Curriculum Overview

Subject: MATHEMATICS

Year Group: 7

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

Year 7 Mathematics builds upon the mathematical skills developed through Key Stage 2. Pupils will cover five topic areas: number, algebra, statistics and probability, geometry and measure, and, ratio, proportion and rates of change. They will be presented in lessons with AO1 – using and applying standard techniques, AO2 – reasoning, interpreting and communicating mathematically, and AO3 – solving problems in mathematics and in other contexts. Pupils are given the opportunity to learn how to use scientific calculators efficiently and effectively. Skills acquired over term 1 are interleaved throughout year 7 to enhance long term retention.

TERM 1		TERM 2		TERM 3	
AUTUMN 1	**AUTUMN 2**	**SPRING 1**	**SPRING 2**	**SUMMER 1**	**SUMMER 2**
Number Sense Calculations	Expressions and equations Measures	2D Shapes Area and Perimeter Coordinates Factors and Multiples	Primes Fractions Algebra - Brackets	Angles Handling Data Statistical Diagrams Proportion	Fractions, Decimals and Percentages Probability
KNOWLEDGE/SKILLS Number sense Adding and subtracting Multiplying Dividing Calculating with negative numbers Order of operations	KNOWLEDGE/SKILLS Expressions Substitution Solving Equations Measures of Time Measures of Mass, Length and Capacity	KNOWLEDGE/SKILLS Line and Shape Properties Perimeter Area Coordinates and Shapes Factors and Multiples	KNOWLEDGE/SKILLS Prime Numbers Prime Factor Decomposition Writing and Comparing Fractions Adding and Subtracting Fractions Distributive Law Algebra – Single Brackets	KNOWLEDGE/SKILLS Types of angles, estimating, measuring and drawing angles. Finding Unknown Angles Averages and Range Tables and Charts Collecting and Presenting Data Solving Proportion Problems	KNOWLEDGE/SKILLS Multiply and divide Fractions Fractions of Amounts Fractions, decimals and Percentages Theoretical Probability
KEY ASSESSMENTS Year 7 Baseline Assessment Post Knowledge Checks Term 1 Assessment		KEY ASSESSMENTS Post Knowledge Checks Term 2 Assessment		KEY ASSESSMENTS Post Knowledge Checks End of Year Assessment	

External Resources and Extended Studies

SPARX Maths - https://sparxmaths.com/
Our main homework platform

Mathsbot - https://mathsbot.com/
Differentiated activities to help build key skills as well as worksheets for consolidation of work.

Corbett Maths – https://corbettmaths.com
5-a-day questions which are good problem-solving starter questions for all abilities.

Maths Genie - https://www.mathsgenie.co.uk/
A free revision site. It has past papers, mark schemes and model answers to GCSE exam questions

Enrichment and Development

Literacy words displayed in the maths corridor to promote key vocabulary used throughout the curriculum. Comprehension tasks scheduled for each half term encompassing literacy, diversity and inclusion, careers and cross-curricular links
Careers in maths information displayed in the maths corridor to spark curiosity
Diversity and inclusion, and women in maths posters displayed in the corridor to highlight and celebrate important figures in maths
Use of SPARX Maths and calculators
Key dates in the maths calendar: Pi Day (March 14th) and National Numeracy Day (May)

Curriculum Overview

Subject: MATHEMATICS

Year Group: 8

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

Year 8 Mathematics builds upon the mathematical skills developed through Key Stage 2 and Year 7. Pupils will cover five topic areas: number, algebra, statistics and probability, geometry and measure, and, ratio, proportion and rates of change. They will be presented in lessons with AO1 – using and applying standard techniques, AO2 – reasoning, interpreting and communicating mathematically, and AO3 – solving problems in mathematics and in other contexts. Pupils are given the opportunity to continue developing the use of scientific calculators efficiently and effectively. Skills acquired in Year 7 are interleaved throughout year 8 to enhance long term retention.

TERM 1

AUTUMN 1

Percentages
Money
Indices
Equations

KNOWLEDGE/SKILLS
Percentages of Amounts
Percentage Change
Calculations with Money
Index Laws
Solving Equations

AUTUMN 2

Sequences
Ratio

KNOWLEDGE/SKILLS
Term-to-Term Rule
Position-to-Term Rule
Ratios
Scale Diagrams

KEY ASSESSMENTS
Post Knowledge Checks
Term 1 Assessment

TERM 2

SPRING 1

Rounding
Coordinates
Area
Circles
Standard Form

KNOWLEDGE/SKILLS
Significant Figures
Coordinates and Midpoints
Area and Units
Area and Circumference
Standard Form and Ordinary Numbers

SPRING 2

Venn Diagrams
3D Shapes
Surface Area and Volumes

KNOWLEDGE/SKILLS
Venn Diagrams
Factors, Multiples and Primes
Nets of 3D shapes
Surface Area
Volume

