Lightmoor Village Primary School

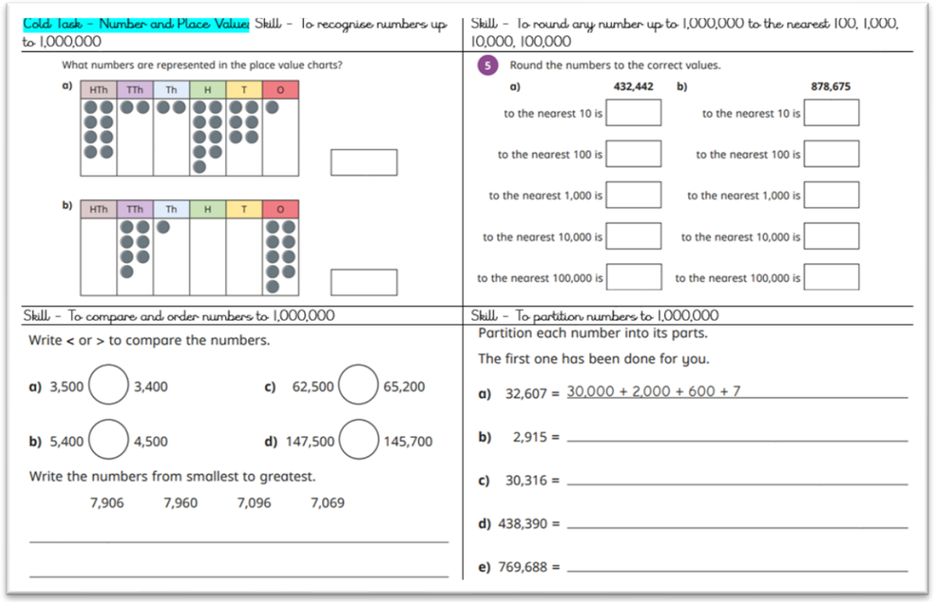
Mathematics Handbook Y1-Y6

2025-2026

At Lightmoor, the maths teaching sequence is based on a ‘mastery approach’ where knowledge and skills are mastered before moving on to the next step. The children’s prior knowledge must be carefully assessed to establish a starting point. The national curriculum objectives must be broken down into small steps and ordered carefully to ensure a coherent learning journey, with each step building upon the previous one.

Planning Mathematics at Lightmoor

Planning, teaching and assessing strategies	
Assessment for learning	**Entry Assessments** Prior to planning, children are assessed against key national curriculum objective through a 'cold task'. The cold task is conducted before each mathematical concept to help inform the teachers planning. se the Lightmoor proforma to create your entry assessment, trying (if possible) to keep it to one A4 page. It is likely that you will be able to assess all the objectives for the unit, so it is important that you choose 3 or 4 key objectives Completing an entry assessment before planning your unit informs you: • Which areas you may not need to teach • Which areas may need longer • Which pupils need to be challenged • Which pupils may need more support



Cold Task – Number and Place Value: Skill – To recognise numbers up to 1,000,000

What numbers are represented in the place value charts?

a) HTh TTh Th H T O

b) HTh TTh Th H T O

Skill – To round any number up to 1,000,000 to the nearest 100, 1,000, 10,000, 100,000

5 Round the numbers to the correct values.

a) 432,442	b) 878,675
to the nearest 10 is	to the nearest 10 is
to the nearest 100 is	to the nearest 100 is
to the nearest 1,000 is	to the nearest 1,000 is
to the nearest 10,000 is	to the nearest 10,000 is
to the nearest 100,000 is	to the nearest 100,000 is

Skill – To compare and order numbers to 1,000,000

Write < or > to compare the numbers.

a) 3,500 ◯ 3,400

b) 5,400 ◯ 4,500

c) 62,500 ◯ 65,200

d) 147,500 ◯ 145,700

Write the numbers from smallest to greatest.

7,906 7,960 7,096 7,069

Skill – To partition numbers to 1,000,000

Partition each number into its parts.

