



## Weaverthorpe C of E Primary School

### Maths Policy

Psalm 23

‘The Lord is my shepherd. He guides me in the right paths as he has promised.’

Adopted by: Full Governing Board

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## Vision and values

At Weaverthorpe School we are on a lifelong journey together. We look out for one another with love, kindness and friendship at the heart of what we do. We are creative in our teaching and learning and value our own community, whilst learning and experiencing the world beyond.

We foster courage and resilience in all we do and are committed to developing a love of learning. We ensure all are valued as we live and work together in our Christian family.

## Introduction

At Weaverthorpe Primary School, we believe mathematics equips pupils with the uniquely powerful set of tools to understand the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. We endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

At Weaverthorpe, we strive for excellence in mathematics achievement throughout the school and teaching is geared towards enabling each pupil to develop within their capabilities. We aim to help children achieve this by developing their confidence to talk about mathematics and be able to explain HOW and WHY they have arrived at a particular answer or conclusion.

## Our aims for the children

- To be fluent, reason, explain mathematically and solve problems
- To challenge children and take risks in their learning.
- To develop an enjoyment of learning through practical activity, investigation, mastering a skill, exploration, and discussion
- To develop confidence and competence with numbers and the number system
- To have positive attitudes towards mathematics with ever increasing confidence, independence, perseverance, and resilience.
- To develop the ability to solve problems through connecting ideas, decision making and applying their mathematical skills in a range of contexts, including other subjects such as science and geography.
- To understand the importance of mathematics in everyday life, especially in relation to essential life skills, such as telling the time and understanding money.

## Intent

- An understanding of the important concepts and an ability to make connections within mathematics.
- A broad range of skills in using and applying mathematics.
- Fluent knowledge and recall of number facts and the number system.
- Fluency in performing written and mental calculations.
- The ability to show initiative in solving problems in a wide range of contexts, to reason, generalise and make sense of solutions.
- The ability to think independently, persevere when faced with new challenges and to work with others to succeed.
- To embrace the value of learning from mistakes.
- A wide range of mathematics vocabulary.

## Cross Curricular themes

All the components of the mathematics curriculum are also developed during other lessons and many school activities. Children are encouraged to continuously develop these skills and all teaching staff are helping the children's understanding of when they are learning specific subjects. Although maths is mainly taught as a separate subject, following the White Rose Maths scheme, every effort is made to link maths with other areas of the curriculum. Our Cornerstones curriculum provides ideas about how this can be achieved, and cross curricular maths should be regularly taught and evidenced in topic books. Maths needs to be experienced beyond the classroom where possible and made relevant to the lives of children.

## Feedback

To ensure that each child is clear about the next steps in their learning, teachers will give the children regular verbal feedback in which they learn to talk about what they can do well and what they need to do to improve their work. Teachers will also mark the children's books and demonstrate improvements that can be made where necessary. This process will be monitored through pupil discussions.

## Tracking Pupils Progress

- The teacher tracker for each pupil is part of the White Rose Maths scheme within the Cornerstones programme.

- The teachers will complete the teacher tracker at the end of each term.
- When a child has demonstrated competence in a particular skill, it is marked off on the tracker with the date.
- At the end of each term a copy of pupil progress can be seen online or printed off.
- This evidence is used to help the teacher give each child a score on the 9 point scale at the end of each data collection point.
- The information is used to inform future planning to meet pupil needs.

## Monitoring

The Mathematics lead, headteacher and link governor regularly monitor and evaluate the work achieved through lesson observations, learning walks, reviewing children's books and pupil perceptions. Through this staff CPD and resource needs are improved.

## Inclusion and Equal Opportunities

The ability to achieve a good standard in all areas of mathematics is fundamental to children's development as independent learners. We believe that all children are entitled to high quality teaching and learning, and we embrace the philosophy of inclusion and equality. All children at Weaverthorpe Primary School are provided with opportunities to develop their skills in mathematics at their level, through carefully planned teaching in small ability groups. Interventions are in place to further support children with additional needs in a particular area. The needs of children on the SEN register are planned for and are detailed on individual provision maps. Children at Weaverthorpe Primary School will learn through a rigorous approach to teaching the mathematics curriculum.

