White Rose Maths on Sumdog

Scheme of Learning – Year 6
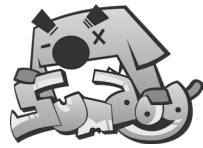
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Introduction

Sumdog and White Rose Maths

Sumdog is an interactive maths and spelling platform for children aged between 5 and 14 years old that combines pupil engagement with quality question content and comprehensive curriculum alignment. Our huge bank of curriculum-aligned maths questions help children to build fluency through regular practice and teachers to diagnose, assess and identify areas for improvement. Questions can be answered in one of over 30 varied and exciting games or in a low-stakes test format, and answering questions earns children coins that can be used to upgrade their 3D avatars, houses and gardens.
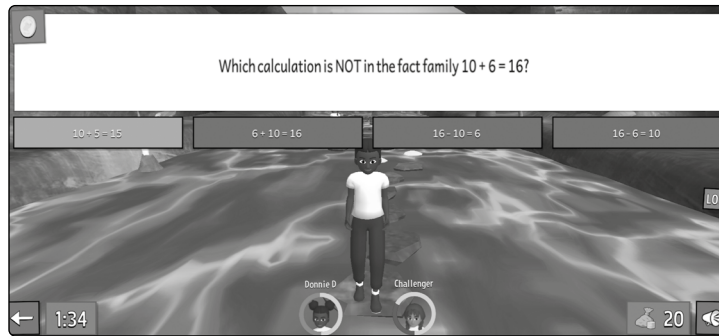
Over the past year at Sumdog, we have developed, reviewed and released an entire curriculum of skills and question content aligned to the new White Rose Maths (WRM) Version 3.0 scheme, with the aim of helping you to set work on Sumdog that exactly matches your in-class teaching. These skills not only draw from our usual broad range of Sumdog questions, but also offer access to approximately 500 brand new question sets that have been designed specifically for WRM by teachers and educational consultants.
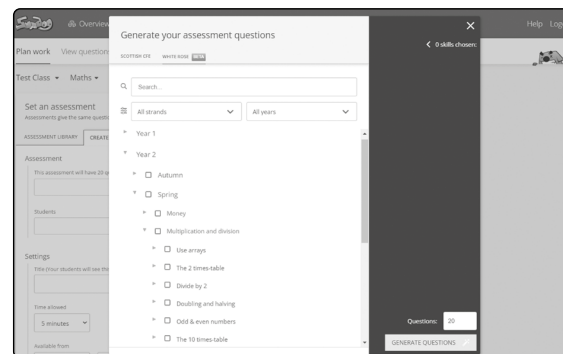
Our Scheme of Learning

This document has been created to help you set work on Sumdog to complement your use of WRM and to identify which of the WRM small steps are covered on Sumdog. To use this document, simply find the WRM small step that you are teaching, then check across for matching Sumdog skills to set work on. The WRM curriculum hierarchy is matched exactly by our skills chooser and wherever we have exactly matching skills, our skill name will match the WRM small step name.

For any small steps that we don't have directly aligned skills for (in **bold**), we've recommended suitable previous skills within the curriculum to provide opportunities for consolidation. In the final column, we've also highlighted the best times to use our ready-made WRM-aligned tests and Sumdog diagnostics, both to revise prior learning and identify areas for improvement when starting a new unit and to assess understanding at the end.

Use Case

Teacher A is a Year 3 teacher who is about to start teaching the 'Shape' block in the Summer term of Year 3. Using the Sumdog White Rose Maths scheme of learning document to set work on Sumdog to complement their teaching, they follow these simple steps:

1. As recommended by the document, they set the WRM-aligned test on Shape from the previous year, 'Year 2 – Shape', to prepare their pupils for upcoming learning.

2. Using Sumdog's enhanced assessment reporting, they then reveal any areas for improvement that need to be addressed before moving on to the more complex Year 3 content.

3. Once they have started teaching the first small step in the block, 'Turns and angles', they consolidate their in-class teaching by setting in-game practice on Sumdog question steps aligned to that exact small step, either in-class or as homework.

4. They then repeat step 3 for the first 3 small steps in the block – using White Rose Maths' teaching resources to introduce new learning, before using Sumdog challenges for practice and consolidation.

