Viscosity

Topic
Viscosity.

Timing
20 min.

Description
Students are provided with a set of identical tubes each containing a different liquid. Students measure the time taken for a bubble to rise through the liquid. This is used to compare the viscosity of the liquids.

Apparatus and equipment (per group)
- Stopclock.

Chemicals (per group)
- Prepared sealed tubes of different liquids

The plastic tubes in which thermometers are packaged are ideal for this purpose. Seal one end of the tube using super-glue and the plastic stopper. Fill the tube with liquid leaving a measured gap of 1 cm. Seal the other end in the same way. Check for leaks before giving the tube to your students.

Liquids to choose could include:
Water, cooking oil, washing up liquid, ethanol (Highly flammable), propan-1,2,3-triol (glycerol), shampoo or bubble bath.

Teaching tips
Remind students to time each liquid using a consistent method – eg measure the time from inversion until the ‘bubble first hits the top’.

Background theory
The particulate nature of matter.

Credits
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