The first one has been done for you.

a) 32,607 = 30,000 + 2,000 + 600 + 7

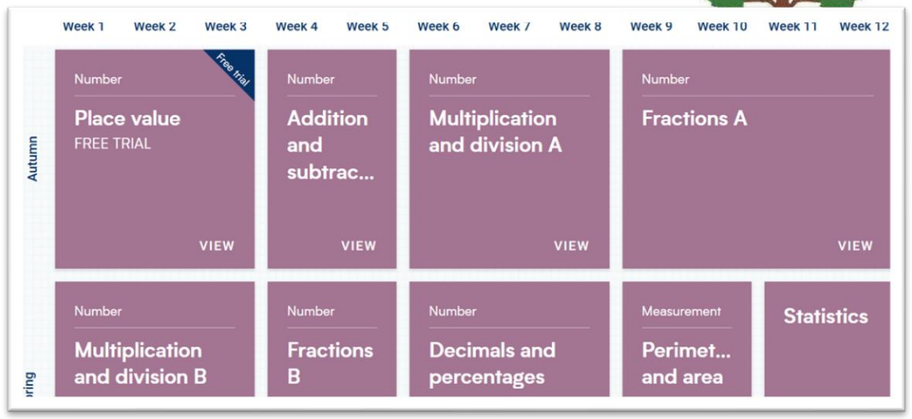
b) 2,915 =

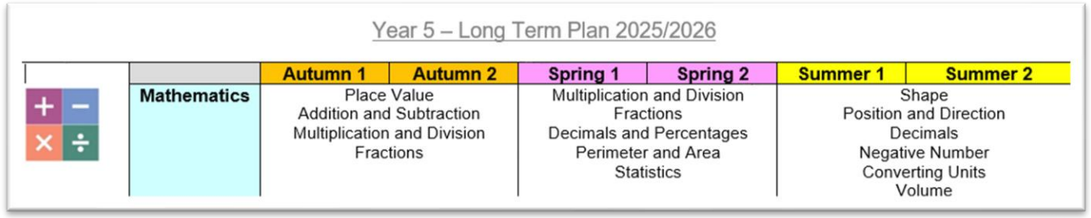
c) 30,316 =

d) 438,390 =

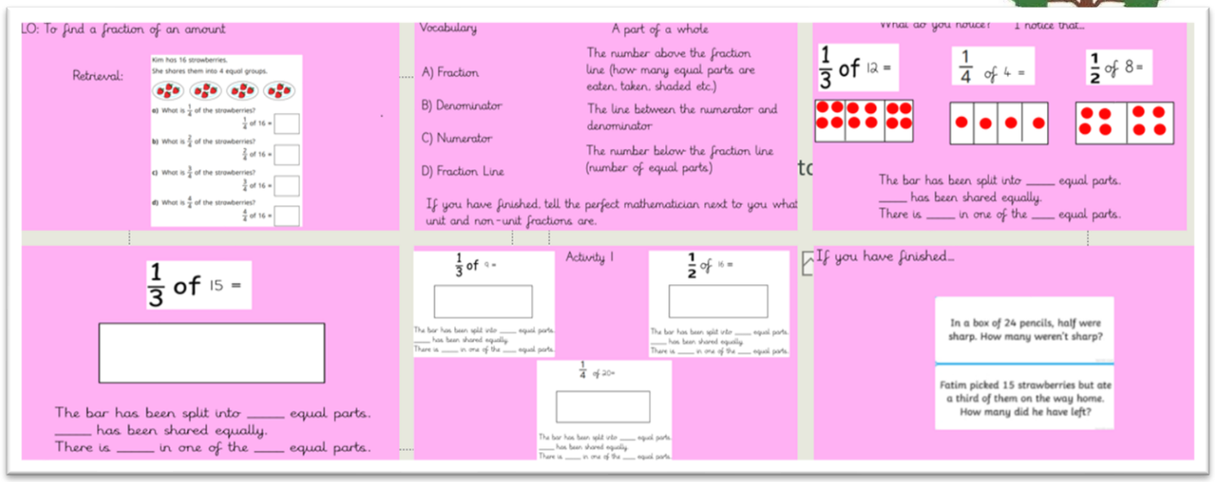
e) 769,688 =

Long term planning	At Lightmoor, we follow White Rose Maths long term plans from Y1-Y6. This gives each year group the necessary time and sequence to carry out a cohesive and well-connected curriculum. This is then replicated on the Lightmoor proforma to ensure consistency across all year groups.
Medium Term Planning	As we are a mastery school, each unit is broken down into small, cohesive steps to ensure learning is mastered before moving on. We use White Rose Maths along with NCETM Primary Mastery CPD Materials and Oak National Academy resources to ensure skills are broken down. Each teacher is given the opportunity to meet with the Maths Lead to ensure each skill is broken down into small enough steps for our children. Please be aware that, while White Rose Maths breaks each unit into small steps, these steps may not be small enough. Links to supporting materials - Primary Mastery Professional Development | NCETM - Free KS2 Maths teaching resources | Y3, 4, 5, & 6 | Page 1 of 2 | Oak National Academy



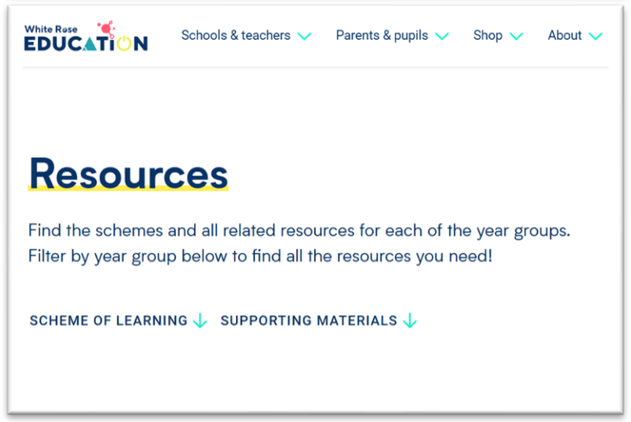