5. As the 4th small step in the block, 'Measure and draw accurately', is almost entirely practical in nature, there is no directly aligning skill on Sumdog. As recommended by this document however, Teacher A uses this time to set a Sumdog challenge covering the previous 3 small steps – providing a valuable opportunity for additional revision as in-class teaching moves swiftly on to the next small step.

6. Finally, at the end of the block, they use the corresponding Sumdog test, 'Year 3 – Shape', to assess learning across the block in a low-stakes, familiar environment. Once again, Sumdog's assessment report enables them to easily identify any remaining gaps in understanding so they can plan intervention as required.
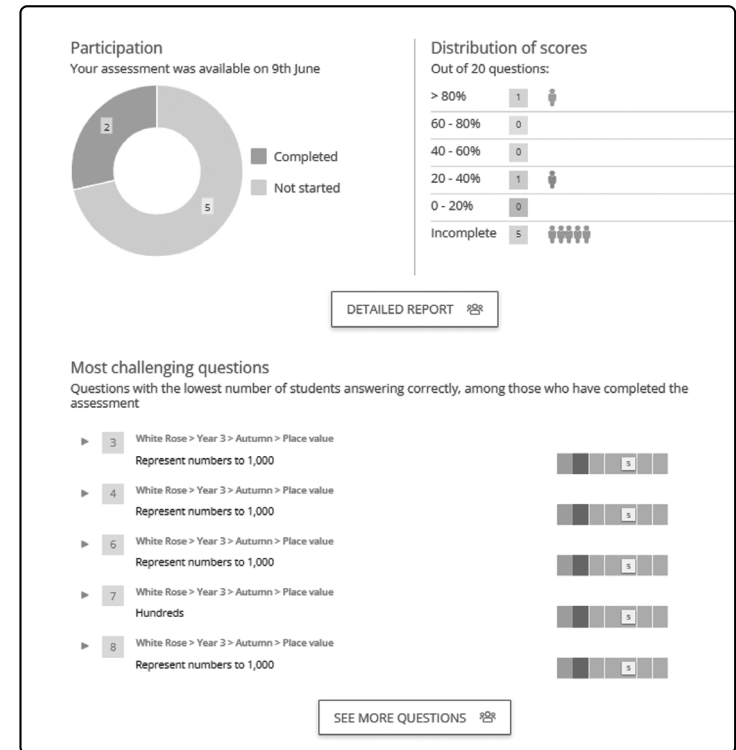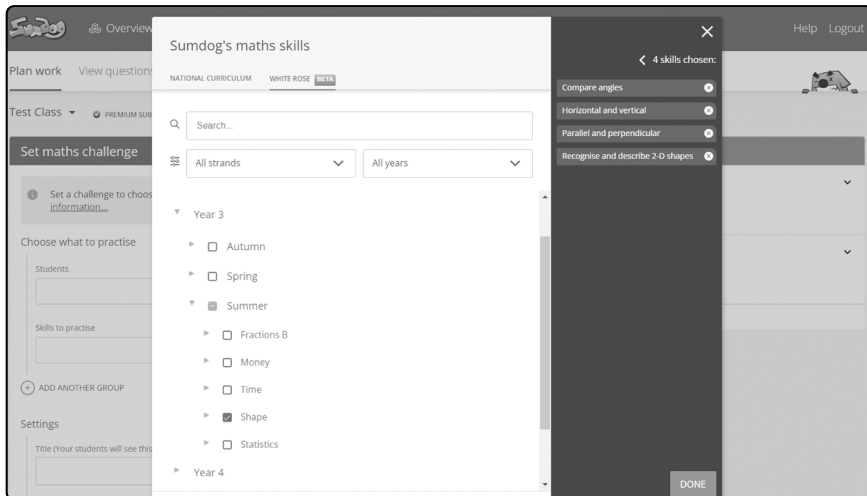
Term	Block	Small Step	Recommended Sumdog White Rose Maths Skill	Sumdog White Rose Maths Assessment Opportunity
Autumn	Place value	Numbers to 1,000,000	**Revision – Year 5 – Place value**	Year 6 Sumdog Diagnostic
		Numbers to 10,000,000	Numbers to 10,000,000	Year 5 – Place value
		Read and write numbers to 10,000,000	Read and write numbers to 10,000,000	
		Powers of 10	**Revision – Numbers to 10,000,000 & Read and write numbers to 10,000,000**	
		Number line to 10,000,000		
		Compare and order any integers	Compare and order any integers	
		Round any integer	Round any integer	
		Negative numbers	Negative numbers	Year 6 – Place value
	Addition, subtraction, multiplication and division	Add and subtract integers	Add and subtract integers	Year 5 – Multiplication and division
		Common factors	Common factors	
		Common multiples	Common multiples	
		Rules of divisibility	**Revision – Common factors & Common multiples**	
		Primes to 100	Primes to 100	
		Square and cube numbers	Square and cube numbers	
		Multiply up to a 4-digit by a 2-digit number	Multiply up to a 4-digit by a 2-digit number	
		Division using factors	Division using factors	
		Introduction to long division	Introduction to long division	
		Long division with remainders	Long division with remainders	
		Solve problems with division	Solve problems with division	

