

# Churchfield C.E. Primary Academy

*Walking together in the light of the Lord, we aim to create a supportive and safe environment where we encourage each other to be the best we can be. At Churchfield we learn to take pride in our successes and aspire to make a positive difference for ourselves, the local community, and the wider world.*



## Maths Intent, Implementation and Impact

### Curriculum Intent

The national curriculum states *'Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas.'*

Therefore, the intention for mathematics is to ensure that all pupils become fluent, reason mathematically and solve problems. *'Pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.'*

At Churchfield C.E. Primary Academy, we teach our children how to make sense of the world around them by developing their ability to calculate, reason and solve problems. We want our children to recognise and understand relationships and patterns in numbers in the world around them. We expect Mathematics to be utilised as a tool beyond the daily Mathematics lessons and beyond the classroom.

- At Churchfield a typical Maths lesson will provide the opportunity for **all** children as: Lesson objectives are taken from the National Curriculum statutory guidelines and activities are differentiated
- Our children have access to high quality lessons that are both challenging and enjoyable.
- We provide our children with a variety of mathematical opportunities, which will enable them to make the connections needed to enjoy greater depth in learning.
- We ensure children are confident mathematicians who are not afraid to take risks.
- We fully develop independent learners with inquisitive minds who have secure mathematical foundations and an interest in self-improvement.

### Curriculum Implementation

Classroom sessions allow all children to practise their fluency and apply new skills in different contexts through reasoning and problems solving. The White Rose Small Steps guidance enables pupils to explore and build upon new and existing concepts, then apply these new skills. Teacher lead input and modelled activities are used to support and guide the children's learning, allowing them to then have the confidence to work independently. Mathematical vocabulary is also modelled by Teaching staff and the pupils are encouraged to use this vocabulary in discussions, when answering questions or providing feedback.

To best support the needs of our learners, a variety of concrete, pictorial and abstract methods are used in the EYFS, KS1 and KS2, resources are available in classrooms and can be accessed by all learners throughout the sessions as and when necessary. Learning environments have also been designed to support and scaffold learning, these are updated with each new unit delivered and contain useful examples, strategies and vocabulary.

To aid recall and address misconceptions or areas of difficulty, flashback lesson starters are used to recap prior learning and embed this knowledge.

Pupils also have access to mathematical challenges, guided by the teacher or accessed independently in individual classrooms.

Online resources are used both in school and at home to aid and support pupils' development in the times tables using TT Rockstars and in other key curriculum areas using Mathletics.

### Planning

Lessons are planned and sequenced so that new knowledge and skills build on what has been taught before. Teachers loosely follow the White Rose Maths Hub materials, Termly Overview and Schemes of work to support their planning.

Staff also refer to the **Calculation Policy** when teaching formal methods, understanding that sometimes children find their own efficient methods along the way.

Each week there is a focus on Times Tables to give children the opportunity to practise and improve their rapid recall skills with facts  $12 \times 12$ . Children enjoy the weekly challenge and strive to improve their time and score each week. All children also have access to their own personal account of 'Times Tables Rockstar'. Arithmetic sessions also take place in Year 1, 2, 5 and 6 to develop and embed fluency when using calculation strategies using the four operations.

### Teaching

At Churchfield C.E. Primary Academy we employ a variety of teaching styles and opportunities for children to learn and develop their Mathematical skills and competencies, both individually and collaboratively. The main aim of all lessons is to develop children's knowledge, understanding and skills, applying these to a variety of contexts.

One of the key elements in lessons throughout the school should be on developing the children's mental calculation strategies alongside developing the children's written calculation strategies as laid out in the Written Calculation Policies for addition, subtraction, multiplication and division.

Our pupils are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols.

Concrete – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.

Pictorial – children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.

Abstract – With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

## Curriculum Impact

At Churchfield C.E. Primary Academy we expect that by the end of Y6 our children:

- become **fluent** in the fundamentals of mathematics
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations.
- **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication.

In order for this to happen, the Mathematics leader, the Principal and the Senior Leadership Team take responsibility for the monitoring of the Mathematics curriculum and the standards achieved by the children. The Mathematics leader will monitor for appropriate pitch and progression at least once every half term.

This monitoring takes the form of:

1. lesson observations and feedback;
2. learning walks and pupil voice conversations;
3. planning scrutiny followed by support where necessary;
4. book scans on a frequent basis;
5. termly data analysis;
6. moderation within the St Chads Academy Trust to ensure each school has the same standards

Formative assessment takes place during lessons and when marking books in the form of discussion, observation, written and oral feedback.

Class also Teachers administer end of unit assessments and End of Term assessments in line with the 2022 revised edition of White Rose Primary Maths scheme of learning.

These assessments are used to identify any strands or particular subject areas where misconceptions may have arisen, and learning is less secure. These areas are then targeted through intervention and lesson starters to recover and secure the pupils understanding.

Statutory tests will be taken at the end of Year 2 and 6 and in EYFS assessments are carried out in September and July to monitor progress made.

Teachers are set annual targets for their children's progression and attainment as part of their performance management. Data is collected termly and reported to SLT All teachers contribute to a termly Pupil Progress Meeting where the data is analysed, and targets are made by highlighting pupils who may need some additional support with their learning.