

Subject statement for Maths

Subject:	Maths
Aims:	<p>Children at Duncombe will develop mastery in maths so that children are enabled to acquire a deep understanding of maths concepts, structures and procedures, step by step.</p> <p>Complex mathematical concepts are built on simpler conceptual components and children understand every step in the learning sequence so that maths becomes transparent and makes logical sense. Interactive lessons establish deep understanding in small steps, as well as effortless fluency in key facts such as tables and number bonds. The whole class works on the same content and no child is left behind. Children master concepts one step at a time in lessons that embrace a Concrete-Pictorial-Abstract (C-P-A) approach, avoid overload, build on prior learning and see patterns and connections.</p>
Progression ensuring skills and knowledge:	<p>By the end of KS2 we aim for children to be fluent in the fundamentals of mathematics with a conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They should have the skills to solve problems by applying their mathematics to a variety of situations with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios. Children will be able to reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.</p> <p>For a more detailed description of progression please see the Calculation Policy and Skills Progression Documents.</p>
Learning Experiences:	<p>Shopping - real life opportunities to use money</p> <p>Applying knowledge learnt in class to real life situations</p> <p>Data handling opportunities in Science, Computing, Geography and History</p>
Digital Discovery links:	<p>Using Beebots for position and direction</p> <p>Creating graphs and charts within data handling topic</p> <p>Interactive games and learning resources</p>
Environmental Issues links:	
Characteristics of Effective Learning:	<p>Engagement: Children at Duncombe explore new mathematical concepts and ideas; they use physical resources and manipulatives to investigate and build on new discoveries; making links and asking and answering questions. Children develop a 'can do' attitude and feel happy to try new things and attempt challenges.</p>
	<p>Motivation: Mathematics is set in real-life and engaging contexts so that children are 'hooked' into their learning and have a context within which to work. They understand that working hard and making mistakes are part of the learning process and do not become discouraged easily; showing resilience and perseverance. Children enjoy the process and relish their mathematical achievements. A growth mindset is encouraged by staff and students as it is embedded into the culture of learning at Duncombe.</p>
	<p>Thinking: Children are encouraged to think deeply, solve problems in different ways and make links to previous knowledge. Children strive for efficiency and look to calculate effectively.</p>
Resources used:	<p>Teaching Resources: Power Maths; White Rose; Secure Maths</p> <p>Online Resources: Mathletics; Times Tables Rockstars; SAT's Companion</p> <p>Physical Resources: Numicon; beaded number lines; place value counters; tens frames; 2D and 3D shapes; measuring equipment, weights and scales; beebots; counting equipment; money.</p>