

COPPICE
PRIMARY SCHOOL

Mathematics Curriculum Policy

Date	Review Date	Endorsed by	Approved by	Link Governor
March 2022	February 2024	Governing Body	FGB	Carolynne Spencer

Aspire, Believe & Achieve



Policy last reviewed: March 2022
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Aims and Purposes

We at Coppice Primary School believe 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, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.' (The National Curriculum in England Framework Document (DfE) 2014)

We have a duty to ensure compliance with the revised National Curriculum and with the application of the new programmes of study and attainment targets. We understand that 'the National Curriculum provides pupils with an introduction to the core knowledge that they need to be educated citizens.' Coppice Primary School has adopted the Mathematics Mastery Curriculum. The Mathematics Mastery approach has three key principles: conceptual understanding, mathematical thinking and mathematical language, with problem solving at the heart of our curriculum. The Mathematics Mastery curriculum is cumulative - each school year begins with a focus on the concepts and skills that have the most connections.

Our well-balanced curriculum promotes the spiritual, moral, cultural, mental and physical development of pupils and prepares them for the opportunities, responsibilities and experiences of later life. We will develop pupils' spoken language, reading and writing in all subjects and will develop pupils' mathematical fluency. We promote a growth mind set belief – that all children can achieve regardless of their background. To encourage children to develop a growth mind set around maths, the way in which we speak to pupils is very important.

We wish to work closely with the Pupil Advocates to hear their views and opinions as we acknowledge and support Article 12 of the United Nations Convention on the Rights of the Child that children should be encouraged to form and to express their views.

We believe it is essential that this policy clearly identifies and outlines the roles and responsibilities of all those involved in the procedures and arrangements that is connected with this policy.

This policy is to be read in conjunction with the following documents:

- National curriculum in England: Mathematics programmes of study.
- The Coppice Primary School Calculations Policy
- Redbridge Scheme of Work
- Marking policy
- Mathematics Mastery toolkit

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;
- To ensure that all pupils reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language;
- To ensure that all pupils 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;
- To develop fluency in arithmetic facts and methods;
- To develop an enthusiasm for and fascination with mathematics;
- To increase the confidence of each pupil in mathematics to enable them to apply the knowledge and skills with assurance;
- To promote the teaching of numeracy and literacy within all subjects;
- To share good practice within the school;
- To work with other schools to share good practice in order to improve this policy.

Roles and Responsibility for the Policy

It is important that all stakeholders are involved in the implementation of this policy. Everyone has an important part to play in supporting children's development in mathematics.

The Governing Body has:

- Appointed a member of staff to be responsible for the curriculum;
- Delegated powers and responsibilities to the Head teacher to ensure all school personnel and stakeholders are aware of and comply with this policy;
- Responsibility for ensuring compliance with the legal requirements of the National Curriculum;
- Responsibility for ensuring that the school complies with all equalities legislation;
- Governors to ensure that appropriate action will be taken to deal with all prejudice related incidents or incidents which are a breach of this policy;
- Responsibility for ensuring funding is in place to support this policy;
- Responsibility for ensuring this policy and all linked policies are maintained and updated regularly;
- Responsibility for ensuring all policies are made available to parents;
- Nominated a link governor to visit the school regularly, to liaise with the Head teacher and the coordinator and to report back to the Governing Body;
- Responsibility for the effective implementation, monitoring and evaluation of this policy

The Head teacher, Senior Leadership Team and SLT Champion will:

- Ensure all school personnel are aware of and comply with this policy;
- Attend any events that MMSL require the Head teacher to attend
- Work closely with the SLT Champion, subject leader and the link governor;
- Ensure compliance with the legal requirements of the National Curriculum;
- Encourage parents to take an active role in curriculum development;
- Provide leadership and vision in respect of equality;
- Provide guidance, support and training to all staff;
- Monitor the effectiveness of this policy by:

    - Observing teaching and learning;
    - Conducting planning scrutinies and learning walks;
    - Holding discussions with pupils.

- Annually, or more frequently if desired, report to the Governing Body on the success and development of this policy

The Subject Leader will:

- Lead the development of this policy throughout the school;
- Attend MMSL training events
- Work closely with the Head teacher, the SLT Champion, the nominated governor and SENCO;
- Present to the Head teacher updates on Mathematics mastery;
- Have half a day dedicated to Mathematics mastery development across MM year groups;
- Teach in a MM year group once per week
- Be accountable for standards in this subject area;
- Monitor standards by;

    - Auditing the subject area using LLO;
    - Monitoring teachers planning;
    - Conducting lesson observations once per year;
    - Scrutinising children's work;
    - Monitoring books with the teacher in accordance with the form on LLO;
    - Carrying out learning walks and feeding back verbally and on LLO;
    - Holding discussions with pupils as part of a learning walk or online.

