

# Mastery Maths at Eppleton



This is a guide for anyone who is visiting Eppleton to explain our approach in mathematics across the school. It is intended to explain what you can expect to see/not to see during lessons.

Q. What is our Curriculum intent?

At Eppleton, our maths curriculum is designed to secure, for all children, a fluency in number and an ability to manipulate number to support problem solving and reasoning. Through the Mastery approach, all children are able to make progress, particularly through the CPA approach (Concrete, Pictorial, Abstract) Our curriculum aims to provide some cross-curricula opportunities to allow children to apply their maths learning in context, particularly in science. We believe it is important for our children to develop resilience and problem solving skills through their maths learning in order to prepare them for life-long learning.

Q. What will a typical maths lesson look like?

At Eppleton, we follow a mastery approach. All lessons are pitched at end of year expectations. Content will be progressive and challenging for all. Lessons might be slow paced or fast paced; depending on how the children grasp the concept. Lessons will include fluency, reasoning and problem solving.

Q. Where are lessons and resources planned from?

Lessons are carefully crafted to follow a concrete > pictorial > abstract approach (progressing from concrete resources/objects, to pictorial representations, finally to concepts presented in calculations or word problems.). Objectives are taken from the National Curriculum. Tasks/activities will largely be taken from White Rose hub. However staff are encouraged to draw from a wide range of quality sources such as: Classroom secrets, NRich, Grammarsaurus, NCETM, Third Space Learning etc.

Q. What about maths display?

In maths, we feel it is important for children to have access to a range of concrete resources in order to access the curriculum and to support the development of mathematical fluency. Concrete resources might be used to support/challenge children within the maths. Classrooms have maths working walls which are designed to support independent learning and display sentences stems to aide in problem solving and reasoning. These are added to as and when required.

Q. Are lessons differentiated?

All lessons are planned with EOY objectives and aimed at EOY expectations. Skilful questioning from teachers will allow support and challenge. Resources will enable all to access. Children could be in mixed ability pairings or fluid groupings (that change regularly) will provide opportunities for peer-to-peer support and scaffolded learning. Some children may be working on an alternative curriculum/ program of study which is more appropriate to their ability and needs.

Q. What will tasks in books look like? Will I see different abilities?

Children's books will look very similar. You will not find repetition of procedural calculation (lots of fluency). You will see reasoning and problem solving happening. You will see children explaining in words and sentences and using mathematical vocabulary. You will see children completing the same tasks—but they may access this differently (teacher/TA input, resources etc.).

Q. What does maths look like in the EYFS & Year 1?

In the EYFS, maths is fully embedded into the daily routine. Through the environment, children are encouraged to apply their mathematical learning and problem solve. Maths is taught during whole class input and then in focus groups which are teacher or TA led. The role of the adult in facilitating maths learning aims to: prompt, initiate, question and encourage maths learning throughout the day. Maths lessons will typically include counting and practical, hands-on maths learning and developing number sense. The same approach is initially used in Y1 to help the children transition whereby they work in small teacher led groups while accessing continuous provision. As the year progresses the children are prepared for the approach taken by the rest of the school so they are year 2 ready. Children are encouraged to seek out their own resources and become less dependent on an adult by working with peers/ independently.

Q. What happens if children have gaps in their learning? How is this taught in mixed abilities?

These are addressed through intervention which is reactive to children's needs during assembly time and any dedicated TA/HLTA time slots where available. Teachers/TAs may have a focus group to enable children to access the tasks during lessons. In some lessons, you may see the learning 'Paused for All,' where the children are given longer to consolidate or practice a specific skill. Or you may see a 'Pause and Stretch,' lesson, where the maths is being consolidated for some children and other children are being challenged further in that specific mathematical area.

Q. How is mental maths taught at Eppleton?

Mental maths is taught daily during our daily maths meeting (DMM). These sessions are designed to target the needs of the class alongside teaching the national curriculum expectations. They include, counting and calculating. There is no expectation that the children record these sessions in books and they should be fun, engaging and interactive.

Q. How is marking and feedback used in a lesson?

Teachers will recap the learning of the previous day (Review). Key concepts/misconceptions may be addressed during the Review session. Teachers and TAs may mark within lessons—offering immediate feed-

Q. Where do you record evidence for fluency, reasoning and problem solving?

back and challenge and support. Children may also peer/self-assess during stages of the lesson.

All children have a maths book where their learning can be recorded. This could be write straight into their books, on a sheet or could be a photosheet to evidence more practical maths activities. There is not an expectation that every lesson has some form of recording everyday. Work may be in maths books, on whiteboards or practical using other objects. We also have designated days, twice a half term (Usually a Wednesday) where all classes take part in a problem solving lesson. These are to ensure all children get to take part in a wide variety of problem solving opportunities. These are recorded in the back of children's maths books. The activities chosen are linked to previously covered units. These are linked to the following

Q. What will presentation be like in books?

skills problem-solving skills: Trial and improvement, Working systematically, Pattern spotting, Working backwards, Reasoning logically, Visualising and Conjecturing.

Q. How do you make sure that higher attainers in maths are challenged?

Formal calculation methods will be expected to be neat and well presented. Children are encouraged to be neat and think about presentation at all times. Some elements of reasoning and problem solving (for example use of the bar model or arrays) may require jottings and rough working. This is fine.

Teachers will differentiate questioning to promote deep learning. Children can be challenged or extended

Q. How are SEND children ensured access to the maths curriculum?

through: giving deep, challenging tasks; peer tutoring; designing and solving their own problems; being asked to explain and reason more often; and to be encouraged to provide more mathematically accurate explanations by refining their language choices.

Q. How do we help our children to know more and remember more?

Children, who are identified as SEND, access the curriculum much like every other child within the school. They will be accessing different EOY objectives, which are appropriate to the level they are working at. Adaptations are made where needed and children may work at stations or alongside an adult to ensure good progress within lessons.

As in all subjects in our curriculum, retrieval practice is a priority in order to help our children to know

If you have any more questions about maths or the maths curriculum, then please feel free to ask staff.

Laura Defty is the maths lead.