Daily Planning	Here at Lightmoor, we adopt an episodic approach to teaching maths. From medium term planning, units are broken down into small steps already but breaking them down even further during daily planning ensure skills are mastered. Planning is conducted through either Flipchart or PowerPoint to ensure lessons are engaging and interactive. Every lesson will begin with a retrieval activity (along with the LO) to ensure relatable skills are mastered before the lessons commences. Following this, children are made aware of the key mathematical vocabulary for the lesson and then are given the opportunity to discuss things they notice about a worked example of the learning objective aiming to be achieved. Next, the children are taught (episode 1) with an 'I do, We do, You do' approach in mind and the children will then complete activity 1. In order to challenge our higher attainers further, an open-ended task will be available for early finishers. Once the time is right, episode 2 will commence where learning is delved into at a deeper level. Finally, children will complete activity 2.

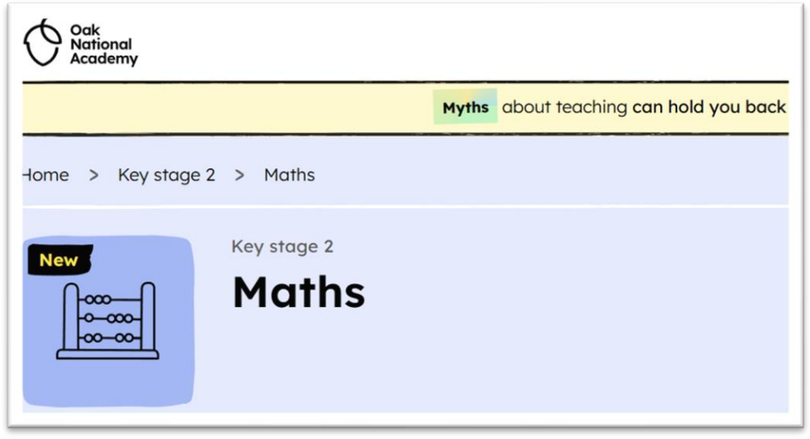


Resources to support planning – these documents will support subject knowledge and breaking down objectives into small coherent steps.

