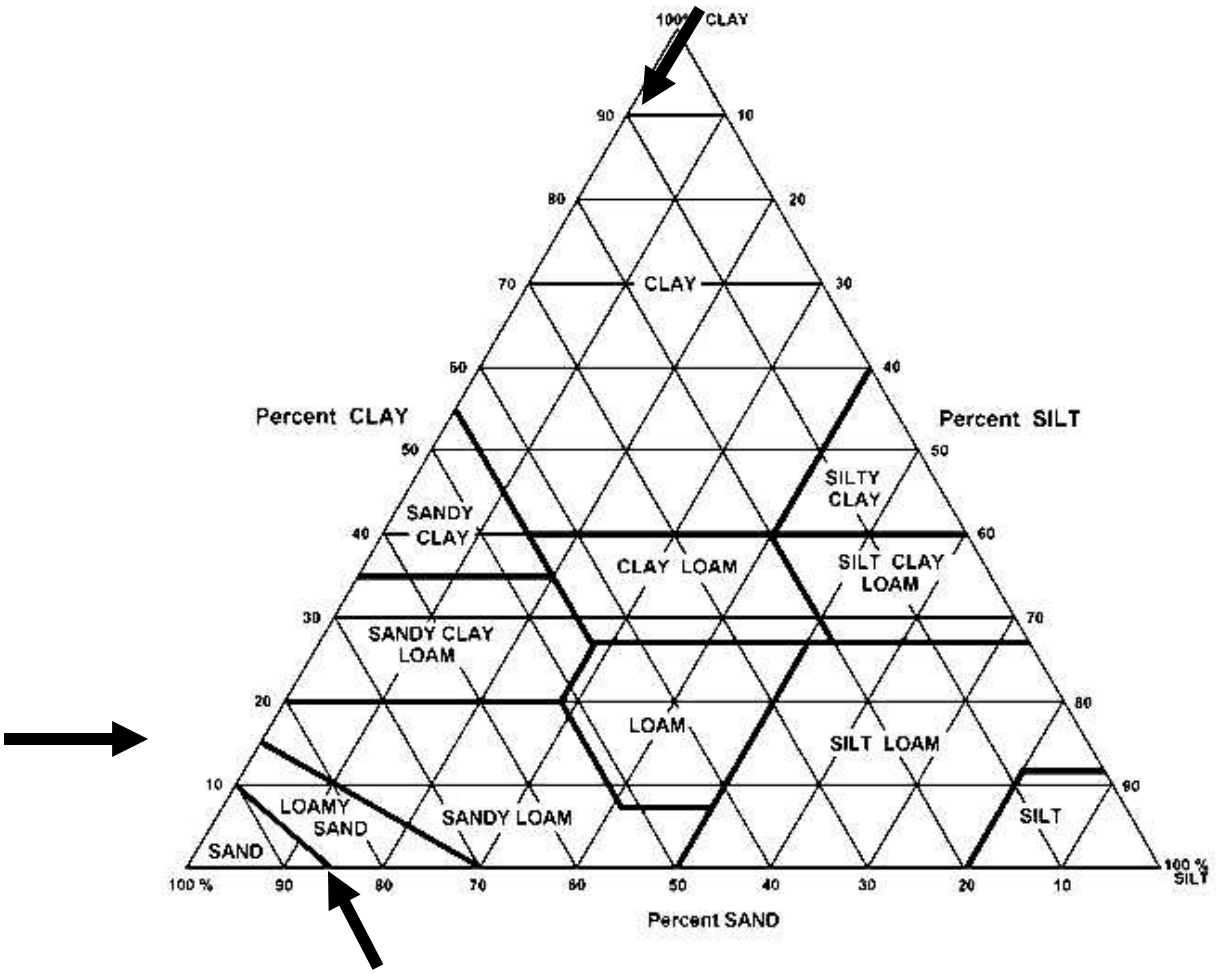
THE SOIL TEXTURAL TRIANGLE



Soil Textural Triangle Practice Exercises

	% Sand	% Silt	% Clay	Texture Name
a)	75	10	15	sandy loam
b)	10	83	7	_____

Table 1. Classification of soil particles according to the International Society of Soil Science and the mechanical analysis of three representative soils.

Fraction	Particle diameter	Soil texture*		
		Sandy loam	Silt loam	Clay
	----millimeter----	----------%----------		
Sand	2.0–0.02	65	20	20
Silt	0.02–0.002	20	65	20
Clay	Smaller than 0.002	15	15	60

Name_____ Date_____

Soil Texture Worksheet

Directions: Using your soil texture chart and example, determine the following soil textures using the percentages given.

	% sand	% silt	% clay	Soil Texture
example	*75*	*10*	*15*	*sandy loam*
a)	42	_____	37	_____
b)	_____	52	21	_____
c)	_____	35	50	_____
d)	64	30	_____	_____
e)	50	_____	40	_____

Now for a challenge!

f)	36	_____	_____	Clay Loam
g)	_____	_____	42	Silty Clay
h)	_____	_____	_____	Loamy sand
i)	_____	_____	_____	silt loam

A 1000ml grad cylinder contains an aqueous solution of soil. You notice three distinct layers after the solution was shaken and allowed to sit for 2 days; any organic material was removed. One layer, on top, is from 920 ml down to 903 ml; the next layer from 903 down to 745, and the bottom layer from 745 to 0 ml. **Show your work.**

Name the component of each layer?

What is the percentage of each layer?

What is this soil's textural classification?

Soil Texture Worksheet

Directions: Use the soil texture chart to find the following soil textures using the percentages given.

	% sand	% silt	% clay	Soil Texture
sample	75	10	15	.....
j)	10	**65**	25	.....
k)	**27**	52	21	.....
l)	**15**	35	50	.....
m)	64	30	**6**	.....
n)	50	**10**	40	.....

For anyone who is up for a challenge:

o)	36	_____	_____	Clayey Loam
p)	_____	_____	42	Silty Clay
q)	_____	_____	_____	Loamy sand
r)	_____	_____	_____	Silt loam

See http://mssoy.org/wp-content/uploads/2013/08/SOIL-PLANT-WATER-RELATIONS-MAY-2012.pdf; or on our wiki.

Define "available soil water holding capacity" in your own words:

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……

What is the readily available soil water for soils "j" and "m", assuming they are 12" deep? Or 20" deep?

	12 inches	20 inches
j-	……	
m-	……	

Assuming a soil derived from sandstone, as near Hockley. What soil texture would you expect?

Assume a soil from a granite parent material, as near Llano. What texture would you expect to find?

Which of the two above soils has more natural nutrient value? Why?