Maths

Maths Diet at Over Hall

Core Offer

2023-2024

INTENT

All children will be challenged and stretched, moving through fluency, to varied fluency and arriving at reasoning and problem solving showing a mastery approach with automaticity. We will provide progression that captures children's inquisitiveness around the subject allowing children to develop resilience and enjoyment in mathematics – we will be mathematicians. Our pupils will know when to apply effective mental methods showing an understanding of mathematical relationships between numbers and patterns.

IMPLEMENTATION *Practice is informed by the Maths Hub: NCETM best practice indicators and EEF's 'Improving Mathematics in the Early Years and Key Stage 1' and 'Improving Mathematics in Key Stage 2 and 3' guidance reports.*

Teaching

- All children in Year 1–6 receive a mathematics lesson daily for 60 minutes using White Rose Maths presentation materials and workbooks. This is a priority every day.
- All children Year 1-6 receive a No Nonsense Number Facts session daily for 15 minutes – this supports basic number fact knowledge and our pupils' ability to manipulate facts to support rapid calculations. This is a priority and will occur daily.
- Staff will assess children against the national curriculum objectives termly, judging children to be below, just below, expected standard or greater depth. Assessments will be informed from independent work in books alongside maths assessment tests. Y2, 4 and 6 will undertake statutory assessments.
- The teacher's knowledge of strengths and areas for development will inform interventions. The interventions could be 'pre-teach', 'post-teach' or 'gap attacks', which aim to ensure that every child strives towards achieving age related expectation or above.
- Assessments will inform planning and next steps for children, whilst being monitored by subject leaders. Staff

will be given opportunities to moderate their books in partnership with schools from across the town.

- Staff will be provided with resources and training from maths specialists to ensure their own professional development is being met to demonstrate knowledge, understanding and teaching of skills.
- Staff will show a passion for mathematics demonstrating expert knowledge, understanding and teaching of skills in their year group.
- Children will have support from staff, some with further adult support, to ensure that all children are being challenged at their ability. Intervention sessions will be used as and when required.
- Coverage will be ensured by staff following the progression of White Rose's National Curriculum Progression document as guidance and will be monitored by subject leaders and senior leaders.
- Children will start exploring the key areas of mathematics with concrete, pictorial and abstract approaches to provide a deep and sustainable understanding of mathematics.

Mathematics – concrete and pictorial resources

Every classroom will have an array of concrete and pictorial resources which include:

- Place value charts – laminated to enable pupils to write on them.
- Number lines and hundred squares
- Base ten materials, place value chips, 5 or 10 frames
- A maths working wall, which encompasses – flipchart sheets used in the main lessons; key vocabulary linked to the topic; formal written method examples that link to the current topic
- Bar model representations of on-going concepts, problems or reasoning questions
- Key vocabulary – with explicit examples to draw out understanding
- Links to wider topics – use of graphs to represent scientific results, tables to organise data in history etc.

Interventions

A range of maths interventions are used across the school and the use of each is assessed and determined by the staff responsible for the progress and attainment of each child.

PRE-TEACH

- Pupils identified via diagnostic assessment (NTS or NFER) are pre-selected to attend interventions, which are designed to reignite specific maths knowledge or skills that enable them to grasp new in-year content successfully. The use of Shine or Step Up to intervention materials are used to support this process.
- Pupils can also be identified via key questioning as part of an oral/mental starter – designed to assess pupils' knowledge of a key skill before a unit or lesson begins.

MULTIPLICATION TABLE CHECK

- Individuals are identified as not working at ARE in Y3 and 4, when completing their TT Rock Star MTC assessments. Those children receive additional support to learn their tables, so that they can achieve the recommended MTC level for Y4 statutory assessment

POST TEACH

- During a Mathematics lesson, staff hot-mark work, so that individuals can be identified and targeted for further support quickly. This will either take place in the lesson or in the afternoon – with both ensuring that individuals do not continue to work within a misconception or practice a layout error, among other examples.

GAP ATTACK

- Gap attack interventions are designed to 'catch' pupils up against a wider range of objectives and may happen weekly or more often as required. They are aimed at pupils working Just Below expectation and ensure that retrieval remains high for topics not yet covered, and are increasingly spaced.

Wider Opportunities

The following opportunities are provided for children to further develop their love of mathematics

- Maths activities are provided weekly for homework
- Children in Key Stage 1 have access to Numbots – an app designed to promote rapid recall of basic number facts
- Children in Key Stage 2 have access to TT Rock Stars – an app designed to develop pupils' tables knowledge, for rapid recall and application across the KS2 mathematics curriculum
- Whole school Rock Star day is arranged every term to promote the use of TT Rock Stars and Numbots
- World Pi Day is celebrated each year, with special events planned
- Social media is used to promote an enjoyment of maths, for example TT Rock Star day
- Maths is enriched through the rest of the curriculum, with opportunities for pupils to apply their maths knowledge to a range of different subjects such as: Science and Geography

Assessment

Children's maths is assessed in the following ways:

- NTS assessments are used from year 1 upwards to assess children's ability to apply their maths knowledge at the end of every term
- Years 5 and 6 use NFER assessment papers at the end of each half term, to assess pupils current progress and to complete diagnostic analysis of attainment, with a view to designing interventions to address gaps.
- End of key stage 1 and end of key stage 2 assessments (SATs)
- Year 4 Multiplication Tables Check
- Formative assessment is on-going, with staff adapting to the needs of the pupils in their class. Hot-marking is used to support his dynamic response within classes.

IMPACT

All pupils

- acquire the knowledge & cultural capital they need to succeed in life
- make progress, in that they know more, remember more & are able to do more.
- learn what is intended in the maths curriculum
- produce work of high quality
- achieve automaticity when applying written methods and can demonstrate their mastery of all disciplines in mathematics
- achieve well in national tests & examinations
- are prepared for their next stage of education
- are able to read to an age-appropriate level & fluency & apply this across all areas on offer
- enjoy learning & are inspired to extend their learning either independently or via wider opportunities