Year 1/2

Mastery Overview
Term by Term

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MathsHUBS
White Rose

Year 1/2

Mixed Year Overview

Since our Year 1 to Year 6 Schemes of Learning and overviews have been released we have had lots of requests for something similar for mixed year groups. This document provides the yearly overview that schools have been requesting. We really hope you find it useful and use it alongside your own planning.

We had a lot of people interested in working with us on this project and this document is a summary of their work so far. We would like to take this opportunity to thank everyone who has contributed their thoughts to this final document.

These overviews will be accompanied by more detailed schemes linking to fluency, reasoning and problem solving. Termly assessments will be available to evaluate where the children are with their learning.

If you have any feedback on any of the work that we are doing, please do not hesitate to get in touch. It is with your help and ideas that the Maths Hubs can make a difference.

The White Rose Maths Hub Team

Guidance

The White Rose Maths Hub has produced these long term plans to support mixed year groups. 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.
- provide plenty of time to build reasoning and problem solving elements into the curriculum

This document fits in with the White Rose Maths Hub Year 1 – 6 Mastery documents. If you have not seen these documents before you can register to access them for free by completing the form on this link http://www.trinitytsa.co.uk/maths-hub/free-learning-schemes-resources/

Once registered you will be provided with a Dropbox link to access these documents; please be aware some school IT systems block the use of Dropbox so you may need to access this at home.

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Mixed age planning

Using the document

The overviews provide guidance on the length of time that should be dedicated to each mathematical concept and the order in which we feel they should be delivered. Within the overviews there is a breakdown of objectives for each concept. This clearly highlights the age related expectations for each year group and shows where objectives can be taught together.

There are certain points where objectives are clearly separate. In these cases, classes may need to be taught discretely or incorporated through other subjects (see guidance below).

Certain objectives are repeated throughout the year to encourage revisiting key concepts and applying them in different contexts.

Lesson Plans

As a hub, we are collating a variety of lesson plans that show how mixed year classes are taught in different ways. These highlight how mixed year classes use additional support, organise groups and structure their teaching time. All these lesson structures have their own strengths and as a teacher it is important to find a structure that works for your class.

Progression documents

We are aware that some teachers will teach mixed year groups that may be arranged differently to our plans (eg Y3/4/5). We are therefore working to create some progression documents that help teachers to see how objectives link together from Year 1 to Year 6.

Linking of objectives

Within the overviews, the objectives are either in normal font or in bold. The objectives that are in normal font are the lower year group out of the two covered (Year 1, Year 3, Year 5). The objectives in **bold** are the higher year group out of the two covered (**Year 2, Year 4, Year 6**), Where objectives link they are placed together. If objectives do not link they are separate and therefore require discrete teaching within year groups.

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Mixed age planning

Teaching through topics

Most mathematical concepts lend themselves perfectly to subjects outside of maths lessons. It is important that teachers ensure these links are in place so children deepen their understanding and apply maths across the curriculum.

Here are some examples:

- Statistics- using graphs in Science, collecting data in Computing, comparing statistics over time in History, drawing graphs to collect weather data in Geography.
- Roman Numerals- taught through the topic of Romans within History
- Geometry (shape and symmetry)- using shapes within tessellations when looking at Islamic art (R.E), using shapes within art (Kandinsky), symmetry within art
- Measurement- reading scales (science, design technology),
- Co-ordinates- using co-ordinates with maps in Geography.
- Written methods of the four operations- finding the time difference between years in History, adding or finding the difference of populations in Geography, calculating and changing recipes in food technology.
- Direction- Programming in ICT

Objectives split across topics

Within different year groups, topics have been broken down and split across different topics so children can apply key skills in different ways.

Money is one of the topics that is split between other topics. It is used within addition and subtraction and also fractions. In Year 1 and 2 it is important that the coins are taught discretely however the rest of the objectives can be tied in with other number topics.

Other measurement topics are also covered when using the four operations so the children can apply their skills.

In Year 5 and 6, **ratio** has been split across a variety of topics including shape and fractions. It is important that these objectives are covered within these other topics as ratio has been removed as a discrete topic.

Times tables

Times tables have been placed within multiplication and division however it is important these are covered over the year to help children learn them.

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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.

Acknowledgements

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Sarah Ward

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.

