

# Kyle Academy

## Senior Phase Pathways

*Our learning*

*Our future*

*Our responsibility*

# Kyle Academy - Senior Phase Options Booklet



## Progression from the Broad General Education (S1-S3) to the Senior Phase (S4-S6)

Progress through Curriculum for Excellence levels for most young people is as follows:

Curriculum Level	Stage at which most will achieve each level
Early Level	Pre-school years and by the end of P1
First Level	By the end of P4
Second Level	By the end of P7
Third Level	By the end of S2 for most, by the end of S3 for almost all
Fourth Level	Most young people will achieve fourth level outcomes in certain

In Kyle Academy, we anticipate that *most* young people will become secure at the third Curriculum for Excellence level by the end of S2 or the early part of S3 in some subjects. In S3, young people specialise in fewer subjects to allow them to study at the fourth level where appropriate. Fourth level learning provides strong foundations for progression to National 5 qualifications in S4.

**National guidance advises that young people should have achieved the fourth level or be making good progress in fourth level learning to progress successfully to National Qualifications at National 5.**

### The Senior Phase – S4 to S6

Pupils begin to narrow down their curriculum in S3 but it is in the Senior Phase that they specialise in subjects that they take on to formal qualifications. The Senior Phase is a three-year experience. At Kyle, we plan what a young person will achieve over the 3 years and are aspirational about what they will leave with. The Senior Phase is not just about qualifications. Today, competition for courses and jobs is tough and our aim is that young people leave school with a portfolio of qualifications, achievements and awards (such as SQA Higher Leadership, the Duke of Edinburgh's Award or the Saltire award).

**In S4, young people study 6 courses.** The level of National Qualification your child will study in S4 will depend on their prior attainment and achievement in S3.

S3		S4
Working Grade D or P	→	National 4 2-year pathway to National 5
Working Grade A, B or C	→	National 5

They will build on their attainment each year of the Senior Phase, progressing to higher levels of qualifications.

S4	S5	S6
National 4	National 5	Higher
2-year pathway to National 5 (with National 4)		Higher
National 5 C	2-year pathways to Higher	
National 5 A-B	Higher	Advanced Higher

In S5 and S6, young people also have the opportunity to study school college partnership courses at Ayrshire College or to study Advanced Highers in other South Ayrshire Secondary schools.



## Section 1

### National Courses

These courses lead to SQA qualifications at different levels. Young people will build on their attainment over the course of S4 to S6, achieving at higher levels and across a broad range of subjects.

**THE SCOTTISH CREDIT AND QUALIFICATIONS FRAMEWORK**

This Framework diagram has been produced to show the mainstream Scottish qualifications already credit rated by SQA and HEIs. However, there are a diverse number of learning programmes on the Framework, which, due to the limitations of this format, cannot be represented here. For more information, please visit the SCQF website at [www.scqf.org.uk](http://www.scqf.org.uk) to view the interactive version of the Framework or search the Database.

scqf  
scottish credit and qualifications framework

SCQF Levels	SQA Qualifications		Qualifications of Higher Education Institutions	Apprenticeships & SVQs
12			Doctoral Degree	Professional Apprenticeship
11			Masters Degree, Integrated Masters Degree, Post Graduate Diploma, Post Graduate Certificate	Graduate Apprenticeship Professional Apprenticeship SVQ
10			Honours Degree, Graduate Diploma, Graduate Certificate	Graduate Apprenticeship Professional Apprenticeship
9		Professional Development Award	Bachelors / Ordinary Degree, Graduate Diploma, Graduate Certificate	Graduate Apprenticeship Technical Apprenticeship SVQ
8		Higher National Diploma	Diploma Of Higher Education	Higher Apprenticeship Technical Apprenticeship SVQ
7	Advanced Higher, Awards, Scottish Baccalaureate	Higher National Certificate	Certificate Of Higher Education	Modern Apprenticeship SVQ
6	Higher, Awards, Skills for Work Higher			Modern Apprenticeship Foundation Apprenticeship SVQ
5	National 5, Awards, Skills for Work National 5			Modern Apprenticeship SVQ
4	National 4, Awards, Skills for Work National 4	National Certificate	National Progression Award	SVQ
3	National 3, Awards, Skills for Work National 3			
2	National 2, Awards			
1	National 1, Awards			



## English — NATIONAL 4

### National 4 - Course structure and Conditions of Award

#### Course Structure

This Course is made up of four mandatory Units. The Course provides learners with the opportunity to develop their listening, talking, reading and writing skills in order to understand and use language. The four Units include the four language skills of listening, talking, reading and writing.

The structure of the Units enables learners to focus on the skills required to understand and use language and to integrate listening, talking, reading and writing skills across the Units. Each Unit also offers opportunities for learners to focus on particular skills.

#### English: Analysis and Evaluation (National 4)

The purpose of this Unit is to provide learners with the opportunity to develop listening and reading skills in the contexts of literature, language and media. Learners develop the skills needed to understand, analyse and evaluate straightforward texts.

#### English: Creation and Production (National 4)

The purpose of this Unit is to provide learners with the opportunity to develop talking and writing skills in familiar contexts. Learners develop the skills needed to create and produce straightforward texts in both written and oral forms.

#### Literacy (National 4)

The purpose of this Unit is to develop the learners' reading, writing, listening and talking skills in a variety of forms relevant for learning, life and work. Learners develop the ability to understand straightforward ideas and information presented orally and in writing. Learners also develop the ability to communicate ideas and information orally and in writing with technical accuracy.

#### Added Value Unit: English Assignment (National 4)

The purpose of this Added Value Unit is to provide learners with the opportunity to apply their language skills to investigate and report on a chosen topic. This assignment will allow the learner to demonstrate challenge and application.

#### Conditions of Award

To achieve the National 4 English Course, learners must pass all of the required Units, including the Added Value Unit.







## English — NATIONAL 5

### National 5 - Course Structure and Conditions of Award

#### Course Structure

This Course contains one mandatory unit: Performance–Spoken Language but there will be continuous assessment of Reading, Writing, Talking, Listening & Literacy. The Spoken Language component is assessed on an achieved/not achieved basis. Generally, the Course provides learners with the opportunity to develop these skills in order to understand and use language.

