

Maths Policy September 2017

Aims

Following the introduction of the new National Curriculum in 2014 the emphasis has been to ensure that all children:

- Become FLUENT
- REASON and EXPLAIN mathematically
- Can SOLVE PROBLEMS

This means that children need to be regularly exposed to opportunities involving increasingly complex problem solving which allows them to apply their Maths knowledge. In doing so, they should be encouraged to develop an argument and line of enquiry which they can prove and justify using mathematical vocabulary. This includes the ability to break down problems, both routine and non-routine, into a series of steps.

We want to teach Maths in a way that:

- Delivers Maths in line with new National Curriculum guidelines
- Ensures the delivery of Maths is filled with cross curricular opportunities
- Develops mental strategies
- Ensure pupils are fluent in their times tables and can apply this knowledge
- Encourages children to use mathematical vocabulary to reason and explain, including partner work to show much deeper understanding
- Challenges children to stretch themselves and take risks in their learning
- Ensures children in Key Stage 1 are secure in their understanding of number and number relationships

Teaching and learning style

The large majority of pupils progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention. The questioning and scaffolding individual pupils receive in class as they work through problems will differ and pupils who grasp concepts rapidly are challenged through more demanding problems which deepen their knowledge further.

Practise and consolidation play a central role to mathematics learning. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts in tandem.

Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring intervention so that all pupils keep up.

Teachers use the CPA approach (concrete, pictorial, abstract) to ensure that concepts are modelled to pupils using multiple representations. This ensures that procedural and conceptual understanding are developed simultaneously.

Pupils are seated in mixed ability groups as we believe that all pupils can attain highly in mathematics and every pupil will have different strengths and development areas. Therefore, groupings within classes are flexible and pupils will work in different groups dependent on their need.

Daily structure

FS1/2- Daily maths session- teacher led, plus in continuous provision

KS1:

- 10.00am - 10.25 Maths
- 10.25 -10.35 Break- Teachers mark/ assess ready for the next session
- 10.35 -11.00 Same Day intervention (Bronze, Silver, Gold challenge)

KS2:

- 10.10 - 10.45 Maths
- 10.45 -10.55 Break (Times tables)- Teachers mark/ assess ready for the next session
- 10.50 -11.20 Same Day Intervention (Bronze, Silver, Gold challenge)

Maths will also be taught cross curricular in the afternoon on occasions

Planning

Each class teacher is responsible for the teaching of mathematics in their class. The following resources are an example of what is used to assist teachers with their planning:

- White Rose Maths hub - overview for Medium term planning
- Big maths CLIC
- NCETM website and resources
- NRICH resources
- Maths Rockx
- Mathletics

Same Day Intervention (SDI)

At Crookesbroom, we have embedded Same Day intervention into our daily Mathematics lessons.

The first session is led by the teacher to introduce new learning. This is then followed by a 'fluency 5' task where the children try to complete 5 mathematics questions.

- Question 1: At consolidation level so that all children can achieve
- Q2 - Q4: Gradually more challenging, including reasoning and problem solving
- Q5: A reasoning/ problem solving challenge

The children then have a 10 minute break whilst the teacher marks their work and assess the children for the next progression in their learning.

BRONZE CHALLENGE - SDI Group - adult led group, teacher input, then an opportunity for the children to apply their learning by completing a bronze challenge (similar level to Q1-3)

SILVER CHALLENGE - Q3 - 5 level to include reasoning and problem solving

GOLD CHALLENGE- reasoning challenges usually a greater depth focus

Intervention	<p>Using formative assessment gathered through the practise tasks, teacher questioning and other formative assessment methods, any pupils who have not grasped the concept or who have misconceptions will have a rapid intervention to ensure that they are ready for the next step of learning. Where possible, this will occur on the same day to ensure that gaps are rapidly plugged, ready for the next steps.</p> <p>If not, the children will be placed in an intervention group which will take place in the afternoon or assembly times. This may involve the use of PIVATS for children with SEN.</p>
Assessment	<p>Teachers will use targeted questions and problems that require pupils to remember, understand, apply, analyse and evaluate their knowledge and skills. These formative assessments along with termly summative assessments will then be used to inform the RAG and ITAF to assess the pupils on an ongoing basis and make a judgement about whether a pupil is on track to achieve age-related or greater depth expectations. This information will all be recorded and discussed at RAG Meetings.</p> <p>Teachers will also complete Question Level Analysis to inform their planning and teaching.</p> <p>EYFS continually assess their children in Maths using 'tapestry'</p>
Marking	<p>(See marking policy)</p> <ul style="list-style-type: none"> • Daily marking of Maths work using a pink highlighter pen for correct answers across the question number and green highlighter (in SDI work) for incorrect answers. • Weekly - the children will write a growth mind set comment to assess their own learning and staff will comment if necessary. • Any corrections by the child should be done in purple polishing pen
Homework	<ul style="list-style-type: none"> • KS1- At least fortnightly mathematics homework - linked to the weeks learning/ times tables/ Mathematics task. • KS2 - Weekly mathematics homework - linked to the weeks learning/ times tables/ Mathematics task.
Presentation	<ul style="list-style-type: none"> • Learning objective at the start of each piece of new learning • 1 number per square <p>KS1 - Short date</p> <p>KS2 - The date to be written in Roman numerals</p> <ul style="list-style-type: none"> - Margin on the left - A ruler to be used when drawing lines

Policy written by Maths Leads - Nicola Gudgin and Alice Hennessey

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