

2021

How we teach Maths at Stradbroke



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Learning at Stradbroke

At Stradbroke, learning is the process of acquiring the essential knowledge, skills and behaviours required for a secure and extended understanding. Provision is designed to advance understanding, gradually, throughout a key stage. **Lessons** are not an event in themselves. They are part of the process of learning which will carry on over several days or even weeks until a pupil is showing the required level of understanding. Some lessons may involve multiple learning objectives.

Maths at Stradbroke

Maths at Stradbroke is delivered using the framework of the White Rose Maths materials which are aligned with the National Curriculum (Mathematics Programmes of Study for KS1 and KS2). While we do not deem the 'Mastery' (or 'Singapore') curriculum models to be appropriate for our children, we do deliver sequences of Maths learning via the CPA approach:

- **Concrete** – using physical objects to solve Maths problems
- **Pictorial** – using drawings to solve Maths problems
- **Abstract** – solving Maths problems using **ONLY** numbers

This approach helps to boost progress; develop a deeper understanding of key skills and plug gaps/address misconceptions. The aim of a mastery approach to Maths is that the child's learning is **deep, long-term, secure and adaptable**.

Areas of Maths

Although we refer to 'Maths' as one subject, we recognise that this covers two disciplines: arithmetic (number and the four operations) and mathematics (everything else). Arithmetic is taught explicitly throughout the school on Fridays



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and is the basis for much of the mental and oral activities that the children are exposed to. Arithmetic appears throughout daily Maths sessions and is assessed discretely at the end of KS1 (Y2) and KS2 (Y6).

Teachers have the freedom to adapt these types of learning, based upon how well the children have grasped a concept. These representations are not used as a means of differentiation by group: a child's 'ability' does not dictate which element of the CPA approach they are exposed to.

Problem Solving and Reasoning

A child at Stradbroke is presented with problem-solving activities when they have shown a fluent and flexible understanding of the associated facts and procedures within that area of Maths. Children are encouraged to explain their thinking and reasoning within the classroom and in their books as, again, this is assessed at the end of KS1 and KS2. 'Mastery' or 'Challenge' stickers and extension activities are used, in particular, to develop problem-solving and reasoning skills and encourage the children to apply their knowledge to a different context.

SEND provision in Maths

The needs of our children who have SEND can be met through carefully sequenced and differentiated activities and – for those who may be working significantly below the year group expected standard – through the use of the Birmingham Toolkit materials that break down key mathematical skills into smaller steps which the child will then develop over a number of sessions. This approach is further strengthened through the use of pre-teaching and gap-fill interventions.

Assessment in Maths

Formative assessment – which can also be defined as 'ongoing' or 'daily' – is carried out by teachers throughout every lesson they deliver; whether via questioning, differentiation or verbal/written feedback. This then informs the next steps of the child.



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In anticipation of the mandatory Multiplication Tables Check in 2022, our Y4 children take part in the voluntary MTC program. Summative assessment is carried out from Y1 to Y6 using End of Unit and End of Term papers (White Rose Maths Resources) which help the teacher to track the child's progress and address individual (or group) misconceptions.

Early Years Foundation Stage (including Little Teds)

Our very youngest children start learning about number through songs such as '5 Little Ducks', '5 Speckled Frogs' and '12345 Once I Caught a Fish Alive'. They learn nursery rhymes such as 3 Blind Mice and Baa, Baa Black Sheep and read stories such as 'The 3 Little Pigs' and 'Billy Goats Gruff'.

They play games using dice to encourage counting and on a daily basis the registers, calendars and lunchtime requests are used for counting opportunities. Numbers placed around the environment support children with number recognition. Children use construction materials such as Duplo and blocks to explore shape and space.

As children move through into reception all the above still continues but with the addition of a more structured and adult led provision with children being taught the early stages of addition and subtraction using concrete and visual resources as support.

Maths at Home & Extra Curricular Maths

Maths activities are included in the year group Home Learning Menu and each child has a Times Table Rock Stars account which they can access both in school and at home. TTRS Learner of the Week certificates are awarded in the weekly merit assembly to celebrate effort, accuracy and speed. In KS2, children have the opportunity to take part in a weekly chess club and in Upper Key Stage 2 (years 5 and 6) can represent Stradbroke in inter-school Maths challenge days.