



MATHEMATICS

As Mathematics is a wide-ranging subject with many fields and applications, it gets used everywhere, and everyone can find some use for it. For students it opens doors to careers. For citizens it enables informed decisions. For nations it provides knowledge to compete in a technological community. No longer just the language of science, Mathematics contributes in direct and fundamental ways to business, finance, health and defence. Whether it's managing your monthly budget or a part of your job, mathematics has a place in everyone's life.

Junior Cycle

The aim of Junior Cycle Mathematics is to provide relevant and challenging opportunities for all students to become mathematically proficient so that they can cope with the mathematical challenges of daily life and enable them to continue their study of mathematics in senior cycle and beyond.

The Maths specification for Junior Cycle has 5 interwoven concepts:

- conceptual understanding—comprehension of mathematical concepts, operations, and relations
- procedural fluency—skill in carrying out procedures flexibly, accurately, efficiently, and appropriately
- strategic competence—ability to formulate, represent, and solve mathematical problems in both familiar and unfamiliar contexts
- adaptive reasoning—capacity for logical thought, reflection, explanation, justification and communication
- productive disposition—habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence, perseverance and one's own efficacy.

The Junior Cycle places a strong emphasis on assessment as part of the learning process. Assessment in Junior Cycle Mathematics will optimise the opportunity for students to become reflective and active participants in their learning. Various forms of assessment will be used throughout the course.

The assessment of Mathematics for the purpose of the Junior Cycle Profile of Achievement (JCPA) will comprise of two classroom based assessments: CBA1 and CBA2.

CBA1 (A mathematical Investigation) will be completed by students in year 2 and CBA2 (A Statistical Investigation) will be completed in year 3. Students will be awarded grade descriptors for each of these. In addition, CBA2 will also have a written assessment task that will be corrected, along with a final examination, by the State Examinations Commission. The Assessment Task will account for 10% of total marks.

There will be two examination papers, one at ordinary level and one at higher level, set and marked by the State Examinations Commission (SEC). The examination will be two hours

in duration and will take place in June of year 3. The number of questions on the examination papers may vary from year to year. This paper will account for 90% of the total marks.

Senior Cycle

Mathematics at Senior Cycle builds on the learning at Junior Cycle and develops mathematical knowledge, skills and understanding needed for continuing education, life and work. Through their study of mathematics, students develop a flexible, disciplined way of thinking which enables them to solve problems in mathematical and real world contexts.

The syllabus is provided at three levels – Higher, Ordinary and Foundation level and is also assessed at these levels. There are two examination papers at each level. Students are encouraged to study at the level appropriate to their needs and aspirations. There are many careers which require or benefit greatly from having a higher level of mathematics, and it's a good idea to research these before coming to a decision.

Senior cycle students study the Project Maths course, which is divided into 5 strands:

1. Statistics & Probability
2. Geometry & Trigonometry
3. Number
4. Algebra
5. Functions