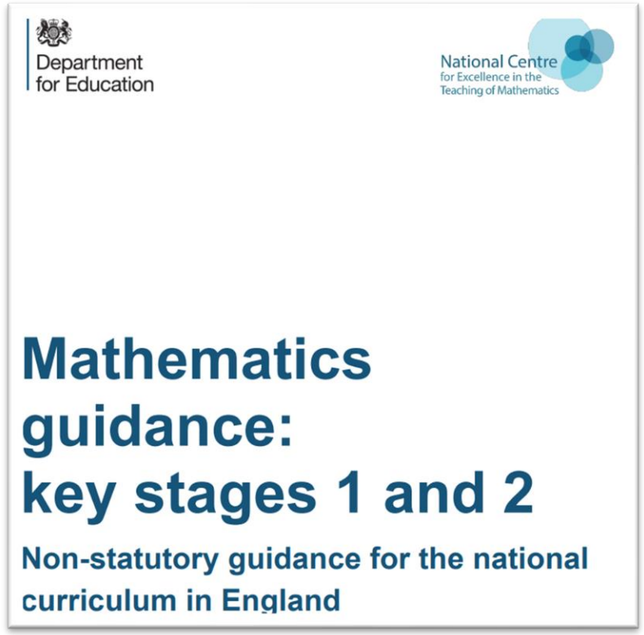
[Primary Mastery Professional Development | NCETM]



[Maths resources for teachers | White Rose Education]



[Free KS2 Maths teaching resources | Y3, 4, 5, & 6 | Page 1 of 2 | Oak National Academy]



Maths_guidance_introduction

Teaching Mathematics at Lightmoor

Maths Classroom Display	The Maths classroom display should be a Working Wall which evolves and developed as the learning journey progresses. Modelled examples of each day's learning should be added to wall, ideally in the moment. The children should be able to access and refer to the working wall at any point in the lesson and act a visual prompt, helping them to link the small steps through the unit. A Maths working wall should include: • Unit Focus • Key Vocabulary • Examples of the representations/ strategies used in each lesson • Stem sentences
Stem Sentences	The quality of children's mathematical reasoning and conceptual understanding is significantly enhanced if they are consistently expected to use correct mathematical terminology (e.g. saying 'digit' rather than 'number') and to explain their mathematical thinking in complete sentences. Stem sentences help children communicate their ideas with mathematical precision and clarity. These sentence structures often express key conceptual ideas or generalities and provide a framework to embed conceptual knowledge and build understanding. For example: If the _____ is the whole, the shaded part is one _____ of the whole. If the rectangle is the whole, the shaded part is one third of the whole.

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Having modelled the sentence, the teacher can then ask individual children to repeat this, before asking the whole class to chorus chant the sentence. This provides children with a valuable sentence for talking about fractions. Repeated use helps to embed key conceptual knowledge.

