

Stanion C.E Primary School

Maths Policy



Introduction

We aim to be a nurturing, inspiring school where all are enabled to achieve their best. Each child should know that they are valued for their individual worth. They should develop a mutual respect of others based on acceptance and trust. The school aims to serve its community by developing close links and by providing an education of the highest quality by developing the whole child within the context of Christian belief and practise.

'Love your neighbor as yourself' (Matthew 22:39)

Aims

At Stanion, we aim for all learners to be engaged in their Maths lessons. We want all learners to enjoy maths and be challenged by it. We recognize resilience and perseverance as key to solving problems and learning new strategies. We value the mistakes that learners make as part of the learning process and aim to develop a growth mindset in our learners. Learners are encouraged to review their own work and are taught that mistakes in their work are a positive thing.

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 have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- **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.

Planning

We ensure the National Curriculum and EYFS framework requirements are met through a broad and engaging learning experience. We challenge pupils with rich and sophisticated problems from a range of sources. We use White Rose, NRICH and NCETM materials as well as Rising Stars Maths for the More-Able and Problem Solving resources. Word problems and investigations provide context in a range of areas to raise the profile of Maths as a career choice and the importance of a good understanding of Maths. Pupils from disadvantaged backgrounds benefit from lessons which include a range of real life contexts. We link Maths and Global Citizenship to build real life links between Maths and the wider world.

The calculation policy and mental maths policy are implemented in all year groups to ensure a progression of core knowledge and to provide children with the opportunities to become number fluent. A skills policy ensures a progression of the core maths skills: imaging, expressing, organising, classifying, conjecturing, convincing, specialising and generalising. Long term knowledge is built through revisiting of the key areas throughout the year and across the key stages. New knowledge builds on the knowledge of the previous year and the methods and resources are used across year groups where appropriate. Representations are revisited across year groups with the context and content being adapted as appropriate.

Learner aspirations are raised through these opportunities and regular whole school problem solving days. Whole school Maths challenges encourage pupils to explore cross-curricular maths and support parents with implementing everyday maths at home.

We develop our learners' culture capital through the exposure to different cultures, global awareness, historical context and the use of quality discussion to form opinions and challenge stereotypes within these areas. The school learning behaviours: Community Cam, Engagement Eric, Independent India, Mindful Mo and Possibilities Parker are taught and rewarded within lessons. These develop the emotional intelligence desirable in the work place and support learning in all subjects. Learning is shared in weekly celebration assemblies and through the school newsletter. Termly class assemblies allow learners the opportunity to share their work with others.

Long term plans identify the areas of Maths that will be taught in each term along with any possible links across the Maths curriculum. Assessment objectives are mapped onto the LTPs for KS1 and KS2. Medium term plans are then produced by breaking down the objectives into smaller steps. Medium term plans identify the weekly objectives to be covered across a term along with any opportunities for linked learning and revisiting of the curriculum. Weekly plans identify opportunities for investigation and assessment. They are working documents annotated by staff to note progress and areas to reteach.

Daily planning is completed as a power point. Non Negotiables must be included:

- LI and small steps to success.
- Key vocabulary to be discussed/taught.
- Revisit of prior learning.
- New learning through a range of representations.
- Identification of resources to be used to support.
- Key questions
Impact
- Independent tasks
- Differentiation

In Reception, planning follows the LTP and is adapted from the Hamilton scheme of work and planning. More opportunities for the use of outside area is planned in as well extending the learning in the summer term to better prepare the children for year one. Adaptation varies depending on the cohort of children and their needs.

Weekly planning is taken from the Hamilton scheme and adapted to meet the needs of the cohort. Education city is used for whole class teaching and the lesson starters. Two lessons a week have whole class teaching and guided group tasks. The rest of the week consists of independent tasks.

EYFS

Teachers support children in developing their understanding of problem solving, reasoning and numeracy in a broad range of contexts in which they can explore, enjoy, learn, practise and talk about their developing understanding. Teachers offer opportunities for these skills to be practised, in order to give children confidence and competence in their use.