#### Course Assessment Structure (Externally assessed)

##### Component 1 – Question Paper: Reading 70 marks

The purpose of this question paper is to assess learners' application of their reading skills in a familiar but challenging context and to provide the challenge of questions and other tasks to be accomplished in a limited amount of time. This question paper will give learners an opportunity to demonstrate the following skills: knowledge and understanding, apply their reading skills in the understanding, analysis and evaluation of texts, apply their critical reading skills and their knowledge of appropriate literary context, forms and genres

##### The question papers are worth 70 marks (70% of the total mark)

There are two Sections:

**Section 1**, titled 'Reading for Analysis, Evaluation and Summarising', will have 30 marks.

**Section 2**, titled 'Critical Reading', will have 40 marks. (This section has two parts).

##### Component 2 – Portfolio: Writing 30 marks

The purpose of the Portfolio is to provide evidence of the learner's writing for two different purposes.

This portfolio will give learners an opportunity to demonstrate the following skills, knowledge and understanding: develop their skills in writing in different genres, develop their skills in writing for a range of purposes and audiences

##### The portfolio will have 30 marks (30% of the total mark).

The portfolio will comprise two written texts that address the main language purposes, namely creative and discursive writing. Fifteen marks will be awarded for each writing piece chosen for the portfolio. These are externally assessed by the SQA. Learners will demonstrate their ability to write in more than one form. The writing portfolio will comprise writing that addresses two of the main language purposes: creative and discursive writing.

#### SPOKEN LANGUAGE UNIT (Internally assessed)

The spoken language unit is a mandatory part of the National 5 course. It is an internally assessed component and, in order to pass the assessment, our young people have to show the ability to: include detailed content and language and structure spoken language in a clear way. Furthermore, they must demonstrate that effective listening to detailed language has taken place by asking and answering questions. It is likely that the spoken language topic will be linked to other aspects of the course.

#### Progression / Career Pathways

This Course or its Units may provide progression to:

- Higher English
- further study, employment and/or training, including careers in: Education, Journalism, Media, Publishing and Advertising



## English — HIGHER

### Course Description

New National Courses are designed to reflect the values, purposes and principles of Curriculum for Excellence and to develop Skills for Learning, Skills for Life and Skills for Work. They are skills-based, offer flexibility, provide time for learning and have scope for personalisation. As such, the Higher English Course builds meaningfully upon the National 5 Course, allowing pupils to develop the breadth, depth and sophistication of their knowledge of literature; enhancing their ability to write insightfully about literature; and promoting pupils' ability to respond to a range of Textual Analysis and Understanding, Analysis and Evaluation (Close Reading) questions.

### Skills Development

The aims of the course are to allow pupils to develop:

- their reading skills in the understanding, analysis and evaluation of texts
- their critical reading skills and their knowledge of appropriate literary context, forms and genres
- their skills in writing in different genres
- their skills in writing for a range of purposes and audiences

### Course Assessment Structure (Externally assessed)

**The question papers are worth 70 marks (70% of the total mark)**

There are two Sections:

**Section 1**, titled 'Reading for Analysis, Evaluation and Summarising', will have 30 marks.

**Section 2**, titled 'Critical Reading', will have 40 marks. (This section has two parts).

### Component 2 – Portfolio: Writing 30 marks

The purpose of the Portfolio is to provide evidence of the learner's writing for two different purposes.

This portfolio will give learners an opportunity to demonstrate the following skills, knowledge and understanding: develop their skills in writing in different genres, develop their skills in writing for a range of purposes and audiences

**The portfolio will have 30 marks (30% of the total mark).**

The portfolio will comprise two written texts that address the main language purposes, namely creative and discursive writing. Fifteen marks will be awarded for each writing piece chosen for the portfolio. These are externally assessed by the SQA. Learners will demonstrate their ability to write in more than one form. The writing

### SPOKEN LANGUAGE UNIT (Internally Assessed)

The spoken language unit is a mandatory part of the Higher course. It is an internally assessed component and, in order to pass the assessment, our young people have to show the ability to: include detailed and complex content and language and structure spoken language in a clear way. Furthermore, they must demonstrate that effective listening to detailed and complex language has taken place by asking and answering questions. It is likely that the spoken language topic will be linked to other aspects of the course.

### Progression / Career Pathways

This Course or its Units may provide progression to:

other qualifications in English, such as Advanced Higher English

- further study, employment and/or training, including careers in: Education, Journalism, Media, Publishing and Advertising



## English — ADVANCED HIGHER

### Course Description

Advanced Higher English provides learners with the opportunity to **independently** develop complex language skills which are essential for learning, life and work; and to develop their **independent** ability to interpret complex literary forms and to produce sophisticated language.

Advanced Higher English fosters an in-depth appreciation, of complex and sophisticated language, and of a wide range of literature and texts in different genres. This enables learners to access their own cultural heritage and history, as well as the culture and history of others.

Learners have the opportunity to personalise their study; choices enable learners to encounter a wide range of texts in different genres and to produce sophisticated writing in chosen literary forms. Building on the four capacities, Advanced Higher English enables learners to communicate, be critical thinkers, develop cultural awareness, and be creative.

### Skills Development

The aims of the course are to allow pupils to:

- critically analyse and evaluate a wide range of complex and sophisticated literary texts, as appropriate to purpose and audience
- apply critical, investigative and analytical skills to a literary topic of personal interest
- create a range of complex and sophisticated texts, as appropriate to different purposes and audiences
- apply knowledge and understanding of complex language in a wide range of contexts and use creative and critical thinking to synthesise ideas and arguments. The Course also develops high levels of analytical thinking and understanding of the impact of language.

### Course Assessment Structure (Externally assessed)

**The externally assessed components are worth 100 marks (100% of the total mark)**

There are four components:

**Component 1**, titled 'Literary Study', will have 20 marks. This exam lasts 1 hour and 30 minutes.

**Component 2**, titled 'Textual Analysis', will have 20 marks. This exam lasts 1 hour and 30 minutes.

**Component 3**, titled 'Portfolio-writing' will have 30 marks.

**Component 4**, titled 'Project- dissertation' will have 30 marks.

Components 3 and 4 are worked on throughout the course. Whilst guidance will be given, the focus is on independent study to prepare students for study beyond school.

### Progression / Career Pathways

The Course provides flexibility, personalisation and choice to enable learners to achieve in different ways. Through the successful completion of this Course, important transferable skills are developed. These skills include: analysing and evaluating a range of complex literary texts, and developing an independence of thought while taking account of the opinions of others.

The ability to analyse and evaluate complex and sophisticated texts, and apply highly developed thinking and communication skills, are important in a number of professions and degree programmes. This Course can lead to degree programmes in business, drama, education, English, humanities, journalism, law, media, and social science, careers in commerce and industry, education, journalism, law, marketing, media, and politics. This Course is recognised as an entry qualification to employment, training, and higher and further education. This Course also provides preparation for a diverse range of occupations and careers.

