

Key Vocabulary

- construction ● design ● disassemble
- dispose ● flow ● invent/invention ● leak ● pour ● structure criterion ● dependent variable ● independent variable ● survey ● brittle ● ductile ● fragile ● impermeable
- malleable/malleability ● permeable
- thermal conductor ● thermal insulator ● viscosity/viscous

Working Scientifically

- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
- Recording data and results of increasing complexity using scientific diagrams and labels classification keys, tables, scatter graphs, bar and line graphs.

Diagram: Malleability



Must – know knowledge

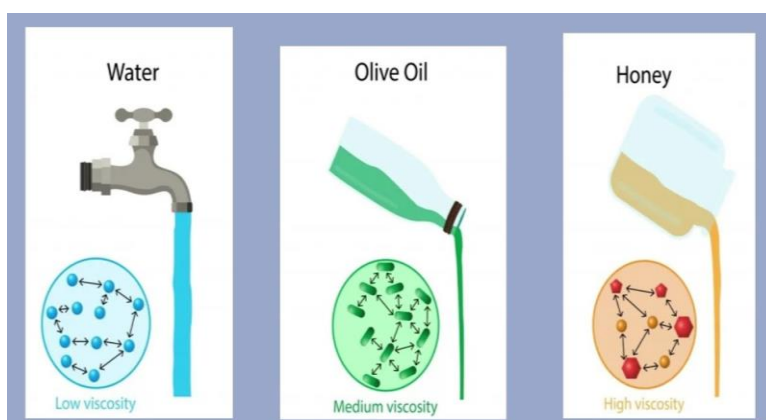
Materials have properties that make them fit for certain purposes. These may include being: absorbent, brittle, durable, ductile, elastic, electrical conductor, electrical insulator, flexible, hard, malleable, transparent, translucent, opaque, permeable/impermeable, rigid, thermal conductor, thermal insulator, magnetic.

Liquids have properties which include having: [a fixed weight, a fixed volume,] an ability to flow, a level of viscosity and they take on the shape of a container. Viscosity is the property of a liquid that describes how fast or slowly it will flow. The viscosity of a liquid describes how thick or thin it is. A liquid with high viscosity (thick) will flow slowly and a liquid with low viscosity (thin) will flow quickly.

A thermal insulator is a material that provides high resistance to heat flow. Examples include rubber, wool, wood, polystyrene/foam, plastics. A thermal conductor is a material that provides low resistance to heat flow. Examples include metals, such as aluminium, copper, steel, and iron. A thermal insulator keeps hot things hot and cold things cold.

Materials can be absorbent and can soak up and take in liquid. Some materials are permeable and let water pass through. Some materials are waterproof and do not let water pass through. The use of some materials can have an impact on the environment.

Diagram: Viscosity



Experiment: Which liquid is the thickest?