

Subject: Maths **Year** 8 **Ability** Mixed

Half Term 1 / weeks	Week 1-3	Week 4-6	
Topic	Unit 1- Factors, Multiples and Primes	Unit 2- Fractions	Reteach and Retention
Topic overview	To recall knowledge on multiples, factors and primes and to apply number skills to real world contexts such as HCF and LCM	To be able to perform all operations with calculations that include fractions.	Focus on the process of reteach and retention, knitting together the learning in reaction to the assessments completed
Pupils will learn...			
Components	<ul style="list-style-type: none"> Find the multiples of a number Find the factors of a number Find the LCM of a pair of numbers by listing multiples Find the HCF of a pair of numbers by listing factors Calculate squares, square roots, cubes and cube roots (with and without a calculator) Find prime numbers Write a number as a product of its prime factors Find the LCM and HCF from venn diagrams using prime factorisation 	<ul style="list-style-type: none"> To be able to find equivalent fractions To be able to simplify fractions To convert between mixed and improper fractions To add and subtract fractions with like and unlike denominators To add and subtract mixed and improper numbers To analyse and work out functional problem-solving worded fractions questions To multiply fractions To divide fractions To calculate with algebraic fractions To convert fractions to recurring decimals 	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: <ul style="list-style-type: none"> describe and explain different types of numbers e.g. odd, even, primes etc. communicate using mathematical language prime numbers and explain prime numbers only have two factors. identifying multiples and factors of numbers <ul style="list-style-type: none"> and be able to find all factor pairs of numbers find common factors of two numbers. 	Students should be able to: <ul style="list-style-type: none"> Find equivalent fractions using common multiples Simplify fractions using common factors Recognise mixed numbers and improper fractions and convert from one form to the other. Add and subtract fractions with different denominators and mixed numbers. 	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)	The topic will build pupils' confidence with basic number skills and using mathematical language to explain reasoning.	This topic will develop students' skills using fractions which is incorporated into future topics in KS4.	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 help to build confidence and improve students' ability to answer these and directly sequential problems.
Key vocabulary pupil will know and learn	factor, multiple, common factor, common multiple, LCM, HCF, prime number, prime factorisation, indices, equivalent	factor, multiple, common factor, common multiple, LCM, HCF, indices, equivalent, numerator, denominator, improper fraction, mixed number, recurring	

Assessment activities	Homework - Unit 1 - Factors, Multiples and Primes Year 8 Test 1	Homework- Unit 2- Fractions Year 8 Test 1	AFL and adaptive teaching will continue to support staff to assess the address areas.
Resources available	Maths watch clips N11, N10, N25, N30a, N30b, N31	Maths watch clips N23b, N23c, N35, N36, N37a, N37b, 210a, 177	Before any assessments are completed, revision and guidance materials are provided for students to assist in independent study.
Notes Why this topic is important...	Key topics are revisited within this unit such as multiplication and division to find factors and multiples. These skills underpin students learning journey. An advancement through these skills will lead to increasingly challenging values being used to work with, and then into problems that use these skills “in context”. The unit finishes with LCM/HCF which is often present in problem solving questions as well as factorising that will be used in harder quadratic problems in KS4.	We begin the unit by simplifying and finding equivalent fractions which draw on skills with multiples and factors mentioned within Unit 1. These skills will be revisited in other topics such as ratio within KS4. We then ensure the students can perform all operations with fractions, in addition to conversions from mixed and improper fractions. Mathematical fluency with fractions will be vital for students throughout their time at school and will be used consistently in more challenging questions throughout KS4. Students will be challenged with extending this basis of knowledge into algebraic fractions which will be revisited further in KS4. Recall within this topic will be important for future topics such as probability and forming and solving equations.	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.