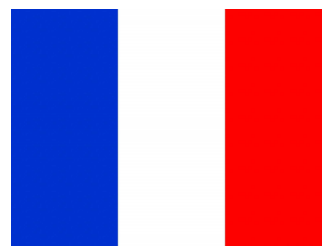


## French — NATIONAL 4/5

### Course Description

In the global economy of the 21<sup>st</sup> century, everyone should seriously consider studying at least one foreign language. French is spoken as a first language in more than two dozen countries, including Belgium, Canada and Switzerland, as well as parts of Africa and the Caribbean. Along with English, it's also an official working language of several international bodies, including the European Union; the International Monetary Fund; the International Red Cross; and the United Nations. Studying French at National 4 or 5 will broaden your horizons and you'll also be learning about the rich and varied culture of French-speaking countries, adding to your appreciation of customs and traditions in them. You will learn about people and places where the language is spoken through the study of four contexts:

1. SOCIETY
2. EMPLOYABILITY
3. LEARNING
4. CULTURE



### Skills Development

The aims of the course are to allow learners to develop:

- The foreign languages skills of listening, talking, reading and writing.
- Self-confidence, communication skills and cultural awareness of the language, people and places where the language is spoken
- Skills for learning, life and work, including literacy, thinking skills, employability, enterprise and citizenship.

### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
<b>Understanding Language</b> <i>Learners will develop reading and listening skills in French, and their knowledge of straightforward language in the four contexts.</i>	<b>Understanding language</b> <i>Learners will develop reading and listening skills in French and their knowledge of detailed language in the four contexts.</i>
<b>Using language</b> <i>Learners will develop talking and writing skills in French, and their knowledge of straightforward language in the four contexts.</i>	<b>Using language</b> <i>Learners will develop talking and writing skills in French and their knowledge of detailed language in the four contexts.</i>
<b>Added Value Unit</b> <i>Learners will apply their language skills to investigate a chosen topic in French.</i>	<b>Exam (100%)</b> <i>Talking (25%), Listening (25%), Reading (25%), Writing (25%)</i>

### Progression / Career Pathways

National 4/National 5/Higher  
 Further study or training  
 Employment

With a language, you will have a huge array of options open to you. More and more jobs are requiring an ability to speak a foreign language as an additional skill. A large number of companies are also seeking to recruit people who can speak another language. Practically any job can involve languages, whether it's based in the UK or abroad.





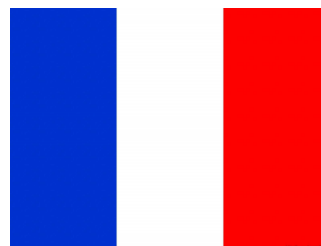
## French — HIGHER

### Course Description

Modern Languages are very important for many reasons - travel, holidays, meeting new people, future employment and further study. French is one of very few languages spoken on all five continents. It is spoken as a first language in more than two dozen countries, including Belgium, Canada and Switzerland, as well as parts of Africa and the Caribbean. Along with English, it's also an official working language of several international bodies, including the European Union; the International Monetary Fund; the International Red Cross; and the United Nations.

Studying Higher French will broaden your horizons and your career options and you'll be able to learn more about contemporary issues and culture in French-speaking countries through the study of four contexts:

1. SOCIETY
2. LEARNING
3. EMPLOYABILITY
4. CULTURE



### Skills Development

The aims of the course are to allow learners to develop:

- The foreign language skills of listening, talking, reading and writing
- Self-confidence, communication skills and cultural awareness of the language, people and places where the language is spoken
- Skills for learning, life and work, including literacy, thinking skills, employability, enterprise and citizenship.

**Recommended entry to Higher: National 5 'A - B'**

### Unit Breakdown

HIGHER (A - D)
<b>Understanding language</b> <i>Learners will develop listening, reading and translation skills in French and their knowledge and understanding of French grammar within the four contexts</i>
<b>Using Language</b> <i>Learners will develop talking and writing skills in French and their ability to apply the rules of French grammar within the four contexts</i>
<b>Exam (100)</b> <i>Talking (30), Listening and Writing (30), Reading (30), Directed Writing (10)</i>

### Progression / Career Pathways

Advanced Higher French  
Higher Spanish  
Further study or training  
Employment

With a language, you will have a huge array of options open to you. More and more jobs are requiring an ability to speak a foreign language as an additional skill. A large number of companies are also seeking to recruit people who can speak another language. Practically any job can involve languages, whether it's based in the UK or abroad.



## Spanish — NATIONAL 4/5

### Course Description

In the global economy of the 21<sup>st</sup> century, everyone should seriously consider studying at least one foreign language. In all corners of the globe people have become aware of the growing presence and importance of Spanish. With over 400 million people speaking it as a first language, Spanish is now one of the world's most-spoken languages. It is not only the official language of Spain, but also of Mexico and much of Central and South America. Studying Spanish at National 4 or 5 will broaden your horizons and you'll also be learning about the rich and varied culture of Spanish-speaking countries, adding to your appreciation of customs and traditions in them.

You will learn about the language, people and places where the language is spoken through the study of four contexts:

1. SOCIETY
2. EMPLOYABILITY
3. LEARNING
4. CULTURE



### Skills Development

The aims of the course are to allow learners to develop:

- The foreign languages skills of listening, talking, reading and writing.
- Self-confidence, communication skills and cultural awareness of the language, people and places where the language is spoken
- Skills for learning, life and work, including literacy, thinking skills, employability, enterprise and citizenship.

### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
<b>Understanding Language</b> <i>Learners will develop reading and listening skills in Spanish, and their knowledge of straightforward language in the four contexts.</i>	<b>Understanding language</b> <i>Learners will develop reading and listening skills in Spanish and their knowledge of detailed language in the four contexts.</i>
<b>Using language</b> <i>Learners will develop talking and writing skills in Spanish and their knowledge of straightforward language in the four contexts.</i>	<b>Using language</b> <i>Learners will develop talking and writing skills in Spanish and their knowledge of detailed language in the four contexts.</i>
<b>Added Value Unit</b> <i>Learners will apply their language skills to investigate a chosen topic in Spanish.</i>	<b>Exam (100%)</b> <i>Talking (25%), Listening (25%), Reading (25%), Writing (25%)</i>

### Progression / Career Pathways

National 4/National 5/Higher  
 Further study or training  
 Employment

With a language, you will have a huge array of options open to you. More and more jobs are requiring an ability to speak a foreign language as an additional skill. A large number of companies are also seeking to recruit people who can speak another language. Practically any job can involve languages, whether it's based in the UK or abroad.



