



Mathematics Intent

The National Curriculum Intent

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. Programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems 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.

Our Intent:

The habits of thinking mathematically are life-enriching. Mathematics is the foundation for understanding the world and we want our children to know the purpose behind their learning and apply their knowledge to their everyday lives. This mirrors our overall curriculum aims throughout, so we ensure that every young person, regardless of background, has a rich and meaningful mathematics education.

- A knowledge rich curriculum
- Opportunities for learners become fluent in the fundamentals of mathematics, develop conceptual understanding and the ability to recall and apply knowledge rapidly.
- To reason and problem solve by applying mathematics to a variety of increasingly complex problems.
- To build upon children's knowledge and understanding from EYFS to year 6.
- Sequenced lessons that build on and revisit and apply knowledge
- Lessons that are broken down into components, making explicit connections and links between the different subjects encountered.
- To develop resilience that enables all children to reason and problem solve with increased confidence.
- Equal opportunities for children to apply their mathematical knowledge to other subjects (cross-curricular links).
- Values vocabulary and is language rich, deepens knowledge through broadening range of vocabulary.

Implementation:

Our high level planning of mathematical strands is translated into coherent, sequences of learning that build on previous knowledge. Our curriculum overview is based on several published resources including Collins Scheme, White Rose, NCTEM, Power Maths, Mathematics Guidance June 2020 and the National Curriculum. Our mastery Mathematics curriculum has been split into three terms. Each term has approx. twelve weeks of planned mathematics teaching, covering the programmes of study. One week each term is for assessment and consolidation. See High Level Overviews and Medium Term Planning.

Each lesson is part of a scheme of work that has been carefully planned to ensure progression of skills, knowledge and understanding throughout the week. Daily mathematics lessons encourage children's fluency but also give opportunities for reasoning and solving problems. In addition we use a range of resources to

enhance learning eg: White Rose Maths, POverMaths, Classroom Secrets, BEAM and Five minute mastery. Following analysis leaders identified then need for an additional fluency and core session. This is a successful additional to our curriculum giving opportunities to pre teach concepts and enhance fluency. See Appendix 1 Mathematics Guidance June 2020

- ❖ All mathematics lessons are prepared following as mastery approach with scaffolding to ensure that all learners are able to access the learning, build upon their existing knowledge and skills, and challenge their reasoning and problem-solving skills.
- ❖ Lessons are differentiated to ensure appropriate challenge for all learners.
- ❖ Concrete manipulatives and pictorial representations are used to support conceptual understanding and to make links across topics.
- ❖ Children are individually assessed and rewarded for rapid recall of number bonds and times tables
- ❖ To ensure consistency in approach a whole school calculation policy is followed to
- ❖ Children are assessed on a termly basis.

Impact:

The curriculum is planned so that children have ample opportunities to revisit different areas of knowledge and build on what they already know. Each strand is separated into different schemes that build on the previous ones to ensure **knowledge progression**.

For example:

- ❖ *Children visit the properties of shapes programmes of study several times across each year group.*

For example:

- ❖ *The objective 'tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks' is revisited in three different schemes of work across Year 3.*

- We measure impact through careful monitoring of pupil progress and attainment
- The impact of our Mathematics curriculum is also measured termly through Teacher assessment along with published termly tests eg: Pixl, testbase and end of unit/topic tests, SATs results at Year 2 and Year 6.
- Ongoing teacher assessment informs our planning throughout the year.
- We formally assess at appropriate intervals using a suite of tests materials linked to NC expectations. We record the results in our whole school tracking system (Insight) for each child so we can monitor an individual child's achievements and areas for development.
- We assess Times tables throughout the year using 'class charts' and online quiz
- The purpose of our assessment is to track each child's knowledge and understanding of the Mathematics curriculum objectives. This allows us to identify areas of strength and weakness to inform our teaching. The assessment tracking in insight is used to identify pupils for interventions across school, both wave 2 and wave 3.

