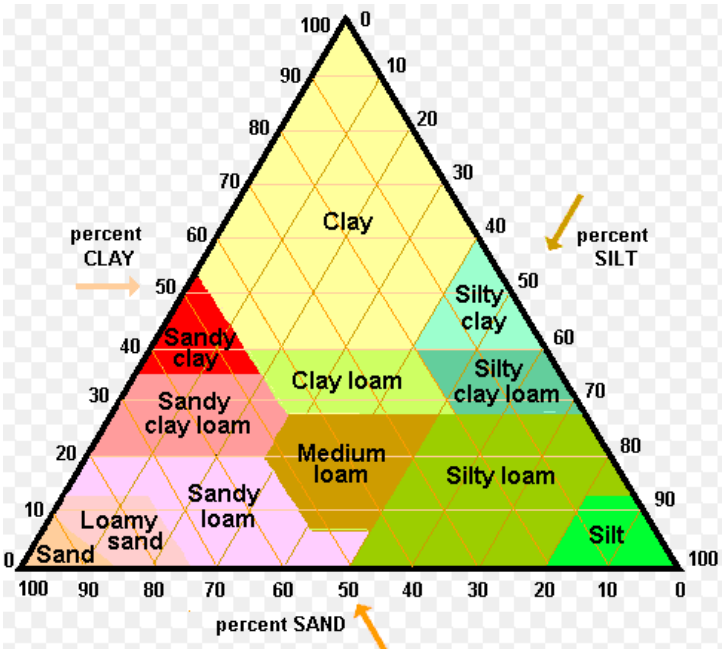
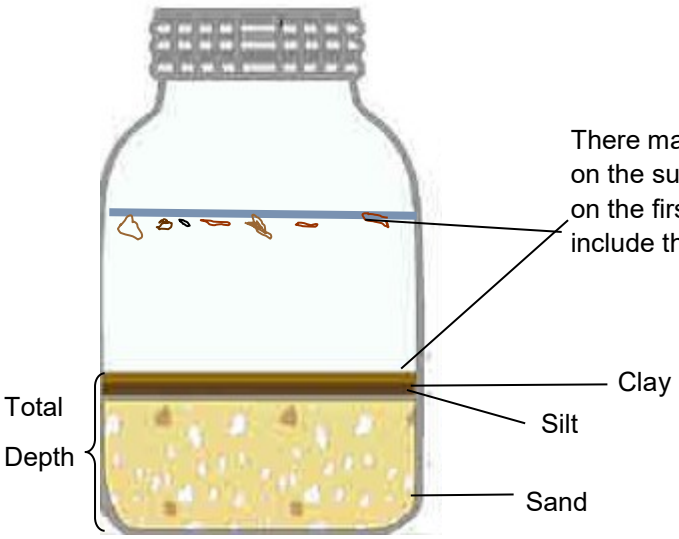
How to determine soil structure by doing a soil sedimentation test



By Linda Beer

Soil Sedimentation Test

1. From below the litter layer take enough soil to fill a quart jar 1/3 full.
2. Remove any sticks and stones or other coarse matter.
3. Add 5 T of Dishwashing detergent.
4. Fill the jar to 3/4 full with cold water.
5. Put lid on and shake to mix for 10-15 min.
6. Leave the jar undisturbed for at least 48 hours on a level surface. After 48 hours the soil will have settled in horizontal layers of sand silt and clay.



7. In cm measure the total depth of the sample - do not include any organic matter in you measurement.
8. In cm measure the depth of the sand silt and clay layers.

An easy equation will give you the % of each component.

