Rendlesham Maths

INTENT

At Rendlesham our children become masters of mathematics. They can calculate fluently, reason and apply their knowledge to various contexts and can recognise and enjoy seeing maths everywhere and in everything.

At Rendlesham we use and adapt White Rose Maths and/or NCETM resources to teach our curriculum.

PLANNING RESOURCES

White Rose Education Oak Academy NCETM Planning

TTRockStars website Numbots website

NCETM Axis

Threads	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fluency	*NCETM*	Numbots Mastering Number	Numbots /TTRockStars Mastering Number	TTRockStars Mastering Number	MTC check Mastering Number Arithmetic	TTRockStars Mastering Number Arithmetic	TTRockstars Arithmetic
Mathematical thinking	WRM	WRM	WRM	WRM	WRM	WRM	WRM
Representation and structure	Mastering Number	WRM Mastering Number	WRM Mastering Number	WRM	WRM Mastering Number	WRM Mastering Number	WRM
Variation	Mastering Number	WRM	WRM	WRM	WRM	WRM	WRM
Coherence	Mastering Number	WRM	WRM	WRM	WRM	WRM	WRM

KEY KNOWLEDGE

Nursery: Children gain opportunities in Mathematics throughout the continuous provision, both inside and outside. Children experience counting, comparison, cardinality, subitising, spatial awareness, shape and pattern through resources that support their mathematical thinking and vocabulary, for example five frames, loose parts play, water play, or number rhymes. Daily experiences and routines are all part of children's mathematical learning, for example self registration, whole-class circle times, number of the week, and adults are a crucial part of scaffolding learning to ensure all children reach their full mathematical potential.

	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Reception	Mastering Number	Mastering Number	Mastering Number	Mastering Number	Mastering Number	Mastering Number
	Pattern and 2D Shapes	Pattern and 2D Shapes	3D Shapes and Length	Pattern and Weight	2D and 3D Shape and Capacity	Length Weight and Capacity

White Rose MATHS

Year 1

Consortium Develop • Create • Engage

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum	<u>Week 1-6</u> Place value within 10 + end of block assessment	<u>Week 6-11</u> Addition and subtraction (within 10) + end of block assessmen	<u>Week 1-4</u> Place value (within 20) + end of block assessment	<u>Week 7-9</u> Place value (within 50) + end of block assessment	<u>Week 1-4</u> Multiplication and division + end of block assessment	<u>Week 7-9</u> Place value (within 100) + end of block assessment
		<u>Week 11</u> Geometry + end of block assessment	<u>Week 4-7</u> Addition and subtraction (within 20) + end of block assessment	<u>Week 9-11</u> Length & height + end of block assessment	<u>Week 4-6</u> Fractions + end of block assessment	<u>Week 9-10</u> Money + end of block assessment
				<u>Week 11</u> Mass and volume + end of block assessment	<u>Week 6-7</u> Position and direction + end of block assessment	<u>Week 10</u> Time + end of block assessment
Fluency	**Mastering Number Year 1**	**Mastering Number Year 1**	**Mastering Number Year 1 Numbots**	**Mastering Number Year 1 Numbots**	**Mastering Number Year 1 Numbots**	**Mastering Number Year 1 Numbots**

White Rose MATHS

Year 2

Consortium Develop • Create • Engage

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum	<u>Week 1-5</u> Place value + end of block assessment	<u>Week 5-10</u> Addition and subtraction + end of block assessment	<u>Week 1-3</u> Money + end of block assessment	<u>Week 8 - 10</u> Length and height + end of block assessment	<u>Week 1-4</u> Fractions + end of block assessment	<u>Week 7-9</u> Statistics + end of block assessment
		<u>Week 10-11</u> Shape + end of block assessment	<u>Week 3-8</u> Multiplication and division + end of block assessment	<u>Week 10-11</u> Mass, capacity and temperature + end of block assessment	<u>Week 4-7</u> Time + end of block assessment	<u>Week 9-10</u> Position and direction + end of block assessment
Fluency	**Mastering Number Year 2 Numbots**	**Mastering Number Year 2 Numbots**	**Mastering Number Year 2 Numbots**	**Mastering Number Year 2 Numbots**	**Mastering Number Year 2 Numbots TTRSs**	**Mastering Number Year 2 Numbots TTRS**

