

Mathematics Vision

The **vision** of Mathematics at Holy Trinity is one that **values**:

- Secure **basic skills** in **number and calculation**;
- A **mastery** of the mathematics curriculum;
- **Confidence, independence** and acceptance of **Mathematical challenge**;
- Understanding of **Mathematics in the wider world** and Mathematical **experiential learning**;
- Deep understanding of **fluency, reasoning** and **problem solving**;
- Awareness of the importance of **intelligent practice**;
- Effective Mathematical **communication** across the **whole school community**;
- Mathematics as a key aspect of **life-long learning**.

To work towards this vision and ensure a consistent approach to high provision of mathematics throughout the school we aim:

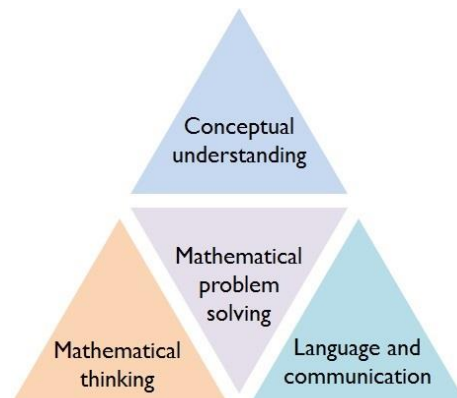
- To **continuously adapt** to the **changing needs** of children at Holy Trinity School;
- Develop a **growth mindset** about ability to learn mathematics;
- To deepen understanding by ensuring that time is given for all children to have the ability to **master** mathematics;
- To instill **confidence** and **enjoyment** through the development of an **'I can do' culture**;
- To provide **daily challenges** to practice basic skills relating to number, calculations and problem solving;
- To continually strive to **engage** and **support parents** to develop their skills, knowledge and understanding of Mathematics;
- To tailor **personalised learning** to meet the needs of all children through rigorous **assessment for learning**;
- To provide **meaningful, experiential learning opportunities** to aid deep understanding of Mathematical concepts and integrate and apply mathematical skills and knowledge within the framework of a **creative and skills based curriculum**;
- To utilise **ICT purposefully** in the learning of Mathematics;
- To fulfil the requirements of the National Curriculum through the guidance of the **Hartlepool Attainment Outcomes** and the Primary Framework for Mathematics to ensure that the children acquire appropriate skills, knowledge and understanding of: **Numbers and the Number System, Calculations, Solving Problems, Measures, Shape and Space and Handling Data**.

Mastery

At Holy Trinity C of E Primary School we follow the Mathematics Mastery Approach to teaching Mathematics

This approach has mathematical problem solving at its heart and has three key principles, we teach children to:

1. Use spoken and written **language** with confidence and clarity to explain and justify mathematical reasoning.
 - Every lesson involves children explaining mathematics.
2. Have a deep conceptual **understanding** of mathematical concepts.
 - This is achieved through covering fewer topics in greater depth. Pupils master concepts rather than learning procedures by rote. They do this using concrete objects and pictures before moving to abstract symbols (numbers and signs).
3. Develop **mathematical thinking**, including generalising, classifying and comparing, and modifying.



Teachers reinforce an expectation that all pupils are capable of achieving high standards in mathematics. The large majority of pupils progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention. Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge. Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts in tandem. Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring intervention so that all pupils keep up.

Our staff have high expectations of all children, irrespective of ability, and encourage them to be successful and achieve their full potential. Our aim is to ensure challenge for all.

Children are encouraged to have a growth mindset about their ability to do mathematics.

Encouraging children to 'have a go' is seen as paramount. We aim to develop the mantra that: 'it's okay to be stuck because it is fantastic when you get unstuck!' In some lessons children 'self-differentiate' and choose the level of challenge right for them. In other lessons, teachers direct children to the correct level of challenge based on their assessment in the initial phases of the lesson.

- Differentiation of tasks is done in various ways:
 - Open ended questioning and activities which allow more able children to offer more sophisticated mathematical responses
 - Stepped Activities which can be accessed at different steps, supporting and challenge all
 - Recording e.g. allowing some children to give verbal responses and photographing their learning
 - Resourcing e.g. Use of cubes, 100 squares, number lines, mirrors to support some children
 - Grouping according to ability so that the groups can be given different tasks when appropriate. Activities are based on the same theme.

Part of independent work often involves some focused, targeted group work from the teacher. However groupings are 'fluid and flexible' based on the children's performance in a previous lesson or the beginning of that particular lesson.

Where Teaching Assistants are available, they are fully briefed before the lesson and use the same teaching methods modelled by the teacher to support individuals or groups. In some cases they may also model concepts to the class allowing the teacher to assess particular groups of children in more detail and identify their next steps.

