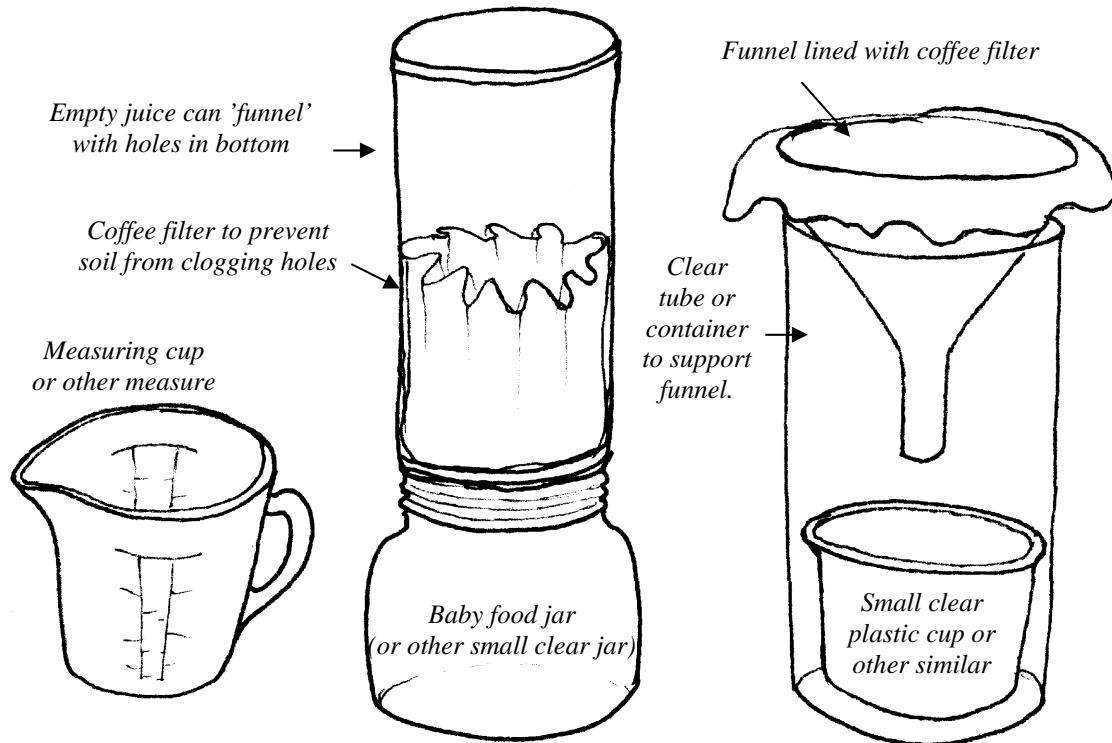


SOIL HYDROLOGY TEST INSTRUCTIONS

Step 1- Setup test stations with the equipment provided by your teacher. It will look something like one of the two suggested stations below.

Either of these alternate setups will work for both tests.



Step 2- Saturation test:

1. Measure 1 cup of dry soil from *Soil Assessment I* samples
2. Place soil in coffee filter making a slight depression in the center
3. Measure 1 cup of water
4. Slowly pour into center of soil and wait until no more water drips from the funnel
5. Carefully remove funnel, filter and soil (without spilling soil)
6. Measure the water in the jar
7. Determine the percent of water that saturated (was retained by) the soil sample ($\text{Percent of water saturated} = (\text{volume water retained} / \text{volume of water added}) \times 100$)
8. Record the % of water that saturated the soil sample on the 'Soil Assessment Form' in the 'Soil Hydrology Assessment' section.

Step 3- Percolation test:

1. Return saturated soil/funnel/filter to emptied jar
2. Measure 1 cup of water
3. Carefully pour into saturated soil
4. Time how long it takes for water to stop dripping from the funnel
5. Record information in 'Soil Assessment Form'

Step 4- Consider results and return to habitat area.

1. Compare results between different soil types.
2. Did the results prove or disprove the predictions you made in *Soil Assessments* about your soil samples?
3. Make comparisons between soil samples and their associated plant communities. Do some soils seem to support different plant communities?

Step 5- Journal Question

Based on comparisons of soil types from different areas in the habitat, what plant community do you predict is most adapted to your plot soil type? Support this conclusion using data from the assessments.