White Rose MATHS

Year 3

Consortium Develop•Create•Engage

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum	Week 1-4 Place value + end of block assessment	Week 7-9 Addition and subtraction + end of block assessment	Week 1-4 Multiplication and division B + end of block assessment -	Week 7 - 10 Fractions A + end of block assessment	Week 1-3 Fractions B+ end of block assessment	Week 5-8 Time + end of block assessment
	Week 4 - 7 Addition and subtraction	Week 9-11 Multiplication and division A + end of block assessment	Week 4-7 Length and perimeter + end of block assessment	Week 10-11 Mass and capacity + end of block assessment	Week 3-5 Money + end of block assessment	Week 8-10 Shape + end of block assessment
Fluency	**Fluent in five, Daily 40, TTRSs**	**Fluent in five, Daily 40, TTRSs**	**Fluent in five, Daily 40, TTRSs**	**Fluent in five, Daily 40, TTRSs**	**Fluent in five, Daily 40, TTRSs**	**Fluent in five, Daily 40, TTRSs**

Year 4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum	Week 1-5 Place value + end of block assessment	Week 5-8 Addition and subtraction + end of block assessment	Week 1-4 Multiplication and division B + end of block assessment	Week 6 - 10 Fractions + end of block assessment	Week 1-3 Decimals B + end of block assessment	Week 7-9 Statistics + end of block assessment
		Week 8-9 Area + end of block assessment	Week 4-6 Length and perimeter + end of block assessment	Week 10-11 Decimals + end of block assessment	Week 3-5 Money + end of block assessment	Week 8-10 Shape + end of block assessment
		Week 9 - 11 Multiplication and division A + end of block assessment			Week 5 - 8 Time + end of block assessment	Week 10 -11 Statistics + end of block assessment Week 11 Position and direction + end of block assessment
Fluency	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 4**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 4**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 4**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 4 Arithmetic**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 4 Arithmetic**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 4 Arithmetic**

White Rose MATHS

Year 5

Consortium
Develop • Create • Engage

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum	Week 1-4 Place value + end of block assessment	Week 6-9 Multiplication and division A + end of block assessment	Week 1-4 Multiplication and division B + end of block assessment	Week 6 - 9 Decimals and percentages + end of block assessment	Week 1-4 Shape + end of block assessment	Week 6 -9 Decimals + end of block assessment
	Week 4-6 Addition and subtraction + end of block assessment	Week 9 - 11 Fractions A + end of block assessment	Week 4-6 Fractions B + end of block assessment	Week 9 - 11 Perimeter and area + end of block assessment	Week 4-6 Geometry + end of block assessment	Week 9-10 Negative numbers + end of block assessment
				Week 11 Statistics + end of block assessment		Week 10 -12 Converting units + end of block assessment Week 12 Volume + end of block assessment
Fluency	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 5 Arithmetic**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 5 Arithmetic**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 5 Arithmetic**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 5 Arithmetic**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 5 Arithmetic**	**Fluent in five. TTRSs. Daily 40. Mastering Number - Year 5 Arithmetic**

Year 6

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Curriculum	Weeks 1-3 Place value + end of block assessment	Weeks 8 - 10 Fractions A + end of block assessment	Week 1-3 Number + end of block assessment	Week 7 - 9 Fractions decimals and percentages + end of block assessment	Week 1-4 Shape + end of block assessment	Real Life Maths
	Week 3 - 8 Addition, subtraction, multiplication and division + end of block assessment	Week 10 - 12 Fractions B + end of block assessment	Week 3 - 5 Algebra + end of block assessment	Week 9 - 11 Area, perimeter and volume + end of block assessment	Week 4 - 5 Position and direction + end of block assessment	
		Week 12 Measurement + end of block assessment	Week 5 - 7 Decimals + end of block assessment	Week 11 Statistics and end of block assessment.	Week 5 -6 Problem solving + end of block assessment	
Fluency	**Fluent in five. TTRSs. Arithmetic**	**Fluent in five. TTRSs. Arithmetic**	**Fluent in five. TTRSs. Arithmetic**	**Fluent in five. TTRSs. Arithmetic**	**Fluent in five. TTRSs. Arithmetic**	**Fluent in five. TTRSs. Arithmetic**

Vocabulary

This document is designed to assist with the teaching of vocabulary across EYFS, KS1 and KS2 and is aligned with the White Rose schemes of learning. This document identifies in which year group vocabulary should be explicitly taught and introduced. However, language should be revisited in subsequent year groups, retrieved regularly and quizzed often to ensure children are consolidating their understanding. Some vocabulary might be introduced earlier (shapes for instance) if necessary or as part of an activity, however this document ensures coverage is progressive.