These Areas of Learning and Development include seeking patterns, making connections, recognising relationships, working with numbers, shapes, space and measures, and counting, sorting and matching. Children use their knowledge and skills in these areas to solve problems, generate new questions and make connections across other Areas of Learning and Development. Mathematical understanding will be developed through stories, songs, games and imaginative play.

Teaching and Learning

Over a series of lessons, there should be:

- Opportunities to revisit prior learning will be provided through a daily review.
- Development of fluency through practise and the use of different representations and models.
- Use of whole class choral counting.
- Explicit teaching of mental strategies following the new mental maths policy.
- Development of reasoning through problem solving, looking at misconceptions, intelligent practise and questioning.
- Opportunities for exploratory talk through a range of contexts including the use of talk partners and group roles.
- Teachers modelling their thinking out loud.
- Pupils are given opportunities to explain teachers' reasoning and misconceptions.
- Modelling and pupil use of the correct terminology.
- Opportunities to use and develop the Maths Super Powers.
- Progression through the targets for the correct year group.
- Learning is broken down into small connected steps.
- Scaffolding is used in the forms of thinking out loud, cue cards and checklists.
- Mini plenaries are used to check pupil understanding.
- Goal free questions are used.
- Same surface, different deep questions are used and explored.
- Misconceptions are identified and explored.
- Support in place for those who are struggling.
- Differentiation supports the cognitive load.
- Plans for moving pupils away from resources and scaffolds for support across the lesson sequence.
- Pupils not always working in set ability groups.
- Use of concrete and pictorial resources to reveal structure detailed in the calculation policy.

We build pupils' vocabulary through the teaching of subject specific language and the use of talk within lessons. Vocabulary is displayed within classrooms and knowledge mats in books are also used so that all learners can articulate their ideas. Learners use verbal reasoning and communication skills within their problem solving and work is often collaborative.

Mathematical Powers

All learners develop an understanding of the Maths Powers: Convincing, conjecturing, specialising, generalising, imaging, expressing, classifying and organising. They develop their reasoning ability and have opportunities to discuss and share their thinking.

Assessment and Record keeping

Assessment is continuous and ongoing.

Frequency	Ideas
Individual lessons	<ul style="list-style-type: none"> • Book targets • Revisiting of sticky knowledge through tasks • Pupils own sticky knowledge notes • Elicitation tasks. • Tapestry. • Eedi quizzes and Enigma Essence toolkit quizzes. • Vocabulary assessment. • Annotated planning • Independent assessment highlighted with yellow tab • Knowledge trackers • Self-assessment and evaluation.

Start/End of unit	<ul style="list-style-type: none"> • Baseline and end of strand formal assessment. • Problem solving challenges • Bsquared
Assessment week	<ul style="list-style-type: none"> • Puma assessments and pupil progress meetings • Moderation of books.
	<ul style="list-style-type: none"> • End of Key Stage SATs take place in Years 2 and 6.

Reception children are baseline assessed at the start of the year and their Early Learning Goals profile is updated throughout each term. Tapestry is used to collect and store evidence for all pupils. Evidence is tagged to the Early Learning Goal and builds an assessment profile for each child. Weekly assessment sheets are completed for every child for the Learning Goal covered in that week. These are stored with each child's profile document.

Children not making progress are supported in class and through intervention. They may need re teaching or extra practise. Where possible this will be provided the same day, before the next Maths lesson. Where gaps in learning are identified, Ready to Progress materials are used for intervention. Addacus resources may also be used to support number sense gaps.

Greater depth learning/Mastery means that pupils can solve a range of problems within an area of the maths curriculum that have different representations, contexts or models. They are able to use their own models and representations as well as explain their choices. They can identify and explain misconceptions and generalise rules. Pupils may be greater depth for one area of the maths curriculum and not for others. To judge a pupil at greater depth, this should be a best fit judgement.

