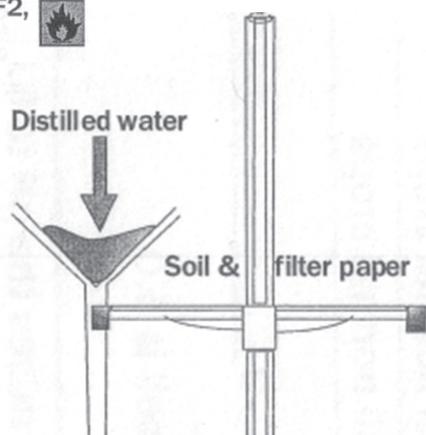


## TESTING SOIL PH

Each type of crop likes to grow in soil within a specific range of pH. To maximise the crop yield, farmers regularly test their soils for pH so they can grow the right crop for the soil conditions.

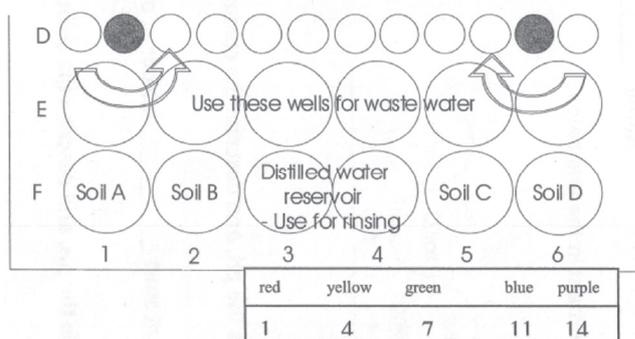
In this experiment you will be testing 4 soils for their pH

2 drops of UI to wells F1, F2, F5 & F6



### Method

1. Place your comboplate® over the diagram on the right so the large wells line up.
2. Set your equipment up as shown in the diagram below, placing your microstand in D2.
3. Clip the microfunnel into the boss and site over F1.
4. Put 2 drops of universal indicator into well F1.
5. Fold a piece of filter paper and place it into the funnel.
6. Put a small amount of soil A into the filter paper and add a small amount of distilled water.

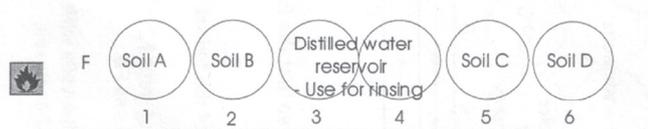


7. Rinse the equipment by turning the stand so that the funnel is over E3.
8. Using distilled water, wash out the inside of the funnel.
9. Repeat steps 4 to 8 for the other soils using wells F2, F5 and F6. You will need to move the stand to D11, for F5 and F6.
10. Compare the colours of the solutions in the wells with the pH indicator chart to help you decide the pH of each soil.

## TESTING SOIL PH

NAME: \_\_\_\_\_

1. Colour in the results from your experiment in the grid below.



2. Which soil has the lowest pH, what is the pH, and describe the colour change of the indicator.

Soil \_\_\_\_\_ pH \_\_\_\_\_ colour at start \_\_\_\_\_ colour at end

3. Which soil has the highest pH, what is the pH, and describe the colour change of the indicator.

Soil \_\_\_\_\_ pH \_\_\_\_\_ colour at start \_\_\_\_\_ colour at end

4. Below is a list of crops grown in the UK and the conditions in which they grow best.

pH	Description	Crops which will grow
<b>Below 4.8</b>	Extremely acid	No normal crops grown in the UK
<b>4.8 to 5.2</b>	Strongly acid	Oats, potatoes, kale, rye and field lupins
<b>5.3 to 5.7</b>	Moderately acid	Those above plus wheat, beans, swedes, turnips, maize and cabbage
<b>5.8 to 6.4</b>	Slightly acid	All normal crops
<b>6.5 to 6.9</b>	Very slightly acid	All normal crops
<b>Above 6.9</b>	No acidity	All normal crops

a) Choose a crop to grow in soil B and D. B \_\_\_\_\_ & D \_\_\_\_\_

b) The crops I could grow if the pH of the soil is 5.0: \_\_\_\_\_

c) If I put some lime on the ground which raises the pH to 6.6, which crops can I now grow? \_\_\_\_\_

5. Describe how a farmer could test the soil of his/her fields for acidity. \_\_\_\_\_