Share Multi Academy Trust

Curriculum Planning Template

Subject: Maths Year 8 Ability Mixed

Half Term 4 / weeks	**Week 1-2**	**Week 3-4**	**Week 4-5**	
Topic	Unit 7 – Percentages	Unit 8 – Ratio	Unit 8b – Compound Measure	Reteach and Retention
Topic overview **Pupils will learn…**	Consolidation of percentage skills from year 7 with the addition of using a calculator method, comparing quantities using percentages, reverse percentages and problem solving.	Students are introduced and are able to use ratio notation.	Students investigate the relationship between distance, time and speed.	Focus on the process of reteach and retention, knitting together the learning in reaction to the assessments completed
Components	• Use percentages greater than 100% • Express one quantity as a percentage of another • Compare two quantities by percentage • Increase or decrease a quantity by a given percentage • Understand how to compare quantities using percentages. • Reverse percentages: find the original quantity given a part of it and its percentage. • Reverse percentages: find the original quantity when we know its final value after the percentage increase or decrease • Solve problems involving percentages and reverse percentages.	• Interpret a:b and a:b:c where a:b:c are whole numbers • Compare two or more quantities by ratio • Understand the relationship between ratios and fractions • Write equivalent ratios, and find the missing term in a pair of equivalent ratios • Express ratios involving rational numbers in their simplest form • Divide a quantity in a given ratio • Find the whole/one part when a whole is divided into parts in a given ratio • Solve word problems involving ratio.	• Use the relationship between distance, time and speed • Write speed in different units such as km/h, m/min, m/s and cm/s. • Convert from one unit of speed to another (e.g., km/h to m/s) • Solve word problems involving speed, uniform speed and average speed.	Staff complete a program of adaptive reteaching on specific topics based on the individual/class needs within their groups. Regular assessments are used to identify gaps in learning. Any gaps found are then addressed in lessons to help support learning and retention. Clear areas for improvement are monitored by individual staff and at a departmental level.
What pupils should already know (prior learning components)	Students should be able to: • Multiply and divide by 10 and 100. • Convert between fractions, decimals and percentages. • Find basic percentages of amounts without a calculator. • Increase and decrease amounts using basic percentages. • Write one number as a percentage of another.	Students should be able to: • Simplifying fractions • Identify HCF to simplify fully • Adding, dividing and multiplying numbers. • Dividing numbers and getting non-integer answers.	Students should be able to: • Understand the concept of different measures for distance, time and speed. • Substitute numbers into a formula	All the half term content will have been covered by this point. Staff will use departmental tracking documents to analyse the gaps in learning from the most recent assessments and all previous assessments. The ability to structure and breakdown a problem-solving question as exemplified in the TFI questions throughout the course.
Transferrable knowledge (skills)	Percentages is used regularly within worded problem-solving questions with multi-steps. Without a basic understanding of percentages, students will struggle to access these questions at a later date. In addition, this skill will be used	Ratio is a skill that appears throughout the maths curriculum. Students are introduced to this in Year 8 to begin their understanding of sharing amounts into ratio's. This assists students in other topic areas such as proportion and probability and	The topic of SDT tests students' ability to convert units of time and distance into other units. In addition, to this student will need to substitute values into a formula and rearrange this formula to find	This activity should serve to highlight and address areas of weakness in teaching and learning or retention. This early intervention to understand specific key areas for improvement or development. This should

	by students in later life when calculating percentages such as VAT, tax etc.	regularly appears in complex multi-step problem solving questions. Without a basic understanding of ratio, students will struggle to access these questions at a later date. At KS4 this knowledge is essential to access the topic of similar shapes. This begins with finding lengths and extends to area and volume at a higher level	unknowns. These skills continue throughout KS3 and 4 when substituting into different formulae to find unknowns.	help to build confidence and improve students' ability to answer these and directly sequential problems.
Key vocabulary pupil will know and learn	compare, quantities, express, reverse, increase, decrease, depreciation, interpret, fractions, rational	compare, quantities, express, recipes, ratio, simplest form, relationship, convert, speed, proportion.	Distance, speed, time, compound, measure, average, kilometre, metre, hour, minute, second, unit, convert, relationship,	
Assessment activities	Homework- Unit 7 – Percentages Year 8 Test 4	Homework- Unit 8a – Algebra and Sequences Year 8 Test 4	Homework – Unit 8b Compound Measure Year 8 Test 4	AFL and adaptive teaching will continue to support staff to assess the address areas.
Resources available	Maths watch clips: N24a, N24b, N39a, N39b, R9, R10, R12	Maths watch clips: R5a, R5b GCSE 39, 165a, 165b, 165c, 200a	Maths watch clips: R2, R11a, N7a GCSE 142	Before any assessments are completed, revision and guidance materials are provided for students to assist in independent study.
Notes **Why this topic is important…**	We begin this unit by recapping fraction knowledge from Year 7 Unit 20. This helps student's retention and fluency with percentages. Following from this we begin deepening student's knowledge of finding the percentage of an amount by introducing multipliers (calculator method). This is then developed further when finding percentage increase and decrease using multipliers. This then assists students finding reverse percentages and will be used in the future when finding compound interest. Within this unit we also cover percentage change which builds upon skills already covered and allows for cross curriculum links with business and geography.	We begin this unit recapping HCF and simplifying fractions. This is the basis of understanding how to simplify a ratio fully. This helps deepen students understanding of fractions and how they work. Students then learn about how ratio represents parts of a whole which links to proportion and fractions previously seen in Year 8 Unit X. Students then begin sharing amounts into a given ratio and working backwards when given how much one part is worth. As an extension we push students to questions involving the difference between and a:b:c. In the future these skills will appear in multi-step GCSE questions and are vital to access these questions. In addition, this topic links cross curriculum with Food Technology, Art and business.	Students begin this unit using the relationship between speed distance and time to calculate unknowns. While doing this student must understand the use of units they are using and to be able to convert between these to use appropriate units of measure. These skills assist students answer worded problems which can be extended into questions with uniform speed and average speed. This topic has cross curriculum links with science.	This is an important point in the curriculum plan that enables individual teachers to review the gaps in learning for the classes they teach. The half-termly assessments are used to track students' progress and enable teachers to react quickly to any gaps in knowledge and prepare students for the next assessment. The feedback and modelling of the exam answers enables students to pick up exam techniques and the ability to communicate effectively.