



Key content – knowledge and skills	National Curriculum focus
<p>Autumn 1: Calculations review; Directed numbers; Factors, multiples, and primes; Rounding and estimation</p> <p>Autumn 2: Manipulating expressions; Solving linear equations; Rearranging formulae; Sequences and graphs</p> <p>Spring 1: Decimals review; Circles and other 2D shapes; Volumes of prisms and cylinders; Surface area of prisms and cylinders</p> <p>Spring 2: 2D shapes review; Angles on parallel lines; Transformations; Constructions</p> <p>Summer 1: Calculations with fractions; FDP conversions; Probability</p> <p>Summer 2: Ratio and proportional reasoning; Averages; More charts and graphs</p> <p>Curriculum Document</p>	<p>Subject content from the National Curriculum Framework Document September 2013:</p> <p>N1-16</p> <p>A1-16</p> <p>R1-10</p> <p>G1-16</p> <p>P1-4</p> <p>S1-3</p>
Key assessment points	
<p>There will be one assessment each half-term</p> <p>Autumn 1: Unit 1-4 test</p> <p>Autumn 2: Unit 1-8 test</p> <p>Spring 1: Unit 1-12 test</p> <p>Spring 2: Unit 1-16 test</p> <p>Summer 1: Unit 1-20 test</p> <p>Summer 2: End of Year exams Unit 1-24</p>	
Christian ethos	
<p>With all mathematics studied we will be exploring how skills such as problem solving, numerical reasoning and real life applications, covered in each topic, will make our students confident and motivated, fully equipped to make a positive contribution to society.</p>	
British values	
<p>An explicit opportunity in the Year 8 curriculum to explore British values falls within the discussion and debate created from exploring real life applications created from mathematics. Teachers will guide and advise students appropriately.</p>	



Week	Month	Learning Intentions and/or Key Questions
Aut1-1	September	Calculations review
Aut1-2		Directed numbers
Aut1-3		Factors, multiples, and primes
Aut1-4		Rounding and estimation
Aut1-5	October	Half term assessment
Aut1-6		
Aut1-7		
		Half term holiday
Aut2-1	November	Manipulating expressions
Aut2-2		Solving linear equations
Aut2-3		Rearranging formulae
Aut2-4		Sequences and graphs
Aut2-5	December	End of term assessment
Aut2-6		
Aut2-7		
		Christmas holiday
Spr1-1	January	Decimals review
Spr1-2		Circles and other 2D shapes
Spr1-3		Volumes of prisms and cylinders
Spr1-4		Surface area of prisms and cylinders
Spr1-5	February	Half term assessment
Spr1-6		
		Half term holiday
Spr2-1	March	2D shapes review
Spr2-2		Angles on parallel lines
Spr2-3		Transformations
Spr2-4		Constructions
Spr2-5		End of term assessment
Spr2-6		
	April	Easter holiday
Sum1-1	May	Fractions and percentages of amounts
Sum1-2		FDP conversions
Sum1-3		Operations with fractions
Sum1-4		Probability
Sum1-5		Half term assessment
Sum1-6		
	June	Half term holiday
Sum2-1		Proportional reasoning
Sum2-2		Ratio
Sum2-3		Averages
Sum2-4		Representing data
Sum2-5	July	End of year exam
Sum2-6		
Sum2-7		

