SC1a States of matter

Word	Pronunciation	Meaning
atom		The smallest neutral part of an element that can take part in chemical reactions.
attractive forces		The weak forces of attraction between molecules.
boiling point		The temperature at which a liquid boils.
chemical properties	***kem****-ik-al*	How a substance reacts with other substances.
melting point		Temperature at which a substance changes from the solid state to the liquid state when heated; or from the liquid state to the solid state when cooled.
molecule		Particle consisting of two or more atoms joined together by covalent bonding.
particle	***part****-ick-al*	A tiny piece of matter that everything is made out of.
particle model	***part****-ick-al*	A theory to explain the different properties and observations of solids, liquids and gases.
physical change	***fi****-zi-kal*	A change in which no new substances are formed – like changes of state.
states of matter		There are three different forms that a substance can have: solid, liquid or gas. These are the three states of matter.

SC2a Mixtures

Word	Pronunciation	Meaning
compound		A substance that can be split into simpler substances, because it contains the atoms of two or more elements joined together.
element		A substance made up of only atoms with the same number of protons in the nucleus.
impure		A substance that is not pure.
melting point		A specific temperature at which a solid turns into a liquid.
mixture		Two or more substances jumbled together but not joined to each other. The substances in many mixtures can be separated from each other.
physical property	***fi****-zi-kal*	A description of how a material behaves and responds to forces and energy. For example, hardness is a physical property.
pure		A single substance, with a fixed composition, that does not have anything else mixed with it.

SC2b Filtration and crystallisation

Word	Pronunciation	Meaning
crystallisation		Separating the solute from a solution by evaporating the solvent.
filtrate		Solution passing through a filter.
filtration		Using a filter to separate insoluble substances from a liquid.
hazard		Something that could cause harm.
insoluble	*in-**sol**-you-bul*	Describes a substance that cannot be dissolved in a certain liquid.
residue		Material remaining in the filter after mixture has passed through it.
risk		The chance of a hazard causing harm.
risk assessment		Identification of the hazards of doing an experiment.
saturated solution		Contains the maximum amount of solute that can dissolve in that amount of solvent at that temperature.
solute		Substance that dissolves in a liquid to make a solution.
solution		Formed when a substance has dissolved in a liquid.
solvent		The liquid in which a solute dissolves to make a solution.

SC2c Paper chromatography

Word	Pronunciation	Meaning
chromatography	*krow-ma-**tog**-raff-ee*	A technique for separating the components of a mixture – for example different food colouring agents.
paper chromatography	*krow-ma-**tog**-raff-ee*	Chromatography carried out by spotting drops of the samples onto paper, and then allowing a solvent to move up the paper. Different components in the samples travel up the paper in the solvent at different rates.
stationary phase	***stay**-shun-air-ee*	The surface through which the solvent and dissolved substances move in chromatography.
mobile phase		In paper chromatography, the solvent that moves along the paper carrying the dissolved samples with it.
chromatogram	*krow-**mat**-tog-ram*	The piece of paper showing the results of carrying out chromatography on substances.
R_f value		The ratio of the distance travelled by the solute on a chromatogram (measured from the centre of the spot) to the distance travelled by the solvent under the same conditions. The values for different substances can be used to identify them.

SC2d Distillation

Word	Pronunciation	Meaning
condense		When a gas turns into a liquid.
distillation	*dis-till-**ay**-shun*	The process of separating a liquid from a mixture by evaporating the liquid and then condensing it (so that it can be collected).
evaporate		
fractional distillation	***frak**-shon-al* *dis-till-**ay**-shun*	A method of separating a mixture of liquids with different boiling points into individual components (fractions).
mixture		Two or more substances jumbled together but not joined to each other. The substances in mixtures can often be separated from each other.
still		The apparatus used to carry out distillation or fractional distillation

SC2e Drinking water

Word	Pronunciation	Meaning
aquifer	***ack**-wi-fer*	Underground layer of rock containing groundwater, which can be extracted using a well or pump.
chemical analysis	***kem**-ik-al*	Using chemical reactions or sensitive machines to identify and measure substances in a sample.
chlorination	*klor-in-**ay**-shun*	The process of adding chlorine to a substance, often to water.

Word	Pronunciation	Meaning
desalination	*dee-sal-in-**ay**-shun*	Produces fresh drinking water by separating the water from the salts in salty water.
precipitate		Insoluble substance formed when two soluble substances react together.
sedimentation		The process in which rock grains and insoluble substances sink to the bottom of a liquid.
simple distillation	*dis-till-**ay**-shun*	The process of separating a liquid from a mixture by evaporating the liquid and then condensing it (so that it can be collected).