## Spanish — HIGHER

### Course Description

In the global economy of the 21<sup>st</sup> century, everyone should seriously consider studying at least one foreign language. In all corners of the globe people have become aware of the growing presence and importance of Spanish. With over 400 million people speaking it as a first language, Spanish is now one of the world's most-spoken languages. It is not only the official language of Spain, but also of Mexico and much of Central and South America. Studying Higher Spanish will broaden your horizons and you'll also be learning about the rich and varied culture of Spanish-speaking countries, adding to your appreciation of customs and traditions in them.

You will learn about the language, people and places where the language is spoken through the study of four contexts:

1. SOCIETY
2. LEARNING
3. EMPLOYABILITY
4. CULTURE



### Skills Development

The aims of the course are to allow learners to develop:

- The foreign language skills of listening, talking, reading and writing
- Self-confidence, communication skills and cultural awareness of the language, people and places where the language is spoken
- Skills for learning, life and work, including literacy, thinking skills, employability, enterprise and citizenship.

**Recommended entry to Higher: National 5 'A - B'**

### Unit Breakdown

HIGHER (A - D)
<b>Understanding language</b> <i>Learners will develop listening, reading and translations skills in Spanish and their knowledge and understanding of Spanish grammar within the four contexts</i>
<b>Using Language</b> <i>Learners will develop talking and writing skills in Spanish and their ability to apply the rules of Spanish grammar within the four contexts</i>
<b>Exam (100)</b> <i>Talking (30), Listening and Writing (30), Reading (30), Directed Writing (10)</i>

### Progression / Career Pathways

Advanced Higher Spanish  
Higher French  
Further study or training  
Employment

With a language, you will have a huge array of options open to you. More and more jobs are requiring an ability to speak a foreign language as an additional skill. A large number of companies are also seeking to recruit people who can speak another language. Practically any job can involve languages, whether it's based in the UK or abroad.



## Mathematics — NATIONAL 4

### Course Description

The National 4 Mathematics Course enables learners to select and apply straightforward mathematical skills in a variety of mathematical and real-life situations. Learners interpret, communicate and manage information in mathematical form. Learners will use their solutions to make and explain decisions.

#### Information about typical learners who might do the Course:

The Course would be suitable for those who are secure at CFE level 3 and have experienced some level 4 outcomes by the end of S3.

### Skills Development

The course aims to:

- enable the use of numerical data and abstract terms and develop the idea of generalisation
- develop skills which are vital to scientific and technological research and development
- develop skills relevant to learning, life and work in an engaging and enjoyable way

### Unit Breakdown

NATIONAL 4 (Pass / Fail)
<b>Mathematics: Expressions and Formulae (National 4)</b> Formulae for circumference, area and volume, Algebraic expressions, Represent, calculate and analyse statistical data, Calculate probability The general aim of this Unit is to develop skills linked to straightforward mathematical expressions and formulae. These include the manipulation of abstract terms, the simplification of expressions and the evaluation of formulae.
<b>Mathematics: Relationships (National 4)</b> Equations, Geometry in 2D shapes, Trigonometry in right-angled triangles, Scattergraphs and line of best fit. The general aim of this Unit is to develop skills linked to straightforward mathematical relationships. These include solving equations, understanding graphs and working with trigonometric ratios.
<b>Numeracy (National 4)</b> Numerical notation and units, Select and carry out calculations, Measurement, Interpret graphical information and probability. All units cover the skills of reasoning.
<b>Added Value Unit</b> Pupils will also be required to sit a <b>course assessment</b> . This will be a <b>test</b> and it will assess the breadth of knowledge and skills acquired from across all units of the course, sometimes in integrated ways. It will consist of two question papers. Paper 1 - Non calculator - 20 minutes. Paper 2 - Calculator - 40 minutes.  This test will be set and marked within the school and will be awarded as <i>pass/fail</i> .

To gain the award of the Course, the learner **MUST** pass all of the Units as well as the Course Assessment (Added Value Unit.)



## Mathematics — NATIONAL 5

### Course Description

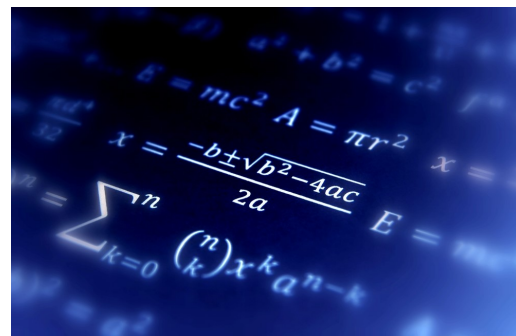
Information about typical learners who might do the Course:

This would be a suitable Course for learners who are secure at CFE level 4 by the end of S3.

### Skills Development

The course aims to:

- motivate and challenge learners by enabling them to select and apply mathematical techniques in a variety of mathematical and real-life situations
- develop confidence in the subject and a positive attitude towards further study in mathematics
- allow learners to interpret, communicate and manage information in mathematical form; skills which are vital to scientific and
- technological research and development
- develop the learner's skills in using mathematical language and to explore mathematical ideas



### Unit Breakdown

#### NATIONAL 5 (Grades A–D)

##### Mathematics: Expressions and Formulae (National 5)

Surds and indices, Geometric formulae. - Gradient, arc length, sector area and volume, Algebraic expressions and fractions.

The general aim of this Unit is to develop skills linked to mathematical expressions and formulae. These include the manipulation of abstract terms, the simplification of expressions and the evaluation of formulae.

##### Mathematics: Relationships (National 5)

Linear equations, Quadratic graphs and equations, Geometry: Pythagoras' Theorem, similarity, shapes properties, Trigonometry graphs and identities.

The general aim of this Unit is to develop skills linked to mathematical relationships. These include solving and manipulating equations, working with graphs and carrying out calculations on the lengths and angles of shapes.

##### Mathematics: Applications (National 5)

Trigonometry in non-right-angled triangles, Vectors, Fractions and percentages, Analysing data: Standard deviation, Interquartile Range and Line of best fit.

The general aim of this Unit is to develop skills linked to applications of mathematics. These include using trigonometry, geometry, number processes and statistics within real-life contexts.

All Units cover skills in reasoning.

All units are internally assessed against the requirements shown in unit specifications. They will be assessed as *pass/fail* within centres.

##### Course Assessment

The Course assessment will consist of two question papers.

Paper 1 - Non calculator - 50 marks- 1 hour 15min

Paper 2 - Calculator - 60 marks - 1 hour 50 minutes.

