6 · The rate and extent of chemical change

AQA · GCSE · Chemistry · Vocabulary in context

Word	Example
rate of reaction /reɪt ɒv rɪ'ækʃn/	The **rate of reaction** is faster at higher temperature.
mean rate /mi:n reɪt/	The **mean rate** is the total change divided by the total time.
instantaneous rate /ˌɪnstən'teɪnɪəs reɪt/	The **instantaneous rate** is the rate at one exact moment, from the slope of a tangent.
tangent /'tændʒənt/	Draw a **tangent** to the curve to find the gradient at one point.
gradient /'greɪdɪənt/	The **gradient** of a distance-time graph gives the speed.
collision theory /kə'lɪʒn 'θɪəri/	**Collision theory** explains reactions through successful particle collisions.
activation energy /ˌæktɪ'veɪʃn 'enədʒi/	A match gives the **activation energy** to start the fire.
concentration /ˌkɒnsən'treɪʃn/	The **concentration** of the acid is 2 mol/dm^3.
pressure /'preʃə/	A sharp knife puts a large **pressure** on the bread.
surface-area-to-volume ratio /'sɜ:fɪs 'eərɪə tə 'vɒlju:m 'reɪʃɪəʊ/	Small cubes have a large **surface-area-to-volume ratio**, so they react faster.
catalyst /'kætəlɪst/	A **catalyst** speeds up a reaction without being used up.
kinetic energy /kɪ'netɪk 'enədʒi/	A fast car has a lot of **kinetic energy**.

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enzyme /'enzaɪm/	The **enzyme** speeds up the reaction.
hypothesis /haɪ'pɒθəsɪs/	Our **hypothesis** predicts more growth in brighter light.
magnesium ribbon	Drop a piece of **magnesium ribbon** into the acid and watch it fizz.
dilute hydrochloric acid	Add 20 cm^3 of **dilute hydrochloric acid** to the flask.
delivery tube	The gas travels along the **delivery tube** to the syringe.
measuring cylinder /'meʒərɪŋ 'sɪlɪndə/	A **measuring cylinder** measures a rough volume of liquid.
gas syringe /gæs sɪ'rɪndʒ/	The **gas syringe** measures the volume of gas made.
sulfur /'sʌlfɜ:/	**Sulfur** burns with a blue flame.
turbidity /tɜ:'bɪdɪti/	The **turbidity** of the mixture rises as it turns cloudy.
sodium thiosulfate	**Sodium thiosulfate** reacts with acid to make the solution cloudy.
sulfur dioxide /'sʌlfɜ: daɪ'ɒksaɪd/	Burning coal releases **sulfur dioxide**.
ventilation /ˌventɪ'leɪʃn/	Good **ventilation** keeps harmful gases out of the lab.
anomaly	One result is an **anomaly**: it does not fit the pattern.
reversible reaction /rɪ'vɜ:sɪbl rɪ'ækʃn/	A **reversible reaction** can go both ways.

Word	Example
ammonium chloride /æˈməʊnɪəm ˈklɔːraɪd/	A white ring of **ammonium chloride** forms where the two gases meet.
hydrated copper sulfate /haɪˈdreɪtɪd ˈkɒpə ˈsʌlfeɪt/	Blue **hydrated copper sulfate** turns white when you heat it.
anhydrous /ænˈhaɪdrəs/	White **anhydrous** copper sulfate turns blue when water is added.
dehydration /ˌdiːhaɪˈdreɪʃn/	**Dehydration** of ethanol gives ethene and water.
hydration /haɪˈdreɪʃn/	Adding water back to white copper sulfate is called **hydration**.
closed system /kləʊzd ˈsɪstəm/	In a **closed system**, nothing can get in or out.
dynamic equilibrium /daɪˈnæmɪk ˌiːkwɪˈlɪbrɪəm/	At **dynamic equilibrium**, both reactions go at the same rate.
equilibrium position	Raising the pressure can move the **equilibrium position**.
Le Chatelier principle /lə ˈʧeɪtlɪə ˈprɪnsɪpl/	The **Le Chatelier principle** says equilibrium shifts to oppose a change.
yield /jiːld/	A higher **yield** means more product is obtained.

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