CURRICULUM AND ASSESSMENT PLAN

YEAR 12/3 | GCSE RE-SIT

The curriculum for year 12/13 GCSE re-sit students is based upon the CfEM scheme of work for GCSE maths re-sits. This has been developed by teachers in the CfEM colleges, based on the Five Key Principles of Teaching for Mastery in Further Education (FE).

1. Develop and understanding of mathematical structure
2. Value and build on students' prior learning
3. Priorities curriculum coherence and connections
4. Develop both understanding and fluency in mathematics
5. Develop a collaborative culture in which everyone believes everyone can succeed

"The GCSE curriculum is made up of a few big, linked ideas, and this scheme of work (SoW) has been designed in a way to reduce students' cognitive load supporting the demands on their working memory while helping them to think deeply about the underlying mathematical concepts. This is in contrast to traditional teaching in a GCSE mathematics re-sit classroom, where students are provided with isolated procedures or algorithms presented as disconnected topics that need to be remembered but cannot be readily applied to everyday life situations.

Evidence from the analysis of students' scripts carried out by CfEM shows that those who miss out on Grade 4 need to develop their thinking on key concepts such as percentages and fractions, rather than try to remember algorithms for solving simultaneous equations or how to rearrange an equation.

This SoW addresses this by removing topics that require too many steps of understanding for our students, considering the exam's low weighting. The critical aim is to develop an improved number sense, and while some algebra is covered, there are very few topics beyond the algebra basics within this SoW. Similarly, with geometry, this SoW concentrates on 2D and 3D basic concepts such as area and volume and does not build into topics such as Pythagoras and trigonometry.

By removing several more complex topics, we give students the best possible chance of success by covering enough content to allow them to comfortably gain a Grade 4, while also spending enough time on each topic for them to be able to address their misconceptions and make progress.

In sequencing this SoW, we have also reviewed different models and representations of mathematical concepts as well as the efficacy of using these mastery approaches from action research undertaken by CfEM colleges."

Students will also be completing a low stake GCSE practice paper every two weeks, to help further develop their understanding of the examination style. Gaps identified from these practice papers will be addressed in lesson and through the use of homework set on Sparx Maths

Students in year 13, and those in year 12 that have already achieved a grade 3, will be given an opportunity to re-sit in November. Due to this they will be working from a bespoke SoW, which will be develop based upon their previous summer examination.

HALF TERM 1
NUMBER and PROPORTIONAL REASONING

All students will know:
- Direct proportion
- Best buys
- Scales, maps and units
- Speed
- Basic fractions
- Ratio and Fractions
- Sharing ratio
- Using ratio
- Multiplication and division
- Estimation
- Factors and HCF
- Multiples and LCM
- Equivalent fractions
- Adding and subtracting fractions

All students will be assessed:

Students will complete a low stake GCSE practice paper every two weeks. Gaps identified will be addressed in lesson and through the use of homework set on Sparx Maths.

Reading skills needed for this unit:

Decoding, fluency, vocabulary, prior knowledge and summarising will all be necessary for this half term.

Key vocabulary:

Place value table, factor, multiple, prime number, integer, estimate, BIDMAS, simplifying, HCF, LCM, Equivalent, scale.

CURRICULUM AND ASSESSMENT PLAN
YEAR 12/13 | GCSE RE-SIT MATHEMATICS

ENRICHMENT OPPORTUNITIES

Revision and homework support will also be available from September. The aim of these is to support students with resources and projects that would normally be unavailable to them.

HALF TERM 2
NUMBER AND ALGEBRA

All students will know:
- Multiplying and dividing fractions
- Converting fractions, percentages and decimals
- Multiplicative reasoning
- Percentages with and without a calculator
- Interest rates and growth
- Exchange rates
- Problem solving with ratio, fractions and percentages
- Powers, roots and index laws
- Standard form
- Directed numbers
- Algebraic notation

All students will be assessed:
- All Year 13 students will be given the opportunity to resit their GCSE exam in November.
- Year 12 students who achieved a Grade 3 in Year 11will be given the opportunity to resit their GCSE examination in November.
- Students will complete a low stakes GCSE practice paper every two weeks. Gaps identified will be addressed in lesson and through the use of homework set on Sparx Maths.
  Students will sit a GCSE assessment at the beginning of the half term. This will be used to support gap closure and intervention as we progress through the year.

Reading skills needed for this unit:
- Decoding, fluency, vocabulary, prior knowledge and summarising will all be necessary for this half term.

Key vocabulary:
Percentage, equivalent, interest, growth, power, root, index, direct numbers, expression, term.

HALF TERM 3
ALGEBRA AND GEOMETRY

All students will know:
- Substitution and formulae
- Expand and factorise
- Function machines
- Solving equations
- Rearranging formulae
- Algebraic thinking in problem solving
- Using a calculator
- Properties of 2D shapes
- Area and perimeter of shapes
- Circles
- Surface area and volume

All students will be assessed:

Students will complete a low stakes GCSE practice paper every two weeks. Gaps identified will be addressed in lesson and through the use of homework set on Sparx Maths.

Students will sit an assessment at the end of the half term.

Reading skills needed for this unit:

Decoding, fluency, vocabulary, prior knowledge and summarising will all be necessary for this half term.

Key vocabulary:

Substitute, expand, factorise, solve, expressions, equation, rearrange, surface area, volume, perimeter, area.

HALF TERM 4
GEOMETRY AND STATISTICS

All students will know:
- Transformations
- Angle facts
- Bearings
- Interpreting and sketching graphs and charts
- Scatter graphs
- Averages and range
- Frequency charts and averages
- Basic probability
- Using frequency and probabilities
- Arithmetic sequence
- Understanding straight line graph

All students will be assessed:

Students will sit an assessment at the end of the half term which will consist of 2 GCSE papers. This will be used to support gap closure and intervention during Half Term 5.

Reading skills needed for this unit:

Decoding, fluency, vocabulary, prior knowledge and summarising will all be necessary for this half term.

Key vocabulary:
Linear sequence, axes, coordinates, linear, mean, median, mode and range, stem and leaf diagram, correlation, sequence, probability, frequency.

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HALF TERM 5 and 6
EXAMINATION PREPARATION

All Students will undertake a bespoke exam preparation and revision plan based upon each classes assessment results.

All students will be assessed:

In preparation for the exams, students will participate in a walking talking mock.

Students will complete a low stakes GCSE practice paper every two weeks. Gaps identified will be addressed in lesson and through the use of homework set on Sparx Maths.

External assessment

Reading skills needed for this unit:

Decoding, fluency, vocabulary, prior knowledge and summarising will all be necessary for this half term.

Key vocabulary:

Grid method, factorise, expand, place value table, factor, multiple, integer, estimate, order of operations, simplifying, balance method, simplify, substitute, solve, quadratic, equation, increase, decrease, compound interest, depreciation, linear, parallel, perpendicular, HCF, LCM, sequence, rearrange, solving, equation, balance method, acute, obtuse, reflex, parallel, bearings, best buy, inverse, simplify.