

# Dangerous explosions

Because magma rises quickly it often gets sprayed out of the crater as fine pieces of rock.

**Q1.** What size of material is:

(a) a bomb, (b) ash and (c) cinder?

(a) ..... 

(b) ..... 

(c) ..... 

**Q2.** In your own words explain what this diagram shows.

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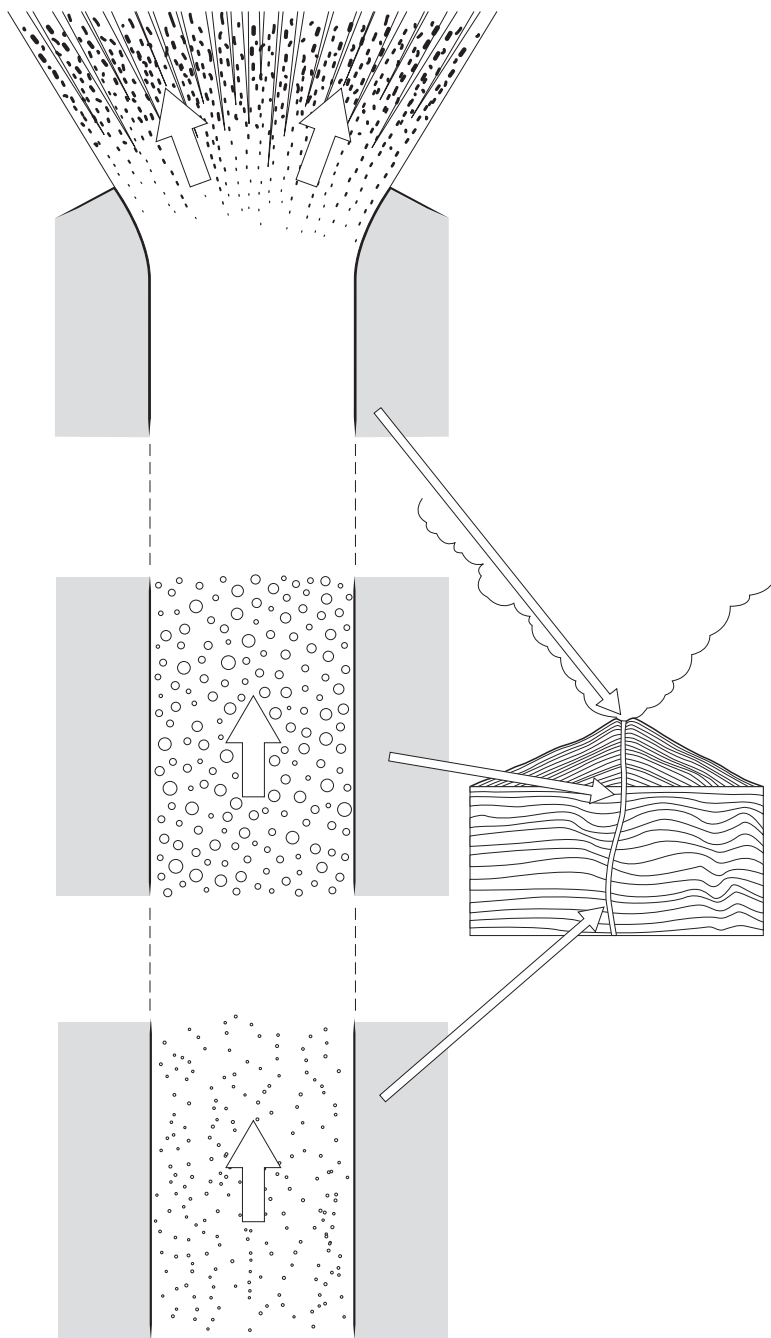
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## Answers

1. Bombs are large, and can weigh around 500 g. Ash is fine and powdery (the finest powder is actually volcanic dust that does not settle back near the volcano, but this is ignored for the purposes of this book). Cinders are smaller than bombs, weighing around 20 g.

2. The diagram shows magma (which is a liquid containing dissolved gases) rising up to the crater and as it does so the pressure decreases and so allows the gases to come out of solution. This creates a frothy mixture which can be sprayed out of the crater. The materials then cool and become the three types of solid mentioned above.

## Notes

*You might care to take a fizzy drink bottle, shake it up, and then allow the foam to come out (this is a very messy experiment!). This is essentially what is happening in the vent. The froth cools and produces the solid material that makes ash, cinders and bombs.*