







AQA Topic	Old Style Name	KS2 Starting Point (Max 2 sentences)	KS2 and KS3 Key Questions	KS3 Topic Summary (Max 2 sentences)	ILNESS sheet
Energy 1	Energy Costs/ Energy Transfers	Students may have previously encountered light, sound and electricity as forms of energy but are unlikely to have linked these as types of energy.		Students will start by learning about types of energy being connected rather than discrete and be able to evidence transformations between types. This will be contextualised to include calculations involving quantities and costs of energy in different forms and linked to real-world examples of applications of energy transfer.	
Matter 2	Elements / Periodic Table	Students are unlikely to have encountered The Periodic Table at Primary school, and will therefore be unlikely to identify materials as elements		Students will begin to identify the different patterns that exist on the Periodic Table, how the table is organised, what the key definitions mean, and suggest how the similarities between the different elements locate them in the specific areas on the Periodic Table. The students will then learn how the different elements react with each other and the difference between compounds and mixtures and understand the product names.	
Waves 2	Wave Effects/ Wave Properties	Students are unlikely to have a detailed knowledge to precede this topic, however may be familiar with some of the keywords by name, such as infrared, ultraviolet and ultrasound.		Students will gain an understanding of the different wave types from the electromagnetic spectrum, some of their uses and measurements that can be applied to them. Concepts will be linked to simple devices that either detect or produce waves and how they work.	
Genes 2	Evolution / Inheritance	Students may have encountered some of the work of Charles Darwin and have a basic understanding of Natural Selection and how evolution occurs. Students are likely to have looked at variation between species and within a species		Students will be introduced to the structure and function of DNA as an important biological molecule. They will learn how characteristics are inherited from parents and how to make predictions of genetic outcomes. This will lead onto developing an understanding of genetic engineering and the ethical issues surrounding it. Students will also look at adaptations of organisms and how these have been influenced by Natural selection. They will be able to link this to biodiversity and reasons for organisms becoming extinct.	
Forces 2	Contact Forces / Pressure	Students will have similar prior knowledge for this topic as for Forces 1. Contact forces such as friction and drag are likely to have been introduced at a basic level, although it is unlikely that pressure will have been investigated in any detail.		Students will look at contact and non-contact forces, looking at materials being squashed and stretched and seeing the effects. This will then be applied to pressure, looking quantitatively on solid surfaces and qualitatively in liquids. Floating and sinking will be examined in detail, including reference to density.	
Reactions 2	Chemical Energy / Types of Reaction	Students will have a limited knowledge of materials but little real experience of chemical reactions at KS2. Combustion and photosynthesis may have been covered however it is unlikely it will have been examined in detail chemically.		Students will begin to identify what the reactants and products are in a chemical reaction, and how heat affects the reaction. The students will then understand the difference between an endothermic and exothermic reaction and how catalysts affect a reaction.	
Earth 1	Earth Structure / Space	Students should have already encountered the three types of rock, how fossils are formed and properties of soil. They are also likely to have some notion of the birth of our Universe, the development of the Solar System and motion of the planets, relating this to seasons and eclipses.		Students will revisit the different types of rocks that make the Earth, and apply this knowledge to all aspects of the Rock Cycle. This will then extend to looking at the other planets around us, their composition, the motion of all the planets and their satellites, and perhaps even the things that are beyond.....	
Organisms 2	Breathing/ Digestion	Students should already have an idea of what constitutes a balanced diet, and foods that provide these nutrients. They should also have a basic knowledge of parts of the digestive and respiratory system, and understand the importance in the heart and blood in moving substances around the body for these other systems.		Students will embed their knowledge of the respiratory system and learn how pressure changes are involved in the mechanisms of breathing. They will relate their knowledge of diffusion to the structure and function of the lungs and the importance of oxygen absorption. Students will then go on to relate the importance of a balanced diet and why enzymes are needed in the digestive system for the effective absorption of food molecules.	