

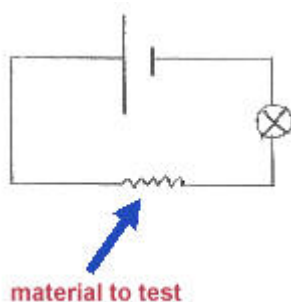
<b>Name</b>		<b>Class</b>	
<b>Group</b>		<b>Teacher</b>	

## Practical Work.

### Experiment: Testing materials

#### TESTS:

1. **Brilliance:** (shininess)- Polish the surface of the material, if it reflects the light it is likely to be a metal.
2. **Conduction of electricity:** Set up the circuit as shown below, and test the materials, if the bulb lights it is a conductor and hence a metal, if an insulator then an organic or ceramic material. Exception: Carbon.



If the bulb lights then the material conducts electricity

3. **Test of magnetism:** Note which materials are attracted to a magnet.

\*\* The following tests are specific to plastics\*\*

4. **Solubility:** Place small samples of plastic in 10mL acetone in a beaker if after 5 minutes there is sign of it dissolving then it is or contains polystyrene

5. **Floatability:**

Place samples of plastics in a. Pure water b. Salty water

If it floats in pure water it is likely to be a plastic that contains Polyethylene and/or polypropylene.

If it only floats in salty water then it is likely to be a polystyrene

If it sinks in both it is likely to be PVC or PET

6. **Effect of hot water.**

Put small samples of plastics in hot water and watch what happens. If it curls up at the edges then the plastics is HDPE or LDPE

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**7. Testing for the presence of chlorine.** (Teacher only)

Warm a piece of copper wire in a bunsen flame and attach it to a sample of plastic and place in the flame. The presence of a blue/green colour shows the presence of chlorine, hence the plastic is PVC.

**Materials to test:**

Metals: Copper, Aluminium, Zinc , and Iron

Plastics: LDPE, HDPE, PVC, PP, PS and PETE

Glass

Ceramic