These question papers will set and marked by the SQA, and conducted in school under exam conditions. The course award will be graded A - D

### Options in S5

Progression would be to Higher Mathematics in S5.





## Mathematics — HIGHER

### Course Description

The Course aims to:

- motivate and challenge learners by enabling them to select and apply mathematical techniques in a variety of mathematical situations
- develop confidence in the subject and a positive attitude towards further study in mathematics and the use of mathematics in employment
- deliver in-depth study of mathematical concepts and the ways in which mathematics describes our world
- allow learners to interpret, communicate and manage information in mathematical form; skills which are vital to scientific and technological research and development
- deepen the learner's skills in using mathematical language and exploring advanced mathematical ideas

### Information about typical learners who might do the Course

This Course is suitable for learners who are secure in their attainment of the National 5 Mathematics Course. We would recommend it to pupils who have gained at least a grade A or grade B. This is a very demanding course and pupils must be prepared to do homework on a nightly basis.

Learners will develop skills in selecting and applying mathematical techniques in a variety of mathematical situations. These skills will enable progression to further learning and to employment. Learners will experience in-depth study of the ways in which mathematics describes our world, and become skilled in interpreting, analysing, communicating and managing information in mathematical form.

### Units Studied

#### Mathematics: Expressions and Functions (Higher)

- **Algebraic skills**- Factorise polynomials, simplify using laws of logarithmic and exponents, identify and sketch functions.
- **Trigonometric skills**—Addition formulae, the wave function, identify and sketch functions.
- **Geometric skills**— Differentiating an algebraic function including basic trig functions.

The general aim of this Unit is to develop knowledge and skills that involve the manipulation of expressions, the use of vectors and the study of mathematical functions. The Outcomes cover aspects of algebra, geometry and trigonometry, and also skills in mathematical reasoning and modelling.

#### Mathematics: Relationships and Calculus (Higher)

- **Algebraic skills**- Polynomials, quadratic, logarithmic and exponential equations
- **Trigonometric skills**—Trigonometric equations involving trigonometric formulae or identities
- **Calculus skills**— Differentiating algebraic functions and basic trig functions
- **Calculus skills**- Vectors

The general aim of this Unit is to develop knowledge and skills that involve solving equations and to introduce both differential calculus and integral calculus. The Outcomes cover aspects of algebra, trigonometry, calculus, and also skills in mathematical reasoning and modelling.

#### Mathematics: Applications (Higher)

- **Algebraic skills**- Equation of a straight line. recurrence relations and equation of a circle.
- **Calculus skills**—Area between curves and optimisation problems

The general aim of this Unit is to develop knowledge and skills that involve geometric applications, applications of sequences and applications of calculus. The Outcomes cover aspects of algebra, geometry, calculus, and also skills in mathematical reasoning and modelling.

### Course Assessment

The **Course assessment for Mathematics** will consist of two question papers.

Paper 1 – Non calculator – 60 marks- 1 hour 30 minutes.

Paper 2 – Calculator – 70 marks – 1 hour 45 minutes.

These question papers will be set and marked by the SQA, and conducted in school under exam conditions. The course award will be graded A – D



## Mathematics — ADVANCED HIGHER

### Course Description

The Advanced Higher Course extends learners' mathematical knowledge in algebra, geometry and calculus. It includes matrix algebra, complex numbers and vector and formalises the concept of mathematical proof.

Advanced Higher Mathematics emphasises the need for candidates to undertake extended thinking and decision making, to solve problems and integrate mathematical knowledge. The course offers candidates, in an interesting and enjoyable manner, an enhanced awareness of the range and power of mathematics.

### Information about typical learners who might do the course

The entry to the course would be learners who have normally attained a pass in the Higher Maths Exam.

Mathematics and Further Mathematics are versatile qualifications, well-respected by employers and are both "facilitating" subjects\* for entry to higher education. Careers for men and women with good mathematics skills and qualifications are not only well paid, but they are also often interesting and rewarding. People who have studied mathematics are in the fortunate position of having an excellent choice of career. Whilst the number of young people studying Advanced level Mathematics is increasing there is still a huge demand from science, engineering and manufacturing employers.

The reason why so many employers highly value mathematics qualifications is because mathematics students become better at thinking logically and analytically. Through solving problems you develop resilience and are able to think creatively and strategically. The writing of structured solutions, proof and justification of results help you to formulate reasoned arguments. ...and importantly you will have excellent numeracy skills and the ability to process and interpret data.

For progression to many courses at university it is important to have strong mathematics skills. For most science, technology, engineering and mathematics (STEM) degree courses Higher Mathematics is a requirement and Advanced Higher Mathematics is often a preferred subject.

*"Those students who had studied Advanced Higher mathematics reported coping better with the mathematical content of the degree, and as such perceived that they required less additional support throughout their studies." Institute of Physics 'Mind the Gap' report 2010*

*"In general, [it's] harder than expected, especially the mathematical aspects. I felt thoroughly unprepared for the mathematics involved coming from only having Highert maths .... My peers who did study Advanced Higher maths were much better prepared." Engineering student*

### Unit Assessments

All units are internally assessed against the requirements shown in unit specifications. They will be assessed as **pass/fail** within centres.

### Course assessment

The **Course assessment for Mathematics** will consist of one calculator of duration 3 hours with a total of 100 marks. The question paper will be set and marked by the SQA, and conducted in school under exam conditions. The course award will be graded A – D

### Conditions of award

To gain the award of the Course, the learner must pass all of the Units as well as the Course assessment.



## Geography — NATIONAL 4/5

### Course Description

Geography opens up for learners the physical environment around them and the ways in which people interact with this environment. The course develops the learner's understanding of our changing world and its human and physical processes. There are opportunities for practical activities, including fieldwork, so that learners can interact with their environment. In the 21st century, with growing awareness of the impact of human activity upon the environment and scarce resources, the study of Geography fosters positive life-long attitudes of environmental stewardship, sustainability and global citizenship. This qualification will help learners develop the knowledge and skills to enable them to contribute effectively to their local communities and wider society. The contexts for study are local, national, international, and global.