- Ensure continuity and progression throughout the school;
- Devise a subject improvement plan and complete a work log;
- Provide guidance and support to all staff;
- Provide training for all staff on induction and when the need arises;
- Keep up to date with new developments;
- Undertake an annual audit and stock take of resources;

- Purchase new resources when required and in preparation for the new academic year;
- Manage the subject budget effectively;
- Undertake risk assessments when required;
- Review and monitor;
- Annually report to the Governing Body on the success and development of this policy;
- Keep MM users up to date on the toolkit;
- Attend the MM conference which brings together partner schools to think and talk about maths education.
- Ensure there are opportunities for professional development in maths across the year (at least 6 SKEWs delivered per academic year with a max of 10).

The Link Governor will:

- Work closely with the Head teacher and the subject leader;
- Ensure this policy and other linked policies are up to date;
- Ensure that everyone connected with the school is aware of this policy;
- Attend training related to this policy;
- Annually report to the Governing Body on the success and development of this policy

Teachers will:

- Comply with all aspects of this policy;
- Attend SKEWs delivered by the MMSL;
- Develop mathematical fluency, numeracy and mathematical understanding in all subjects;
- Develop pupils' spoken language, reading, writing and vocabulary in all subjects;
- Plan and deliver good (medium impact) to outstanding (high impact) lessons;
- Plan differentiated lessons which are interactive, engaging, of a good pace and adhere to the six phase lesson structure as defined in the teaching and learning policy for MM;
- Have high expectations for all children and will provide work that will extend them;
- Assess, record and report on the development, progress and attainment of pupils;
- Achieve high standards;
- Carry out number superstar assessments weekly and keep a record of scores;
- Celebrate the success of pupils in lessons, by awarding stars, and in celebration assemblies;
- Implement the school's equalities policy and schemes;
- Report and deal with all incidents of discrimination;
- Attend appropriate training sessions on equality;
- Report any concerns they have on any aspect of the school community
- Set homework using Learning With Parents online in accordance to the homework policy

- Keep TT Rockstars allocations up to date so children can progress in their timetable learning.

Pupils will:

- Be encouraged to work in partnership with the school by making decisions and exercising choice in relation to their educational programme;
- Listen carefully to all instructions given by the teacher;
- Ask for further help if they do not understand;
- Participate fully in all lessons;
- Participate in discussions concerning progress and attainment;
- Treat others, their work and equipment with respect;
- Take part in questionnaires and surveys;
- Complete next steps in their books.

Parents/carers will:

- Be aware of and comply with this policy;
- Be encouraged to take an active role in the life of the school by attending:

    - Parents and open evenings;
    - Parent-teacher consultations;
    - Curriculum development workshops.

- Be encouraged to work in school as volunteers;
- Be informed via termly jigsaws of their child's topics;
- Asked to provide suggestions and ideas for improving this subject;
- Be asked to take part periodic surveys conducted by the school on curriculum development;
- Encourage effort and achievement;
- Encourage completion online homework;
- Provide the right conditions for homework to take place;
- Expect their child to complete homework on time;
- Join the school in celebrating success of their child's learning at celebration assemblies;

Teaching and Learning Style

We use a variety of teaching and learning styles in order to develop children's knowledge, skills and understanding.

Curriculum Planning and Organisation

Teachers collaborate on the planning of the subject to ensure parity in provision and to share expertise. Curriculum planning is managed in three phases namely:

Long Term Planning

- Details what is to be taught over the year;
- Provides teaching guidelines and overall objectives for each year group for the whole year
- For all year groups this is set out in the program of study

Medium Term Planning

- Organises the subject into termly or half-termly sections;
- Is more detailed and the objectives are more specific in nature;
- Is developed by the teachers, who respond to the needs of their pupils;
- Ensures a balanced distribution of work is undertaken across each term;
- Plans opportunities for consolidation weeks within the term.

Short Term Planning

- Details the subject curriculum over the week;
- Plans lessons in detail with specific class objectives;
- Sets individual learning goals for each pupil;
- Details what should be covered in maths meetings which take place at least 3 times a week in all year groups.

Lesson structure

Mathematics Mastery lessons follow a 6 part structure. This keeps the lesson pacey, gives flow and allows more opportunities to teach creatively, give feedback and assess learning. Maths lessons in Mathematics Mastery year groups will follow the six-part lesson as follows:

- Phase one: Do now - This is a quick task all pupils can access without any teacher input as an introduction to the mathematics lesson.

