KEVICC Key Stage 4 Curriculum Subject: Mathematics

Spring Half-Term

Term: Year 10 Spring Term – Block Five

Topic: Recap Cumulative Frequency and Histograms

What is the essential knowledge from this unit?
What do students need to remember and understand?

	Specification content	Specification notes
S3h	**Construct and interpret diagrams for grouped discrete data and continuous data, i.e. histograms with equal and unequal class intervals and cumulative frequency graphs, and know their appropriate use**	

Students should be able to:
- understand which diagrams are appropriate for different types of data
- construct suitable diagrams for grouped discrete and continuous data
- interpret diagrams for grouped discrete and continuous data.

S6	Draw estimated lines of best fit Make predictions Interpolate and extrapolate apparent trends whilst knowing the dangers of doing so	

Students should be able to:
- recognise and name positive, negative or no correlation as types of correlation
- recognise and name strong, moderate or weak correlation as strengths of correlation
- understand that just because a correlation exists, it does not necessarily mean that causality is present
- draw a line of best fit by eye for data with strong enough correlation, or know that a line of best fit is not justified due to the lack of correlation
- understand outliers and make decisions whether or not to include them when drawing a line of best fit
- use a line of best fit to estimate unknown values when appropriate.

Key Vocabulary and notation.

Cumulative frequency	Quartile
Frequency table	Upper Quartile
Discrete data	Inter-quartile range
Qualitative	Class interval
Continuous data	Mean
Grouped data	Median
Quartiles	Range
Box plots	Modal Class
Compare data	Analyse
Draw conclusions	Estimate
Primary data	Frequencies
Secondary data	Axis
Distribution	Axes
Lower Quartile	Horizontal
Distribution Lower	Vertical
	Curve
	Outliers
	Minimum value
	Maximum value
	Whisker
	Compare data

Mathematical questioning should be designed to unpick the structure of the maths and deepen the student's understanding. When students talk about mathematical concepts, they should develop the vital mathematical language that helps them explain their ideas fully.

Students are expected and encouraged to use terminology during all discussions, verbal feedback and in written content.

What prior learning supports understanding of this content?
- Revisit the median and mean, including finding the total given the mean
- Find the mean of grouped data.
- Work out the mode and modal class
- Choose the appropriate average
- Find unknown data values given the mean or changes in the mean.
- Find the median from a table of values.

How does this content link to future learning?
- Consolidate all aspects of Statistics from key stage 3 and 4.
- Revise and explore subject content through examination questions and in context.

Reading: *Where in the unit are students supported to read complex academic text?*
- Reading and understanding mathematical questions and problems' – teacher input.
- Decoding complex examination questions - explain what they are asking the student to do' – teacher input.
- Following instructions to solve problems - break down the tasks – teacher input.
- Recognising terminology, numbers, and symbols.

Writing: *Independent writing tasks and how they are structured*
- Using the correct subject specific terminology for numbers and symbols – examination papers, class books.
- Responding to questions that ask for an explanation or a reason – examination papers, class books.
- Self-evaluation, reviewing, reflecting and analysis of own work – class books, personalised learning checklists and analysis.
- Creating notes that can be used later for revision purposes - class books, revision cards, mind maps etc.

Key assessments:

How will do students review the information learned?

End of block assessments.

AQA end of block assessments provide a quick progress check at the end of each block of learning to make sure students have understood the content being covered. These are available for both foundation and higher tiers.

End of term/year assessments and mock examinations.

End of term assessments assessing the students' progress towards targets and provide diagnostic information to modify future teaching.

End of year 9 and 10 examinations assessing the students' progress towards targets and provide diagnostic information to modify future teaching.

Two mock examinations seasons take place during year 11 using previous years AQA 8300 examination papers. Students to experience the full suite of papers at both Foundation and higher tiers using Non-calculator and Calculator requirements.

All examinations will explore the three examination papers at both foundation and higher tiers using non-calculator and calculator requirements.

How will feedback be seen?

Marked end of block, term assessments and mock examinations.

Personalised learning checklists for all assessments identifying strengths and areas of development.

Written teacher feedback and marking in compliance with faculty and College Marking Policies. Student responses to marking. Students self-mark using purple pen. Verbal feedback given every lesson from teacher and peers as appropriate. Teacher and student self-assessment of presentation of class books will be completed to ensure written work is of high standard and students are achieving their potential.