



# MATHS Implementation



**Underpinned by Our  
GEM LEARNING POWERS**

**Diamond Power:**  
Being responsible and facing challenge

**Ruby Power:**  
Supporting others

**Sapphire Power:**  
Staying focused

**Emerald Power:**  
Being Courageous

**Topaz Power:**  
Actively Learning in a group

**Amethyst Power:**  
Working well with a partner

## Why is consistent MATHS implementation important?

To ensure whole school consistency and progression, the school uses the DfE approved 'Power Maths' scheme which is fully aligned with the White Rose Maths scheme. Teachers reinforce an expectation that all children are capable of achieving high standards in Mathematics and the large majority of children progress through the curriculum content at the same pace. Staff understand the need to 'keep up, not catch up' and are supported in doing this with the implementation of the Power Maths scheme of work. Each teacher and teaching assistant has access to online and hard copies of detailed planning and lesson resources.

## MATHS Implementation

A variety of teaching and learning opportunities provide the children with active and stimulating learning experiences:-

- Teachers share learning objectives via a problem solving (discover) activity at the start of each lesson. This initial problem-solving activity prompts discussion and reasoning, as well as promoting an awareness of maths in relatable real-life contexts that link to other areas of learning
- Children are encouraged to solve problems through the use of concrete resources, pictorial representations and abstract thinking (the C-P-A approach). This helps children tackle concepts in a tangible and more comfortable way.
- Teachers use careful questions to draw out children's discussions and their reasoning. The class teacher then leads children through strategies for solving the problem, including those already discussed.
- Mixed ability talk partners may be used to create speaking and listening opportunities for children to explain their thinking in mathematics. Mathematical talk and specific mathematical vocabulary is a non-negotiable. Children are encouraged to speak in full sentences when explaining a concept or procedure. To support this sentence stems to embed understanding are modelled, and often recorded by teachers on the class 'maths working walls'.
- Children may work individually on a task, in pairs or in small groups, depending on the nature of the activity.
- To develop secure and deep conceptual understanding, staff are expected to plan for the use of concrete resources, representations and structures (outlined and guided through Power



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**Our Curriculum Implementation**

Maths) to reinforce learning objectives and to support pupils with English as an additional language and/or additional needs.

- Lessons are planned to engage and encourage the full participation of all pupils. The planning materials used by staff, within the Power Maths scheme, promote intelligent practice and as well as developing own staff subject knowledge.
- Differentiation is seen through the concrete resources used, and/or the reliance on the representations and structures within a lesson to help embed a mathematical concept. Staff understand what ARE and mastering looks like for each objective (power maths practice books) and plan for how their children will get there. In order to meet the needs of all pupils, children working above ARE within an area of mathematics have 'going deeper' opportunities planned by staff.
- Teachers create an ethos in which all children feel they can contribute and feel valued.
- Home learning is set to develop and review children's learning. This may be paper based or using the Doodle maths app.

#### Lesson Structure Details

Lessons are planned using the National Curriculum and Power Maths scheme of work. All lessons are aimed at the year group the children are working towards. Daily lessons are shaped accordingly to meet the individual needs of the children and build on from previous learning. Pupils engage in mental strategies, practical work, investigations, problem solving, discussions and consolidation.

All lessons:

1. Begin with a '**discover**' problem solving activity to introduce the concept being taught.
2. Teachers are to model reasoning and problem solving thinking as well as the use of concrete or visual representations during the whole class led '**share**' activity.
3. Children have time to practise again during the third stage of the lesson in a '**think together**' activity. This provides the teacher and support staff with the opportunity to assess the children's understanding and quickly address/challenge misconceptions. Each lesson follows an 'I do, we do, you do' model. This is heavily supported by the expert planning and resources outlined in the Power Maths scheme of work.
4. Children then move onto their **independent work** in **practice books**. This work allows pupils to develop deeper mathematical knowledge as the problems increase in difficulty and depth. At this point, teachers and support staff are to satellite mark and address/challenge misconceptions quickly within the lesson.

To round off the lesson the teacher often emphasises the teaching point of the lesson. Using the '**reflect**' within the Power Maths practice books, pupils are asked to present and explain their work, discuss and compare methods, generalise rules and make links with other work. These reflections are used for assessment and moderation purposes. They also, along with teacher assessment, help to identify children in need of a '**same day intervention**' session.