



Caring

Positive

Stimulating



Mathematician Intent

To provide high quality learning experiences where **all** children maximise their potential

To enable **all** children to develop a deep understanding of Mathematical concepts

To equip **all** children with the essential skills and knowledge to become confident and fluent Mathematicians

To inspire in **all** children a natural curiosity and a love of Mathematics

To enable **all** children to leave CPS with a secure knowledge of basic Mathematical skills

To enable **all** children to apply the skills of a Mathematician in a variety of contexts and subjects

To promote the basic skill of reading for **all** children through the eyes of a Mathematician

Fluency - Children should be taught to:

- Become fluent in the fundamentals of Mathematics through varied and frequent practice with exposure to increasingly complex problems over time
- Develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- Recall multiplication facts for up to 12 x 12 by the end of Year 4

Reasoning - Children should be taught to:

- Follow a line of enquiry, making links and generalisations, and developing an argument, justification or proof using Mathematical language
- Use the specific language needed to make links with their Mathematical understanding

Problem Solving - Children should be taught to:

- Apply their Mathematical understanding to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

What

Implementation

How

Teaching and Learning

Mastery Curriculum - We follow a mastery curriculum where topics and key skills are taught in depth. We teach content in blocks of learning. Skills are revisited through Remember More learning, revisiting learning from previous lessons, and by making links to other areas of Mathematics eg: measures, money etc. A mastery curriculum ensures that children have a deep, secure, long term knowledge of the Mathematics curriculum and that children confidently apply their skills and knowledge to a variety of situations and contexts.

We use the **White Rose pedagogy** as a starting point for planning; the progression of manipulatives and resources are carefully planned and sequenced, there is an emphasis on Mathematical talk and use of Mathematical vocabulary, previous knowledge is included in each block supporting teachers to know what skills and knowledge has previously been taught. We ensure there are daily opportunities for all children to develop reasoning and problem solving skills within lessons and use sentence stems to support verbal reasoning. To ensure that all children become fluent in their basic skills, children from Year 2 - Year 6 complete a weekly arithmetic lesson.

Times Table Rock Stars— From the beginning of Year 3, children use Times Tables Rock Stars which they can access at school and at home to develop their times table recall. In class, the children in Key Stage 2 practise their times tables frequently throughout the week. Children who require further intervention are identified.

Learning Environment and use of Manipulatives

Each class has a Mathematician display board, showing key content which includes a learning wall that is updated regularly to support the children in their learning. Sentence stems are displayed within the classroom alongside Multiplication Wizards (Years 2—6 only).

Each class has an interactive whiteboard which is used as a teaching tool to teach new mathematical concepts, consolidate learning, and to solve problems.

Following the Calculation Policy, all children have access to the manipulatives required to support their Mathematical understanding. These manipulatives are easily accessible to children during their Mathematics lessons. As well as these we also have larger mathematical resources stored centrally.

Building Cultural Capital and Inspiring Curiosity

Mathematics is integrated in contemporary culture with a STEM (Science, Technology, Engineering, Mathematics) foci. With this change, creativity has emerged as the new cultural capital of the mathematics classroom. Creativity is needed to address current and future problem-solving challenges of the twenty-first century and beyond.

FS and KS1 inspire curiosity in Maths by putting learning into context with the use of role plays. FS have maths provision in their outside area for the children to access independently. Wherever possible, teachers help children put their maths learning into real life context and support pupils in making links with other subjects. In each class the children are seated with a learning partner. This changes regularly throughout the year which exposes each child to a range of social/cultural dialogue. A famous Mathematician is shared with the children during the termly Maths

Supporting all learners to aspire and achieve (including the disadvantaged)

We provide regular opportunities for the children to immerse themselves in Mathematical concepts.

Throughout the school year the children are exposed to budgets, scoring, ranking and voting, all of which require basic maths skills.

We provide regular feedback to children and RTF time. Children are encouraged to assess their learning and talk about their achievements. We provide tailored interventions and focus group time with teachers and TA's.

As subject leaders, we regularly signpost teachers towards all the resources we have to support them with closing gaps for children.

Teachers provide fortnightly (Years 1-4) / weekly (Years 5-6) home learning which always includes a Mathematician focus.

Assessment

SATS— Year 6
White Rose Assessment twice a year (Autumn and Summer) (Year 1 –5)
Year 4 Times table Check
Insight Tracker
Ongoing Formative Assessment
White Rose—end of block assessments
Progress is reported to parents three times per year

Monitoring

Book Scrutiny
Planning Scrutiny
Times Table Rock Stars
Data Outcomes
Pupil Conferencing
Teaching and Learning Observations

Quality of Education

Attainment at the end of each Key Stage (Including FS) is required to be in line with, or better than national expectations. Learners must make progress in line with, or better than national expectations.

Behaviour and Attitudes

All children approach their Mathematical learning with enthusiasm and confidence.

Children are aware of the 4 R's and use these inherently throughout their learning journey. They have a positive attitudes towards solving problems and are resilient in the face of a challenge.

Personal Development

All children are given the tools to enable them to both acquire Mathematical knowledge and to build on what they already know, ensuring they develop life long skills.

Impact