

***At Woodhouse Primary School we encourage our pupils to be confident, resilient mathematicians with a love of learning and no fear of ‘grappling’ with difficult concepts and those expressed in an unfamiliar way.
In our school, children are scaffolded, extended and supported through rapid teacher intervention, use of equipment and choice of strategies e.g. jottings/mental/resources. As such teaching is both enabling and extending.***

Term :	Lesson Design : Curriculum objectives	Any adjustments/comments
Autumn 1	<p><u>Number: Place Value</u> count from 0 in multiples of 100; find 10 or 100 more or less than a given number</p> <ul style="list-style-type: none"> • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • compare and order numbers up to 1000 • read and write numbers up to 1000 in numerals and in words • solve number problems and practical problems involving these ideas. <p><u>Number: Addition and Subtraction</u> add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> ❖ a three-digit number and ones ❖ a three-digit number and tens ❖ a three-digit number and hundreds <ul style="list-style-type: none"> • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers <p><u>Measurement</u></p> <ul style="list-style-type: none"> • measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) 	<p>Covered in Spring in 2018 (will be in Autumn 1 2019)</p>
Autumn 2	<p><u>Number: Place Value</u></p> <ul style="list-style-type: none"> • count from 0 in multiples of 4, and 100; find 10 or 100 more or less than a given number • identify, represent and estimate numbers using different representations (m, cm, g, kg) • solve number problems and practical problems involving these ideas. <p><u>Number: Addition and Subtraction</u></p> <ul style="list-style-type: none"> • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. <p><u>Number : Multiplication and Division</u></p> <ul style="list-style-type: none"> • recall and use multiplication and division facts for the 3 and 4 multiplication tables 	

	<ul style="list-style-type: none"> • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written method <p><u>Number: Fractions</u></p> <ul style="list-style-type: none"> • count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 • recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • solve problems that involve all of the above <p><u>Measurement</u></p> <ul style="list-style-type: none"> • tell and write the time from an analogue clock • estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • know the number of seconds in a minute and the number of days in each month, year and leap year • compare durations of events [for example to calculate the time taken by particular events or tasks]. 	
<p>Spring 1</p>	<p><u>Number: Place Value</u></p> <ul style="list-style-type: none"> • count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • solve number problems and practical problems involving these ideas. <p><u>Number: Addition and Subtraction</u></p> <ul style="list-style-type: none"> • add and subtract numbers mentally, including: <ul style="list-style-type: none"> ❖ a three-digit number and ones ❖ a three-digit number and tens ❖ a three-digit number and hundreds • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. <p><u>Number: Multiplication and Division</u></p> <ul style="list-style-type: none"> • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. 	

	<p><u>Measurement : Perimeter</u></p> <ul style="list-style-type: none"> measure the perimeter of simple 2-D shapes <p><u>Geometry : Properties of Shape</u></p> <ul style="list-style-type: none"> recognise 3-D shapes in different orientations and describe them <p><u>Statistics</u></p> <ul style="list-style-type: none"> interpret and present data using bar charts and tables solve one-step and two-step questions [for example, ‘How many more?’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables. <p><u>Number: Fractions</u></p> <ul style="list-style-type: none"> count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators solve problems that involve all of the above 	<p>Move to Autumn in 2019-2020</p> <p>Move to Autumn in 2019-2020</p>
<p>Spring 2</p>	<p><u>Number: Place Value</u></p> <ul style="list-style-type: none"> solve number problems and practical problems involving these ideas. <p><u>Number – Addition and Subtraction</u></p> <ul style="list-style-type: none"> add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. <p><u>Number: Multiplication and Division</u></p> <ul style="list-style-type: none"> recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods <p><u>Number: Fractions</u></p> <ul style="list-style-type: none"> count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 	

	<ul style="list-style-type: none"> recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators <p>Measurement: Time</p> <ul style="list-style-type: none"> tell and write the time from an analogue clock estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight know the number of seconds in a minute and the number of days in each month, year and leap year compare durations of events [for example to calculate the time taken by particular events or tasks]. <p>Statistics</p> <ul style="list-style-type: none"> interpret and present data using pictograms and tables solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. 	<p>Time is referred to daily throughout the year but these objectives are to be covered in more detail in the Autumn term in 2019-2020</p>
<p>Summer 1</p>	<p>Number : Place Value</p> <ul style="list-style-type: none"> solve number problems and practical problems involving these ideas. <p>Number: Addition and Subtraction</p> <ul style="list-style-type: none"> add and subtract numbers mentally, including: <ul style="list-style-type: none"> a three-digit number and ones a three-digit number and tens a three-digit number and hundreds <p>Number: Multiplication and Division</p> <ul style="list-style-type: none"> solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. <p>Number: Fractions</p> <ul style="list-style-type: none"> recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators recognise and show, using diagrams, equivalent fractions with small denominators add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] compare and order unit fractions, and fractions with the same denominators solve problems that involve all of the above <p>Measurement: Money</p> <ul style="list-style-type: none"> add and subtract amounts of money to give change, using both £ and p in practical contexts 	

<p>Summer 2</p>	<p><u>Geometry: Properties of Shapes</u></p> <ul style="list-style-type: none"> • draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • recognise angles as a property of shape or a description of a turn • identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • identify horizontal and vertical lines and pairs of perpendicular and parallel lines. <p><u>Number: Multiplication and Division</u></p> <ul style="list-style-type: none"> • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. 	
<p>Objectives covered in other lessons: Temperature and negative numbers (CCL – Around the world) Bar charts -Light topic in Science Measure body parts and compare to dinosaur</p>		
<p>We aim that all pupils:</p> <ul style="list-style-type: none"> • Become fluent in the fundamentals of mathematics so that they develop the conceptual as well as procedural understanding that underpins a concept and the ability to recall and apply knowledge rapidly and accurately. • Can reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language. • Can solve problems by applying their mathematics to a variety of problems with increasing sophistication, including unfamiliar contexts and real-life scenarios. • Can use the language of mathematics accurately discussing their learning with confidence and precision. <p>In mathematics lessons you will see:</p> <ul style="list-style-type: none"> • Teachers and children having fun and demonstrating positive ‘can do’ attitudes. 		

- High expectations of learning where ALL children are challenged and 'grappling' with concepts; they will demonstrate resilience and independence.
- Insistence on mathematical terminology being used accurately and confidently to explain learning and understanding
- Children confidently using resources from around the classroom to support their learning.
- Well-designed lessons to build upon previous learning to help learners to remember in the long term. **e.g.** repetition of stem sentences for 'sticky knowledge'; small steps; layered learning to enable and extend
- Timely and rapid interventions to address misconceptions.
- Effective questioning where teachers adapt learning within the lesson to support the progress of all learners.
- Application of skills to non-standard situations including the use of non-examples to challenge thinking.

Helpful Resources:

Maths Generic : Curriculum 2019

- ❖ **Bespoke Woodhouse Progression Documents** : Number Fluency; Shape Dictionary; Measurement Charts
- ❖ **White Rose Maths Documents** : Small Steps ; Maths Glossary; Maths Questions
- ❖ **Mastery:** Staff Training; WR Mastery Documents; Quigley Mastery Examples
- ❖ **Quigley Milestones:** B A D examples