**Materials**

**Aim:** To compare the properties of different categories of materials

**Materials**. Glass, chalk, pieces of 2 litre milk carton (polyethene), nail, polystyrene foam, copper sulfate crystals, wood pieces

Design a table to record the results of each test on each material

**Testing**:

1. Electrical conductivity: Use a circuit with a light globe to test the electrical conductivity of each item.

2. Acid resistance: Add 40 mL of 2 M HCl to a beaker. Add each material one at a time leaving the nail and chalk to last.

3. Solvent resistance: Add 40 mL of acetone to a beaker and add each material one at a time leaving the polystyrene foam to last.

4. Malleability: Use a brick to hammer each material to see the effect of a hammer blow (omit glass as you already know the answer!)

5. Density: Test the density of each material. You will need to think how you will do this.

6. Flammability: Use tongs to test each item in a flame. Test the item well above the flame at first to gauge the melting point of the object. Later try the item in a flame - if it starts to burn, put it out straight away.

**Conclusion**: Summarise the properties of each material.