Subject: Maths

Year: 8

Unit: 1 to 4

Medium-term plan

Autumn 1

Week	Module Overview	Cross-Curricular	Planning Links
1	Calculations Review This is an opportunity for pupils to revisit any calculation skills they are not confident with from unit 7.1. For the lowest attaining groups some objectives from 7.1 might also need to be revisited. Not everything will be recapped in these lessons, so some revision may be interleaved with the subsequent units.	Cross-Curricular Activity on Creating Art from Fractions, Decimals and Percentages	Curriculum Document Complete Maths platform Planning Proforma Department padlet Resources folder
2	Directed numbers In these lessons pupils should gain an understanding of calculating with directed numbers using a range of concrete and pictorial representations such as double-sided counters, vertical number lines, and should have an opportunity to work with negative numbers in context. Misconceptions should be carefully avoided.		
3			
4	Factors, multiples, and primes Depending on the prior knowledge of the class and time spent on unit 8.1, this unit may take shorter than two weeks, and may focus on identifying when to find factors and when to find multiples in context, or on beginning to use prime factorisation. Open-ended tasks such as exploring squares or counting factors can help here.		
5			
6	Rounding and estimation This is an opportunity for pupils to review the rounding work from 7.1, and extend that knowledge to decimals and significant figures. This can then be interleaved in subsequent units on area and perimeter, for example. Pupils should be encouraged to use formal inequality notation where relevant.		
7			

Subject: Maths

Year: 8

Unit: 5 to 8

Medium-term plan

Autumn 2

Week	Module Overview	Cross-Curricular	Planning Links
1	Manipulating expressions In returning to algebra, time should first be taken to ensure pupils are still fluent with the algebraic manipulation they learnt in Year 7, including collecting like terms, expanding, and factorising. Manipulatives such as algebra tiles can be used to support this. Task selection should also be a factor here.	Cross-Curricular Activity on Creating Art from Fractions, Decimals and Percentages	Curriculum Document Complete Maths platform Planning Proforma Department padlet Resources folder
2	Solving linear equations It is essential here that pupils begin from wherever their knowledge from 7.8 ends, so pupils are not being cognitively overloaded. Not all pupils will solve all types of equations listed here, but all groups should have opportunity to practice algebraic manipulation and working with negatives in this module.		
3			
4	Rearranging formulae Links should be made in this module with similarities in solving equations, and it would be beneficial to explore the differences and what they mean in practice. This could be done in the context of looking at forming mathematical expressions or equations, and substitution to highlight if a variable has one or many values.		
5			
6	Sequences and graphs Pupils have not had any units on sequences, so there is quite a lot to cover in this unit, but wherever pupils get up to will be continued from in units 9.7 and 9.8. The focus for graphs should be on coordinates and the concept of gradient. There are more opportunities here to interleave learning on directed numbers and decimals.		
7			

Subject: Maths

Year: 8

Unit: 9 to 12

Medium-term plan

Spring 1

Week	Module Overview	Cross-Curricular	Planning Links
1	Decimals Review Hopefully if knowledge on decimals has been interwoven throughout previous units then teachers will be aware of the current gaps in knowledge from 7.10 and 7.11 and will be able to plan accordingly to build on this knowledge, or recap where necessary. Pupils should finish this unit able to do at least the Support objectives.	Cross-Curricular Activity on enlargements in art	Curriculum Document Complete Maths platform Planning Proforma Department padlet Resources folder
2	Circles and other 2D shapes This gives opportunity for pupils to review and build on work from 7.9, whilst building up knowledge of circles. Teachers may choose to revise this knowledge throughout the unit gradually adding in new knowledge and eventually extending to compound shapes where time permits. Problems in context should also be considered.		
3			
4	Volume of prisms and cylinders The aim of this module is to be able to apply the work done on area to extend to 3D shapes, and for pupils to understand the concept of volume. Again, problems in context should be considered, hence the objectives on conversions. Teachers may choose to mix this unit with 8.12 so pupils can practice method selection.		
5			
6	Surface area of prisms and cylinders In this module pupils should understand and apply the concept of surface area, including in context. Some prerequisite objectives from 8.10 and 8.11 haven't been included here as they should already have been considered. Teachers may choose to mix this unit with 8.11 so pupils can practice method selection.		