Role of the Subject Leader

To ensure that **all members of the school community understand the vision of Mathematics** at Holy Trinity and to lead, challenge and support all in achieving the vision by:

- Ensuring curriculum policies, guidelines and resources are well organised, reviewed, updated and easily accessible;
- Maintaining clarity of expectations in relation to planning, assessment and teaching and learning;
- Developing standards in teaching and learning;
- Identifying and addressing strengths and areas for development;
- Informing, supporting and providing development opportunities.

Achieving the Mathematics Vision

Teaching and Learning

- Planned blocks of teaching are based on the specific needs of cohorts, groups and individual children and are identified through ongoing tracking; informing next steps;
- All children complete daily mental/written Mathematical number/calculation problem solving activities based on the key objectives for each year group: we call these 'non-negotiables';
- The Holy Trinity progression in calculations document outlines the steps and expectations that are followed to achieve secure basic skills in number and calculation. This document is used throughout the teaching of Mathematics and is written for the use of all members of the school community;
- Dedicated Mathematics lessons are flexible to allow meaningful, experiential learning opportunities and the ability to develop and apply mathematical skills in other areas of the curriculum;
Within a planned Mathematics lesson:
 - Challenge, independence, experiential learning and relating Mathematics to the wider world are what drives planned sessions;
 - A combination of teaching styles is adopted to suit the needs of all learners;
 - Key vocabulary, learning outcomes, success criteria, reference to targets are shared with the children at the outset;
 - Differentiation is evident, effective and support is precisely targeted;
 - Intervention groups are in place to support children's specific needs;
 - Teachers and teaching assistants work with specific focus groups, and actively intervene and support with the learning of these particular children;

Planning and Assessment

- Planned next steps in teaching and learning are identified from information gathered in the previous half term and this in turn informs the planning for the coming half term;
- A planned medium term block of teaching includes the following key information:
Ongoing learning; new learning; resources; timescales; success criteria/outcomes
- A planned short term block of teaching includes the following key information
Ongoing objectives; new objectives; teaching; pre learning activity; activities; differentiation; success criteria/outcomes; evaluation of learning
- In the Foundation Stage teachers plan in line with the ELGs.
- Symphony Maths is used as an intervention for Maths across Key Stage Two.

Assessment Cycle:

Assessment in Mathematics exists in two forms: ongoing teacher assessment using and validation assessment tests at key points during the year.

Teacher assessment:

This form of assessment is viewed as a continuous process. Information is gathered continually as part of on-going formative and summative assessment:

Formative Assessment:

Marking and Feedback:

Marking and feedback is inherently for the benefit of pupils. Mathematics at Holy Trinity aims to:

- Clarify and validate pupil understanding - What have I done that is right? What am I good at?
- Identify misconceptions and errors - What mistakes have I made? What do I not understand?
- Enable opportunities to explore reasons misconceptions and mistakes – What do I need to do? How do I do it?
- Opportunities to correct misconceptions and errors – I now understand and I am confident to have a go.
- Identify next steps in learning - What do I need to do next?

Teacher assessment information is gathered in a variety ways and this informs judgements. Evidence for assessment judgements are collected via:

- Marking ongoing written work;
- Observations of children engaged in activity;
- Pupil self assessment/peer assessment;
- Dialogue with individuals and groups of children;
- Dialogue with members of support staff;
- Evaluations from planning documents;
- End of block assess and review lessons.

Assessment Tests:

Years 1-6 complete written assessment tests in October, February and May (Y3/4/5) Optional SAT tests and Y2/Y6 End of Key Stage SAT tests in May). The test scores support and validate teacher assessment judgements. Reception class are not formally tested.

Tracking progress:

The teacher assessments and test scores are recorded digitally by the class teacher throughout the year and individual points progress is tracked and monitored by the subject leader to ensure that good progress is being made. An overall summative teacher assessment judgement is gathered in May also and this is added to the whole school tracking system for analysis. This judgement forms the baseline for target setting by the subject leader. Children are challenged to make the following progress per academic year, with the overall goal of being secure in their year group:

Reception - 3 FSP points

Year 1 - 6 steps

Year 2 - 6 steps

Year 3 - 6 steps

Year 4 - 6 steps

Year 5 - 6 steps

Year 6 - 6 steps

Target Setting:

The subject leader sets basic and challenging targets for all children and these targets are linked to staff performance management. Layered targets are also set for each year group and are based on analysis of data and information gathered through the course of the year. These include times tables targets for each year group.

Teachers are responsible of setting ongoing targets for children in their guidance. Targets are communicated throughout the year and a child's following year's targets appear the end of year report. IEP targets for maths are clear, specific and achievable for the child in question.

Progression:

At the end of each academic year, all materials are passed onto the next year group and a learning dialogue is opened between professionals to discuss next steps for the beginning of the next academic year.

Governors:

There is a named governor linked to Maths who plays a key role in monitoring and evaluating Maths across the school through discussions each term with the subject leader. Our link governor for Mathematics is Richard Mason.

Formative assessment

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Opportunities to correct misconceptions and errors – I now understand and I am confident to have a go.

Identify next steps in learning - What do I need to do next?