- Phase two: New learning - The new learning segment introduces the main mathematical concepts for the day's lesson.

- Phase three: Talk task - The talk task segment of the lesson practises the new learning by talking about maths with key vocabulary.

- Phase four: Develop learning – The develop learning segment builds on the new learning and develops a deeper understanding of the maths concepts of that lesson.

- Phase five: Independent learning - The independent task practises learning independently through solving problems.

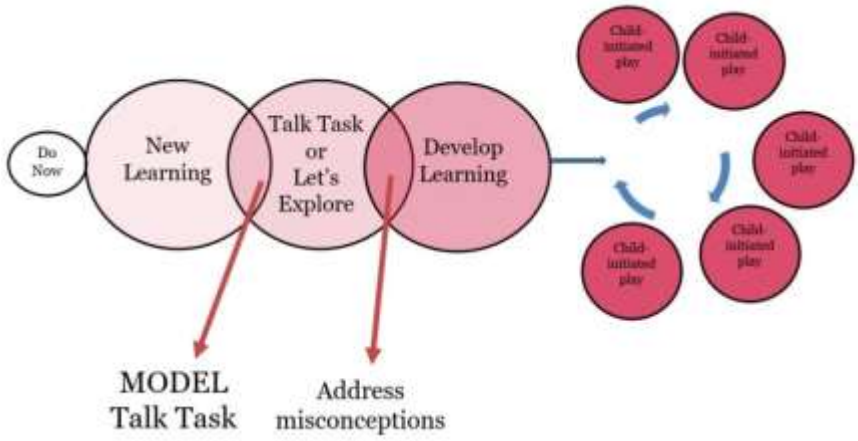
- Phase six: Plenary - The Plenary segment recaps on the lesson, checking understanding and celebrating success.

In addition to the six-part lesson structure there will be 'transitions'. Transitions are times when pupils move from place to place or activity to activity. Pupils spend a lot of time in transitions – by necessity – and when they are in transitions they are always learning. As every second counts in a Mathematics Mastery lesson, transition activities are a very important component of our approach.

Between tasks, children sing songs or do call and response activities with the teacher. These activities are exciting for the pupils, and helps to keep them focused on the learning and the lesson flowing. It is imperative that the transitions are smooth, snappy and meaningful, so these will need a lot of practice initially. Although these may seem repetitive at first, this repetition will aid learning, and eventually each lesson will use a variety of transitions.

The model for Reception classes is slightly different. They either choose to follow a child-initiated model or a focus group model.

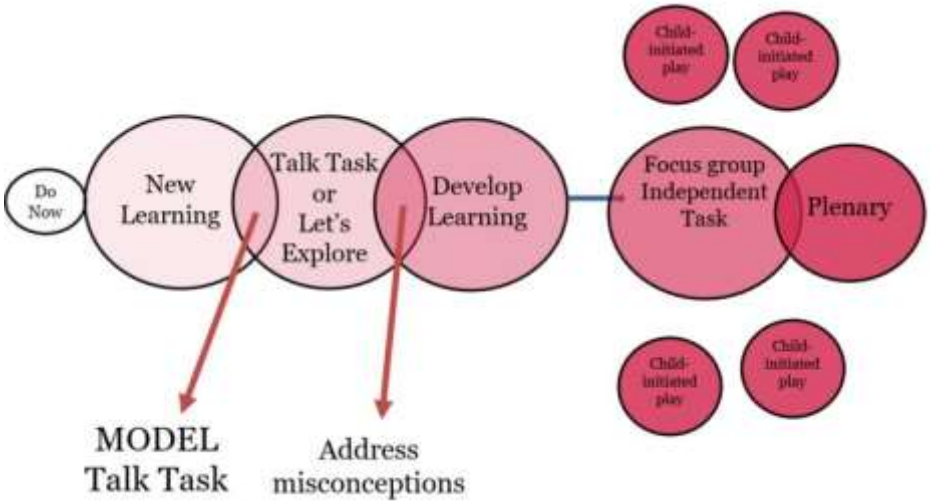
Child-initiated model



A focused adult-led session with direct teacher input and has high language expectations. The teacher and TA role-model the Talk Task for pupils.

When working in the continuous provision, adults observe and question pupils and pose problems for pupils to solve that specifically relate to the key learning from the adult-led session or from the unit

Focus group model



A focused adult-led session with direct teacher input and has high language expectations. The teacher and TA role-model the Talk Task for pupils.

