

Enjoyment and engagement are at the heart of the ways we aim to teach Mathematics at Kidgate Academy, both for pupils of all ages and for teachers and support staff. It is through making the skills relevant and appropriate to the children's lives that it is increasingly viewed as both a core skill and a way of embedding strong links to other areas of learning.



## Intent – What do we aim to deliver?

For children to develop a love of learning for mathematics, embracing mathematical challenges and seeking ways to extend their knowledge whilst using the correct mathematical vocabulary to support their reasoning. We want them to identify mistakes and explain them with confidence.

All children to develop a strong sense of mathematical fluency, enabling them to make connections with key concepts and use justifications based on their reasoning knowledge. The wider curriculum allows transferrable mathematic skills.

For all children to develop the skills and confidence to be able to move fluently between concrete resources, pictorial representations and abstract ideas and concepts when solving mathematical problems. We challenge all children.

Children to become skilled and rapid arithmeticians through developing a deep knowledge of addition, subtraction, multiplication, and division facts.

For children to thrive in mathematics, it is essential they become fluent in recalling number facts, such as number bonds and times tables. They continue to practice their times table recall and arithmetic skills outside of the school environment. To enable quick and fluent recall, children are encouraged to showcase their knowledge at home, asking parents and carers to, where possible, support them in their journey.

Times tables and arithmetic skills are taught daily at the start of every mathematics lesson. This is followed by the introduction of new content on one of the many areas of the curriculum, culminating in independent tasks for the children to complete.



## Implementation – How do we aim to deliver it?

Our children's journey begins in Early Years, where we start the process of developing key mathematical skills using a wide range of hands-on resources. As well as basic numerical fluency, we develop skills such as spatial awareness, problem solving and reasoning through activities, that also utilise the outdoor environment. Maths is an important part of the Early Years curriculum and receiving a good grounding is an essential life skill that enables our pupils to succeed in other areas. New vocabulary and representations are taught explicitly in Early Years and the same representations are embedded and revisited in Key Stage One. NSPCC Number Day enriches mathematical learning for all by engaging pupils in fun, real-life problem-solving activities that develop number skills, reasoning, and a positive attitude towards maths while supporting an important cause.

We adopt a mastery approach based on the White Rose Education scheme of learning where teaching and learning should show progression across all key stages within the different strands of Maths. We follow current pedagogy to underpin our teaching practice, therefore have adopted the five big ideas for Mastery into our lesson structure. We supplement this with arithmetic and problem solving and reasoning skills resources from Third Space Learning. We aim to build a deep understanding of topics, whilst helping our pupils become confident mathematicians who embrace mathematical challenges. Topics are introduced in a logical order and are revisited throughout the year. These revisits encourage deep learning and ensure learners have the foundational knowledge they need, before moving on to more advanced maths. The use of accurate and concise vocabulary is something we strive for within our lessons. To promote this, teachers use stem sentences during partner talk time, which allow concepts and strategies to be verbalised and explain in a clear manner.

There is a shared belief that being able to recall key number facts is an essential characteristic of a successful mathematician. Children in Reception, Year 1 and Year 2 receive regular sessions to secure firm foundation in the development of number sense using the mastering Number programme. They become confident and flexible with number. To support the learning of times tables, all children are encouraged to use Times Tables Rockstars to help develop and consolidate their times table knowledge outside of the classroom. In doing so, children will be able to recall all multiplication and division facts quickly and accurately by the end of Year four. Children in Y2-Y6 have a weekly personalised times table test to assess and review their knowledge.

The expectation is that most pupils will move through the scheme of learning at broadly the same pace, however, decisions about when to progress should always be based on the security of a child's understanding. Children who grasp concepts rapidly should be challenged through rich and sophisticated problems which encourage them to reason and prove their understanding at a deeper level before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.



## Impact – How will we know when we have delivered it?

Children are confident and fluent mathematicians, who use mathematical vocabulary to reason and explain their workings.

Children can answer all required multiplication and division facts quickly and accurately by the end of Year four.

Children show a secure understanding of all topics through the use of formative and summative assessments, with any gaps in knowledge swiftly identified and addressed during intervention sessions.

Children will leave for secondary school equipped with the mathematical knowledge and skills needed to succeed in their further education.