



At St Peters C of E Middle School, we strive to ensure children value themselves and their God given talents and appreciate the world he created. The intent of the Science curriculum is to develop pupils' scientific knowledge and conceptual understanding of our world through the specific contents of Biology, Chemistry and Physics; foster and develop our pupils' curiosity in the subject, whilst preparing them for future life in an increasingly scientific and technological world. Pupils are immersed in scientific vocabulary, which provides them with the tools they need to elicit their understanding and knowledge. Learning is enriched through additional opportunities of specialist visitors and visits. We intend them to develop scientific skills as a process of enquiry and that the working scientifically skills are built-on and developed throughout children's time at school so that they can apply their knowledge of Science when using equipment, conducting experiments, building arguments and explaining concepts confidently. We endeavour to ensure that the Science curriculum we provide will give children the confidence and motivation to continue to further develop their skills into the next stage of their education and life experiences.

	<b>Make Connections</b>	<b>Self manage / Independence</b>	<b>Challenge / high expectations</b>	<b>Creativity</b>	<b>Problem solving / resilience</b>
<b>Aspire, Believe</b>	<p>We plan so that:</p> <ul style="list-style-type: none"> <li>• Links are made to other curriculum area such as Maths, Geogrpahy, Design Technology, ICT</li> <li>• Links to real life e.g. Climate change, Body changes, Electricity in the home, Energy.</li> </ul>	<p>We plan so that:</p> <ul style="list-style-type: none"> <li>• Students become independent learners, are self motivated and resilient – Plan and carry out own experiments. Go back and retest.</li> <li>• Students self-govern and problem solve – Pratical scenarios, concept cartoons, group work and discussion.</li> </ul>	<p>We plan so that:</p> <ul style="list-style-type: none"> <li>• Everyone is challenged through differentiation and reasonable adjustments through bronze, silver and gold tasks</li> <li>• Challenge oppurtunities for high attainers through extension tasks and open ended investigations</li> </ul>	<p>We plan so that:</p> <ul style="list-style-type: none"> <li>• We foster an environment where students are confident to explore, experiment and develop their own independent ideas during enquiries.</li> <li>• We create a climate of valuing creativity and expanding creative vision e.g. Making models of solar system and skeleton,</li> </ul>	<p>We plan so that:</p> <ul style="list-style-type: none"> <li>• Students have regular opportunities to think, enquire and come to their own conclusions following experiments.</li> <li>• Students are encouraged to develop resilience in learning and keep trying even if it becomes challenging</li> <li>• We create a learning environment in which children feel safe to make mistakes and are reflective – self and peer assessing and the end of each lesson</li> </ul>
 <b>Grow</b>	<p>We provide opportunities to:</p> <ul style="list-style-type: none"> <li>• Let students discover links</li> <li>• Bring interactive lessons into the classroom</li> <li>• Outdoor learning E.G Forces (Rockets), Plants.</li> <li>• Trips E.G KS2 Planetarium, Natural History Musuem, KS3 Legoland</li> <li>• Discover cross-curricular links</li> <li>• STEM Day</li> </ul>	<p>We build in oppurtunities for:</p> <ul style="list-style-type: none"> <li>• Choice of starting points</li> <li>• Ownership of learning</li> <li>• Reviewing own learning</li> <li>• Setting own targets – At beginning and end of topic and science skills.</li> <li>• Finding own solutions</li> <li>• Considering others methods</li> <li>• Being prepared with correct equipment</li> <li>• Peer to peer learning and feedback</li> <li>• Independent learning days - Revision</li> </ul>	<p>We provide opportunities to:</p> <ul style="list-style-type: none"> <li>• Access the curriculum with the highest appropriate target including challenge for all</li> <li>• Model best practise – How to carry out experiments, predict and write conclusions, tackling new information.</li> <li>• Share positive praise and feedback through marking and verbally</li> <li>• learn from mistakes and misconceptions – students share their own methods</li> <li>• Self-challenge</li> </ul>	<p>We provide opportunities to:</p> <ul style="list-style-type: none"> <li>• Be creative through open ended child-led tasks including both theoretical and practical</li> <li>• Choosing their own hypotheses to investigate.</li> <li>• Collaborate with others during practical experiments.</li> <li>• Celebrate scientific discovery and ideas for own enquiries.</li> </ul>	<p>We provide opportunities to:</p> <ul style="list-style-type: none"> <li>• See and experience real world examples – see teachers make mistakes and learn</li> <li>• Secure a base of scientific understanding and knowledge</li> <li>• Face complex science challenges that require deeper level thinking.</li> <li>• Praise effort</li> <li>• Challenge ourselves with problem solving and open ended challenges.</li> <li>• Discuss our pathway to success with peers</li> </ul>
 <b>Achieve</b>	<ul style="list-style-type: none"> <li>• Students develop transferable skills such as graph skills and laboratory equipment use, health and safety assessments</li> <li>• Students are able to collaborate with ideas, practical skills and group activities.</li> <li>• Students are confident communicators within practical groups and during class presentations.</li> <li>• Students make good or better than expected progress and reach their expected attainment in Science.</li> </ul>	<ul style="list-style-type: none"> <li>• Students become lifelong learners of STEM</li> <li>• Students understand where they are and where to go next in their learning journey</li> <li>• Students know what they need to do to make progress in both scientific skills and theory for Biology, Chemistry and Physics.</li> </ul>	<ul style="list-style-type: none"> <li>• Students set their own targets</li> <li>• Students are proud of own achievements in Science</li> <li>• Students make good or better than expected progress and reach their expected attainment in all areas of Science.</li> </ul>	<ul style="list-style-type: none"> <li>• Students are confident to question and think outside the given criteria.</li> <li>• Students are well rounded - valuing creativity in all; three areas of Science.</li> <li>• Students make good or better progress across the curriculum</li> </ul>	<ul style="list-style-type: none"> <li>• Students are resilient and prepared to keep trying if they don't get the results expected.</li> <li>• Students see mistakes as opportunities for further scientic enquiry.</li> <li>• Students make good or better progress as they develop resilience to challenging or unfamiliar learning.</li> </ul>