Walton's approach to Maths

Long Term Memory Practice

To ensure learning is embedded in children's long term memory, Year 3-6 take part in daily Long Term Memory Practice sessions where they answer questions using skills taught either earlier in the academic year or in the previous academic year at the start of each day. Reception – Year 2 children take part in Mastering Number sessions daily.

Discover (10 minutes)

A practical, real-life problem arouses curiosity and introduces each lesson. Children find the maths through story-telling.

Share (5 minutes)

Teacher led – this interactive section follows the Discover activity and highlights the variety of methods that can be used to solve a single problem.

Think Together (10 minutes)

This section contains problems structured in similar ways to the ones which will appear in the Practice section later in the lesson. In this section, the teacher will follow the approach 'I do, we, do, you do' in which ever order is most appropriate for each lesson. Teachers will model metacognitive strategies (see next page) out loud in this section.

Misconception moment (5 minutes)

Teachers present children with a misconception which is likely to arise in the Practice part of the lesson. The children work in pairs to spot and explain the mistake either verbally or by writing in their Maths Journals and use metacognition to select an appropriate method for solving the problem.

Practice (20 minutes)

Children work through carefully structured questions in their workbooks which gradually increase in difficulty in small steps. Where appropriate, concrete resources will be available to support children.

Seating

Children work in pairs for the majority of each lesson. Pairings are selected carefully by teachers to ensure that children can support and encourage one another. Less confident children benefit from the support of a more confident mathematician and the more confident learners benefit from having to explain their fluency and reasoning to a peer.

Greater Depth

Throughout the lessons, we include challenges to push greater depth children. These are usually within the Think Together and Practice sections. These are supplemented additional WRMH challenges. It is vital that our Greater Depth Mathematicians can not only solve problems, but also reason and explain why they have selected certain strategies.

Intervention and feedback

Intervention and feedback takes place in the mornings daily during skills sessions. Research into feedback by the EEF has found there is no clear evidence as to whether feeding back on the same day or at a later date is more effective. For children working below their year group, daily intervention sessions where they access a lower year group's work take place.

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Long term planning–small steps

Each unit is split into a number of small steps (lessons) which logically build upon each other, ensuring that new content is introduced in small steps.

Assessment

Teachers formatively assess children throughout lessons, providing verbal feedback as much as possible throughout each lesson. At the end of each lesson, teachers record any children who require intervention, or who were successful in completing the challenge on their planning. At the end of each term, children take part in summative assessments which identify their strengths and any gaps in knowledge they may have.

Concrete resources

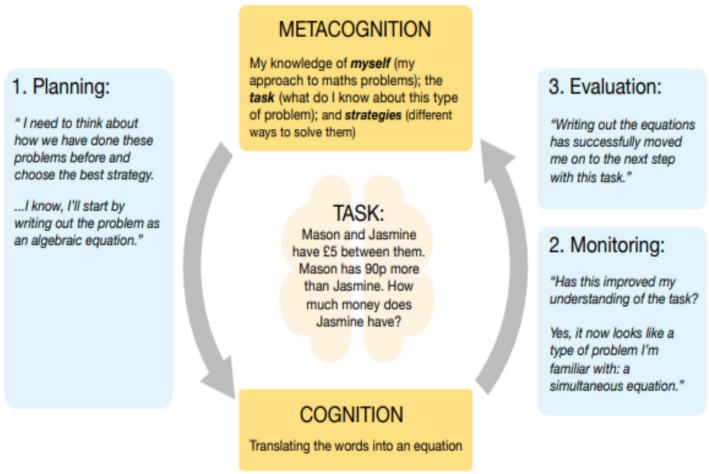
We use concrete resources to support children to discover representation and structure in Maths. It is important to appreciate, however, that children must always understand the link between models and the objects they represent. Although they can be used at any time, good concrete models are an essential first step in understanding.

Subject knowledge for teachers

Every unit has a video which incorporates real-life classroom sequences. These videos show you how the reasoning behind mathematics can be carried out in a practical manner by showing real children using various concrete and pictorial methods to come to the solution. Teachers can see how using these practical models, such as part-whole and bar models, helps children to find and articulate their answers.

Metacognitive strategies

We strive to develop self-regulated learners at Walton who are aware of their strengths and weaknesses, and can motivate themselves to engage in, and improve, their learning. At the heart of this is metacognition. The cycle below would be repeated many times when solving a problem. Metacognitive strategies are best taught through subject content as they are often subject specific.



EYFS

In EYFS we follow the EYFS framework.

In Reception, children follow the same lesson structure as in KS1 and 2 (Discover, Share, Think Together) but over the space of a week in smaller groups. Challenge is included through targeted questioning.

In Nursery, learning focuses on the children exploring number through a range of continuous provision and teacher-led activities, always using concrete and/or pictorial representations.