

8Ia – The particle model

Word	Pronunciation	Meaning
Brownian motion	<i>mO-shun</i>	An erratic movement of small specks of matter caused by being hit by the moving particles that make up liquids or gases.
compress		To squeeze into a smaller volume.
contract		To get smaller.
density		The amount of mass that one cubic centimetre of a substance has. Often measured in grams per cubic centimetre (g/cm^3).
diffusion	<i>diff-you-zshun</i>	When particles spread and mix with each other without anything moving them.
evidence		Data used to support an idea or to show that it is wrong.
expand		To get bigger.
gas		One of the states of matter. It does not have a fixed shape or a fixed volume and is easy to squash.
liquid	<i>li-kwid</i>	One of the states of matter. It has a fixed volume but not a fixed shape.
mass		The amount of matter that something is made from. Mass is measured in grams (g) and kilograms (kg). Your mass does not change if you go into space or to another planet.
particle model	<i>part-ick-al</i>	Another term for particle theory.
particle theory	<i>part-ick-al</i>	A theory used to explain the different properties and observations of solids, liquids and gases.
solid		One of the states of matter. It has a fixed shape and fixed volume.
state of matter		There are three different forms that a substance can be in: solid, liquid or gas. These are the three states of matter.
volume (matter)	<i>vol-yoom</i>	The amount of room something takes up. Often measured in cubic centimetres (cm^3).

8Ib – Changing state

Word	Pronunciation	Meaning
anomalous	<i>uh-nom-uh-luh s</i>	Something that does not fit a pattern. When talking about water, this means that water does not behave in the same way as other liquids when it freezes.
boiling		When there is liquid turning into a gas in all parts of a liquid, creating bubbles of gas in the liquid.
boiling point		The temperature at which a liquid boils.
change of state		When a substance changes from one state of matter (solid, liquid or gas) into another.
chemical change	<i>kem-ik-al</i>	A change which forms one or more new substances.
condense		When a gas turns into a liquid.
evaporate		When a liquid turns into a gas.
freeze		When a liquid turns into a solid.

Word	Pronunciation	Meaning
freezing point		The temperature at which a liquid turns into a solid. It is the same temperature as the melting point of the substance.
melt		When a solid turns into a liquid.
melting point		The temperature at which a solid turns into a liquid.
physical change	<i>fi-zi-kal</i>	A change in which no new substances are formed (e.g. changes of state).
sublime		When a solid turns into a gas, without becoming a liquid in between.
water vapour		Water as a gas. Also called steam.

81c – Pressure in fluids

Word	Pronunciation	Meaning
fluid		A gas or a liquid.
pressure		The amount of force pushing on a certain area. A way of saying how spread out a force is. Often measured in newtons per square metre (N/m ²) or pascals (Pa).

81d – Floating and sinking

Word	Pronunciation	Meaning
upthrust		A force that pushes things up in liquids and gases.
weight		The amount of force with which gravity pulls things. It is measured in newtons (N). Your weight would change if you went into space or to another planet.

81e – Drag

Word	Pronunciation	Meaning
air resistance		A force that tries to slow objects down that are moving through air. It is caused by friction and by the objects pushing the air out of the way.
balanced force		When two forces on an object are the same strength but in opposite directions.
drag		Another name for air resistance or water resistance.
friction		A force between two objects that are touching. It usually acts to slow things down or prevent movement.
streamlined		Something that has a smooth shape to reduce the air resistance or water resistance.
water resistance		A force on objects moving through water.