Adults plan one focus group activity that incorporates the key learning from the unit.

Adults plan the continuous provision to enable pupils to explore the key learning from the unit through child-initiated play.

Inclusion

We believe that we are an educationally inclusive school as we are concerned about the teaching and learning, achievements, attitudes and well-being of all our pupils.

We work hard to offer equality of opportunity and diversity to all groups of pupils within school such as children:

- From both sexes;
- Who have Special Educational Needs;
- Who are looked after;
- From minority faiths, ethnicities, travellers, asylum seekers, refugees;
- Who are gifted and talented;
- Who are at risk of disaffection;
- Who are young carers;
- Who are sick;
- Who have behavioural, emotional and social needs;
- From families who are under stress.

We believe we have a duty to ensure that all children have equal rights to the opportunities offered by education and that all children will be encouraged to fulfil their potential in their academic, physical and creative achievements.

We want to give all children the right to access high quality educational experiences, to take part in a broad and balanced curriculum and to be part of the social life of the school.

We recognise that within the school we have more able, gifted and talented children. We believe that:

- More able children demonstrate a higher ability to exceed age related expectations than average for the class and often require differentiated tasks and opportunities to learn through challenges.

We aim, where possible, to attend any G&T workshops available to us.

We have an even greater obligation to plan and deliver well-structured lessons with appropriate assessment plus ambitious targets for pupils who have low levels of prior attainment or come from disadvantaged backgrounds.

We want pupils with identified special educational needs to have full access to all subjects of the National Curriculum with teachers planning lessons that have no barriers to pupils achieving and with appropriate targets relating to the subject.

Also, we have a duty to cater for pupils whose first language is not English by planning teaching opportunities to help them develop their English and to gain full access to the National Curriculum.

Differentiation

Differentiation is best defined as 'the process by which differences between learners are accommodated so that all students in a group have the best possible chance of learning.' (Geoff Petty)

The main purpose of differentiation is to challenge and raise standards of learning by ensuring that curriculum objectives are accessible to all our children despite their backgrounds or abilities. We see differentiation as a form of integration and not exclusion.

Differentiation must reflect the learning objective and can be achieved in a variety of ways either by task, by support or by outcome and should be chosen by fitness for purpose.

We want all children to achieve success, therefore we will ensure they are given differentiated tasks that are matched to their level of attainment so that they can demonstrate successfully what they know, understand and can do.

The main feature of effective differentiation is good planning resulting in effective teaching and learning with children making good progress. Also we expect to see in all classes interested, well-motivated children responding to challenges, children working productively on task and being aware of their own progression.

At Coppice, we aim to have challenge for all pupils by not limiting their learning with a set task. The next level of challenge is always made available to children and each lesson has an open ended challenge where teachers draw on resources such as Nrich, Mathematical challenges for the most able, White Rose and Maths Hub.

Links with ICT/Computing

The use of information and communication technology will promote, enhance and support the teaching of this subject area wherever possible.

The TT Rockstars app is on all kindles and available via the internet browser. Children are encouraged to play this at home. Homework is set online using Learning with Parents.

Assessment for Learning

Teachers will:

- Carry out continuous assessment;
- Use short-term assessments matched to the teaching objectives to adjust their planning;
- Carry out medium-term assessments to measure progress against key objectives to adjust planning;
- Identify barriers to learning and address this through verbal feedback or a next step;
- Carry out long-term assessment to assess progress against school and national targets;
- Carry out pre/post assessments for each unit;
- Carry out termly assessments;
- Administer national tests and assessment in Y2, Y4 and Y6;
- Use long-term assessments to help them plan for the next academic year;

Inform parents and carers of their child's progress and targets;
Update the tracking system (target tracker) regularly.

Monitoring the Effectiveness of the Policy

The practical application of this policy will be reviewed annually or when the need arises by the coordinator, the Head teacher and the link governor.

A statement of the policy's effectiveness and the necessary recommendations for improvement will be presented to the Governing Body for further discussion and endorsement.

Raising Awareness of this Policy

We will raise awareness of this policy via:

- The school website;
- The Staff Handbook;

- Meetings with parents such as introductory, transition, parent-teacher consultations and periodic curriculum workshops;
- Reports such annual report to parents and Head teacher reports to the Governing Body.

Training

All school personnel:

- Have equal chances to attend training, career development and promotion;
- Receive training on this policy on induction which specifically covers:

    - National Curriculum programmes of study and attainment targets for all subjects;
    - Teaching and learning;
    - Planning;
    - Assessment;
    - Key skills.

- Receive periodic training so that they are kept up to date with new information;