Year 1

Mastery Overview
Term by Term

The Mastery Pathway

MathsHUBS
White Rose

Year 1

Overview

One of the most frequent request we get as a Maths Hub is for a suggested long term curriculum plan for mathematics in primary. We have listened to what teachers need and the following mastery overviews have been developed by primary practioners in conjunction with the White Rose Maths Hub to provide a curriculum plan that will support 'Teaching for Mastery'.

There is a termly plan for each year group from Year 1 to Year 6; each term is split into twelve weeks. You will see from the overviews that a significant amount of time is devoted to developing key number concepts each year. This is to build their fluency as number sense will affect their success in other areas of mathematics. Students who are successful with number are much more confident mathematicians.

We hope you find them useful. If you have any comments about this document or have any ideas please do get in touch.

The White Rose Maths Hub Team

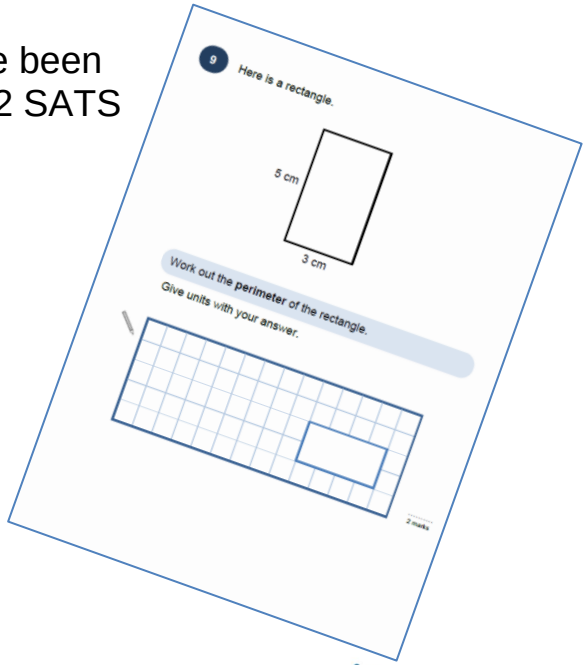
Assessment

Alongside these curriculum overviews, our aim is also to provide a free assessment for each term's plan. Each assessment will be made up of two parts:

Part 1: Fluency based arithmetic practice
Part 2: Reasoning based questions

You can use these assessments to determine gaps in your students' knowledge and use them to plan support and intervention strategies.

The assessments have been designed with new KS2 SATS in mind. All of the assessments will be ready by 30 November 2015.



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Year 1

Teaching for Mastery

These overviews are designed to support a mastery approach to teaching and learning and have been designed to support the aims and objectives of the new National Curriculum.

The overviews;

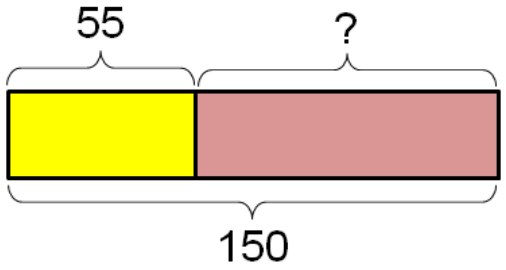
- have number at their heart. A large proportion of time is spent reinforcing number to build competency
- ensure teachers stay in the required key stage and support the ideal of depth before breadth.
- ensure students have the opportunity to stay together as they work through the schemes as a whole group
- provide plenty of time to build reasoning and problem solving elements into the curriculum.

Concrete – Pictorial – Abstract

As a hub we believe that all students, when introduced to a key new concept, should have the opportunity to build competency in this topic by taking this approach.

Concrete – students should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

Pictorial – students should then build on this concrete approach by using pictorial representations. These representations can then be used to reason and solve problems.



An example of a bar modelling diagram used to solve problems.

Abstract – with the foundations firmly laid, students should be able to move to an abstract approach using numbers and key concepts with confidence.

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Frequently Asked Questions

We have bought one of the new Singapore textbooks. Can we use these curriculum plans?

Many schools are starting to make use of a mastery textbook used in Singapore and China, the schemes have been designed to work alongside these textbooks. There are some variations in sequencing, but this should not cause a large number of issues

If we spend so much time on number work, how can we cover the rest of the curriculum?

Students who have an excellent grasp of number make better mathematicians. Spending longer on mastering key topics will build a student's confidence and help secure understanding. This should mean that less time will need to be spent on other topics.

In addition schools that have been using these schemes already have used other subjects and topic time to teach and consolidate other areas of the mathematics curriculum.

My students have completed the assessment but they have not done well.