Subject: Maths

Year: 8

Unit: 13 to 16

Medium-term plan

Spring 2

Week	Module Overview	Cross-Curricular	Planning Links
1	2D shapes review This unit gives an opportunity for pupils who may not have completed all the objectives from 7.13 to review them, and for other pupils to revise the concepts, though the length needed for this will vary from class to class. Teachers may choose to instead review symmetry with module 8.15.	Cross-Curricular Activity on enlargements in art	Curriculum Document Complete Maths platform Planning Proforma Department padlet Resources folder
2	Angles on parallel lines Pupils should have opportunity in this unit to revise and continue the angles work from 7.14, whilst introducing understanding of angles on parallel lines. Terminology and spotting angle rules here is highly important, so teachers need to ensure pupils are practising choose angle rules rather than applying one per lesson.		
3			
4	Transformations It is unlikely in these two weeks that pupils will gain a full understanding of all types of transformations. It is more important that pupils cover the support and crossover objectives well, than cover more and understanding be lost. Pupils will be able to revise transformations in year 10 alongside negative and fractional enlargements.		
5			
6	Constructions This unit follows directly from 7.16 and should allow pupils to refresh their compass and protractor skills, and increase the range of problems they are able to apply them to. It is preferable that this is done from a motivating point of what each construction achieves rather than what it is, so as to help pupils decide when each is needed.		

Subject: Maths

Year: 8

Unit: 17 to 20

Medium-term plan

Summer 1

Week	Module Overview	Cross-Curricular	Planning Links
1	Fractions and percentages of amounts This unit presents an opportunity for pupils to revisit work covered in units 7.17 to 7.19. If pupils are weak on the support objectives it may be necessary to revisit support objectives from the previous year on pictorial representations. Ensure pupils are confident on other objectives before 'find the original' problems.	Cross-Curricular Activity on Percentages in Fitness Training	Curriculum Document Complete Maths platform Planning Proforma Department padlet Resources folder
2	FDP conversions This is a short unit to ensure work done in 7.19 is embedded in order for pupils to be able to calculate with percentages using calculators accurately, and so that in unit 9.19 pupils are able to use multipliers effectively. Ensure in this unit that pupils see a range of problems to tackle misconceptions like $3\% = 0.3$		
3	Operations with fractions Here pupils have the opportunity to practice skills on multiplying and dividing fractions initially studied in 7.20, alongside adding and subtracting fractions. It's important first that pupils are confident on equivalent fractions. Pupils should also have opportunities to look at different ways fractions may appear (e.g. $4 = 4/1$ and $1 = 4/4$).		
4			
5	Probability This is the first unit in the scheme of work on probability, so take time to ensure that pupils are comfortable with the language of probability, and review ordering fractions on a number line to enable them to make comparisons on likelihoods. Pupils are not expected to look at combined events here.		
6			

Subject: Maths

Year: 8

Unit: 21 to 24

Medium-term plan

Summer 2

Week	Module Overview	Cross-Curricular	Planning Links
1	Proportional reasoning This unit builds on work done in unit 7.21 and teachers may wish to use some of the support objectives from 7.21 for lower-attaining pupils. This is essentially a reminder to pupils of the usefulness of ratio tables, with opportunities to practice using them in a wider range of scenarios.	Cross-Curricular Activity on FDP / Multiplicative Reasoning	Curriculum Document Complete Maths platform Planning Proforma Department padlet Resources folder
2	Ratio This unit follows on from 7.22 and the support objectives combine some of the objectives from their in an effort to ensure pupils are not starting their work here without prerequisite knowledge.		
3	For pupils already confident using bar models there is an opportunity to work beyond bar models on combining and subdividing ratios.		
4	Averages This unit provides an introduction to the world of averages for pupils, as it is not covered in Year 7. For some pupils this will be mainly working with lists, but is expected that most pupils will be able to find averages from tables. Care should be taken to explore reasoning and not just teach methods, as this causes confusion later.		
5			
6	Representating data This units allows pupils to review and consolidate work from unit 7.24, alongside any graph types not covered. It is expected that the graph types focused on in this unit will vary considerably depending on the prior attainment of the pupils.		