There are two types of stem sentences:
<table>
<tr><th>1) Fill in the missing parts of a sentence</th><th>2) Mathematical generalisation or “rule”</th></tr>
<tr><td>The children fill in the missing parts of the sentence, varying the parts but keeping the sentence stem the same. This can be repeated throughout the teaching input but also in the children’s independent learning.
This type of stem sentence reveals and embedded the mathematical structure of the concept but also Children use the same sentence stem to express other relationships.</td><td>This is often most powerful and memorable when it emerges in a lesson through active learning. These stem sentences are repeated in chorus, which helps to embed the concept. They should be displayed clearly on the working wall as a visual prompt.</td></tr>
<tr><td>Examples:
There are 12 stars. 1/3 of the stars is equal to 4 stars.
5 is the whole. 3 is part and 2 is a part.
23. The two represents 2 groups of ten. The three represents 3 extra ones.
There are ____ groups of cubes. There are ____ cubes in each group. There are ___ groups of ___.
This shape is a hexagon because it has exactly 6 straight sides.</td><td>Examples:
Ten tenths are equivalent to one whole.
A number can be made of different parts.
addend + addend = sum
When adding 10 to a number, the ones digit stays the same
Equal groups have the same number of objects in each group.
When adding fractions with the same denominator, just add the numerators.
An acute angle is less than 90º.</td></tr>
</table>
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<td>Concrete, Pictorial, Abstract</td>
<td>The children at Lightmoor experience a CPA (Concrete, Pictorial, Abstract) approach in lessons. The children begin their learning of a new concept or strategy in the concrete with a range of manipulatives to support their understanding. As their conceptual understanding develops, they move towards the pictorial representation of the learning and finally to the abstract numeral and symbols. Children are not pushed to move through these stages until they have shown understanding which the teaching team assess. It is important that resources and manipulatives are accessible to the children at all times so that they can choose to use resource to support their understanding when they need to.</td>
</tr>
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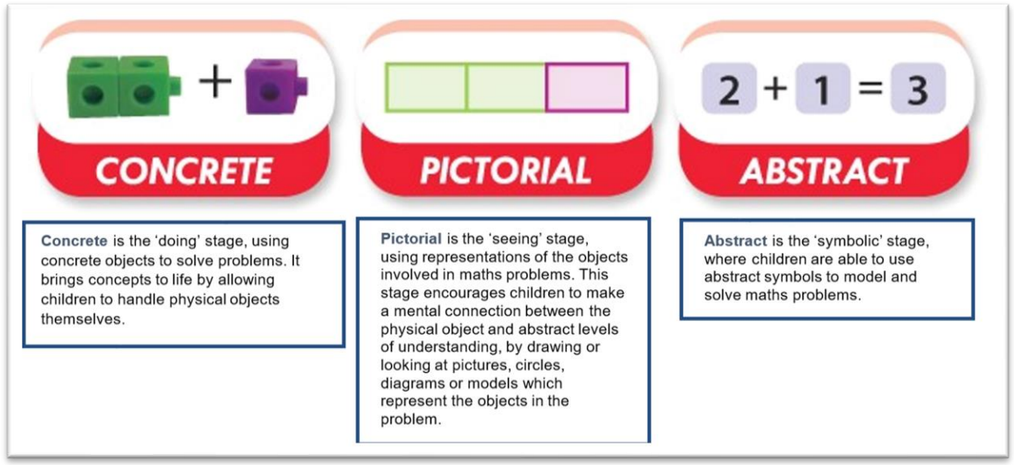
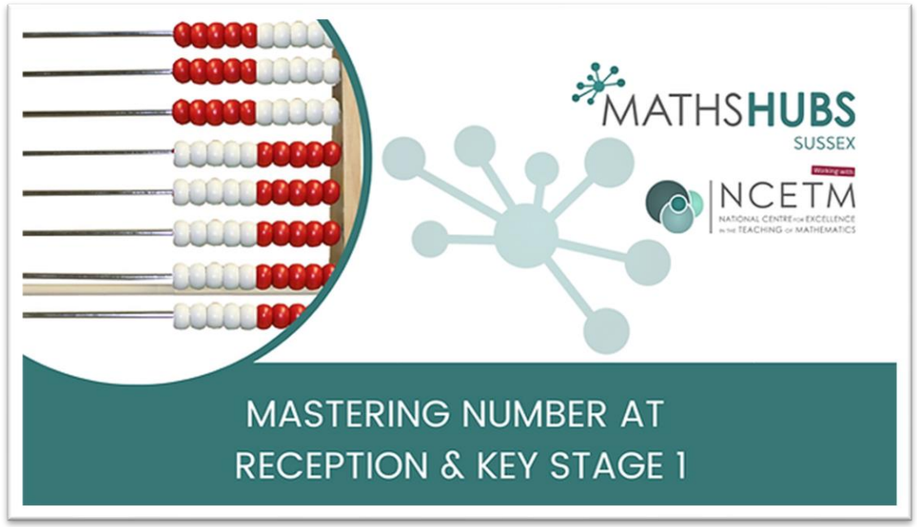
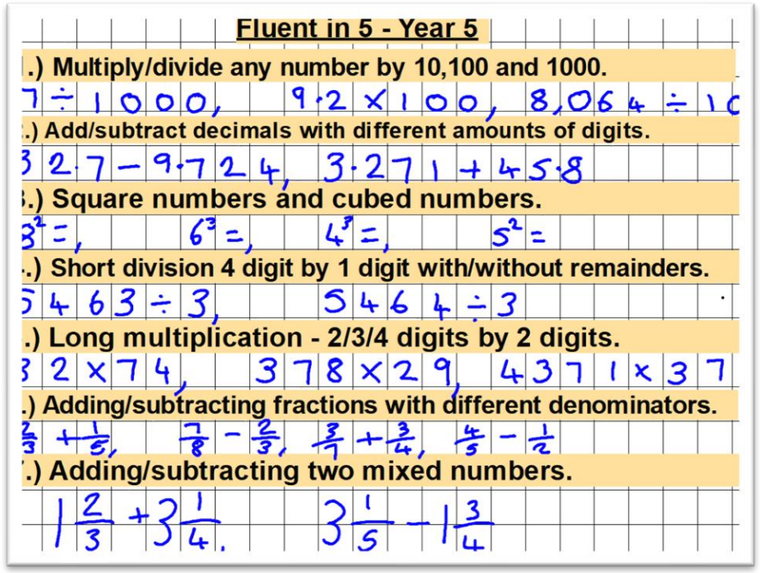
	