KEY ASSESSMENTS
Post Knowledge Checks
Term 2 Assessment

TERM 3

SUMMER 1

Linear Graphs
Transformations
Angles
Statistical Diagrams

KNOWLEDGE/SKILLS
Plotting Graphs and Finding Equations
Transforming Shapes – Translations and Reflections
Finding Unknown Angles
Drawing and Interpreting Statistical Diagrams

SUMMER 2

Inequalities
Algebra – Double Brackets
Algebraic Fractions
Recurring Decimals

KNOWLEDGE/SKILLS
Linear Inequalities
Expanding Double Brackets
Fractions Review
Algebraic Fractions
Fractions and Recurring Decimals

KEY ASSESSMENTS
Post Knowledge Checks
End of Year Assessment

External Resources and Extended Studies

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Diversity and inclusion, and women in maths posters displayed in the corridor to highlight and celebrate important figures in maths
Use of SPARX Maths and calculators
Key dates in the maths calendar: Pi Day (March 14th) and National Numeracy Day (May)

Curriculum Overview

Subject: MATHEMATICS

Year Group: 9

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

Year 9 Mathematics builds upon the mathematical skills developed through Year 7 and Year 8. Pupils will cover five topic areas: number, algebra, statistics and probability, geometry and measure, and, ratio, proportion and rates of change. They will be presented in lessons with AO1 – using and applying standard techniques, AO2 – reasoning, interpreting and communicating mathematically, and AO3 – solving problems in mathematics and in other contexts. Pupils are given the opportunity to continue developing the use of scientific calculators efficiently and effectively. Skills acquired in Year 8 are interleaved throughout Year 9 to enhance long term retention.

TERM 1		TERM 2		TERM 3	
AUTUMN 1	**AUTUMN 2**	**SPRING 1**	**SPRING 2**	**SUMMER 1**	**SUMMER 2**
Fractions and Percentages Probability Standard Form Inequalities	Quadratic Equations Formulae Constructions Circles	Rounding 3D shapes Pythagoras' Theorem Ratio & Proportion	Linear Graphs Compound Measures Motion Time Graphs	Quadratic Graphs Angles & Bearings Transformations Similarity & Congruence	Handing Data Statistical Diagrams Vectors
KNOWLEDGE/SKILLS Fractions, Decimals and Percentage Review Percentage Change Theoretical Probability Experimental Probability Calculations with Standard Form Linear Inequalities	KNOWLEDGE/SKILLS Factorising Quadratic Equations Solving Quadratic Substitution Solving Equations Measures of Time Measures of Mass, Length and Capacity	KNOWLEDGE/SKILLS Error Intervals Pythagoras' Theorem in 2D Ratio Proportion worded Problems	KNOWLEDGE/SKILLS Plotting Graphs Finding Equations Speed and Rates Distance Time Graphs	KNOWLEDGE/SKILLS Plotting and Interpreting Quadratic Graphs Angle Facts Bearings Transforming Shapes Similarity and Congruence	KNOWLEDGE/SKILLS Scatter Graphs Collecting and Presenting Data Grouped Data Column Vectors
KEY ASSESSMENTS Post Knowledge Checks Term 1 Assessment		KEY ASSESSMENTS Post Knowledge Checks Term 2 Assessment		KEY ASSESSMENTS Post Knowledge Checks End of Year Assessment	

External Resources and Extended Studies

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Maths Genie - https://www.mathsgenie.co.uk/
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Enrichment and Development

Literacy words displayed in the maths corridor to promote key vocabulary used throughout the curriculum. Comprehension tasks scheduled for each half term encompassing literacy, diversity and inclusion, careers and cross-curricular links

Careers in maths information displayed in the maths corridor to spark curiosity and a dedicated lesson to careers in maths

Diversity and inclusion, and women in maths posters displayed in the corridor to highlight and celebrate important figures in maths

Use of SPARX Maths and calculators

Key dates in the maths calendar: Pi Day (March 14th) and National Numeracy Day (May)

Curriculum Overview

Subject: MATHEMATICS

Year Group: 10

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

Year 10 GCSE Mathematics builds upon the mathematical skills developed through Key Stage 3. Pupils will cover five topic areas: number, algebra, statistics and probability, geometry and measure, and, ratio, proportion and rates of change. They will be presented in lessons with AO1 – using and applying standard techniques, AO2 – reasoning, interpreting and communicating mathematically, and AO3 – solving problems in mathematics and in other contexts. During term 1 and 2 pupils will all study the same topics and during term 3 will follow either a higher or foundation pathway into Year 11, in preparation for their GCSE examinations in the summer.

