



**Chawson First School
Mathematics Policy
March 2024**

Mathematics is part of the statutory National Curriculum. At Chawson we believe that Mathematics equips our children with necessary life skills, to solve problems and make sense of the world around them using maths in real life contexts and calculations.

We encourage children to ask questions, think creatively, understand and explore in a variety of exciting ways.

This policy outlines the guiding principles by which this school will implement the teaching of Mathematics. It will be reviewed periodically.

Vision

At Chawson 1st School we all share a united vision, that all of our children will develop into **independent, articulate** and **aspirational** children. Our curriculum is our main tool for providing children with the opportunities to develop these skills. Each subject contributes to us achieving this vision. In maths we do this by:

Independent- In maths, independence in challenge and risk taking are supported through a CPA (Concrete, Pictorial, Abstract) mastery approach, by giving children opportunities to decide how to present their work. Children are encouraged to take a lead role in their learning by asking questions about mathematical reasoning and deciding on what they need to do to solve a problem. Children are encouraged to make links between strategies and to use in different contexts. In this way, the children will develop the confidence to express their opinions and answer questions orally and in a written form with increasing independence.

Articulate- Children will have opportunities to develop communication skills through structured sentence stems. They will have opportunities for working in pairs/group work as well as whole class tasks. An emphasis will be put on the explanation of how a problem is solved over the final answer.

Aspirational- Through the use of carefully planned activities that are fun and memorable, children are fully engaged in their learning, which then enables them to reach their full potential and become aspirational for themselves. When possible, maths topics are given a 'purpose' so that children aspire to achieve the end goal. We encourage the children's best efforts and celebrate this by rewarding class work and improved scores in number bond and multiplication fact recall work. They will develop a positive mind set to learning maths through praise and encouragement and successes will be celebrated. Children will understand the wider importance of becoming competent in maths.

1. Our rationale for teaching Mathematics

Mathematics at Chawson is taught daily. This is as a discrete session, but where possible it may have cross curricular links and is used in other subject areas. Children are given the tools and encouragement to succeed, developing a positive mind set towards the subject and confidence in their own abilities, facilitating engagement and interest for all children, regardless of ethnic origin, gender, aptitude or disability.

2. Aims & objectives:

We are following the National Curriculum introduced in September 2014.

Its stated Aims are;

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*
- *can 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.*

Objectives:

- have a sense of the size of a number and where it fits into the number system;
- know by heart number facts such as number bonds, multiplication tables up to 12X12, doubles and halves;
- use what they know by heart to figure out answers mentally;
- calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of calculation strategies
- move towards being able to use formal column methods for addition and subtraction in Key Stage 2.
- make sense of number problems, including non-routine problems, and recognise the operations needed to solve them;
- explain their methods and reasoning using correct mathematical terms;
- judge whether their answers are reasonable and have strategies for checking them where necessary;
- suggest suitable units for measuring, and make sensible estimates of measurements;
- explain and make predictions from the numbers in graphs, diagrams, charts and tables.

3. Planning/Teaching

Planning is a process in which all teachers are involved.

Planning of Maths in the Foundation stage is based on the Early Learning Goals, using the small steps from NCETM Mastering number. In Key Stage 1 and 2, planning is based on objectives taken from the National Curriculum, using NCETM curriculum prioritisation documents and Can Do for small steps. Long Term Plans identify which year groups cover which topics, and ensures there is good progression between year groups. Class teachers work in their year groups. The Maths leader keeps an overview of the Long-Term Plans and handles requests for new resources alongside the curriculum budget holder.

All children are taught mathematics within their own mixed ability class.

The Foundation Stage children in the Preschool and Reception year have mathematics integrated throughout their week with opportunities to achieve the Early Learning Goals for Number and Shape, Space and Measure. This involves direct teaching and then a variety of mathematical activities and experiences, both inside and outside the classroom.

Maths lessons in KS1 and KS2 include a mixture of mental oral work, whole class teaching, time for independent or group work, plenary discussion, focus maths groups and time to respond to teachers marking. We plan and teach following a mastery approach using the lesson structure of 'Teach it, Practise it, Do it, Secure it and Deepen it'.

