

Mathematics

Mathematics is important in our everyday life, allowing us to make sense of the world around us and to manage our lives. It equips us with the skills we need to interpret and analyse information, simplify and solve problems, assess risk and make informed decisions. Mathematics plays an important role in areas such as science or technologies and is vital to research and development in fields such as engineering, computing science, medicine and finance. Mathematics equips us with many of the skills required for life, learning, and work. Within the mathematics framework, some statements of experiences and outcomes are also identified as statements of experiences and outcomes in numeracy. These form an important part of the mathematics education of all children and young people as they include many of the numerical and analytical skills required by each of us to function effectively and successfully in everyday life.

The mathematics experiences and outcomes are structured within three main organisers, each of which contains a number of subdivisions:

Number, money and measure

- Estimation and rounding
- Number and number processes
- Multiples, factors, and primes
- Powers and roots
- Fractions, decimal fractions, and percentages
- Money
- Time
- Measurement
- Mathematics – its impact on the world, past, present and future
- Patterns and relationships
- Expressions and equations



Shape, position and movement

- Properties of 2D shapes and 3D objects
- Angle, symmetry, and transformation

Information handling

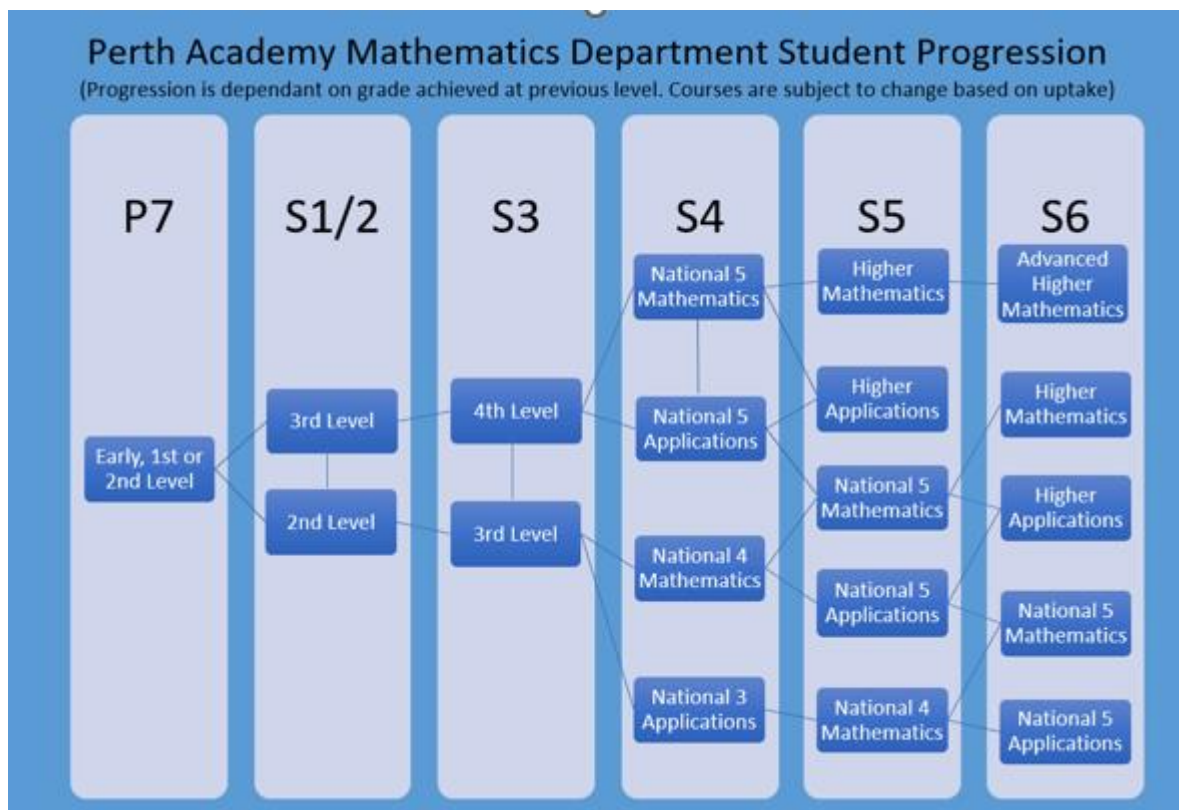
- Data and analysis
- Ideas of chance and uncertainty.