### Skills Development

The aims of the course are to allow learners to develop:

- a range of geographical skills and techniques including using, interpreting, evaluating and analysing a range of geographical information
- using a range of maps and other data to process and communicate information
- researching skills, including fieldwork
- detailed understanding of the ways in which people and the environment interact in response to physical and human processes at local, national, international, and global scales
- detailed understanding of spatial relationships and of the changing world in a balanced, critical and sympathetic way
- a geographical perspective on environmental and social issues
- an interest in, and concern for, the environment leading to sustainable development

### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
Physical Environments Unit	Physical Environments Unit
Human Environments Unit	Human Environments Unit
Global Issues Unit	Global Issues Unit
<b>Added Value Unit</b> Learners will choose an issue for personal study drawn from geographical contexts. They will research their chosen issue and present their findings. This is internally assessed.	<b>Assignment (20%)</b> All pupils will write a formal Assignment under exam conditions based on their Geographical investigation in partnership with the Dolphin House staff. This will be externally marked by the SQA  <b>Question Paper (80%)</b> All pupils will also sit an external written exam to assess knowledge and understanding and written skills.

### Progression / Career Pathways

This Course or its Units provides progression to Higher Geography and/or a Higher Environmental Science Course. Future career pathways include: Airline Pilot, Climatologist, Environmental Management, Writer and or Researcher, GIS Specialist, Teacher, Urban Planner, Community Development, Transportation Manager and many more.



## Geography — HIGHER

### Course Description

Geography opens up for learners the physical and human environment around them and the ways in which people interact with the environment. The purpose of this Course is to develop the learner's understanding of our changing world and its human and physical processes. There will be opportunities for practical activities, including fieldwork, so that learners can interact with their environment. In the 21st century, with growing awareness of the impact of human activity upon the environment and scarce resources, the study of Geography fosters positive life-long attitudes of environmental stewardship, sustainability and global citizenship. This qualification will ensure learners will develop the skills, knowledge and understanding to enable them to contribute effectively to their local communities and wider society. The contexts for study are local, national, international and global.

### Skills Development

The main aims of the course are to enable pupils to develop:

- a wide range of geographical skills and techniques
- an understanding of the complexity of ways in which people and the environment interact in response to physical and human processes at local, national, international and global scales
- understanding of spatial relationships and of the complexity of the changing world in a balanced, critical and sympathetic way
- a geographical perspective on environmental and social issues and their significance
- an interest in, understanding of, and concern for the environment and sustainable development

### Unit Breakdown

HIGHER (Grades A - D)	
Physical Environments Unit	
Human Environments Unit	
Global Issues Unit	
<b>Assignment (27%)</b>	All pupils will undertake a Geographical investigation in partnership with the Dolphin House staff and will complete scientific research and enquiry along the Ayrshire Coast. This is an independent project with support and pupils need to write up their findings under exam conditions.
<b>Question Paper (73%)</b>	All pupils will also sit an external written exam to assess knowledge and understanding and analysis and evaluation skills.

### Progression / Career Pathways

This Course or its Units provides progression to Advanced Higher Geography. Future career pathways include: Airline Pilot, Climatologist, Environmental Management, Writer and or Researcher, GIS Specialist, Teacher, Urban Planner, Community Development, Transportation Manager and many more.





## Travel & Tourism — NAT 5 Skills for Work

### NATIONAL 5 TRAVEL & TOURISM

Everyone loves to go on holiday! As well as this, tourism is a major employer and revenue earner. This course is designed to let you gain knowledge of a variety of tourist destinations in Scotland, the UK and the rest of the world. It will also be of interest to anyone seeking to study travel & tourism as part of a general education or as a consumer wishing to gain an insight into how the industry works. This course offers essential vocational and employability skills that will develop the skills, knowledge and attitudes needed for work in the travel and tourism industry.

#### Unit 1: Employability

In this unit you will learn about all the organisations that come under the tourism 'umbrella' and be introduced to the skills needed to work in the tourism industry. This will be done through a range of activities including mock interviews and you will also have the opportunity to do work experience within local tourist services in Ayrshire.

#### Unit 2: Customer Services

In this unit you will explore the various services needed to book, organise and go on holiday. You will find out about the work of the tour operator and the travel agent. You will also be shown how to book flights and holidays online. The differences between no frills and scheduled airlines will be highlighted and you will learn about the types of people who enjoy cruises, coach trips and package holidays.

#### Unit 3: Scotland as a tourist destination

In this unit you will find out about holidaying in Scotland. You will look at the different scenic areas of our country, find out what to do at these locations and where to stay. You will also gather information from brochures and the internet which will enable you to describe a range of destinations and attractions, identify current trends in holidays and describe the impact of tourism in Scotland.

#### Unit 4: UK and worldwide tourist destinations

In this unit you will find out about the world's holiday hotspots. You will be looking at brochures, holiday programmes, the internet and DVDs to gain a good working knowledge about the world's most popular tourist destinations such as the Mediterranean countries, USA and Canada, the Caribbean, the Far East and Australia and New Zealand. Again you will find out about what to do, where to go, what to do and where to eat and stay.

#### Assessment

There is no external exam for N5 Travel and Tourism. All units are internally assessed and are Pass/Fail.





## History — NATIONAL 4/5

### Course Description

The National History Course allows pupils to acquire breadth and depth in their knowledge and understanding of the past through the study of Scottish, British, European and world contexts. The time periods covered is the medieval period and includes elements of political, social, economic and cultural history. History makes a unique contribution to the curriculum. The study of History contributes to a pupil's understanding of the society in which they live and work by helping them appreciate the ways in which important aspects of that society have developed both nationally and internationally.

### Skills Development

There are a number of key skills that pupils will develop through studying History whilst working towards securing national qualifications. Pupils will acquire a broad range of historical knowledge and understanding, including a sense of development over time, and an appreciation of the culture and attitudes of societies other than our own. Pupils will analyse and evaluate a variety of historical evidence from both primary and secondary sources. Pupils will engage directly with questions and present independent opinions about them by developing arguments that are well-written, clearly expressed, coherently organised and effectively supported by relevant evidence. In addition to participating in a variety of learning experiences, pupils will be supported and encouraged to increase their confidence to undertake self-directed learning, making the most effective use of time and resources.

### Unit Breakdown

National 4 & 5
The Scottish Wars of Independence - Scottish Unit
The making of Modern Britain - British Unit
Civil Rights in the USA - Europe and World Unit
<b>Assessment</b> To achieve the National 5 History award, pupils must pass all Units Assessments, one assessment for each unit studied. Overall course assessment consists of a 80 mark question paper and a 20 mark assignment. To pass National 4, pupils must pass unit assessments.

### Progression / Career Pathways

There are many employment opportunities for people with Modern Studies qualifications in a variety of different fields such as journalism and law. In addition there are wide ranging opportunities within; the finance, administration and corporate sector, the media, broadcasting and publishing; local and national government; education; police and the armed forces.