Component depth ÷ Total soil depth = X x 100 = %

Example

Total soil sample depth 10 cm

Sand 6cm

Silt 3.5cm

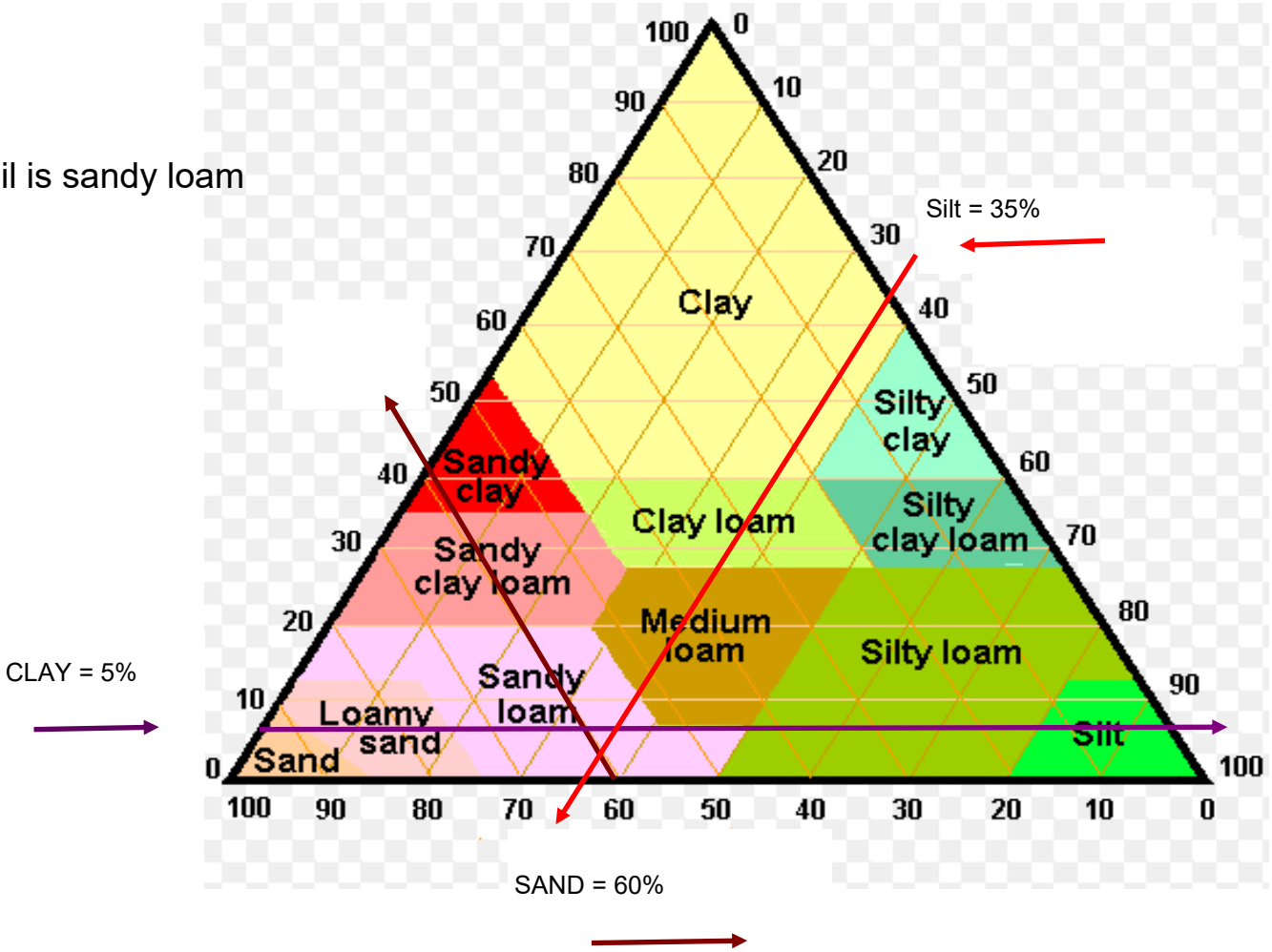
Clay 0.5cm

Sand 6cm 6÷10 = 0.6 x 100= **60% sand**

Silt 3.5cm ÷ 10cm = 0.35 x100= **35%silt**

Clay 0.5cm ÷ 10 cm = .05 x100 =**5% clay**

This soil is sandy loam



Example from previous page

Sand : The base of the triangle is the percentage of sand. Find the number that corresponds to the percentage of sand in your sample. Draw a line through the triangle at that point.

In this sample sand is 60%.

Silt: Use the right side of the triangle for silt. Find the number that corresponds to the percentage of silt in your sample. Draw a line through the triangle at that point.

