

Particles and Atoms

Bronze	Silver	Gold	Platinum
<input type="checkbox"/> I can use the properties of a material to decide if it is a solid, liquid or gas <input type="checkbox"/> I can describe the arrangement and movement of particles in solid, liquid and a gas <input type="checkbox"/> I can identify which change of state has taken place <input type="checkbox"/> I can use the word atom correctly <input type="checkbox"/> I can describe an atom using the words nucleus and electrons <input type="checkbox"/> I can describe the difference between an element and a compound <input type="checkbox"/> I can identify the different types of atoms in a substance from its formula	<input type="checkbox"/> I can relate the properties of a substance to the arrangement and movement of the particles <input type="checkbox"/> I know whether a material needs to be heated or cooled for a particular change of state to happen <input type="checkbox"/> I know where protons, neutrons and electrons are found in the atom <input type="checkbox"/> I can identify elements and compounds from pictures showing their atoms <input type="checkbox"/> I can explain what a molecule is	<input type="checkbox"/> I can describe the charges of protons, neutrons and electrons <input type="checkbox"/> I know that the atoms of different elements are different <input type="checkbox"/> I can use the formula of a substance to work out the ratio of the different atoms it is made of <input type="checkbox"/> I can identify elements and compounds from their formulae	<input type="checkbox"/> I can explain how a change of state can be reversed and why this is possible <input type="checkbox"/> I can explain why an atom is neutral <input type="checkbox"/> I can write the formula of a substance when given particle pictures showing molecules or giant structures <input type="checkbox"/> I can explain why mass is conserved when a chemical reaction happens

Reproduction

Bronze	Silver	Gold	Platinum
<input type="checkbox"/> I can label the male and female reproductive system	<input type="checkbox"/> I can explain the consequences of lifestyle (smoking, drugs, alcohol) on the development of a baby <input type="checkbox"/> I can describe the difference between sexual and asexual reproduction, with a named example	<input type="checkbox"/> I can describe the stages of human development and relevant time scales from conception to puberty <input type="checkbox"/> I can describe the function of the menstrual cycle	<input type="checkbox"/> I can explain the role of hormones in the menstrual cycle

Energy

Bronze	Silver	Gold	Platinum
<ul style="list-style-type: none"> <input type="checkbox"/> I can use data to draw simple conclusions about energy in foods <input type="checkbox"/> I can recall and use the equation $\text{efficiency} = \frac{\text{useful output energy transfer (J)}}{\text{input energy transfer (J)}}$ 	<ul style="list-style-type: none"> <input type="checkbox"/> I can describe the energy changes taking place in most situations <input type="checkbox"/> I can recall and use the equation: $\text{energy transferred (J, kWh)} = \text{power (W, kW)} \times \text{time (s, h)}$ <input type="checkbox"/> I can describe the difference between renewable and non-renewable energy resources using examples 	<ul style="list-style-type: none"> <input type="checkbox"/> I can rearrange and use the equation: $\text{efficiency} = \frac{\text{useful output energy transfer (J)}}{\text{input energy transfer (J)}}$ <input type="checkbox"/> I can rearrange and use the equation: $\text{energy transferred (J, kWh)} = \text{power (W, kW)} \times \text{time (s, h)}$ 	<ul style="list-style-type: none"> <input type="checkbox"/> I can compare the cost of different appliances using equation <input type="checkbox"/> I can evaluate the environmental and economic aspects of different energy resources

Pure Substances

Bronze	Silver	Gold	Platinum
<ul style="list-style-type: none"> <input type="checkbox"/> I can explain why a mixture is described as impure <input type="checkbox"/> I can pick the best method to separate different mixtures 	<ul style="list-style-type: none"> <input type="checkbox"/> I can explain why filtration and evaporation can be used to separate some mixtures <input type="checkbox"/> I can describe how to carry out chromatography <input type="checkbox"/> I can correctly use the word pure 	<ul style="list-style-type: none"> <input type="checkbox"/> I can explain why distillation can be used to separate some mixtures <input type="checkbox"/> I explain how melting point data can be used to decide if a substance is pure or impure <input type="checkbox"/> I can identify the most appropriate technique to separate a given mixture 	<ul style="list-style-type: none"> <input type="checkbox"/> I can explain how chromatography separates mixtures <input type="checkbox"/> I can explain how fractional distillation is different to simple distillation