**Name:** Mohammad,Muhannad

Raad,Saif, Alazar **Report:** Properties of materials

You will need

Half-filled beaker with hot water.

Samples of everyday materials, for example clay, cotton, rubber, glass, plastic, wood, copper, wool, steel.

Procedure

Test the materials for the properties below. Write your results in your table.

• ***Is it waterproof?***  
Find out by placing one drip of water on the material. If the water is not absorbed, the material is waterproof.

• ***Does it conduct heat?***Do this test only on waterproof materials.  
Find out by placing the material in hot water, with part of it above the water. After a few minutes, feel the end that is above the water. If this end feels hot, the material is a good conductor of heat.

• ***Is it flexible or stiff?***  
Find out by trying to bend it.

• ***Is it strong?***Find out by pulling and pressing it. If it does not change, it is relatively strong.

• ***Is it transparent or opaque?***  
A material is transparent if you can see through it, and opaque if you cannot.

• ***Is the material brittle?***Do you think it will break if you drop it? If so, the material is brittle.

• ***Is the material hard or soft?***If you can scratch the material with a nail, it is relatively soft.

**Use the table below to record your results.**

|  |  |  |
| --- | --- | --- |
| **Material** | **Properties of material** | **One use of the material** |
| Clay | Brittle  Opaque  Heat conductor  Strong  Stiff  Hard  Waterproof | Statues |
| Plastic | Flexible  Opaque  Brittle  Soft  Waterproof  Not Strong | Plates  Toys |
| Wood | Strong  Stiff  Opaque  Brittle  Hard  Not waterproof  Not Flexible | Paper  Furniture |
| Steel | Waterproof  Heat conductor  Stiff  Strong  Opaque  Brittle  Hard | Construction |
| Cotton | Flexible  Strong  Opaque  Hard  Not brittle  Not Waterproof | Clothes |
| Wool | Flexible  Strong  Opaque  Hard  Not waterproof  Not Brittle | Clothes |
| Rubber | Waterproof  Flexible  Opaque  Flexible  Soft/hard  Does not conduct heat  Not Strong  Not Brittle | Car tires  Surgical gloves |
| Glass | Waterproof  Conducts heat  Strong  Transparent  Brittle  Hard  Not Flexible | windows |
| Copper | Waterproof  Brittle  Strong  Heat  Conductor  Stiff  Hard  Opaque | Lightning rods |