This is your call as a school, however our recommendation is that you would spend some time with the whole group focussing on the areas of the curriculum that they don't appear to have grasped. If a couple of students have done well then these could be given rich tasks and deeper problems to build an even deeper understanding.

Can we really move straight to this curriculum plan if our students already have so many gaps in knowledge?

The simple answer is yes. You might have to pick the correct starting point for your groups. This might not be in the relevant year group and you may have to do some consolidation work before.

These schemes work incredibly well if they are introduced from Year 1 and continued into Year 2, then into Year 3 and so on.

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Year 1

Detailed Schemes

To complement these yearly overviews we are working on termly schemes of learning that provide:

- More details on how to teach particular aspects of the curriculum
- Fluency, reasoning and problem solving ideas for each topic.

These will gradually become available over this term. Please keep checking back for updates.

In addition to this the NCETM have developed a fantastic series of problems, tasks and activities that can be used to support 'Teaching for Mastery'. They have been written by experts in mathematics.

It will also give you a detailed idea of what it means to take a mastery approach across your school. Information can be found on the link below.

https://www.ncetm.org.uk/resources/46689

Everyone Can Succeed

As a Maths Hub we believe that all students can succeed in mathematics. We don't believe that there are individuals who can do maths and those that can't. A positive teacher mindset and strong subject knowledge are key to student success in mathematics.

More Information

If you would like more information on 'Teaching for Mastery' you can contact the White Rose Maths Hub at mathshub@trinityacademyhalifax.org

We are offering courses on:

- Bar modelling
- Teaching for Mastery
- Year group subject specialism intensive courses – become a maths expert.

Our monthly newsletter also contains the latest initiatives we are involved with. We are looking to improve maths across our area and on a wider scale by working with the other Maths Hubs across the country.

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Year 1 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction			Geometry: Shape	Number: Place Value		Number: Addition and Subtraction		
Spring	Time		Place Value		Number: Addition and Subtraction	Measures: Length and height	Number: Multiplication and Division		Number: Fractions			
Summer	Number: Place Value			Number: Four operations			Measurement: Money		Measurement: Weight and Volume			

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Term by Term Objectives

Year 1

Year group	1	Term	Autumn

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Number: Place Value</u> Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers to 10 in numerals and words. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Given a number, identify one more or one less. Count in multiples of twos.			<u>Number: Addition and Subtraction</u> Represent and use number bonds and related subtraction facts (within 10) Add and subtract one digit numbers (to 10), including zero. Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.			<u>Geometry: Shape</u> Recognise and name common 2D and 3D shapes, including rectangles, squares, circles and triangles, cuboids, pyramids and spheres. Describe position, direction and movement, including whole, half, quarter and three quarter turns	<u>Number: Place Value</u> Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number. Count, read and write numbers from 1 to 20 in numerals and words. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Count in multiples of twos and fives		<u>Number: Addition and Subtraction</u> Represent and use number bonds and related subtraction facts within 20. Add and subtract one digit and two digit numbers to 20, including zero. Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7= ? – 9		

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Term by Term Objectives

Year 1

Year group	1	Term	Spring

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Time Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Recognise and use language relating to dates, including days of the week, weeks, months and years. Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] and measure and begin to record time (hours, minutes, seconds) Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.		Place Value Count to 40 forwards and backwards, beginning with 0 or 1, or from any number. Count, read and write numbers from 1-40 in numerals and words. Identify and represent numbers using objects and pictorial representations. Given a number, identify 1 more or 1 less.		Number: Addition and Subtraction Add and subtract one digit and two digit numbers to 20, including zero. Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.	Measures: Length and height Compare, describe and solve practical problems for: lengths and heights for example, long/short, longer/shorter, tall/short, double/half Measure and begin to record lengths and heights.	Number: Multiplication and Division Count in multiples of twos, fives and tens. Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.		Number: Fractions Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.		Time at the beginning or end of the term for consolidation, gap filling, seasonal activities, assessments, etc.	

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Term by Term Objectives

Year 1

Year group	1	Term	Summer

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number: Place Value Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers from 1-100 in numerals and words. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least. Given a number, identify one more and one less.			Number: Four operations Represent and use number bonds and related subtraction facts within 20. Add and subtract one digit and two digit numbers to 20, including 0. Read, write and interpret mathematical statements involving addition (+) subtraction (-) and equals (=) signs. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. Count in multiples of twos, fives and tens. Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.			Measurement: Money Recognise and know the value of different denominations of coins and notes. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems.		Measurement: weight and volume Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] Measure and begin to record mass/weight, capacity and volume.		Time at the beginning or end of the term for consolidation, gap filling, seasonal activities, assessments, etc.	

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