

Mathematics Curriculum: Year 10 (Higher)

The Mathematics Curriculum will develop the knowledge and cultural capital needed for students to succeed in life, leaving school with mathematical skills for future learning and future employment. The Mathematics Curriculum is rigorous and ambitious for every student. It is carefully planned to maximise the progress from the first day of year 7 to the last day of year 11. The Mathematics Curriculum seeks to raise the aspirations of our students and includes links with careers and financial capability. It provides our students with the knowledge they need for future success in education and helps students to develop core transferable skills required for success in later life.

All year 10 students will begin the year by completing baseline assessments. This will ensure the class teacher has a full understanding of the individual students' strengths and weaknesses.

Autumn 1	Autumn 2	Spring 1
Students will study the following units in mathematics in the first Autumn term. • Number. • Algebra. • Interpreting and representing data.	Students will study the following units in mathematics in the second Autumn term. • Fractions, ratio and percentages. • Angles and trigonometry.	Students will study the following units in mathematics in the first spring term. • Graphs. • Area and Volume. • Transformation and constructions.
Important vocabulary: Decimal, place value, factor, multiple, index notation, prime numbers, standard form, negative indices, fractional indices, surds. Expression, simplify, substitution, formulae, expand, factorising, sequences, quadratic, geometric.	Important vocabulary: Ratio, percentages, fractions, proportion, decimals. Hypotenuse, opposite, adjacent, right angle, triple, interior, exterior.	Important vocabulary: Quadratic, linear, real life graphs, cubic, reciprocal, line segments. Circle, prism, perimeter, area pyramid, cone sector cylinder, sphere. Reflection, rotation, enlargement, bearing.
Spring 2	Summer 1	Summer 2
Students will study the following units in mathematics in the second spring term. • Equations and inequalities. • Probability.	Students will study the following units in mathematics in the first summer term. • Multiplicative reasoning. • Similarity and congruence. • Trigonometry.	Students will study the following units in mathematics in the second summer term. • Further statistics. • Equations and graphs.
Important vocabulary: Solve, variable, completing the square, simultaneous equations, quadratic. Mutually exclusive, experimental probability,	Important vocabulary: Growth, decay, compound measure, similarity, congruent, geometric proof. Cosine, sine, tan.	Important vocabulary: Box plot, histogram, cumulative frequency, sampling, describing distributions. Graphical simultaneous equations, cubic, reciprocal, quadratic.

independent events, tree diagrams.		
------------------------------------	--	--

These topics will also help students to:

- Make connections between units and develop an appreciation that mathematical topics are related.
- Not to be afraid of “being lost” and having to struggle to find a way through a problem
- To use calculation to solve basic problems
- To be resilient and persevere with tasks and challenges
- To have rapid and sound memorisation of mathematical material.

Key staff contacts:

Faculty Leader: Mr M Fryirs m.fryirs@fi.coastandvale.academy

Head of Year 10: Mrs M Guminiski m.guminski@fi.coastandvale.academy

How parents can help:

- Review key vocabulary with your child to help them transfer it to their long-term memory.
- Ask students to explain what they have learnt that week, this also helps build long-term memory.
- Spend time together accessing the following websites – Corbettmaths, Maths Genie and Mathswatch (Students will have their login details). All of these websites contain a broad range of resources and questions along with video explanations.
- Visit Corbettmaths website and click 5 a day worksheets. 5 a days are 5 questions per sheet on 5 different topics. If students were to complete just 3 of these per week, this would make a huge positive impact to their understanding of mathematics.

How your child will be assessed:

We operate a thorough testing process. Students complete a short test every unit of work to assess progress. Each test paper is marked and the Question Level Analysis is stored in our records database so we have a full diagnosis of strengths and weaknesses of each individual student. Test corrections and feedback will take place in class. The QLA from the test informs planning: any remaining misconceptions are drip fed into subsequent lessons in interleaving retrieval starters and cumulative starters.

Students will complete one trial exam in year 10 and two trial exams in year 11. Just like the unit tests, they are marked and Question Level Analysis is stored in our records database so we have a full diagnosis of strengths and weaknesses of each individual student.

Students are entered for Pearson Edexcel GCSE Mathematics at the end of year 11. Traditionally our top sets and second sets are entered for Higher Tier. Our third set and fourth set are both entered for Foundation Tier.

Please feel free to contact us to discuss our assessment policy in depth.