Course Assessment

Assessment information is gathered in S1 and used to determine whether pupils work at Level 2 or 3. Mid-way through S2, pupils will begin working on the next level.

Skills for Learning, Life and Work

Communication	Employability	Leadership	Learning	Self-Management
Active Listening Giving & Receiving Feedback Presenting	Managing Resources and Time Teamwork	Extending the thinking of others Offering Encouragement	Remembering Understanding Applying Analysing Evaluating Information Handling Investigating or Problem Solving	Perseverance Positive Thinking



Higher Applications of Mathematics A Nutshell Guide for Parents

What is the new Higher Applications of Mathematics course and who is it for?

This course will equip learners with sought after mathematical, statistical and financial skills. It is suitable for a wide range of learners, including those who wish to progress to further learning and employment in non-STEM areas.

I am enjoying the way of learning through e-Sgoil and I was surprised at how well it worked even from the first lesson.

What will your child gain from this course?

- Knowledge & skills in statistics, mathematical modelling, finance and project planning which are relevant to a wide range of careers and courses
- Skills in using technology to manipulate and model mathematical, statistical, and financial information
- Skills in analysing, interpreting and presenting data and numerical information
- Skills in evaluating numerical information critically

How will your child learn?

- Through live, online lessons with a specialist teacher
- Through independent study
- Through practical tasks, many of which will involve the use of technology
- From live inputs delivered by industry experts
- Alongside learners from a range of different schools
- By contributing to class discussion
- By using appropriate digital tools
- By using the interactive course materials available on Scholar

What will be your role?

- To continue to support your child with their learning
- To encourage your child to engage with what will at first be a new and different learning experience
- To encourage your child to communicate effectively with their teacher so they can provide the correct level of support
- To share feedback on your own and your child's experience of e-Sgoil



How will the course be assessed?

The course will be assessed through a **question paper** (exam) and a **project**, which will be marked by SQA and graded A to D.

The question paper makes up **73%** of the total assessment mark and the project makes up **27%**.

National e-Learning Offer



Maths or Applications of Maths. Which should I choose?

A common question asked by students is which type of maths should I study. There is more information available on each of them elsewhere. Here, we hope to let you know the basic difference between the Maths courses that are offered to help students make informed choices.

In a nutshell:

Mathematics is offered at National 4, National 5, Higher and Advanced Higher. This is your traditional Maths subject. Full of algebra, trigonometry, calculus etc. All the topics that are extremely useful for those pursuing a career in STEM but likely not used much again by those who don't

Applications of Mathematics is offered at National 3, National 4, National 5 and Higher. This is a more useful course to those who need a maths qualification but don't need the topics mentioned above. The course is more focused on finance, statistics and real life calculations like areas, volumes etc. This is the course for those who want to be a teacher, nurse, etc. or any other career other than STEM.

Both courses share the same tariff points etc. In our experience some students are reluctant to take Applications of Maths because they don't know enough about it or think it a lesser qualification. This is not the case. It is just different. In fact, an S5/6 could in theory do both Mathematics and Applications of Mathematics on their course choice if they wanted to. A bit like some people do 2 sciences or social subjects. However, in most cases it will be one or the other.

In the table below I have tried to simplify what is required for entry into each level. You will notice we would like anyone attempting Nat 5 Maths to have already achieved Nat 5 Numeracy. The Nat 5 Applications of Maths course includes Nat 5 Numeracy within it. Nat 5 Maths does not and there is no time to do this as an extra.

<u>Course</u>	<u>Entry requirements</u>
Advanced Maths	Good pass at Higher
Higher Maths	Good pass at Nat 5 Maths
Higher Applications	Pass at Nat 5 Maths or Nat 5 Applications
Nat 5 Maths	Pass at Nat 4 Maths and Nat 5 Numeracy
Nat 5 Apps	Pass at Nat 4 Maths or Nat 4 Apps
Nat 4	Pass at Nat 3

I hope this helps. Any questions please ask a member of the Mathematics department.