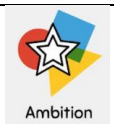
Subject statement for Maths

Subject:	Maths
Aims:	As set out in the National Curriculum, the aims of teaching maths are: • Become fluent in the fundamentals of mathematics, including the varied and regular practice of increasingly complex problems over time. • Reason mathematically by following a line of enquiry, understanding relationships and generalisations, and developing an argument, justification or proof using mathematical language. • Can solve problems by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. Children at Duncombe will develop mastery in maths so that all children acquire a deep and sustained understanding of maths concepts, structures and procedures, step by step. In line with our ASPIRE values, we aim to provide a curriculum which caters for the needs of all individuals. 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. This approach creates and nurtures positive attitudes, confidence and competence with mathematical problems. Complex mathematical concepts are built on simpler conceptual components year on year and children understand every step in the learning sequence so that maths 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. Lessons will include opportunities for reasoning and problem solving, and where possible, apply their learning to everyday situations so that children understand the importance of mathematical skills in everyday life.
Progression ensuring skills and knowledge:	In EYFS, our aim is for all children to develop firm mathematical foundations in a way that is engaging and age appropriate. Maths is taught discreetly and children will have the opportunity to develop the mathematical skills they've learned in guided activities and independent play. Children learn fundamentals of number in order for them to be ready to access the curriculum in Year One. To ensure consistency and progression we teach maths using extended blocks in Key Stage One and Two to enable children to develop a depth of understanding and a mastery of the key concepts. The curriculum map matches the structure of White Rose but has been adapted to meet the needs of our children ensuring that key concepts are revisited and support long term memory retention with a balance of fluency, reasoning and problem solving. Teachers plan using resources from White Rose, NCETM and the DfE Ready to Progress documents which allow children to learn through a range of representations (concrete, pictorial and abstract) and see patterns and connections through variation Pupils who grasp concepts rapidly will be challenged through being offered rich mastery and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material will be supported to consolidate their understanding, including through additional practice (in interventions), before moving on Where appropriate, work may be pitched to and adapted to support children who are not yet ready to access that year's curriculum. To ensure consistency, all teachers use a vocabulary ladder to guarantee that children develop their oracy skills in order to explain their thinking with greater sophistication as they go through the school For a more detailed description of progression please see the Calculation Policy and Skills Progression Documents.
Learning Experiences:	Shopping - real life opportunities to use money Applying knowledge learnt in class to real life situations Data handling opportunities in Science, Computing, Geography and History Measuring in Science and Design and Technology

<table>
<tr><td rowspan="6">School values:
 
</td><td> 
</td><td>Children develop ambition in maths through well planned and structured lessons which teach children the next logical step to develop their understanding. Lessons are punctuated by mini plenaries which move the lesson on or recap or rephrase learning where necessary. Children enjoy the process and relish their mathematical achievements. A growth mind-set is encouraged by staff and students and a positive attitude towards maths is modelled by teachers and embedded into the culture of learning at Duncombe.</td></tr>
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</td><td>Children develop their self-esteem when their hard work is acknowledged. The focus of fluency in maths lessons means that concepts are revisited so children learn to remember more and therefore are able to progress in this subject with ease. When children find maths hard or become stuck, which could impact on their self-esteem, this is identified early so that support can be put in place.</td></tr>
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</td><td>Maths can feel like a challenging subject for some children. To develop skills of perseverance, teachers use specific praise to identify and highlight when a child has overcome a particular difficulty. Children learn a range of strategies and when it is appropriate to use them in order for them to reason and solve problems.</td></tr>
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</td><td>The intended outcome for maths is for children to become independent learners. In order to do this, children learn to use a range of concrete and pictorial resources which helps to scaffold learning</td></tr>
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</td><td>Children show respect for other during maths lessons. Evidence of this can be seen widely across the school where they share and take care of concrete resources. Our children work hard in maths, showing respect for the teacher and each other creating a positive learning environment</td></tr>
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</td><td>Many children at Duncombe speak English as an additional language therefore maths, which is universal, is often a favourite subject. Children at Duncombe develop a ‘can do’ attitude towards maths and feel happy to try new challenges because they experience success through well pitched tasks. Often they work in collaboration with a partner which promotes collaboration and discussion where they use stem sentences to support their vocabulary. Children show their love of the subject during lesson times, out of school, while using Doodle maths and when taking part in Mad Minutes, a school wide initiative to help boost children’s understanding of times table facts.</td></tr>
<tr><td>Resources used:</td><td colspan="2">Teaching Resources: White Rose, NCETM, Secure Maths (interventions)
Online Resources: DoodleMaths, DoodleTables SAT’s Companion
Concrete Resources: Numicon, Dienes, beaded number lines, place value counters, place value mats, tens frames, rekenreks, 2D and 3D shapes, measuring equipment, weights and scales, Beebots, counting equipment, money.</td></tr>
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