Atomic structure and the periodic table

AQA · GCSE · Chemistry · Vocabulary in context

Word	Example
Mendeleev /'mendɪli:v/	**Mendeleev** left gaps in his table for elements not yet found.
atom /'ætəm/	An **atom** has a nucleus and electrons.
• **element** /'elɪmənt/	Each **element** of the array holds one value.
compound /'kɒmpaʊnd/	Water is a **compound** of hydrogen and oxygen.
chemical reaction /'kemɪkl rɪ'ækʃn/	Digestion is a **chemical reaction**.
word equation /wɜ:d ɪ'kweɪʒn/	"Magnesium + oxygen → magnesium oxide" is a **word equation**. "Magnesium + oxygen → magnesium oxide"
symbol equation /'sɪmbl ɪ'kweɪʒn/	A **symbol equation** uses formulas, such as $2H_2 + O_2 \rightarrow 2H_2O$. $2H_2 + O_2 \rightarrow 2H_2O$
mixture /'mɪkstʃə/	Air is a **mixture** of gases.
filtration /fɪl'treɪʃn/	Use **filtration** to remove sand from water.
crystallisation /ˌkrɪstəlaɪ'zeɪʃn/	**Crystallisation** gives pure salt crystals from a solution.
simple distillation /'sɪmpl dɪstɪ'leɪʃn/	**Simple distillation** separates water from salt water.
fractional distillation /'frækʃənl dɪstɪ'leɪʃn/	**Fractional distillation** separates crude oil into fractions.

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chromatography /krəʊmə'tɒgrəfi/	**Chromatography** separates the dyes in ink.
distillation /dɪstɪ'leɪʃn/	**Distillation** separates ethanol from water.
model /'mɒdl/	The nuclear **model** shows a tiny nucleus with electrons around it.
plum pudding model /plʌm 'pʊdɪŋ 'mɒdl/	In the **plum pudding model**, the atom is a ball of positive charge with electrons inside.
nuclear model /'nju:klɪə 'mɒdl/	In the **nuclear model**, a tiny nucleus sits at the centre of the atom.
proton /'prəʊtɒn/	A **proton** has a positive charge.
neutron /'nju:trɒn/	A **neutron** has no charge.
electron /ɪ'lektrɒn/	An **electron** has a negative charge.
atomic number /ə'tɒmɪk 'nʌmbə/	Carbon has an **atomic number** of 6. 6
mass number /mæs 'nʌmbə/	Carbon-12 has a **mass number** of 12. Carbon-12 12
isotope /'aɪsətəʊp/	Carbon-14 is an **isotope** of carbon. Carbon-14
Relative atomic mass /'relətɪv ə'tɒmɪk mæs/	**Relative atomic mass** is the average mass of an element's atoms.
energy levels /'enədʒi 'levlz/	Electrons sit in **energy levels** around the nucleus.
outer shell electron /'aʊtə ʃel ɪ'lektrɒn/	An **outer shell electron** is in the energy level farthest from the nucleus.

Word	Example
periodic table /ˌpɪərɪˈɒdɪk ˈteɪbl/	Find the element's atomic number in the **periodic table**.
period /ˈpɪərɪəd/	The **period** of the wave is 0.02 s. 0.02 s
group /gruːp/	Sodium and potassium are in the same **group**.
noble gas /ˈnəʊbl gæs/	Neon is a **noble gas**: it hardly reacts.
alkali metal /ˈælkəlaɪ ˈmetl/	Sodium is an **alkali metal**.
halogen /ˈhælədʒn/	Chlorine is a **halogen**.
displacement /dɪˈspleɪsmənt/	In a **displacement** reaction, chlorine pushes bromine out of a salt.
transition metals /trænˈsɪʃn ˈmetlz/	Iron and copper are **transition metals**.
catalyst /ˈkætəlɪst/	A **catalyst** speeds up a reaction without being used up.

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