Episodic Teaching	Each lesson is broken down into a 'smaller step' to ensure all children can access learning through an episodic approach. Every lesson will have more than one episode to ensure teaching time is short and concise. This gives the children the opportunity to practise what they have learned at the soonest opportunity and so that their cognitive load is exceeded. Learning is then explored at a deeper level providing higher attainers with the opportunity to develop their conceptual understanding.
Ping Pong Style	A ping pong approach to teaching support an episodic approach. The idea is that children always play an active part in learning. This may be through questions, whiteboard work or previously mentioned stem sentences. Our aim is to ensure all children engage with learning at every given opportunity to ensure mathematical reasoning and conceptual understanding is significantly developed as much as possible. To learn more about the Ping Pong Style follow the link below:

	 Why and how to use the ‘ping pong’ teaching style | NCETM

Mental Mathematics

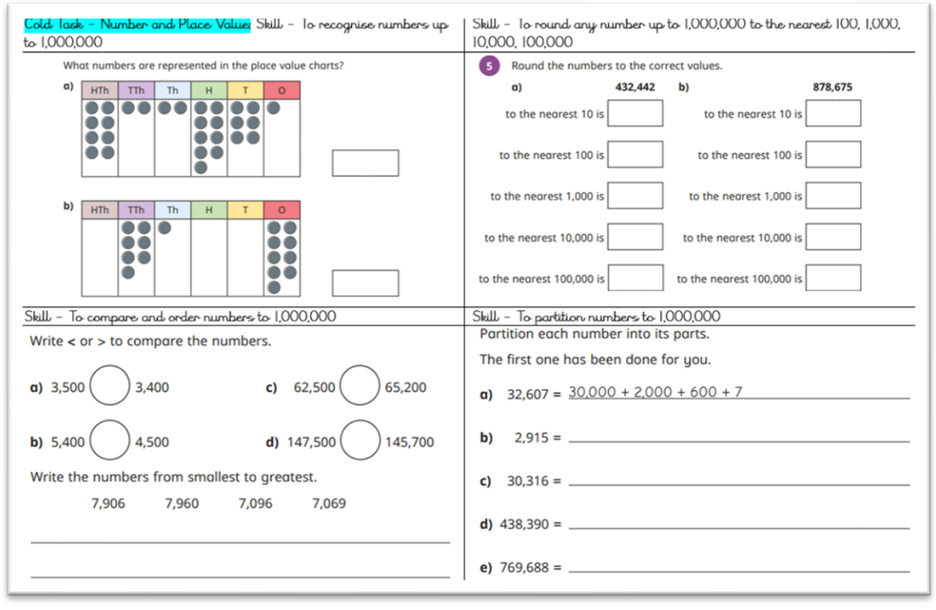
Mastering Number	Through external CPD, we recognise at Lightmoor that there are key fluency objectives for the children to achieve at the end of KS1 and KS2. We recognise that children should know as many number facts within 20 fluently by the end of KS1 and know as many times table facts to 12X12 fluently by the end of Y4 ideally, but definitely by the end of KS2. This will aid both the transition from KS1-KS2 and from KS2-KS3. In order to address this and give the children the best opportunity at achieving these goals, we supplement our daily lessons with Mastering Number lessons.

