

# Worksheet 1.5.3 Understanding liquids and gases

## 1 Properties of liquids and gases >

Liquids and gases have the following properties:

- They flow.
- They take the shape of their container.
- Gases can be compressed.

Match each of these properties to the following applications:

a) watering plants

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b) using a water wheel

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c) using a bicycle pump

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d) using a bouncy castle

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e) blowing up an air bed

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f) using an oxygen cylinder for diving

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## 2 Comparing the viscosity of liquids >>

Liquid	Viscosity (ratio compared to water)
water	1
mercury	1.5
blood	10
motor oil	200
honey	10 000

a) Which variables would need to be kept the same in an investigation to produce the table of results given?

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 .....

b) If blood took 1 second to flow a given distance, how long would motor oil take to flow the same distance?

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- c) i) What kind of graph would you draw to present this data?  
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- ii) Why would you draw this type of graph?  
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- iii) What difficulties would you anticipate in drawing this graph?  
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### 3 Using the particle model to explain data

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Draw a particle model to explain the differences in viscosity between honey and water.