# STUDENT WorkSheet 1

## SOIL TESTING

Suitable for AGE 10+

AN CHOILL BHEAG

**Name:** _____ **Class:** _____ **Date:** _____

It is important to audit and assess the soil of the land. Some trees prefer dry conditions (Holly and Hazel) and some prefer wet conditions (alder, willow, birch).

**We will carry out 2 investigations:**

1. **Soil Test – PH and Jam Jar Test:**
2. **Plant, tree and biodiversity audit**

## 1 Soil Investigation:

To measure PH of Soil – to find out if soil is Alkaline or Acidic

**NOTE: PH scale – 0-14 – Ideal soil is 6.5 – 7PH:**

1-7=acidic _____ 7=neutral _____ 7-14=alkaline

### Instructions:

1. Follow instructions in PH soil test kit
2. Dig up some soil, remove stone and return any insects/worms carefully back to soil
3. Put powder from capsule in narrow chamber
4. Put a small bit of soil in narrow chamber
5. Add water up to line (try to use spring or bottles water so that it does not affect reading)
6. Replace lid and shake well
7. Leave to sit for 10 minutes
8. Compare colour against chart
9. Record results
10. Repeat experiment in 2-4 different areas

### PH Soil Test Results:

| Location and Sample Site Number: | Observations |
|---|---|
| Example - School grounds Area 1 | PH=6 = slightly acidic |
| | |
| | |
| | |

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## 2 Soil Investigation:

### Jam Jar Test – to find out % of different layers

### Equipment

Soil

If possible, have other soil to compare with – bog, clay and compost samples from the locality

Glass jars

Magnifying glasses

Plastic tub with lid (with holes in)

White paper

Pencils/sticks

Invertebrate identification guide

### Method

Hand round sample of each soil type one at a time; discuss what the soil looks like and smells like. Pour a small amount of soil onto a piece of white paper and look through it closely using magnifying glass.

### Observations:

Observe the layers as they settle, identify gravel, sand, humus, clay and by subtraction, you can determine the thickness of the main layers and so identify the general soil type:

| Sum | Soil layer | Result |
|---|---|---|
| C – B | Layer of clay | |
| B – A | Layer of silt | |
| A | Layer of gravel and sand. | |

**Note:** ***Sand grains*** are the largest so they will settle to the bottom. ***Silt grains*** are smaller, so they will create the next layer. ***Clay grains*** are smaller again, so they will settle on top. If there is a dark layer on top of the sand layer, this is called ***humus.*** Particles floating in the water can be bits of leaves, wood, etc. This is called ***organic matter***.

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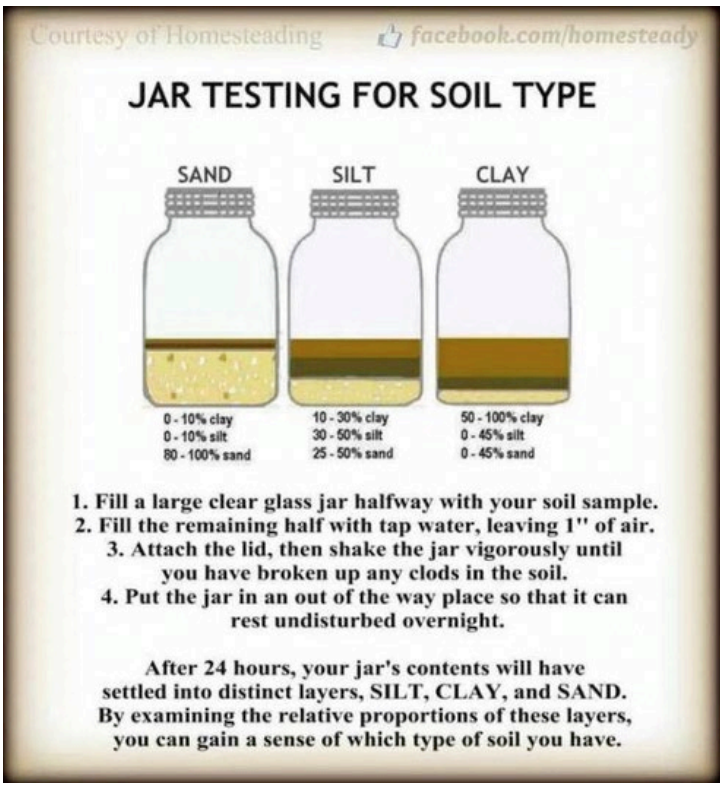


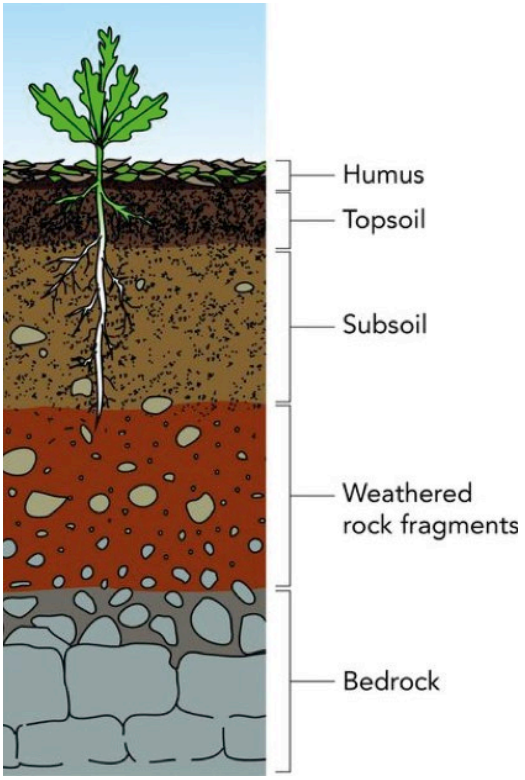


**Resource:** Look up GLOBE SOIL sites
https://www.globe.gov/web/phenology-and-climate


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www.leafireland.org