Skills in **bold** indicate revision skills that have been suggested where a White Rose Maths small step has no directly equivalent skill on Sumdog.

Term	Block	Small Step	Recommended Sumdog White Rose Maths Skill	Sumdog White Rose Maths Assessment Opportunity
Autumn	Addition, subtraction, multiplication and division	Solve multi-step problems	**Revision – Solve problems with division**	
		Order of operations	Order of operations	
		Mental calculations and estimation	Mental calculations and estimation	
		Reason from known facts	Reason from known facts	Year 6 – Addition, subtraction, multiplication and division
	Fractions A	Equivalent fractions and simplifying	Equivalent fractions and simplifying	Year 5 – Fractions A
		Equivalent fractions on a number line	Equivalent fractions on a number line	
		Compare and order (denominator)	Compare and order (denominator)	
		Compare and order (numerator)	Compare and order (numerator)	
		Add and subtract simple fractions	Add and subtract simple fractions	
		Add and subtract any two fractions	Add and subtract any two fractions	
		Add mixed numbers	Add mixed numbers	
		Subtract mixed numbers	Subtract mixed numbers	
		Multi-step problems	Multi-step problems	Year 6 – Fractions A
	Fractions B	Multiply fractions by integers	Multiply fractions by integers	Year 5 – Fractions B
		Multiply fractions by fractions	Multiply fractions by fractions	
		Divide a fraction by an integer	Divide a fraction by an integer	
		Divide any fraction by an integer	Divide any fraction by an integer	
		Mixed questions with fractions	Mixed questions with fractions	
		Fraction of an amount	Fraction of an amount	
		Fraction of an amount – find the whole	Fraction of an amount – find the whole	Year 6 – Fractions B

Skills in **bold** indicate revision skills that have been suggested where a White Rose Maths small step has no directly equivalent skill on Sumdog.

Term	Block	Small Step	Recommended Sumdog White Rose Maths Skill	Sumdog White Rose Maths Assessment Opportunity
Autumn	Converting units	Metric measures	Metric measures	Year 5 – Converting units
		Convert metric measures	Convert metric measures	
		Calculate with metric measures	Calculate with metric measures	
		Miles and kilometres	Miles and kilometres	Year 6 – End of term arithmetic (Autumn)
		Imperial measures	Imperial measures	Year 6 – Converting units
Spring	Ratio	Add or multiply?	Add or multiply?	Year 6 Sumdog Diagnostic
		Use ratio language	Use ratio language	
		Introduction to the ratio symbol	Introduction to the ratio symbol	
		Ratio and fractions	Ratio and fractions	
		Scale drawing	**Revision – Introduction to the ratio symbol**	
		Use scale factors	Use scale factors	
		Similar shapes	**Revision – Use scale factors**	
		Ratio problems	Ratio problems	Year 6 – Ratio
	Algebra	1-step function machines	1-step function machines	
		2-step function machines	2-step function machines	
		Form expressions	Form expressions	
		Substitution	Substitution	
		Formulae	Formulae	
		Form equations	Form equations	

