



Lympstone C of E Primary School MATHS Policy 2020

‘Let all that you do be done in love’

1 Corinthians 16:14

Vision Statement

“Let all that you do be done in love.” (1 Corinthians 16:14)

‘In doing this we aim to enable each child to flourish by celebrating their individual strengths so that their greatness is not overlooked. This creates a sense of dignity, respect and love for themselves, which they can then recognise and celebrate in others within the community and the world.

Maths Policy Statement

This policy is intended to provide clear guidance for the delivery of the Maths curriculum Through-out the school and over the three stages: Foundation, Key Stage One and Key Stage Two. It aims to reflect the needs of the children within the school as expressed in the aims of the school and as set out in the EALC calculation policy. It is intended that this policy will provide a corporate statement of purpose, ensure that each and every child’s entitlement to Maths experiences is realised and provide a clear basis from which to plan programmes of work.

INTENT (Aims)

The broad aims of Mathematics are set out within the 2014 National Curriculum. The purpose of mathematics in our school is for all pupils to 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
- **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.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

. By this, we mean that pupils are able to hold balanced and well-informed conversations about mathematical concepts and strategies.

IMPLEMENTATION (Curriculum)

The curriculum for Maths is designed to ensure numeracy lies at the heart. A multi-disciplinary approach to curriculum design provides a balance between principles, practice and purpose. Our curriculum uses the 'APED' acronym to encourage children to – Answer it, Prove it, Explain it, Draw it. This encourages children to work at a deeper level, reasoning and justifying in different ways.

Maths is taught daily in each class to ensure that curriculum entitlement is met. To supplement this, we have additional 'morning maths' sessions- developing number fluency, which is delivered first thing every morning when the children begin the school day. Maths is also enriched through our WOW weeks, focus days, trips and visitors.

The use of the 'WHITE ROSE' particularly supports the development of representation, reasoning and justifying.

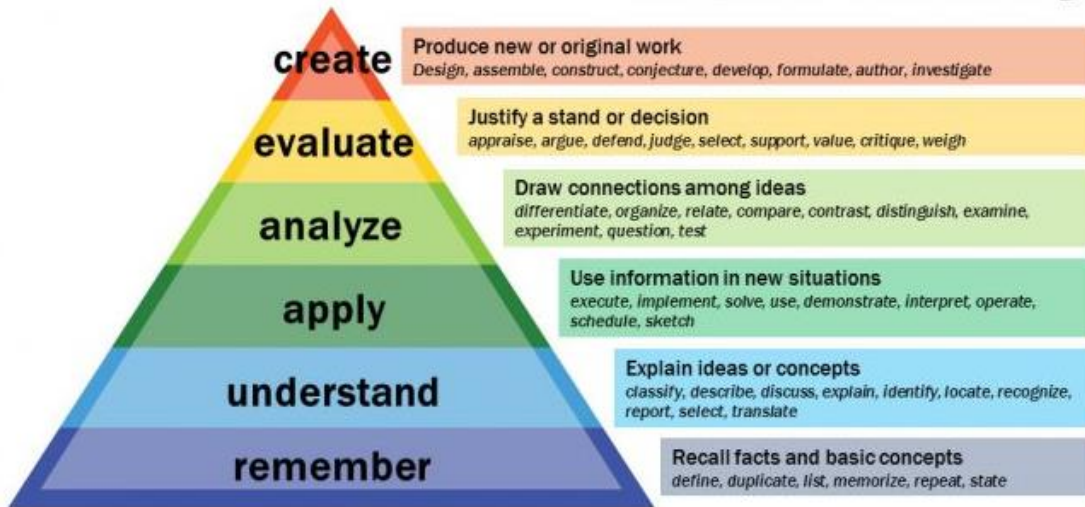
Each classroom must have a maths working wall where current vocabulary, reference materials and 'flipchart work' is displayed for children to access during lessons. There are also STEM sentence starters, 'what to do if I'm stuck' prompts and APED support posters to enable children to work more deeply and independently in maths. There are two 'practical materials' boxes in each class which should be out and available to children during all maths sessions. Children have free access to these resources (and classroom based resources) to support their working and independence.

IMPLEMENTATION (Teaching Mathematics)

Mathematics uses an enquiry-based approach to learning. Lessons include times to respond, discuss ideas with partners and review/evaluate. The APED stickers encourage children to think more deeply about their maths and show their understanding in different ways, justify and reason. This may be individually or as a whole class. This approach enables pupils to focus on the using and applying skills of maths. A range of teaching strategies are used to ensure learning is challenging and relevant including the use of interactive whiteboards, chrome books, practical resources and high quality questioning.

Where possible we want our pupils to have opportunities to hypothesise and test their own ideas out, investigate, conjecture according to Bloom's Taxonomy of learning. (see below)
We believe that rich learning tasks, set in an environment where children feel safe enough to take risks and try out new ideas, they will become articulate mathematicians.

Bloom's Taxonomy



IMPACT (Assessment)

Pupils are assessed in terms of how they are making progress in relation to national expectations for their age. In broad terms the following principles have been applied to each aspect in terms of what it means to become mathematically secure:

- Extending knowledge and understanding from the concrete and familiar to the abstract and complex
- Moving from simple ideas to making connections between them and placing these within a bigger picture or meta-narrative
- Demonstrating increasing layers of knowledge and skill through engagement with a broadening and increasingly complex range of information
- Showing an increasing ability to think critically and question
- Respecting the views of others

Pupils are assessed using age-related expectations. This is done in a variety of ways e.g. through written activities, discussion, presentations and problem solving activities. Progress is tracked termly through book scrutiny and teacher assessments.

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class. We assess the children in order to ensure that they make good progress in this subject and to plan future work.

In addition, pupils are encouraged to use self-assessment to evaluate their own knowledge and understanding. A comment about their progress is made in the annual report to parents.

IMPACT (Monitoring & Evaluation)

The co-ordinator and Headteacher monitor Maths provision and standards through observation, looking at work, talking to children and reviewing the curriculum with staff.

The co-ordinator is responsible for contributing to the self-evaluation process. In addition, the governing body monitor the role of maths through the curriculum Portfolio.

Role of Maths Leader

- **To ensure that the Maths policy is implemented and to keep up to date with reviews.**
- **To have oversight of the Maths curriculum and keep up to date with local and national changes.**
- **To monitor, review and update resources.**
- **To monitor pupil progress and achievement.**
- **To maintain and build priorities set by the school.**
- **To develop links with the community.**
- **To coach, mentor and support teachers in developing their strengths in teaching Maths, including planning, arranging and delivering CPD as appropriate.**
- **To liaise with parents to ensure all children receive their entitlement.**

Entitlement and Inclusion - EAL, PP, SC, SEND, More Able

All children are entitled to access a broad and balanced curriculum at an appropriate level. Teachers should include a range of teaching styles and groupings to allow all children to make progress. Every child should be given opportunity to develop their skills independently and in groups, enhancing their own confidence and self-esteem.

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