



# St Bede's Inter-Church School Core Science Years 7-9 Curriculum Map

	Year 7 (3 hrs per week)	Year 8 (3 hrs per week)	Year 9 (4 hrs per week Combined, 6 hrs Separate)
<b>Autumn</b>	<p><b>Introduction to science</b> An introduction to lab equipment, working scientifically and working safely.</p> <p><b>Cells</b> Cells as the basic unit of living things, using a microscope, comparing types of cells and looking at organisation in living things.</p> <p><b>Particles</b> All matter is made of atoms. Using the particle model to explain the properties of solids, liquids and gases and changes in state.</p> <p><b>Space</b> Exploring our place in the Universe and looking at the interaction of Earth with the moon, the solar system and beyond.</p> <p><b>Reproduction (animals)</b> Reproductive organs, menstrual cycle, fertilisation, development of the foetus and giving birth.</p>	<p><b>Atomic structure and Periodic Table</b> The differences between atoms, elements, compounds and mixtures. An introduction to the organisation of elements in the Periodic table.</p> <p><b>Digestion</b> The contents of a healthy diet and the consequences of unbalanced diets. Structure and function of the digestive system.</p> <p><b>Sound</b> Using knowledge of waves to explain how speakers, microphones and hearing work.</p> <p><b>Chemical reactions</b> Identifying the signs of a chemical reaction and describing the different types of chemical reaction that take place. Explaining what happens in terms of particles.</p>	<p><b>Genes and evolution</b> A simple model of chromosomes, genes and DNA in heredity and development of the DNA model. Variation between individuals linked to competition and how that can drive natural selection.</p> <p><b>Reactivity</b> The reactions of metals with water, acids and oxygen and using these to build a reactivity series.</p> <p><b>Electricity</b> Static electricity from movement of charge. Investigating series and parallel circuits, evaluating scientific models of electricity.</p> <p><b>Fit and Healthy</b> Structure and function of the skeleton. The effects of drugs on behaviour, health and life processes.</p> <p><b>Materials</b> Properties of ceramics, polymers and composites and how these properties are related to their uses.</p> <p><b>Investigative skills</b> Apply knowledge and skills to different investigations. Develop hypotheses, plan and implement practical work, analyse and evaluate data.</p>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Spring</b></p>	<p><b>Acids and Alkalis</b> Identifying acids and alkalis, measuring their strength and investigating neutralisation.</p> <p><b>Energy</b> Food and fuels ecosystems, energy stores and transfers, energy resources and energy calculations.</p> <p><b>Ecology</b> Habitats, sampling methods, food chains and webs, how organisms can affect and are affected by their environment.</p> <p><b>Rocks</b> Using the rock cycle to explain how new rocks are made and old rocks are worn away. Linking the properties of different rocks to their uses.</p>	<p><b>Respiration and circulation</b> Describing the structure and function of the respiratory and circulatory systems and how they are linked to aerobic and anaerobic respiration.</p> <p><b>Light</b> Describing how light travels, comparing with sound waves and comparing different uses of light and the electromagnetic spectrum.</p> <p><b>Atmosphere</b> The atmosphere, the carbon cycle and climate change.</p> <p><b>Microbes</b> Types of microbes, how diseases are spread and how we can prevent them. Body defences and the importance of hygiene and vaccination.</p>	<p>GCSE</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Summer</b></p>	<p><b>Intro to forces</b> Forces as pushes or pulls, arising from the interaction between objects. Exploring the effects of density and pressure and the resulting forces.</p> <p><b>Variation</b> Measuring variation and considering why it is important. Using similarities and differences to classify plants and animals.</p> <p><b>Matter</b> Observing physical changes and explaining them using the particle model. Looking at how and why thermal energy is transferred.</p> <p><b>Working scientifically</b> Applying investigative skills (making predictions, planning, presenting results) to specific scientific contexts that students have studied to show how these ideas work in practice.</p>	<p><b>Forces and effects</b> Forces change the speed, direction, or shape of objects. Moments as the turning effect of forces.</p> <p><b>Separation techniques</b> Using the properties of components in a mixture to explain different methods for separating them.</p> <p><b>Interdependence</b> Explaining why almost all life on Earth depends on photosynthesis.</p> <p><b>Magnetism</b> Magnetic poles, attraction and repulsion, and magnetic fields. Making electromagnets and exploring how they are used.</p>	<p>GCSE</p>