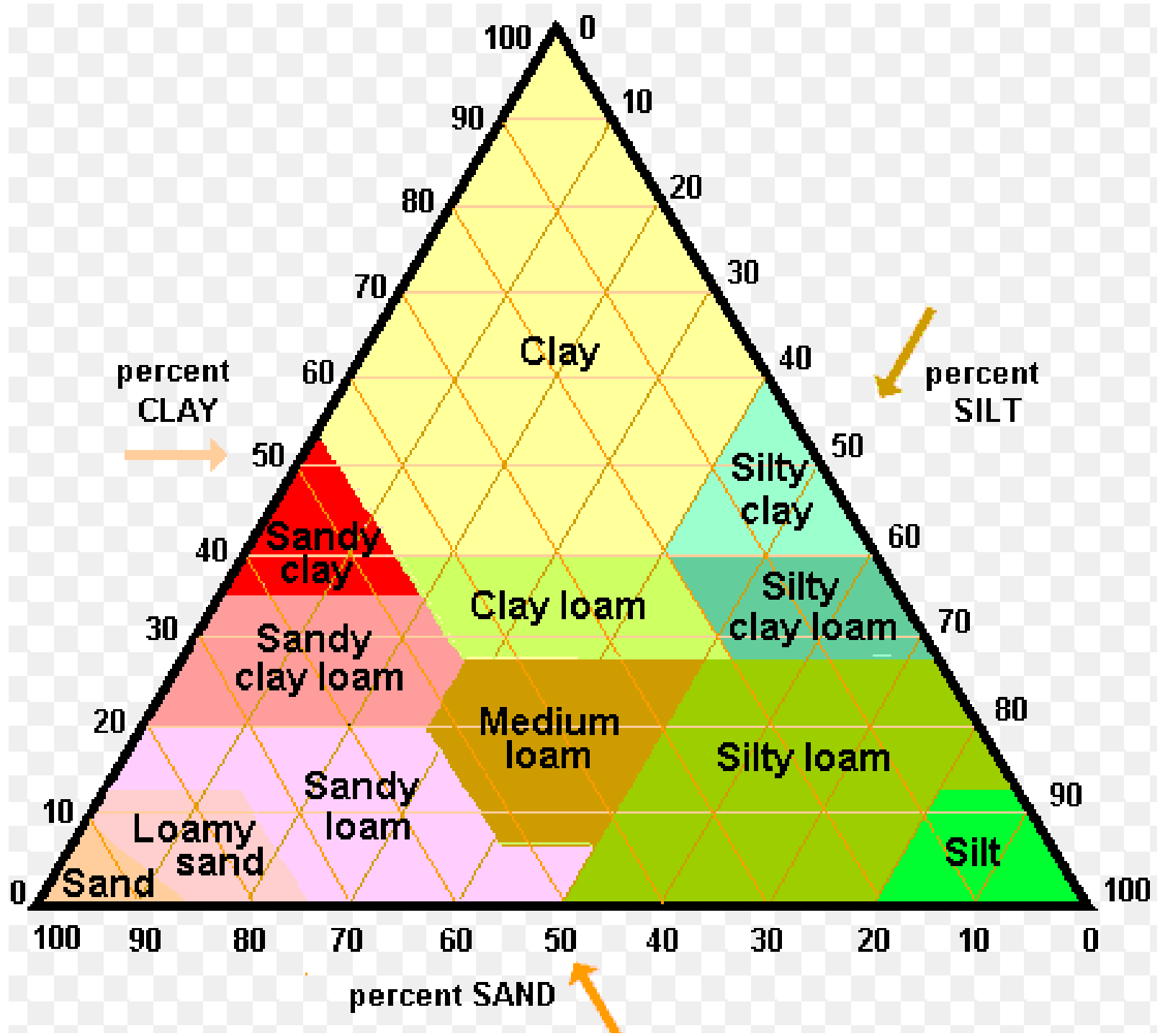
In this sample silt is 35%.

Clay: 5%Use the left side of the triangle for clay. Find the number that corresponds to the percentage of clay in your sample. Draw a line through the triangle at that point.

In this sample clay is 5%.

The section where all 3 lines meet is your soil type. In this sample the soil is a sandy loam.

Use the Soil Triangle on page 4 for your soil sample.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Clay loam
Silty clay loam
Sandy clay loam
Medium loam
Silty loam
Sandy loam
Loamy sand
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