## History — HIGHER

### Course Description

The Higher History Course allows pupils to acquire breadth and depth in their knowledge and understanding of the past through the study of Scottish, British, European and world contexts. The time periods covered is the medieval period and includes elements of political, social, economic and cultural history. Higher History makes a unique contribution to the curriculum. The study of History contributes to a pupil's understanding of the society in which they live and work by helping them appreciate the ways in which important aspects of that society have developed both nationally and internationally.

### Skills Development

There are a number of key skills that pupils will develop through studying History whilst working towards securing national qualifications. Pupils will acquire a broad range of historical knowledge and understanding, including a sense of development over time, and an appreciation of the culture and attitudes of societies other than our own. Pupils will analyse and evaluate a variety of historical evidence from both primary and secondary sources. Higher and Advanced Higher pupils will critically analyse the opinions of historians. Pupils will engage directly with questions and present independent opinions about them by developing arguments that are well-written, clearly expressed, coherently organised and effectively supported by relevant evidence. In addition to participating in a variety of learning experiences, pupils will be supported and encouraged to increase their confidence to undertake self-directed learning, making the most effective use of time and resources.

### Unit Breakdown

HIGHER (Grades A - D)
Britain 1851-1951 - British Unit
The Scottish Wars of Independence - Scottish Unit
The Crusades - European and World Unit (Issues 1-4 only)

### Assessment

Overall course assessment consists of a 44 mark question paper on Britain, European and World topics, a 36 paper on the Scottish Wars, and a 30 mark assignment.

### Progression / Career Pathways

There are many employment opportunities for people with History qualifications in a variety of different fields such as; History and Heritage; for example archivists, researchers, librarian, and curator etc. In addition there are wide ranging opportunities within; the finance, administration and corporate sector; the legal profession, the media, broadcasting and publishing; local and national government; education; police and the armed forces.



## History — ADVANCED HIGHER

### Course Description

The Advanced Higher History Course allows pupils to acquire depth in their knowledge and understanding of historical themes, and to develop further the skills of analysing complex historical issues, evaluating sources and drawing conclusions. The Course makes a distinctive contribution to the curriculum by engaging in the issues which arise from significant historical events and developments. The depth of study enables pupils to engage fully in historical debate and thereby develop a deeper appreciation of the forces which have shaped historical developments. The Advanced Higher History course is a study of Germany: from Democracy to Dictatorship, 1918-39. It is a study of the changing nature of political authority, the reasons for changes and the consequences of the changing character of political authority, focusing on the themes of ideology, authority and revolution.

### Skills Development

There are a number of key skills that pupils will develop through studying History whilst working towards securing national qualifications. Pupils will acquire a broad range of historical knowledge and understanding, including a sense of development over time, and an appreciation of the culture and attitudes of societies other than our own. Pupils will analyse and evaluate a variety of historical evidence from both primary and secondary sources. Pupils will engage directly with questions and present independent opinions about them by developing arguments that are well-written, clearly expressed, coherently organised and effectively supported by relevant evidence. In addition to participating in a variety of learning experiences, pupils will be supported and encouraged to increase their confidence to undertake self-directed learning, making the most effective use of time and resources.

### Course Content

**Advanced Higher** - The course is divided into 4 areas:

**The creation of the Weimar Republic**

**A period of relative stability**

**The collapse of the Weimar Republic**

**The transformation of post-Weimar society**

#### Assessment

**The question paper** will be marked out of 90. It will be divided into two sections. Each Section will have the following mark allocations:

**Section A:** Historical Issues will have 50 marks. This Section will be made up of extended response (essay) questions requiring the learner to draw on the knowledge and understanding and skills acquired during the course.

**Section B:** Historical Sources will have 40 marks. This Section will be made up of extended response questions requiring the learner to draw on the knowledge and understanding and skills acquired during the course and apply these to unseen historical sources.

**Project (dissertation)** The project (dissertation) will allow learners to apply research, analysis and evaluation skills as they investigate a complex historical issue. Candidates have an open choice of issue for study. Assessors will support candidates to make an appropriate choice that will allow them to demonstrate the required knowledge and understanding and application of skill. The project (dissertation) will have 50 marks



## Modern Studies — NATIONAL 4/5

### Course Description

The course is divided into three units:

- World Power: USA
- Crime and the Law in the UK
- Democracy in Scotland and the UK

Modern Studies Courses encourage learners to develop important attitudes including: an open mind and respect for the values, beliefs and cultures of others; openness to new thinking and ideas and a sense of responsibility and global citizenship. The subject develops in learners a greater understanding of the contemporary world and their place in it. Learners' horizons are extended and they are challenged to look at the world in new ways. Their confidence grows as they begin to understand more about their sense of identity and place in the contemporary world. The investigative and critical thinking activities in this course give learners important experience in contributing to group work and also working on their own.

### Skills Development

The main aims of Modern Studies are to enable learners to:

- engage as active and informed members of society and local and global citizens
- appreciate and respect human and legal rights and responsibilities as well as democratic modes of government
- understand the democratic process and how, why and to what extent people are informed about and participate in society
- understand social and economic issues at local, Scottish, national and international levels and ways of addressing needs and inequalities
- distinguish between different views about the extent of state involvement in society

### Unit Breakdown

World Power: USA - International Unit
Crime and the Law - Social Unit
Democracy in Scotland and the UK - Political Unit
<b>Assessment</b> To achieve the National 5 Modern Studies award, pupils must pass all Units Assessments, one assessment for each unit studied. Overall course assessment consists of a 80 mark question paper and a 20 mark assignment. To pass National 4, pupils must pass unit assessments.

### Progression / Career Pathways

There are many employment opportunities for people with Modern Studies qualifications in a variety of different fields such as journalism and law. In addition there are wide ranging opportunities within; the finance, administration and corporate sector, the media, broadcasting and publishing; local and national government; education; police and the armed forces.



## Modern Studies — HIGHER

### Course Description

The course is divided into three units:

- World Issue: Poverty
- Inequalities in Health and Wealth
- Democracy in Scotland and the UK

Modern Studies Courses encourage learners to develop important attitudes including: an open mind and respect for the values, beliefs and cultures of others; openness to new thinking and ideas and a sense of responsibility and global citizenship. The subject develops in learners a greater understanding of the contemporary world and their place in it. Learners' horizons are extended and they are challenged to look at the world in new ways. Their confidence grows as they begin to understand more about their sense of identity and place in the contemporary world. The investigative and critical thinking activities in this course give learners important experience in contributing to group work and also working on their own.

