MATHEMATICS POLICY 2018 - 2021

Ownership	**HT**
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Approved by Governors	**2018**
Updated (if apt)	
To be reviewed	**October 2021**

1. Why Teach Mathematics?

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world and the ability to reason mathematically,

2. Aims of the National Curriculum

The National Curriculum for Mathematics aims to ensure that all pupils:

- Become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

- **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- **Solve problems** by applying their mathematics 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.

The National Curriculum for Mathematics describes what must be taught in each Key Stage as well as defining a programme of study for each year group. In Early Years, the curriculum is guided by the Early Learning Goals and the 40-60 months Statutory Framework.

3. Planning

Planning, based on the White Rose Mixed Age planning overview, supported by resources from a range of providers, is undertaken at two levels:

Medium term planning is carried out half-termly. Teachers are given half termly objectives which link to the national curriculum age related expectations for each year group.

Short term planning is carried out weekly. These plans link the objectives for each lesson with the target cards which are stuck into the children's maths books.

4. Cross-curricular links

Mathematics is taught mainly as a separate subject but every effort is made to link maths with other areas of the curriculum. We try and identify the mathematical possibilities across the curriculum at the planning stage. We also draw children's attention to the links between maths and other curricular work so children see that maths is not an isolated subject.

In the Early Years, these links are more evident because of the less formal timetable.

5. Teaching methods and approaches

Staff at Stower Provost have worked with the maths lead to develop a calculations document that takes into account the criteria of the new National Curriculum.

Lessons have a flexible approach to ensure the pitch and pace suits the children. Teachers use their own judgement in how to approach teaching a concept and will incorporate group, paired or individual work as appropriate and aim to follow the concrete, pictorial abstract approach proven to accelerate learning.

In EYFS the children work in small and large groups depending on the focus for the week. Maths activities are accessible at all times during child initiated learning.

Pupils engage in:

- The development of mental strategies
- Written methods
- Practical work
- Investigational work
- Problem-solving
- Mathematical discussion and reasoning, using precise mathematical language.
- Consolidation of basic skills and routines

At Stower Provost Primary School we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced.

We endeavour to set work that is challenging, motivating and encourages the pupils to talk about what they have been doing. The work will be suited to the needs of the children in each class. The teacher will use the traffic light system which will enable children at the start of each lesson to recognise their own ability on a subject and help them to choose the correct level of work to complete. This will also enable the teacher to measure progress achieved by the end of the lesson.

6. Display

We recognise the importance of displays in the teaching and learning of mathematics. Every class displays relevant mathematical information which is consistent throughout the school. This is appropriate to the age of the class. These may include number lines, number grids, vocabulary and other display materials that provide a visual support for the children's mental processes. Displays are also used as interactive tools to enable children to make mathematical responses.

7. Assessment

We aim to provide feedback to children through marking so that they have specific advice about next steps for their learning. Children are given time to read and review their work following marking. Children are encouraged to respond with a purple pen when they have read their teachers comments.. See separate Marking Policy for more information. Following the removal of levels, teachers are now using the objectives and traffic lights to access whether children have achieved the Age Related Expectations. These are highlighted and dated at the back of the books and the information is used to record children's progress and attainment on the school's tracking system.

Teachers will enter data onto the school's tracking system under the following headings:

- TARGET:- No understanding/knowledge
- **Working Towards:-** At early stage of development (support needed)
- **Mostly:** Growing ability and independence (prompting needed**)**
- **Secure:** Exhibits skill independently
- **Mastery** Exhibits skill spontaneously and with confidence and in a range of contexts

The information which is input onto SPTO can then be used to make a judgement about whether the children are working at ARE. See Assessment Policy for specific details on Assessment.

8. Reporting

All parents receive an annual report on which there is a summary of their child's effort and progress in mathematics over the year.

At the end of KS1 and KS2, each pupil's level of achievement against national standards is included as part of their report.

9. Resources

Resources for the delivery of the maths curriculum are stored both centrally and in classrooms. Everyday basic equipment is kept in classrooms. Additional equipment and topic-specific items are stored in the staff work room.

Materials are constantly updated, as new and relevant items become available. The maths subject leader orders new resources after consultation with the staff.

10. Equal opportunities

As a school we endeavour to maintain an awareness of, and to provide for equal opportunities for all our pupils in mathematics. We aim to take into account cultural background, gender and Special Needs, both in our teaching attitudes and in the published materials we use with our pupils.

11. Children with special educational needs

All children receive high quality inclusive teaching. Where possible, we aim to fully include SEN pupils in the daily mathematics lessons so that they benefit from the emphasis on oral and mental work and by listening and participating with other children in demonstrating and explaining their methods. There are high expectations for all pupils. Resources are provided to encourage children to learn independently and support their learning. Specialist resources, such as numicon are also used across the school.

If children are recognised as having specific learning needs in maths then they may be selected to take part in the 'Catch up' scheme which runs from year 2 to year 6. Where necessary teachers will, in consultation with the Inclusion Leader and members of the SLT, draw up programme of support for a child. If a child's needs are particularly severe they will work on an individualised programme written in consultation with the appropriate staff.

When planning, teachers will try to address the child's needs through simplified or modified tasks. Support staff are also deployed effectively to support the children's learning requirements.

12. Homework

IN EYFS there is not any formal homework. In Key Stage 1 maths homework is sent when the class teacher feels it is appropriate to do so. In Key Stage 2, children receive homework each week. The amount of homework given will progress as the children move up through the school. The aim of homework is always to consolidate learning that has been happening in the classroom.

13. Mastery

The mastery curriculum is linking up the teaching of maths in line with the methods being taught in Singapore. Opportunities for developing mastery are sought throughout the year, ensuring children have a secure understanding of each theme covered.