	 
Fluent in Five	Alongside daily lessons and Mastering Number lessons, children are exposed to a daily Fluent in Five activity. The aim of this activity is to practise key arithmetic skills on a daily basis within a time frame. This will ensure previous skills are revisited and that these skills become more fluent for the children. 

TTRockstars & Numbots	 

Assessing Mathematics at Lightmoor

Entry/Exit Assessment	At the start and end of each unit, each child will carry out an entry/exit assessment. This will allow the class teacher to identify any gaps in knowledge, what areas may need more focus, what may need reteaching and the progress the children have made. Typically, the entry assessment and exit assessment will be the same but it is down to the discretion of the teacher as to whether they will change the exit assessment if necessary. The exit assessment will also inform future planning, interventions and assessment trackers.
Assessment/progress tracker	Once the exit assessments are completed and marked, complete the Class Maths Assessment Grid for that unit, indicating whether they children have achieved the objectives for that unit of learning. Each



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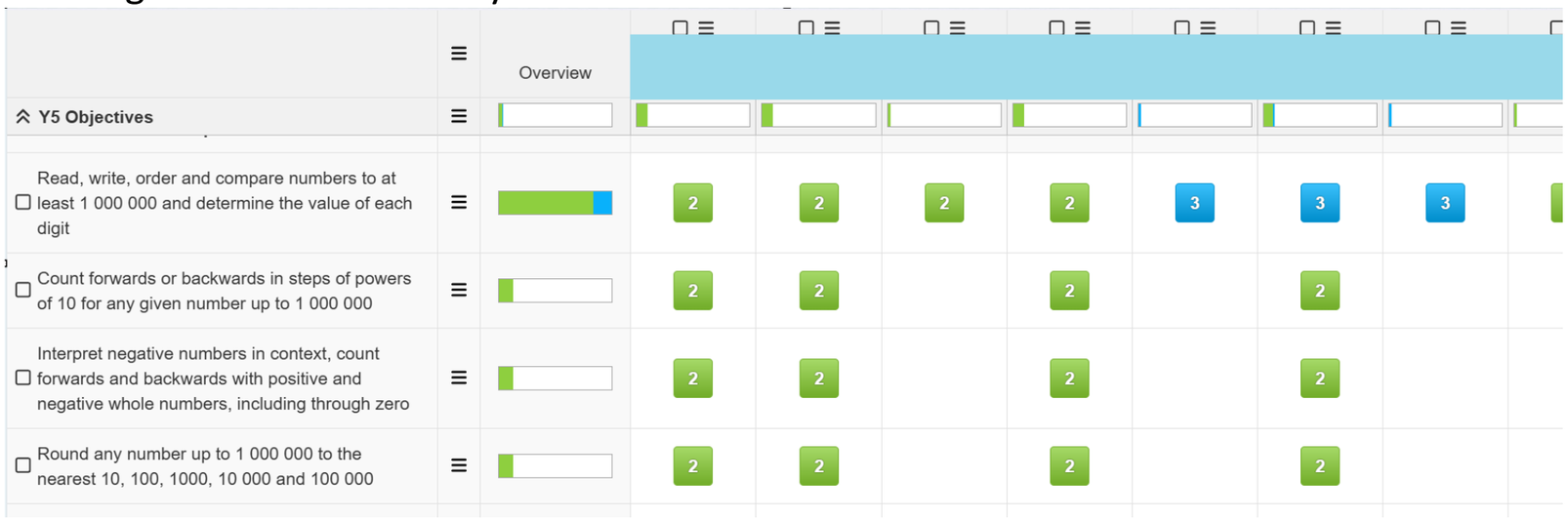
	child's progress can be accessed from Y1-Y6 and will give the teacher the data to identify gaps in learning for the child and any trends within each class. 
White Rose Assessments	Alongside entry and exit assessments, children are assessed against many national curriculum objectives using assessment derived from White Rose Maths. These assessments expose children to a range of question types and styles. These assessments are carried out during Autumn 2, Spring 2 and Summer 2.