Term by Term Objectives

Y1/2

Year 1 and 2 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	Place Value			Addition and Subtraction			Place Value	Addition and Subtraction (Year 1) Multiplication and Division (Year 2)			Geometry- Shape	
Spring	Time		Place Value (Y1) Graphs (Y2)	Money		Multiplication, Division and Fractions				Length and Height	Consolidation	
Summer	Weight and Volume (Y1) Capacity, volume, mass and temperature (Y2)		Place Value (Y1) 3D Shape (Y2)	Four operations			Assessment	Place Value		Year 1 and 2 Consolidation and application		

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Term by Term Objectives

Y1/2

Year	1 and 2	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
Place Value Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number. Count in multiples of twos. **Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward.** Count, read and write numbers to 10 in numerals and words. **Read and write numbers to at least 100 in numerals and words.** **Recognise the place value of each digit in a two digit number (tens, ones)** 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. **Identify, represent and estimate numbers to 100 using different representations including the number line.** Given a number, identify one more or one less. **Compare and order numbers from 0 up to 100; use <, > and = signs.** **Use place value and number facts to solve problems.**			Addition and Subtraction Represent and use number bonds and related subtraction facts (within 10) **Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.** Add and subtract one digit numbers (to 10), including zero. **Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two digit number and ones; a two digit number and tens; two two digit numbers; adding three one digit numbers.** 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. **Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods.** **Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.** **Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.**			Place Value 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 **Year 2, revisit weeks 1 – 3.**	Addition and Subtraction 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 **Multiplication and Division** **Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.** **Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) sign.** **Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.** **Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.**		Geometry: Shape Recognise and name common 2D and 3D shapes, including rectangles, squares, circles and triangles, cuboids, pyramids and spheres. **Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line.** **Compare and sort common 2D shapes and everyday objects.** **Order and arrange combinations of mathematical objects in patterns and sequences.** Describe position, direction and movement, including whole, half, quarter and three quarter turns. **Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)**	

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Term by Term Objectives

Y1/2

Year	1 and 2	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. **Tell and write the time to five minutes, including quarter past/to 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. **Know the number of minutes in an hour and the number of hours in a day.** Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] and measure and begin to record time (hours, minutes, seconds) **Compare and sequence intervals of time.** 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, begin with 0 or 1 or 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. Graphs **Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.** **Ask+ answer simple questions by counting the number of objects in each category and sorting the categories by quantity.**	Measurement: Money Recognise and know the value of different denominations of coins and notes. **Recognise and use symbols of pounds (£) and pence (p); combine amounts to make a particular value.** **Find different combinations of coins that equal the same amounts of money.** Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. **Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.**		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. Number – fractions **Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.** **Write simple fractions for example, ½ of 6 = 3** **Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.**				Length and height Compare, describe and solve practical problems for: lengths and heights for example, long/short, longer/shorter, tall/short, double/half **Compare and order length and record the results using >, < and =.** Measure and begin to record lengths and heights. **Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm), using rulers and scales.**	Consolidation and Assessment	

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Y1/2

Term by Term Objectives

Year	1 and 2	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
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. Measurement: Capacity, volume, mass and temperature **Choose and use appropriate standard units to estimate and measure capacity (litres/ml, mass (kg/g) and temperature (°C) to the nearest appropriate unit, using thermometers, scales and measuring vessels.** **Compare and order volume/capacity/mass and record the results using >, < and =.**		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. Given a number, identify one more and one less. Geometry- properties of shape, 3D shapes Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. Identify 2D shapes on the surface of 3D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.] Compare and sort common 3D shapes and everyday objects. Order and arrange combinations of mathematical objects in patterns and sequences.	Number: Four operations Represent and use number bonds and related subtraction facts within 20. **Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.** Add and subtract one digit and two digit numbers to 20, including zero. **Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two digit number and ones; a two digit number and tens; two two digit numbers; adding three one digit numbers.** Read, write and interpret mathematical statements involving addition (+), subtraction (-), multiplication (x) and division (÷) and equals (=) signs. **Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.** **Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.** Solve one step problems that involve the four operations, using concrete objects and pictorial representations, and missing number problems. **Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods.** Count in multiples of twos, fives and tens **Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.** **Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.**		Assessment	Number: Place Value Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. **Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward.** Count, read and write numbers from 1-100 in numerals and words. **Recognise the place value of each digit in a two digit number (tens, ones)** **Read and write numbers to at least 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. **Identify, represent and estimate numbers to at least 100 using different representations including the number line.** Given a number, identify one more and one less. **Compare and order numbers from 0 up to at least 100; use <, > and = signs.** **Use place value and number facts to solve problems.**		Consolidation and application		

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