TERM 1		TERM 2		TERM 3	
AUTUMN 1	**AUTUMN 2**	**SPRING 1**	**SPRING 2**	**SUMMER 1**	**SUMMER 2**
Percentages Surface Area and Volume Simultaneous Equations	Simultaneous Equations Formulae Trigonometry Constructions	Linear Graphs Real-life Graphs Set Notation Tree Diagrams	Tree Diagrams Compound Measures Ratio Graphs	Sequences Handling Data Proportion Transformations Rounding Indices	Indices Brackets Handling Data and Statistical Diagrams Recurring Decimals
KNOWLEDGE/SKILLS Repeated percentage change Surface area Volume Linear simultaneous equations	KNOWLEDGE/SKILLS Linear simultaneous equations Rearranging formulae Right-angled trigonometry Constructions and loci	KNOWLEDGE/SKILLS Equations of linear graphs Plotting and interpreting real-life graphs Venn diagrams and set notation	KNOWLEDGE/SKILLS Independent and dependent events Density and pressure Working with ratios and algebra Velocity-time graphs Cubic, reciprocal and exponential graphs	KNOWLEDGE/SKILLS Arithmetic and geometric sequences Sampling Direct and inverse proportion Transforming shapes Error intervals Index laws Bounds	KNOWLEDGE/SKILLS Index laws Expanding and factorising brackets Grouped data Drawing and interpreting statistical diagrams Fractions and recurring decimals Cumulative frequency graphs Box plots
KEY ASSESSMENTS Post Knowledge Check Autumn PPE Examinations		KEY ASSESSMENTS Post Knowledge Check Spring PPE Examinations		KEY ASSESSMENTS Post Knowledge Check End of Year Assessment	

External Resources and Extended Studies

SPARX Maths - https://sparxmaths.com/
Our main homework platform

Mathsbot - https://mathsbot.com/
Differentiated activities to help build key skills as well as worksheets for consolidation of work.

Corbett Maths – https://corbettmaths.com
5-a-day questions which are good problem-solving starter questions for all abilities.

Maths Genie - https://www.mathsgenie.co.uk/
A free revision site. It has past papers, mark schemes and model answers to GCSE exam questions

OnMaths - https://www.onmaths.com/
Another free to use website for exam paper practice

Enrichment and Development

Literacy words displayed in the maths corridor to promote key vocabulary used throughout the curriculum. Comprehension tasks scheduled for each half term encompassing literacy, diversity and inclusion, careers and cross-curricular links

Careers in maths information displayed in the maths corridor to spark curiosity

Diversity and inclusion, and women in maths posters displayed in the corridor to highlight and celebrate important figures in maths

Use of SPARX Maths and calculators

Year 10 enrichment day trip to Southend University for students aspiring to study maths at A Level

Curriculum Overview

Subject: MATHEMATICS

Year Group: 11 (25/26)

CHASE HIGH SCHOOL
AMBITION - RESILIENCE - KINDNESS

Year 11 (25/26) GCSE Mathematics builds upon the mathematical skills developed through Year 10 and Key Stage 3. Pupils will cover five topic areas: number, algebra, statistics and probability, geometry and measure, and, ratio, proportion and rates of change. They will be presented in lessons with AO1 – using and applying standard techniques, AO2 – reasoning, interpreting and communicating mathematically, and AO3 – solving problems in mathematics and in other contexts. During term 1 pupils will study the remaining units of their GCSE course and sit Pre-Public Examinations. During term 2 and 3 pupils will follow a bespoke curriculum based on Question Level Analysis from the previous term's PPE examinations; classroom teachers identify gaps in learning and address 'common misconceptions' to maximise attainment.

TERM 1	TERM 2	TERM 3
KNOWLEDGE/SKILLS **Higher** • More algebra • Vectors and geometrical proof • Proportion and graphs **Foundation** • Fractions, indices and standard form • Congruence, similarity and vectors • Expanding and simplifying • Factorising linear and quadratic expressions • Rules of Indices	**KNOWLEDGE/SKILLS** Revision for GCSEs Topics identified from QLA as area for development	**KNOWLEDGE/SKILLS** Revision for GCSEs Topics identified from QLA as area for development
KEY ASSESSMENTS **Half term 1:** Post Knowledge Checks GCSE paper sat in class **Half term 2:** Post Knowledge Checks Autumn PPE Examinations	**KEY ASSESSMENTS** **Half term 1:** GCSE paper sat in class **Half term 2:** GCSE paper sat in class Spring PPE Examinations	**KEY ASSESSMENTS** **Half term 1:** GCSE papers sat in class GCSE Examinations – paper 1 **Half term 2:** GCSE Examinations papers 2 and 3

Extended reading suggestions and external resources:

SPARX Maths - https://SPARXmaths.uk
Core website for compulsory homework tasks, also offering revision, times tables practice and targeted work.
Mathsbot - https://mathsbot.com/
Differentiated activities to help build key skills as well as worksheets for consolidation of work.
Maths Genie - https://mathsgenie.co.uk
Revision resources for KS3 – A-Level, support videos, past GCSE papers and mini tests.
Corbett Maths – https://corbettmaths.com/
5-a-day questions which are good problem-solving starter questions for all abilities.
BBC Bitesize - https://www.bbc.co.uk/bitesize/subjects/z38pycw