

Intent, Implementation and Impact Statement



INTENT

Mathematicians at St. Andrew's have the knowledge, skills and confidence to explore number, geometry, statistics and measure, and understand how they are related to the real world.

<u>Intent</u>

The 2014 National Curriculum for maths aims to ensure that all pupils:

- * become fluent in the fundamentals of mathematics
- * reason mathematically
- * can solve problems by applying their mathematics

Here at St. Andrew's, we work towards these aims in our daily maths lessons, following a teaching for mastery approach. This is based upon the NCETM's 5 Big Ideas for Teaching for Mastery. Each carefully sequenced lesson weaves fluency, variation, representation and structure, mathematical thinking and coherence throughout.

We aim to give our children the confidence to achieve mathematically, consequently enhancing their chances of success in later life. Children are encouraged to develop independence and show the skills of perseverance and resilience in daily lessons. We actively seek to develop a growth mindset during maths lessons and an 'I can' attitude.

Staff work to foster a life-long love of maths through rich, purposeful mathematical experiences. We aim to create a whole school positive ethos towards mathematics, enabling all children to achieve in the subject.



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Our I-ASPIRE values are at the heart of everything we do. Through Mathematics we aim to develop:

Independence - children are taught to independently apply skills they have learnt to enable them to reason and problem solve. Children challenge themselves and have a growth mindset.

Ambition - children take risks within a safe environment. They are encouraged to have raised ambitions of what they can do and achieve. Children become fluent with number facts and calculation techniques. Children self-assess their work to make a judgment on how successful they have been against the intended learning outcome. Learning about careers/real life situations which require elements of Mathematics. Children have a growth mindset and want to improve and succeed.

Self-control - children control emotions in difficult situations, coping with disappointment; develop a wide range of calculation techniques through use of concrete resources, pictorial representations and abstract calculations. Children are able to use their number fluency to reason and are able to problem solve. Children improve their work by revisiting it and doing their corrections. Children keep focused during lessons, even when they are finding the work hard.

Perseverance - children are encouraged to develop their resilience and do not give up. Children use a range of trial and error techniques to problem solve. Children are reflective about what has been successful and what needs further development.



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Integrity - children do the right thing when no-one is watching. Children support others within talking partnerships and collaborative group work in Mathematics, offering each other advice and support.

Responsibility - Being a model citizen, contributing and understanding all actions have consequences. Working collaboratively, the children will have the opportunities to reflect of their work and help to develop peers. Children collect the manipulatives they need, use it correctly and then return it after use.

Empathy - Understanding the views and beliefs of others. Learning about careers/real life situations which require elements of Mathematics and how this impacts the life of others.

At St. Andrew's, we know that children learn in a variety of different ways, therefore, they are given opportunities to work independently and with others. Our delivery of Mathematics supports these elements. We believe that the children need the chance to explore and investigate together to develop concepts as well as embedding basic skills, knowledge and understanding through regular individual practice.

Our Mathematics curriculum provides opportunities to experience real life scenarios, work with concrete manipulatives, the same pictorial representations and equipment throughout the school. We aim to engage, inspire and challenge pupils, equipping them with the knowledge and skills to experiment. As the children progress through the school, they should be able to think critically and develop a rigorous understanding of Mathematics. Children should also understand and appreciate how important Mathematics is in real life situations.



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IMPLEMENTATION

Implementation

Maths lessons are generally around 60 minutes long each day following DfE guidelines. The only exception to this is Year R who after a 15 minute input, will the do adult led follow up activities in small groups and independent learning within the continuous provision.

In Year 1-6, we use the 'Power Maths' scheme of work as a basis for our learning and teaching. Our teachers work with a structured lesson format which encourages sequenced learning, which is coherently planned and builds upon prior learning. In Year R, the NCETM's Mastering Number Programme is used.

Following the Power Maths approach, teachers are encouraged to adapt ideas to meet the needs of their class and specific groups within their class. All children are taught within their own year group.

Feedback on progress will be delivered to students throughout the lesson, with students being afforded the time to make improvements to their work. Teachers attempt to 'live mark' during lessons and children self mark or peer assess their work. This is reflected in our marking policy.

Some children who require a more personalised learning approach, will receive extra support from either the class teacher or a teaching assistant.

All children are given the opportunity to reason, problem solve and use fluency skills individually and with their peers in each lesson.

Children access multiple representations and use concrete, pictorial and abstract representations alongside of each other to develop a deep understanding of methods and concepts.

Lessons have been carefully crafted to allow learning to take place over a number of small, conceptual steps which allow opportunities to make connections and to investigate maths a greater depth. Due to this, the pace of lessons may appear to be slower.

Some children will require supplementary support either during or after lessons to enable them to master certain concepts or elements. This intervention will be carried out immediately to allow the children to access the next lesson.



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Implementation continued

Children who rapidly grasp skills and concepts well in the main lesson will be challenged by being given activities which require a greater depth of understanding ('Deepening Activities').

Lessons will feature 'mathematical talk' between the teacher and the pupils and between the children with their talking partners.

Units of work within maths will take different lengths of time due to the topic content and coverage which ensures a sufficient depth of understanding before moving on.

Daily retrieval of arithmetic skills is a consistent aspect of all maths lessons across school. Each year group, from Year 1-6, have a 15 minute fluency lesson each day. This allows children the opportunity to learn a specific sets of number facts, e.g. number bonds, doubles, halves, times table facts. The Mastering Number Programme is used with Year 1 and 2.

We have ambitious expectations for all children within lessons and they are guided through learning experiences, reducing any feeling of 'fear' towards the subject.

Teachers work to incorporate the science of learning within the learning and teaching of maths. Lessons are divided into sections; discovery, sharing, collaboration, practice and reflection. The 'I do, we do, you do' approach guides pupils learning and works to support their independence. A range of questioning approaches allows for high level participation through 'Deepening' activities. Strengthening activities and immediate intervention are offered to children who need extra support within the subject.

Children are encouraged to verbalise their thought processes and a simple answer is challenged with 'How do you know?' and 'Explain what makes you think that?'



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IMPACT

Mathematicians at St. Andrew's have the knowledge, skills and confidence to explore number, geometry, statistics and measure, and understand how they are related to the real world.

<u>Impact</u>

All our children are given every opportunity to become confident and capable mathematicians, not adverse to challenge. They build up a range of strategies and approaches towards maths as they progress through school, which prepares them for further education and future life. Children see a real reason for maths being such a focal point in their education.

Assessment for learning is used to inform planning. This happens during the 'Discover' stage of a lesson. This allows the teacher to mathematically orientate the lesson.

Teachers record attainment with the subject using 'Compass' in line with the school assessment policy. Formal assessments are carried out 3 times a year using PUMA tests. The Multiplication Tables Check is carried out in the Summer Term of Year 4. The Year 6 children sit their SATs in May each year.

Children leave St. Andrew's with, at least, the basic knowledge and skills required to successfully progress through Secondary School.

Our enthusiasm and approach leads to engaging, varied and relevant maths experiences for children here at St. Andrew's.