

# Mathematics Curriculum: Year 11 (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.

Please note the below curriculum is subject to change/adaptation at the class teacher's discretion to meet the needs of their class.

Autumn 1	Autumn 2	Spring 1
Students will study the following units in mathematics in the first Autumn term. <ul style="list-style-type: none"> <li>• Circle theorems.</li> <li>• Proof</li> </ul>	Students will study the following units in mathematics in the second Autumn term. <ul style="list-style-type: none"> <li>• Algebraic fractions.</li> <li>• Rearranging harder formulae.</li> <li>• Surds.</li> </ul>	Students will study the following units in mathematics in the first spring term. <ul style="list-style-type: none"> <li>• Vectors.</li> <li>• Geometric proof.</li> <li>• Proportion.</li> </ul>
<b>Important vocabulary:</b>  Radii, chord, tangent, theorem.	<b>Important vocabulary:</b>  Factorise, rationalise, simplify, conjugate.	<b>Important vocabulary:</b>  Parallel, factor, multiple, segment, algebraic, collinear, geometric, direct, inverse, constant of proportionality.
Spring 2	Summer 1	Summer 2
Students will study the following units in mathematics in the second spring term. <ul style="list-style-type: none"> <li>• Transformation of functions.</li> <li>• Exponential functions.</li> <li>• Composite functions.</li> </ul>	Mixed Revision	Mixed Revision
<b>Important vocabulary:</b> Translation, reflection, nonlinear graphs, function, composite	<b>Important vocabulary:</b>	<b>Important vocabulary:</b>

## 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](mailto:m.fryirs@fi.coastandvale.academy)

Head of Year 11: Mrs K Davies [k.davies@fi.coastandvale.academy](mailto:k.davies@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.
- In year 11, students will be set past exam papers to complete for homework. A link to a worked solution video will be posted on google classrooms. Ensure your child is following the process of correcting and improving their answers with their green pen.

## 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.