Additionally, to the main lesson objective time is dedicated each day to improve mental arithmetic. In year 1 the children develop number sense through the NCETM Mastering Number programme and 'Learn Its' which are addition facts and the tables facts that children benefit greatly from knowing by heart – and the corresponding fact family (inverse statements). This knowledge is given increased prominence in class with weekly speed tests plotting progress. In year 2, 3 and 4 maths is taught in two discrete sessions. One lesson is 15 minutes, called MOT (Maths On Track) focusing on mixed arithmetic knowledge including tables recall. The main maths lesson is 45 minutes which covers teaching objectives from medium term plans.

4. The Curriculum

The curriculum is planned and taught following a mastery approach. Calculation strategies are taught following the calculation policy alongside reasoning and problem-solving opportunities which are embedded throughout the week. The curriculum is planned to be engaging and challenging.

5. Differentiation

Children's individual learning needs are catered for sensitively and children are encouraged to value each other's attempts by working in mixed ability groups or a focus group. Teachers constantly seek to improve resources which enable both the most able and those with learning difficulties to access information. They plan activities which inspire and challenge children's thinking and allow them to respond in ways which best suit the individual. The use of mathematical resources and pictorial representations is the main tool for differentiation. On a day-by-day basis children identified as needing additional 'keep up' work will be given time with an adult during MOT for the support.

6. Equal opportunities

- Maths is taught within the guidelines of the school's equal opportunities policy.
- All children have the right to gain mathematical knowledge and understanding regardless of gender, race, class, physical or intellectual ability.
- Our expectations do not limit children's achievement and our assessment does not involve cultural, social, linguistic or gender bias.
- We recognise that maths may strongly engage our prior higher attainer and G&T children, and we aim to challenge and extend them through reasoning and problem-solving opportunities, called 'Deeper in the Moment'.

7. Assessment and recording

Teachers' assessments of each child's progress, in this area of the curriculum, are made through continual assessment as children respond in their learning during lessons and through marking. Lessons are planned with regard to the National Curriculum and are differentiated and modified as necessary to respond to the needs of the children. Teachers are fully aware of what is required by the National Curriculum and how their children are doing as they are able to make judgments against the lesson's learning intentions and success criteria. Any significant anomalies during teaching in the children's

learning would be noted by the class teacher to ensure the children's learning can be managed in the next lesson and 'keep up' work planned for during MOT sessions. In KS1 and KS2 the children will take standardised termly assessments. Teachers use Rising Stars standardised assessments to contribute to evidence of their overall assessment of a child.

8. Monitoring and evaluation

Mathematics is monitored through lesson observations, work scrutiny, pupil interviews and professional discussion amongst staff. Data milestones are created which may highlight cohorts or groups of children whose progress needs investigating. Interventions are planned as a result and could form part of the pupil premium support being given in school or during a catch up session during an MOT lesson. As a result of this the school development plan is updated with action plan points for mathematics. Maths priorities are also often addressed in the school RAP when needed. These developments are shared with the Governors of the school appropriately.

9. Resources

At Chawson we have material from a variety of published schemes to support the school's short-term planning. These are not used as stand-alone material in their own right.

Each classroom has a supply of resources that are needed on a daily basis referred to as 'the maths tool kit'. Other practical equipment is organised and stored centrally in the resources area. The Maths lead is responsible for the management and review of mathematics resources.

10. Extra opportunities

Homework- Homework is set throughout the school in accordance with the school homework policy. Regular practise of number bonds and multiplication facts are promoted through NumBotts and TTRockstars.

Parental Involvement- Parents are kept in touch with developments in mathematics through topic letters, in school events, family learning and year workshops. They are actively encouraged to support their child's learning in mathematics as in other subjects and are welcome in school to discuss any aspect of the curriculum.

School cluster events- When appropriate the children will work with other children from different schools as part of cluster events. These usually involve children from year 3 and 4.

Review

This Mathematics policy will be reviewed periodically to ensure that it reflects current practice in the teaching of Mathematics at Chawson Community First School.

Denise Smith (March 2024)