Cross Curricular

We develop our learners' culture capital, within Maths, through cross curricular learning and whole school maths days including a focus on maths through art and, in the future, famous mathematicians. We will develop money week to support pupils with budgeting skills and look at how the government set budgets and taxes.

Mathematical skills are applied in topic work, art, design technology and science.

ICT

Opportunities to use ICT to support teaching and learning in Maths will be planned for and used appropriately.

Home/school Link

We aim to develop our wider Maths community and promote the fundamental British Values through parents being invited to attend whole school maths events and solve whole school maths challenges with their children as well as opportunities for learning with other schools in the community so that learners can be offered a wider range of experiences outside of our school learning space and with different learners from different backgrounds.

Tapestry and DB primary are used to share current Maths objectives being taught and covered at school along with useful links to support learners at home. Learners have access to Times Tables Rock stars at home from Year 2 upwards. Homework is set in KS1 and KS2 as appropriate. Parents evenings are held twice a year where Maths progress and targets are discussed and a written report is sent home once a year. Termly Maths challenges are set to the whole school to boost engagement in Maths at home.

Presentation

Books

- All books have targets in the front. They are identified and up to date.

- All pieces of work include a short date and a learning intention in the form of a question.
- Work is presented neatly with one number in each square.
- There is evidence of deepening of learning through a variety of representations of problems.
- There is evidence of problem solving and the use of the Maths Super powers. This may also be in the Maths class book or on Tapestry.
- There is evidence of the use of concrete and pictorial support being used by pupils to support where needed.
- There is evidence of a range of contexts including real world opportunities.
- Photographic evidence and observations to be recorded on Tapestry.
- Pupils complete WWW and EBI as well as a traffic light at the end of the lesson.
- Challenges are identified with a green sticker and are marked promptly.
- Corrections are highlighted in pink and identified with a blue sticker.
- Independent assessment is identified with a yellow sticker.
- Comments are initialed by pupils. (KS2)
- Marking makes reference to the Maths super powers where appropriate and develops pupils reasoning.

Displays

- Have the maths super powers
- Should model concrete and pictorial resources to support learning
- Should include key vocabulary to support learning

Inclusion

We aim to meet the needs of all, taking into account gender, ethnicity, culture, religion, language, disability, sexual orientation, age and social circumstances.

SEND

We aim for all learners to make expected progress from their starting points and use targeted intervention to support this if needed. All learners, including SEND pupils, benefit from the use of good quality concrete and pictorial resources to deepen understanding and support their progression.

We aim for the majority of our learners to move through the program of study at broadly the same pace. Differentiation is provided through the use of concrete and pictorial resources, scaffolding of tasks, use of mastery questions to deepen thinking, displays and prompts within the classroom, acceleration through tasks, outcomes, the amount of support and guidance to complete tasks, the use of peer support and pre-teaching. Those who are not sufficiently fluent with earlier material may undertake a revised program of learning to consolidate their learning, including through additional practise, before moving on.

Learners are encouraged to evaluate their needs and select levels of support that are appropriate for them. Groupings for differentiation are fluid where pupils are completing work with the appropriate level of support for their ability in that lesson for that particular Maths topic. Learner gaps are closed within lessons and through targeted intervention. This can be informal or through a program of intervention identified on provision maps. We recognise that differentiation through the use of different tasks risks widening gaps between pupils in the class.

Monitoring and Evaluation

Monitoring and evaluation of Mathematics teaching in the School is carried out by the Mathematics Co-ordinator and the Head teacher. When possible discussion with children will take place along with scrutiny of work.

Role of the Subject Leader

The subject leader will be responsible for improving standards of teaching and learning in Mathematics through:

- Monitoring of Pupil progress
- The quality of the learning environment
- Taking the lead in policy development
- Auditing and supporting colleagues in their CPD
- Purchasing and organising resources
- Keeping up to date with Numeracy developments

Review

The governing body reviewed this policy on Thursday, 28th September 2023.

Review Date – September 2024

Signed _____

Headteacher

Signed _____

Chair of Governors