**Name: Nouf, Salma, Maryam, Joy** **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** |
| Cotton | Absorbs water, flexible, heat insulator, not strong, opaque ,soft |  Clothes |
| Cardboard | Absorbs water, flexible, heat insulator, not strong, opaque ,hard | Packaging  |
| Paper towel | Absorbs water, flexible, heat insulator, not strong, opaque ,soft | Cleaning |
| Paper | Absorbs water, flexible, heat insulator, not strong, opaque ,hard | Writing |
| Plastic | Water proof, some are flexible, heat insulator, some are strong, it could be both opaque or transparent ,hard | Cups |
| Glass | Water proof, stiff, heat insulator, strong, transparent, brittle ,hard | Windows |
| Ceramic | Water proof, stiff, heat insulator, strong, opaque, brittle ,hard | Plates |
| Metal | Water proof, stiff, heat conductor. Strong, opaque ,hard | Nails |
| Wood | Absorbs water, stiff, heat insulator, strong, opaque ,hard | Doors |
| Gold  | Water proof, stiff, heat conductor, strong, opaque ,hard | Jewelry  |
| Rubber  | Water proof, flexible, heat insulator, not strong, opaque ,soft | Erasers |