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Term	Block	Small Step	Recommended Sumdog White Rose Maths Skill	Sumdog White Rose Maths Assessment Opportunity
Spring	Algebra	Solve 1-step equations	Solve 1-step equations	
		Solve 2-step equations	Solve 2-step equations	
		Find pairs of values	Find pairs of values	
		Solve problems with two unknowns	Solve problems with two unknowns	Year 6 – Algebra
	Decimals	Place value within 1	Place value within 1	Year 5 – Decimals
		Place value – integers and decimals	**Revision – Place value within 1**	
		Round decimals	Round decimals	
		Add and subtract decimals	**Revision – Year 5 – Add decimals with a different number of decimal places & Subtract decimals with a different number of decimal places**	
		Multiply by 10, 100 and 1,000	Multiply by 10, 100 and 1,000	
		Divide by 10, 100 and 1,000	Divide by 10, 100 and 1,000	
		Multiply decimals by integers	Multiply decimals by integers	
		Divide decimals by integers	Divide decimals by integers	
		Multiply and divide decimals in context	Multiply and divide decimals in context	Year 6 – Decimals
	Fractions, decimals and percentages	Decimal and fraction equivalents	Decimal and fraction equivalents	Year 5 – Decimals & percentages
		Fractions as division	Fractions as division	
		Understand percentages	**Revision – Year 5 -Understand percentages**	
		Fractions to percentages	Fractions to percentages	

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Term	Block	Small Step	Recommended Sumdog White Rose Maths Skill	Sumdog White Rose Maths Assessment Opportunity
Spring	Fractions, decimals and percentages	Equivalent fractions, decimals and percentages	Equivalent fractions, decimals and percentages	
		Order fractions, decimals and percentages	Order fractions, decimals and percentages	
		Percentage of an amount – one step	Percentage of an amount – one step	
		Percentage of an amount – multi-step	Percentage of an amount – multi-step	
		Percentages – missing values	Percentages – missing values	Year 6 – Fractions, decimals and percentages
	Area, perimeter and volume	Shapes – same area	Shapes – same area	Year 5 – Volume
		Area and perimeter	Area and perimeter	
		Area of a triangle – counting squares	Area of a triangle – counting squares	
		Area of a right-angled triangle	Area of a right-angled triangle	
		Area of any triangle	Area of any triangle	
		Area of a parallelogram	Area of a parallelogram	
		Volume – counting cubes	Volume – counting cubes	
		Volume of a cuboid	Volume of a cuboid	Year 6 – Area, perimeter and volume
	Statistics	Line graphs	Line graphs	Year 5 – Statistics
		Dual bar charts	Dual bar charts	
		Read and interpret pie charts	Read and interpret pie charts	
		Pie charts with percentages	Pie charts with percentages	

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Term	Block	Small Step	Recommended Sumdog White Rose Maths Skill	Sumdog White Rose Maths Assessment Opportunity
Spring	Statistics	Draw pie charts	Draw pie charts	Year 6 – End of term arithmetic (Spring)
		The mean	The mean	Year 6 – Statistics
Summer	Shape	Measure and classify angles	Measure and classify angles	Year 6 Sumdog Diagnostic
		Calculate angles	Calculate angles	Year 5 – Shape
		Vertically opposite angles	Vertically opposite angles	
		Angles in a triangle	Angles in a triangle	
		Angles in a triangle – special cases	Angles in a triangle – special cases	
		Angles in a triangle – missing angles	Angles in a triangle – missing angles	
		Angles in quadrilaterals	Angles in quadrilaterals	
		Angles in polygons	Angles in polygons	
		Circles	Circles	
		Draw shapes accurately	Draw shapes accurately	
		Nets of 3D shapes	Nets of 3D shapes	Year 6 – Shape
	Position and direction	The first quadrant	The first quadrant	Year 5 – Position and direction
		Read and plot points in four quadrants	Read and plot points in four quadrants	
		Solve problems with coordinates	Solve problems with coordinates	
		Translations	Translations	Year 6 – End of term arithmetic (Summer)
		Reflections	Reflections	Year 6 – Position and direction

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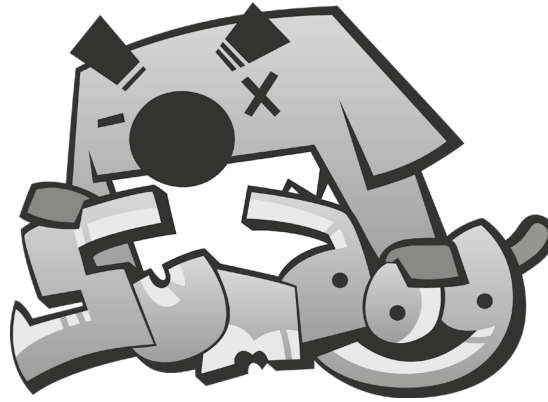
Interested in trying our new fully aligned White Rose Maths scheme?

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