

Physics - Key Stage 3

Matter

Lesson 3 - Density

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Independent Practice. Questions on our learning

- 1) Density is defined as _____ per unit volume?
- 2) Mass is the amount of _____ in an substance or object?
- 3) The units of _____ are cm^3 or m^3
- 4) Gases have the _____ density compared to solids and liquids?
- 5) _____ have the highest density as their particles are closely packed.

Independent Practice - Explaining Density

Pause the video to answer the following questions. Think about both the spacing and the number of particles, within your answer. Then replay the video to check.

- 1) Why do gases have very low densities?
- 2) Why do solids have higher densities than liquids
- 3) Why do liquids have densities that are close to the densities of their substance a solid?
- 4) Using the the word density in your answer, suggest why bubbles of gas float in a liquid?

Substance	Mass (g)	Volume (cm³)	Density = mass / volume	Density (g/cm³)
Steel	780	100		
Aluminium	270	100		
Air	0.13	100		
Feathers	0.25	100	4	
Ice	46	50		
Water	30	30		
Bricks	46	25		
Silver	1050	100		
Gold	1930	100		

Substance	Density (g/cm ³)	Float or sink?	Explain
Brick	1.9	sink	Brick has a <u>higher density</u> than water so it will sink
Cork	0.12	5	
Concrete	2.3		
Oil	0.72		
Lithium	0.535		