



Trevisker Primary School Curriculum Overview for Mathematics

Subject Lead: R. Lobb

Rationale

Our whole school ethos is reflected in our motto 'Friendship and Respect, Learn for Life'. At Trevisker, we have an engaging, meaningful and progressive whole school approach to mathematics which allows every child to succeed and reach their full potential in maths. We use the National Curriculum as a basis for teaching and its approach to learning for mastery.

Planning

Across the school, we use the National Curriculum as the foundation for planning. Our mathematics planning is supported by the Power Maths scheme, which is affiliated to White Rose and the Deepening Understanding resources provide us with problem solving activities for all abilities. This ensures continuity and progression throughout the school. Power Maths also provides teachers with planning support such as a whole school yearly overview, termly and daily planning, teaching videos to support misconceptions and teaching tips.

Delivery

We strive to keep up to date with recommendations and teaching techniques to support effective teaching and learning. Knowledge and skills are revisited in a systematic approach in all years. Children start the day with fluency tasks, learning is then checked and reviewed before they progress to Power Maths, which has an interactive introduction to each lesson called a 'Discover' task. This is usually based on a problem-solving activity; there is a focus on using manipulatives throughout. Sometimes the introduction will be a practical challenge e.g. weighing and measuring activities before the beginning of the next stage. The next phase is 'Share', where we share our methods, discuss and explain. This is then followed by a 'Think together' activity, where we work together through questions modelling strategies and then 'Practice' time, where pupils work independently, sometimes with a buddy or as a group to complete the main body of work. At the end of a lesson, there is a reflect question or problem used as a plenary. Each lesson is appropriately challenging to extend our learners using Deepening Understanding or other problem solving challenges. The children also become involved in self and peer assessment using traffic lights and the Learning Line. Speaking and listening is a vital part of all lessons, as is collaborative and partner work, and key vocabulary is introduced, displayed and revisited.

EYFS

In Reception, Mathematics is delivered through whole class teaching, adult led focus activities, weekly challenges in the maths area, though continuous provision and

implemented throughout the daily routine. In Reception, Mathematic lessons are split into three parts, which broadly follows the Power Maths program. This consists of: 1. Whole class oral and mental starter – 5 minutes 2. Whole class main teaching – 10 minutes 3. Adult led focus activity. The Oral and mental starters focus on a broad range of topics such as shape, measure, time, patterns etc. to help develop an understanding of these concepts. Whole class main teaching follows Reception Power Maths planning. We teach a short whole-class lesson following the teaching sequence set out in Power Maths; starter stimulus, discover & share, think together, challenge and practical activities. Children enjoy sharing their understanding, talking about maths and the practical elements of these maths activities. The clarity and focus of the Power Maths resources allow teachers to focus on developing and strengthening fundamental maths concepts and skills, also to address any misconceptions that may arise. The structure of the lesson enables teachers to secure a good balance between whole class work, group teaching and individual practice. It also allows teachers to establish regular routines thereby maximising teaching time. It supports assessment, as well as providing individual verbal feedback to children, ensuring that children have a clear understanding of the task they have completed, as well as any next steps. In both Nursery and Reception, through continuous provision, children can self-select Maths resources to consolidate their learning during child-initiated activities. We recognise the importance of play-based learning and therefore encourage children to develop their understanding during their play. Such opportunities are provided in both the inside and outside environment. Regular observations and assessments help to ensure that children who need additional intervention to consolidate their mathematical understanding are identified and supported appropriately.

Assessment

At Trevisker, we use formative assessment in mathematics to inform our planning and move learning forward for all pupils. Teachers and pupils use the traffic light system to assess work and consider next steps. Judgements are made through observations and questioning and marking of work. Usual practice is for misconceptions to be identified before the next maths session and support given to that pupil. The Otrack assessment system is used to input, monitor and track progress and attainment across the school. This can then be used to focus and personalise learning for individuals and groups. In year 6 and year 2, children will also participate in statutory tests (SATs). Year 4 pupils take part in the Multiplication Times Tables Check and in EYFS, children are assessed through a baseline assessment and Early Learning Goals.

