



Trenode Primary Academy

Maths Policy 2020-21

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Rationale:

At Trenode Primary Academy (TPA) we believe Mathematics equips pupils with a unique set of powerful tools to understand the world. These tools include logical reasoning, problem solving skills and the ability to think and work fluently.

Mathematics is important in everyday life. It is integral to so many aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards Mathematics that will stay with them. Innumeracy is just as unacceptable as illiteracy and all children must leave LPA with a secure understanding of and proficiency in, maths.

This policy seeks to define a set of parameters to work within when planning, teaching and assessing maths. A degree of consistency across the academy is essential, although this must be balanced with the individual contexts and needs of each cohort.

Aims of maths teaching

We follow the National Curriculum for maths and also follow the 'Mastery Approach'. Our curriculum aims to ensure that all pupils:

- Become fluent in the fundamentals of mathematics, including through varied and frequent practice 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, using conjecture and understanding relationships to be able to justify and use mathematical language.
- Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication.

Principles

The following principles underpin maths teaching at TPA:

Everyone is a mathematician

The idea of someone having a maths brain and others not being able to do maths is wrong. While some children may pick up a concept more quickly than others everyone has the ability to learn maths and be successful.

Concrete learning precedes conceptual learning

Evidence suggests that children learn first by doing and therefore need to use concrete objects before they can understand something conceptually. It is, therefore, essential to ensure that all children have access to concrete objects in maths lessons and are able to use them for as long as is necessary for them.

Depth is preferable to breadth

When children have successfully learned a new concept, rather than moving them onto the next topic, they can be allowed to 'go deeper' into what they are learning, providing them with the opportunity to master concepts and apply them in different contexts.

Investigating and problem solving are essential

Mathematics isn't simply learning a body of knowledge for children to learn; it is also a set of skills which children must be able to apply effectively. Therefore, it is essential that teaching involves a diverse range of problem solving and investigating skills as frequently as possible.

Provision

It is important that classrooms are well resourced with a variety of manipulatives to support teaching of mathematics at all stages. All children should have the chance to learn through the use of manipulatives, not just younger children or lower-ability children. Possible manipulatives could include:

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|---------------------|-----------------|
| • Dienes | Counters |
| • Multilink | Dice |
| • Place value cards | Numicon |
| • Bead string | Cuisenaire rods |

Measuring equipment will also be available in a shared area, which should be accessed when introducing ideas so that children can have a visual concept of what they are measuring and how big the measures are.

This is not a compulsory or exhaustive list, rather a guide to be built up when planning mathematics provision and resourcing classrooms.

Planning

Planning is for the teachers who will be using it. Long term plans are available for all year groups, which are based on the National Curriculum document and the White Rose Mastery Approach, to ensure that coverage is correct for each year group. Planning can be organised according to the teacher's professional judgment and the needs of the class providing the needs of all pupils are met. Learning objectives are to be taken from the long term planning and will be clear and precise and seen within children's work alongside steps to success.

Mental fluency

Children will have opportunity to learn and practice fluency facts including number bonds and times tables. These will be monitored by class teachers and tracked termly by the maths lead to ensure children are able to make appropriate progress.

Assessment

Teachers will use formative assessment appropriately when they are marking works to ensure that future planning consolidates and stretches pupils appropriately. From year 2-6, summative assessments will be used at the beginning and end of the year to show progress and confirm teacher assessment at the end of the year. However, when assessing a child's mathematical ability, it is important to speak and question them. While pupils' maths books are a useful indicator of the work a child has covered and is capable of, they are not a totally reliable way to assess a child in isolation. Pupil maths books, assessment and pupil conferencing will triangulate what children do and don't know and will be a way to assess each child.