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and place value	Count subitise order/ordinal compare forwards backwards numerals digit one more one less equal to more than less than (fewer)	sort represent multiples partitioning ones tens	count in steps count in multiples place value estimate compare	ascending descending 10 or 100 more 10 or 100 less hundreds	negative numbers roman numerals 1000 more 1000 less thousands round	ten thousands one hundred thousands powers of integer	millions ten millions
Addition and subtraction	add plus altogether total take away/minus number bonds part whole digit	addition/add subtraction difference equals facts problems missing number problems 2-digit number inverse	sum 3-digit number commutative	column addition column subtraction exchange estimate	4-digit number operations methods		
Multiplication and division	double half twice as many equal unequal Share Group Odd even	multiplication division arrays	commutative repeated addition times tables	exchange mathematical statements missing number problems integer scaling problems correspondence problems derived facts	factor pairs formal written layout distributive law remainders	multiples factors prime numbers square numbers cube numbers short division product dividend divisor quotient operations	multi-digit numbers long division

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions/decimals/ percentages		whole half quarter equal parts	three quarters third equivalent fractions unit fractions non unit fractions numerator denominator one whole	tenths	decimal equivalence hundredths convert proper fractions improper fractions decimal point	fifth thousandths mixed numbers percent factors integer complements	
Measurement (measure and length)	measure wide(er) narrow(er) compare long(er) (est) short(er) (est) length	compare	standard units estimate order record results centimetre cm metre m	millimetre mm perimeter	kilometres km rectilinear figure area	decimal notation scaling metric units imperial units inches compound shape irregular shape square centimetres square metres	conversion miles formulae parallelograms triangles feet
Measurement (height, weight and capacity)	height long(er)/short(er) tall(er)/short(er) weight capacity heavy/light heavier than lighter than big/bigger/biggest full/empty more than less than half/half full	mass volume	kilogram kg gram g Quarter Full three quarters full liters l millilitres ml temperature celsius			cubic centimetre pounds pints	cubic metre cubic millimetre cubic kilometre gallons stones ounces

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement (time)	time quicker slower earlier later before after first next today yesterday tomorrow morning afternoon evening day week hour minutes	chronological order month year o'clock half past second	intervals of time quarter past/to duration	analogue clock roman numerals 12/hour clock 24-hour clock a.m./pm. noon midnight leap year digital	convert		
Measurement (money)		money coins notes pounds £ pence p	value change				
Geometry - properties of shape	2-d shapes rectangle square circle triangle characteristics 3-d shapes cuboids cubes cone spheres curved straight flat	sides corners properties pyramids faces	pentagon hexagon line of symmetry properties cylinder edges vertices vertex	right-angle triangle heptagon octagon polygon properties prism orientations angles acute angle obtuse angle turn right angles half turn ¾ of a turn greater than right angle less than right angle horizontal lines vertical lines perpendicular lines parallel lines	isosceles equilateral scalene trapezium rhombus parallelogram kite geometric shapes quadrilaterals	regular polygon irregular polygon reflex angles degrees one whole turn angles on straight line angles around a point vertically opposite missing angles	radius diameter circumference dimensions

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Position and direction	over under between around through on into next to behind beneath order repeat patterns on top of	position direction movement whole turn quarter turn half turn three-quarter turn	clockwise anti-clockwise straight line rotation arrange sequences		co-ordinates first quadrant grid translation plot polygon axis	reflection	four quadrants co-ordinate plane
Statistics			pictograms tally chart block diagram category sorting totalling comparing horizontal vertical	table bar chart one-step problem two-step problem	time graph discrete data continuous data line graph comparison problem sum problem difference problem calculate interpret	timetable two-way tables	pie chart mean
Ratio and proportion							relative size missing values integer multiplication percentages scale factor unequal sharing and grouping
Algebra							formulae linear number sequences algebraically equation unknowns combinations variables

HOW TO HELP AT HOME

There are lots of ways to support maths learning at home. Times tables are fundamental so ensuring children regularly practise these is key. It is also essential that children understand that maths is everywhere so they can help with working out cooking times, journey times, weighing out ingredients, calculating the cost of shopping, and sharing out food between family members, just to name a few.

USEFUL WEBSITES

https://play.numbots.com/#/intro
https://play.ttrockstars.com/auth
https://www.topmarks.co.uk/Search.aspx?Subject=16
https://mathsframe.co.uk/
https://www.bbc.co.uk/bitesize/subjects/z6vg9j6