Maths- Y10H

MAGHULL HIGH SCHOOL – CURRICULUM MAP

HALF TERM 1 SEPT - OCT	Week 2 w/b 9th Sept	Week 3 w/b 16th Sept	Week 4 w/b 23rd Sept	Week 5 w/b 30th Sept	Week 6 w/b 7th Oct	Week 7 w/b 14th Oct	Week 8 w/b 21st Oct
TOPIC (S)	**Calculating with Percentages**	**Calculating with Percentages** **Measures**	**Measures**	**Statistical Measures and Diagrams**	**Statistical Measures and Diagrams**	**Statistical Measures and Diagrams**	**Indices**

Knowledge & Skills development

<u>Calculating with Percentages</u>

- percentage increase/decrease problems
- original value problems
- simple interest, including in financial mathematics
- problems set in context
- using a multiplier

<u>Measures</u>

- apply and interpret limits of accuracy
- use standard units of measure and related concepts (length, area, volume/capacity, mass, time, money etc.)
- use standard units of mass, length, time, money and other measures (including standard compound measures) using decimal quantities where appropriate
- change freely between related standard units (eg time, length, area, volume/capacity, mass) and compound units (eg speed, rates of pay, prices, density, pressure) in numerical and algebraic contexts
- use compound units such as speed, rates of pay, unit pricing, density and pressure

<u>Statistical Measures and Diagrams</u>

- interpret, analyse and compare the distributions of data sets from univariate empirical distributions through:
  - appropriate measures of central tendency (median, mean, mode and modal class)
  - spread (range, including consideration of outliers, quartiles and inter-quartile range)
- apply statistics to describe a population
- infer properties of populations or distributions from a sample, whilst knowing the limitations of sampling
- interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate graphical representation involving discrete, continuous and grouped data, including boxplots
- construct and interpret diagrams for grouped discrete data and continuous data, ie histograms with equal and unequal class intervals and cumulative frequency graphs, and know their appropriate use

<u>Indices</u>

- use positive integer powers and associated real roots:
  - square
  - cube
  - higher
- recognise powers of 2, 3, 4 and 5
- estimate powers and roots of any given positive number
- calculate with roots, and with integer and fractional indices

Assessment / Feedback Opportunities	Topic assessments	Self-assessment sheets	Homework	Formative teacher assessment - verbal	Retrieval practice	
Cultural Capital	• Percentages with populations • Data handling					
SMSC / Promoting British Values **(Democracy, Liberty, Rule of Law, Tolerance & Respect)**	Willingness to participate in, and respond to mathematical opportunities. Use of social skills in different contexts, including working and socialising with pupils from different religious, ethnic and socio-economic backgrounds.					
Reading opportunities						
Key Vocabulary	Percentage Increase Decrease Multiplier Change Interest Compound Limits Bounds Pressure Force Area Density Speed Mass Volume Distance Time Rate Data Bivariate Univariate Outliers Quartiles Mode Mean Median Range Population Sample Histogram Cumulative-Frequency Frequency-Density Integer Power Root Index Indices					
Digital Literacy	Excel spreadsheet Desmos					
Careers	Finance, Engineering, Business, Medical.					