

## Burton Leonard Church of England (VC) Primary School



### Mathematics Policy 2020-23

#### Intent

Mathematics is an important part of children's development throughout school, right from an early age. We intend on delivering a curriculum which:

- Inspires children and enables them to achieve in mathematics following a mastery curriculum approach.
- Gives each child a chance to believe in themselves as mathematicians and develop the power of resilience and perseverance when faced with mathematical challenges. To inspire robust and resilient problem solvers who understand the importance of collaboration and teamwork in the pursuit of success
- Recognises and respects that mathematics underpins much of our daily lives
- Engages all children and entitles them to the same quality of teaching and learning opportunities as they strive to achieve their best
- Makes rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- Provides equal opportunities for children to apply their mathematical knowledge to other subjects
- Is in line with the expectations in the National Curriculum 2014

#### Implementation

Our mastery approach to the curriculum is designed to develop children's knowledge and understanding of mathematical concepts from the Early Years through to the end of Y6.

#### Teaching and Learning, Content and Sequence

In our school, we follow the national curriculum and use White Rose Schemes of Work as a guide to support teachers with their planning and assessment. The Calculation Policy is used within school to ensure a consistent approach to teaching the four operations over time.

At the start of each new topic, key vocabulary is introduced and revisited regularly to develop language acquisition, embedding as the topic progresses. All lessons begin with oral work for key fact fluency and a short assessment to support retrieval practice and develop long-term memory. Children's skills in mental calculation are developed by ensuring they have a repertoire of known facts such as times tables, corresponding division facts and number bonds and strategies to draw upon.

Children are taught through clear modelling and have the opportunity to develop their knowledge and understanding of mathematical concepts. The mastery approach incorporates using objects, pictures, words and numbers to help children explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding at all levels.

Children move through the different stages of their learning at their own pace.

Children who have shown their understanding at a deep level within the unit, will have opportunities to apply these skills in a greater depth activity. This challenges children and ensures that children are using more than just one skill to be able to answer the mathematical problems.

Reasoning and problem solving are integral to the activities children are given to develop their mathematical thinking.

Resources are readily available to assist demonstration of securing a conceptual understanding of the different skills appropriate for each year group.

Children are encouraged to explore, apply and evaluate their mathematical approach during investigations to develop a deeper understanding when solving different problems and puzzles

A love of maths is encouraged throughout school via links with others subjects, applying an ever growing range of skills with growing independence.

Children with additional needs are included in whole class lessons and teachers provide scaffolding and relevant support as necessary. For those children who are working outside of the year group curriculum, individual learning activities are provided to ensure their progress.

### **Leadership, Assessment and Feedback**

Assessment informs the teaching and learning sequence, and children work on the objectives they are assessed as being at, with pre and post teaching available within a 'keep up not catch up' culture.

Feedback is given on children's learning in line with our Marking and Feedback policy. Formative assessment within every lesson helps teachers to identify the children who need more support to achieve the intended outcome and who are ready for greater stretch and challenge through planned questioning or additional activities.

Summative assessments are completed at the end of the academic year and reported to parents in the end of year report.

The Headteacher will:

- Set high expectations and monitor teaching and progress;
- Encourage a whole school approach, keeping parents, governors and all support staff well informed;
- As the Subject Leader, support individual teachers
- Regularly review the mathematics action plan

Governors will:

- Be well informed through the leadership of the Headteacher as Mathematics Subject Leader and the Maths Governor
- Support the staff in implementing the school's policy for mathematics
- Monitor and review progress on the Mathematics Action Plan

The Subject Leader will:

- Lead by example showing understanding of the subject
- Offer support to teachers in planning, teaching and assessment
- Monitor and evaluate teaching and progress
- Identify training and development needs, plan and deliver training and development needs

Teachers will:

Use a range of teaching and learning styles to incorporate

- Direct teaching
- Whole class oral/mental sessions
- Group/paired work
- Individual work;
- Multi- sensory learning approaches
- Pre and post teaching
- Use the National Curriculum objectives to aid planning using the yearly objectives and programmes of study
- Give homework activities in line with the school policy (See Homework Policy)

In the daily mathematics lesson teachers will:

Share clear key learning questions and steps to success with the children as appropriate;

- Provide daily practice of mental skills including counting, rapid recall, newly learned facts and calculation strategies
- Maintain good pace and use highly effective questioning
- Use accurate mathematical vocabulary
- Engage pupils in challenging differentiated activities using a range of resources, including computing

The SENCO will:

- Support the Mathematics Subject Leader and teachers in dealing with children with special needs and encourage whole class inclusion where possible
- Use the detailed objectives when preparing Personal Provision Maps and target setting

Support staff will:

- Attend training for Mathematics where appropriate
- Have a clear understanding of their role in each part of the lesson
- Share the key learning question and success criteria for each lesson and know the key vocabulary to be developed
- Be involved in the Marking and Feedback process by giving clear oral feedback within lesson

Parents will:

- Be encouraged to develop positive attitudes to Mathematics and actively support their children when homework is given
- Be well informed of their children's progress through annual reports and parent's evenings
- Be invited to Open Book evenings to share learning, be encouraged to ask staff how school teaches mathematics, be invited to attend maths workshops in school

Inclusion

At our school we teach maths to all children, meeting ability and individual needs. We are a 'dyslexia friendly' school, providing a broad and balanced education to all children. Through our maths teaching we provide learning opportunities that enable all pupils to make at least good progress. We strive hard to meet the needs of those pupils with Special Educational Needs, those with disabilities or those with special gifts and talents. We do this by setting suitable learning challenges and responding to each child's different needs. We work across the cluster to provide extended opportunities for children to explore mathematical challenges together.

Early Years Foundation Stage

We teach Maths in EYFS as an integral part of the topic work covered during the year. We relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals, ELG 11 – Numbers and ELG 12 – Shape, space and measures. Children can explore their mathematical thinking and develop skills through our play based learning environment both indoors and outdoors.

Assessment

Children demonstrate their ability in Maths in a variety of different ways. Teachers will assess children's knowledge by making informal judgements during lessons. The teacher and teaching assistant assesses the work and uses this information to plan for future learning. Written or verbal feedback is given to the child to help guide his or her progress. Children are encouraged to make judgements about how they can improve their own work. We value peer and self assessment as a learning tool. Steps to success are clearly demonstrated and pupils are encouraged to evaluate their own learning, learn from mistakes and look at next steps in learning.

## **Impact**

- Children demonstrate a quick recall of key facts and procedures. Fluency skills enable children to use numbers with confidence in a range of contexts and persevere in seeking solutions being confident in learning from mistakes.
- Children take some responsibility for their own learning in self assessment AfL
- Children show confidence in believing that they will achieve.
- The flexibility and fluidity to move between different contexts and representations of maths.
- The chance to develop the ability to recognise relationships and make connections in maths lessons.
- Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can
- independently apply the concept to new problems in unfamiliar situations.
- Children show a high level of pride in the presentation and understanding of their work
- Children reason mathematically, follow a line of enquiry, develop an argument, justify and prove using mathematical language with confidence
- Use their knowledge to solve problems, see patterns, make predictions, present information clearly, interpret data;
- Give oral explanations of their methods.

Subject Leader – Amanda Townson

Reviewed Autumn 2020  
Next review Autumn 2023

Amanda Townson

A handwritten signature in black ink, appearing to be a stylized version of the name 'Amanda Townson'.