Monitoring and evaluation

Subject leadership time is provided for co-ordinators to monitor planning, attend training, meet with colleagues and offer support. The school leadership team support this and any outcomes inform the action plan, school improvement plan and any future priorities. We are also part of the National Maths Hub, which is founded upon the latest research findings for best practice across the country. This incorporates demonstration lessons, theories and best practice sharing.

Connectivity – how it links to other subjects

Wherever possible and appropriate, connections are made between other subject areas to promote engagement and make learning as meaningful as possible for the children. For example, charts, graphs and tables may be used in science lessons, measuring skills in PE and scale drawings in art.

Visits, visitors and extra-curricular activities

Experiential learning is at the heart of everything we do at Trevisker. Maths experiences are enhanced through trips and visitors into school to support our maths curriculum, such as visiting teachers from other schools, links with secondary school maths educators and visiting guests (Maths magician). The school climate crew have successfully gained a local grant for composters, which they had to create and budget for before presenting to a local committee. We have been at the forefront for leading effective Power Maths lessons in Cornwall and have supported other schools with their Power Maths journey.

Use of ICT

To enhance teaching and learning, we use a range of mathematical programmes to support learning in school. For example, 'Times tables Rock Stars' and 'Numbots'. Further up the school, this would also include using formulae in ICT, producing graphs in different forms and collecting data. Deepening understanding is used to support high attainers and develop the understanding of pupils in general. ICT may also be used to support homework. All teachers can write and demonstrate mathematical learning on large interactive screens.

Staff Professional Development (CPD)

This is a particular focus this academic year and all staff will be involved in curriculum development in order to enhance teaching and learning in this subject area, also in professional growth plans. Training courses are provided both within the Trust and wider in order to keep up to date with new guidance, resources and ideas. We are closely aligned with the National Maths Hubs, who provide in depth training for focused teaching years. Also, we will be hosting a maths hub meeting here at Trevisker, providing the opportunity for all staff to benefit from the expertise of Ross Barnes, one of the top Primary mathematicians in the country. Furthermore, two of our staff will be participating in Maths Hub further learning courses. Kernow Learning have also supported staff with maths training this year and this will surely continue. Moreover, the maths lead has also successfully delivered maths training to staff.

Budget

The maths budget is managed by the SLT along with the subject lead and the Local Advisory Board. Spending is focused on enabling successful delivery of the subject and fulfilling the subject action plan as well as buying the Power Maths scheme.

Inclusion & Equal Opportunity

Staff at Trevisker are committed to ensuring the active participation and progress of all children in their learning. All children will be given equal opportunities to achieve their

best possible standard, whatever their current attainment and irrespective of gender, ethnic, social or cultural background, home language or any other aspect that could affect their participation or the progress of which they are capable. With a mastery approach, differentiation occurs in the support and intervention provided to different children, not in the topics taught, particularly at earlier stages. The National Curriculum states: 'Children 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.' There is little differentiation in the content taught but the questioning and scaffolding individual children receive in class as they work through problems will differ, with higher attainers challenged through more demanding problems, which deepen their knowledge of the same content before acceleration onto new content. Children's difficulties and misconceptions are identified through immediate formative assessment and addressed with rapid intervention – commonly through individual or small group support later the same day. Although the expectation is that the majority of children will move through the programmes of study at broadly the same pace, the 2014 National Curriculum states: 'Decisions about when to progress should always be based on the security of children's understanding and their readiness to progress to the next stage.' In exceptional circumstances, if a child's needs are best met by following an alternative plan, including coverage of the content from a previous year, this will be detailed on the child's provision map and any specific arrangements for the provision of children with SEND will be shared with relevant staff and communicated to parents at SEND reviews and parent meetings.

Governance

At Trevisker, each LAB member is linked to a curricular area and meets with the subject lead to review action plans and agree focus points for discussion and for learning walks. The subject lead will compile a presentation to update the link LAB member/governor on how Maths is developing across the school.

Maths in Action!



Acorn Class building patterns

Power Maths on display



Y2 Measuring & Shape



Reception class counting