Name _____

What is in Soil?

Activity 1: Soil Inventory

Use a hand lens and tweezers to examine a small sample of garden soil.
Look for: mineral matter - small pieces of rocks and minerals (the chunks you can't easily break) organic matter - leaves, sticks, insect parts (legs, antennas, etc.), living insects and worms

Make a list under each heading of what you found:

      Living and Once Living Organisms   Nonliving (rocks and minerals)

_____

_____

_____

_____

_____

_____

Activity 2: Water in the soil.

A. Place your soil sample on a paper towel. Fold the towel in half and gently press.
    Return your soil to its container. Examine the towel.

   Describe the condition of the paper towel. _____

   What ingredient did you remove from the soil? _____

B. Place a cup of wet soil in a container. Weigh it. Place it in a sunny window. Weigh it after a few days.

   Date: _____ Weight of wet soil sample: _____

   Date: _____ Weight of dried out sample: _____

                           Difference in weight: _____

   How much water was in your soil sample? _____

Activity 3: Air in the Soil

Procedure:
Put 100 ml of sandy soil into a container. Measure 100 ml of water. Slowly pour the water into the soil until it is saturated - cannot hold anymore water. As soon as water starts collecting on top, stop pouring.

Did you notice air bubbles rising up from the soil? Explain why that would happen.

_____

How much water is left in the measuring cup or beaker? _____

How much water did you add to the soil? _____

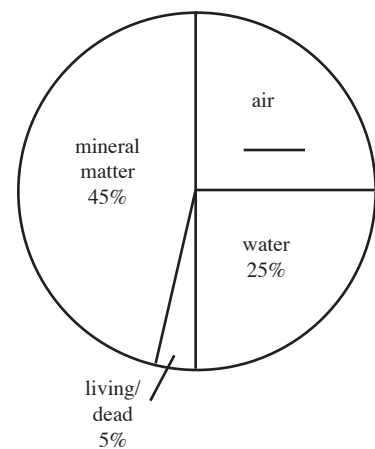How much air was in the soil before you added the water? _____

Where did the air go when you added the water? _____

_____

We often see lots of worms on the top of the soil after a big rainstorm. Explain why. _____

_____

Conclusion: Components of Soil

The pie graph at the right shows everything that is in the average soil.
The number should equal 100% (percent).

What percentage of the soil is air? _____

Soil Pie

Convert the information from the pie graph to the bar graph below.

Minerals					
Water					
Air					
Organic Matter					
	0%	25%	50%	75%	100%

What percentage of soil is air and water? _____

Which component of soil is the smallest percentage? _____

Which component of soil is the largest percentage? _____

Where does mineral matter in soil come from? _____

Where does organic matter in soil come from? _____