## Teaching Mathematics

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.

At Weaverthorpe we are committed to develop a love of mathematics and to follow the White Rose Mixed Age Schemes of Learning. These contain a long-term plan and small steps of progression where the blocks are broken down into a series of manageable steps.

Teachers record their planning on weekly plans ensuring that a balance of the 'basics' (fluency) has been taught as well as reasoning and problem solving. We supplement these small steps using a variety of resources, tailored to the needs of our children and differentiated as required to provide as much challenge as possible.

Our calculation policy (taken from White rose Maths) states the strategies that should be taught in each year group and this document is used as a starting point for 'what and how' to teach strategies.

Lessons are as hands on as possible using a wide range of equipment to assist the children with their learning. Mathematics is used to set tasks for the children to complete both in class and at home. Class teachers and the maths co-ordinator monitor the children's results and the progress made.

## Mathematics in School

Maths is taught daily in each class with lessons lasting approximately 45 - 60 minutes and they usually follow a similar format. Lessons begin with 5-10-minute oral/mental starter that allows children to apply skills learnt and recall number facts. The main part of the lesson involves putting the learning in context and applying it to the outside world, developing new skills, reasoning and problem solving. Ideas are shared, misconceptions addressed, and children are active learners.

Children work on the same objective, however there is variation within the tasks and work is differentiated appropriately as required. Teachers set termly targets which allow children to focus on the key concepts identified.

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. Decisions about when to progress will always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems to develop mastery before any acceleration through new content. Those who are not sufficiently fluent with earlier material will consolidate their understanding, including additional practice, before moving on.

## Marking and Feedback

- Whenever possible, children should be present when work is marked.
- Teachers use a green pen when marking the children's work
- Correct answers are marked with a tick.

- Incorrect answers are marked with a cross.
- Conceptual errors will result in a “work with me” comment and the teacher will work with the child to correct the misconception; this will be evident in subsequent work.
- Written comments must reflect learning or next steps and should be used regularly. Examples of written feedback that requires an action from the child in their blue pen may include: Is this always true and how do you know? Can you explain how... continue the pattern... now try this one....justify your reasoning... can you spot .... Can you prove why....can you correct the mistake?
- House points should be used for reward and recognition.
- When lengthy discussions have been given verbally, VF (verbal feedback) will be written on the child’s work.

## Assessment of Mathematics

Formative assessment is carried out by teachers during lessons and used to inform and adapt future planning for the needs of the class.

In addition, children complete:

- Baseline assessments at the beginning of each academic year so that teachers can identify gaps in knowledge which can be quickly addressed.
- Termly White Rose progress checks which are analysed to measure the progress of the children and how well they have understood the concepts that have been taught.
- Children are assessed termly in Year 2 - 6 using online standardised Rising Stars Progress in Understanding Mathematics Assessment (PUMA).
- The maths subject leader analyses data from assessments to identify areas of strength and areas for development within a year group and as a school.

Teachers are continually monitoring the performance of the children and will adapt their planning to ensure it meets the children’s needs.

## Mathematics at Home

Written maths homework is completed and marked in homework books. Bash maths and Top marks activities are set for children, to support classroom learning and some are completed at home.

All children in Years 1 – 6 also have their own login for Times Table Rockstars which can be accessed by the children at home.

## Role of the subject leader

At Weaverthorpe Primary School the maths subject leader provides support and advice to other members of staff, monitors the quality of teaching and is responsible for evaluating and reviewing the long- and medium-term planning and provision for maths across the school. The subject leader attends any training and primary maths network meetings and then disseminates the information to staff to extend their knowledge and expertise. The maths leader, headteacher and link governor work closely to track the progress in maths across the school. They identify achievement gaps and think of suitable ways to try and narrow these. The evidence gathered is used to form part of the school development plan.