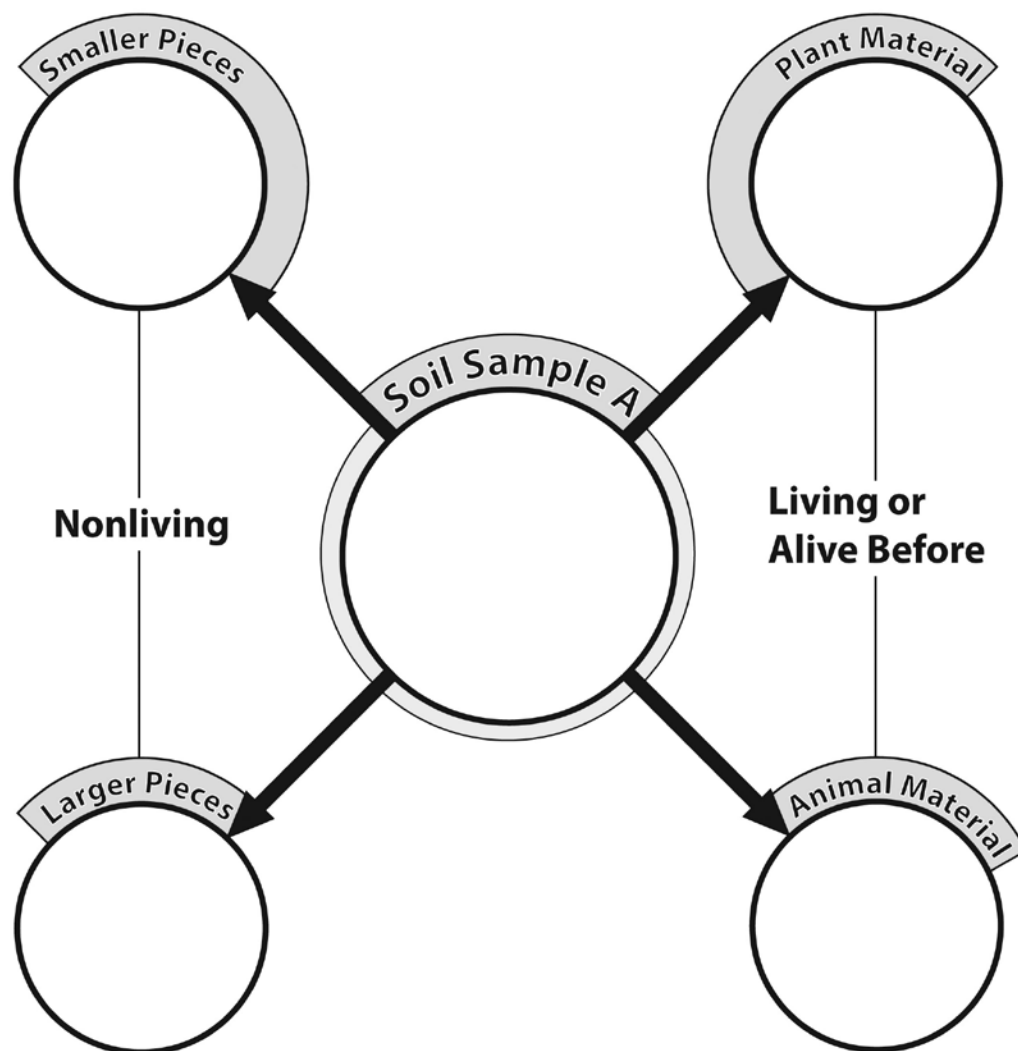


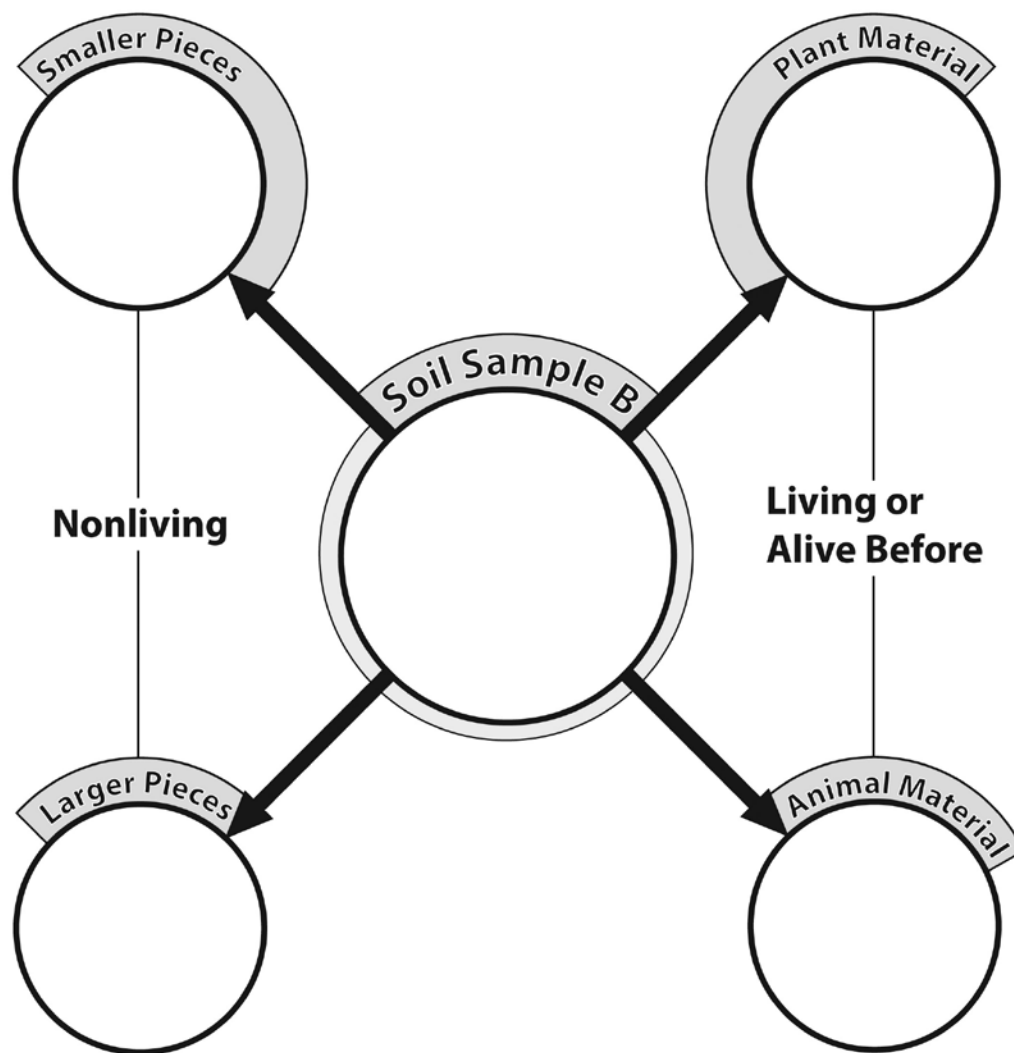
MASTER 2.1A, INVESTIGATION 1: LOOKING AT SOIL SAMPLES

1. Put one spoonful of soil A in the middle circle.
2. Use a hand lens and a pencil to sort the parts of the soil into different piles.



MASTER 2.1B, INVESTIGATION 1: LOOKING AT SOIL SAMPLES

1. Put one spoonful of soil B in the middle circle.
2. Use a hand lens and a pencil to sort the parts of the soil into different piles.



Procedure



Answers to questions on Master 2.2:

INVESTIGATION 1:

LOOKING AT SOIL SAMPLES

1. How is the soil sample A like soil sample B?

Potting soil (sample A) and local soil (Sample B) are similar in that they both contain nonliving (inorganic) materials and materials from living sources (either currently alive or formerly living; organic). Organic materials come from plant and animal sources. For example, students might see pieces of leaves or even parts of dead insects in the soil. Organic materials also come from bacteria and other microorganisms too small to be seen without a microscope. Both types of soil also contain particles from nonliving sources that vary in size, such as sand or small stones. The two soils differ in the relative amounts of the different kinds of materials. Often, the potting soil will have more organic material than the local soil. The local soil often contains small pebbles and rocks not found in the potting soil. You may need to help students distinguish between soil components that are nonliving versus those that were at one point part of a living organism but are no longer alive. For example, students may categorize a small piece of wood as nonliving because they don't recognize that it was once part of a living organism.

2. How is sample A different from sample B?

See answer to question 1.

3. Do you think that plants will grow better in sample A or sample B? Why?

Generally, we cannot tell how well a soil will support plant growth by visual inspection alone. Although we may be able to see some differences in the kinds of particles in a soil sample, it is not possible to see many of the different things (nutrients) that plants need.