States of matter

IGCSE Chemistry · Vocabulary in context

Word	Example
particles /ˈpɑːtɪklz/	The **particles** in a gas move all the time.
atoms /ˈætəmz/	Everything is made of tiny **atoms**.
molecules /ˈmɒlɪkjuːlz/	Water is made of **molecules**.
ions /ˈaɪɒnz/	Water molecules surround the **ions** as they dissolve.
kinetic particle theory /kɪˈnetɪk ˈpɑːtɪkl ˈθɪəri/	**Kinetic particle theory** says matter is made of moving particles.
solid /ˈsɒlɪd/	In a **solid**, the particles are packed tightly and only vibrate.
liquid /ˈlɪkwɪd/	In a **liquid**, the particles are close but can move past each other.
gas /gæs/	In a **gas**, the particles are far apart and move quickly.
volume /ˈvɒljuːm/	The **volume** of the box is $2\ \text{m} \times 1\ \text{m} \times 1\ \text{m} = 2\ \text{m}^3$. $2\ \text{m} \times 1\ \text{m} \times 1\ \text{m} = 2\ \text{m}^3$
compress /kəmˈpres/	You can **compress** a gas by pushing it into a smaller space.
density /ˈdensɪti/	Iron has a higher **density** than wood, so it sinks in water.
mass /mæs/	The **mass** of this bag of rice is 5 kg. 5 kg
separation /ˌsepəˈreɪʃn/	Increase the **separation** of the plates.

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arrangement /əˈreɪndʒmənt/	The particle **arrangement** in a solid is regular and close.
motion /ˈməʊʃn/	Heating increases the **motion** of the particles.
regular /ˈregjʊlə/	The particles in a crystal are in a **regular** pattern.
vibrate /vaɪˈbreɪt/	The particles in a solid **vibrate** in place.
forces of attraction /ˈfɔːsɪz ɒv əˈtrækʃn/	**Forces of attraction** hold the particles together.
melting /ˈmeltɪŋ/	**Melting** turns ice into water.
freezing /ˈfriːzɪŋ/	**Freezing** turns water into ice.
evaporating /ɪˈvæpəreɪtɪŋ/	Water is **evaporating** from the puddle in the sun.
boiling /ˈbɔɪlɪŋ/	During **boiling**, bubbles form all through the water.
condensing /kənˈdensɪŋ/	Steam **condensing** on a cold window forms drops of water.
melting point /ˈmeltɪŋ pɔɪnt/	The **melting point** of ice is 0 °C. 0 °C
boiling point /ˈbɔɪlɪŋ pɔɪnt/	The **boiling point** of water is 100 °C. 100 °C
sublimation /ˌsʌblɪˈmeɪʃn/	Dry ice undergoes **sublimation** from solid to gas.
energy /ˈenədʒi/	Food gives your body the **energy** it needs to move.
heating curve /ˈhiːtɪŋ kɜːv/	A **heating curve** shows temperature rising as a solid is heated.

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Word	Example
cooling curve /ˈkuːlɪŋ kɜːv/	A **cooling curve** shows temperature falling as a liquid cools.
thermal energy /ˈθɜːml ˈenədʒi/	Rubbing your hands turns work into **thermal energy**.
pressure /ˈpreʃə/	A sharp knife puts a large **pressure** on the bread.
kinetic energy /kɪˈnetɪk ˈenədʒi/	A fast car has a lot of **kinetic energy**.
collide /kəˈlaɪd/	Particles must **collide** to react.
diffusion /dɪˈfjuːʒn/	The smell of perfume spreads across a room by **diffusion**.
concentration /ˌkɒnsənˈtreɪʃn/	The **concentration** of the acid is 2 mol/dm^3. $2\ mol/dm^3$
relative molecular mass /ˈrelətɪv məˈlekjʊlə mæs/	Water has a **relative molecular mass** of 18. 18
rate /reɪt/	The **rate** of reaction is faster when it is warm.
ammonia /æˈməʊnɪə/	**Ammonia** gas has a strong, sharp smell.
hydrogen chloride /ˈhaɪdrədʒn ˈklɔːraɪd/	**Hydrogen chloride** gas dissolves in water to make hydrochloric acid.
ammonium chloride /æˈməʊnɪəm ˈklɔːraɪd/	A white ring of **ammonium chloride** forms where the two gases meet.

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