### Skills Development

The main aims of Modern Studies are to enable learners to:

- engage as active and informed members of society and local and global citizens
- appreciate and respect human and legal rights and responsibilities as well as democratic modes of government
- understand the democratic process and how, why and to what extent people are informed about and participate in society
- understand social and economic issues at local, Scottish, national and international levels and ways of addressing needs and inequalities
- distinguish between different views about the extent of state involvement in society

### Unit Breakdown

Higher
<b>World Issue: Poverty - International Unit</b> In this unit learners will study a significant world issue, poverty. This will include a study of the causes and consequences of poverty around the world, and evaluate international responses to poverty.
<b>Inequalities in health and wealth - Social Unit</b> Learners will consider evidence that inequalities exist in health and wealth in the UK. They will then examine the causes of these inequalities, and analyse attempts that have been made to reduce inequalities.
<b>Democracy in Scotland and the UK - Political Unit</b> Learners will develop a knowledge and understanding of the UK political structure including the place of Scotland within this and the debates around this arrangement. They will develop knowledge and understanding of the ways in which society is informed about the political system, and able to participate in, and influence, the political system. At Higher level this unit will focus on Scottish politics.
<b>Assessment</b> Overall course assessment consists of a 52 mark essay paper, a 28 mark source paper and a 30 mark assignment

### Progression / Career Pathways

There are many employment opportunities for people with Modern Studies qualifications in a variety of different fields such as journalism and law. In addition there are wide ranging opportunities within; the finance, administration and corporate sector, the media, broadcasting and publishing; local and national government; education; police and the armed forces.





## Modern Studies — ADVANCED HIGHER

### MODERN STUDIES - ADVANCED HIGHER

The Advanced Higher Modern Studies Course allows pupils to acquire depth in their knowledge and understanding of political themes, and to develop further the skills of analysing complex issues, evaluating sources and drawing conclusions. This Course makes a distinctive contribution to the curriculum by drawing on the social sciences of politics, sociology and economics and where appropriate, of associated ideas drawn from other social subjects. It thereby adopts a multi-disciplinary approach.

#### Aims

The main aims of this Course are to enable learners to:

- analyse the complex political and social processes in order to develop an understanding of contemporary society
- understand and analyse complex political or social issues in the United Kingdom and adopt an international comparative approach
- develop a range of independent practical research skills by carrying out research into a contemporary issue
- present complex ideas in a range of ways
- evaluating, analysing and synthesising a range of evidence relating to complex issues
- develop a knowledge and understanding of social science research methods



**Advanced Higher** - This Course has two mandatory Units.

#### Modern Studies: Contemporary Issues (Advanced Higher)

In this Unit, learners will study Political Issues and Research Methods. Learners will develop an in depth knowledge and understanding of issues in the United Kingdom and adopt an international comparative approach to their study. Learners should examine case studies related to the context studied to critically evaluate a range of social science research methods.

#### Modern Studies: Researching Contemporary Issues (Advanced Higher)

In this Unit, learners will develop a range of skills relevant to undertaking independent research including how to identify appropriate research issues; plan and manage a complex programme of research; source, collect and record appropriate and reliable information; evaluate, analyse and synthesise evidence; organise, present and reference findings using appropriate conventions; and evaluate research methodology.

#### Assessment

To gain the award of the Course, the learner must pass all of the Units as well as the Course assessment. The overall course assessment will consist of 1 question paper worth 90 marks and a project/dissertation worth 50 marks.

- apply a multidisciplinary approach drawing on analysis from a range of social sciences

#### Unit Breakdown

#### Progression / Career Pathways

There are many employment opportunities for people with Modern Studies qualifications in a variety of different fields such as journalism and law. In addition there are wide ranging opportunities within; the finance, administration and corporate sector, the media, broadcasting and publishing; local and national government; education; police and the armed forces.



## Politics — HIGHER

### Course Description

The course is divided into three units:

- Political Theory
- Political Systems

- Political Parties and Elections

The Higher Politics Course develops learners' ability to analyse political ideas, events, issues, parties and electoral performance. Learners gain knowledge and understanding of individual rights, duties and citizenship, of significant political concepts and ideologies, and of the complexity of political systems through comparative study

### Skills Development

The Higher Politics Course will encourage learners to develop important attitudes, including an open mind and respect for the values, beliefs and cultures of others, openness to new thinking and ideas, and a sense of responsibility and global citizenship. This Course contributes to learners' understanding of society by helping them to develop an understanding of political theory, political systems in the UK, international contexts and the factors affecting the electoral performance of political parties. This sense of political understanding will, in turn, assist them in participating as effective contributors to society and responsible citizens within that society, as well as giving them more individual confidence in their learning and working lives.

### Unit Breakdown

Higher
<b>Political Theory</b> Learners who complete this Unit will be able to use a range of sources of information to evaluate different political ideologies and political concepts, for example comparing Socialist and Conservative views on the role of the state.
<b>Political Systems</b> In this unit learners will study and compare different political systems, for example examining the role of the Executive and the ways in which this role is limited in different political systems.
<b>Political Parties and Elections</b> Learners who complete this Unit will be able to analyse a range of electoral data to evaluate factors which contribute to the electoral performance of UK political, for example examining how effectively parties have used modern technology in their recent election campaigns.
<b>Assessment</b> Overall course assessment consists of a 52 mark essay paper, a 28 mark source paper and a 30 mark assignment.

Kyle Academy History and Modern Studies Department offers Politics at Higher levels to S6 pupils, ideally pupils who have studied Higher Modern Studies in S5. However, S6 pupils who have achieved a grade A or B in another social subject may also be admitted to the course; this would be decided on an individual basis.

### Progression / Career Pathways

There are many employment opportunities for people with Politics qualifications in a variety of different fields such as journalism and law. In addition there are wide ranging opportunities within; the finance, administration and corporate sector, the media, broadcasting and publishing; local and national government; education; police and the armed forces.



## RMPS — NATIONAL 4/5

### Course Description

The National 4/5 Religious, Moral and Philosophical Studies Course enables learners to investigate and explain religious, moral and philosophical questions and responses, make comparisons, and develop the ability to express detailed and reasoned views. The Course addresses the impact and significance of world religions, contemporary moral questions, and religious and philosophical questions. Learners have opportunities to consider both religious views and viewpoints independent of religious belief. The Course will explore the questions that religious and non-religious responses raise and the solutions or approaches they offer. Learners will have opportunities to reflect on these and on their own experience and views. Learners will develop skills which are transferable to other areas of study and which they will use in everyday life.

### Skills Development

Pupils will develop the following skills in National 4/5 RMPS:

- investigating and explaining religious, moral and philosophical questions and responses
- the ability to express detailed and reasoned views
- making comparisons between responses and opinions
- explaining and commenting on the meaning and context of sources
- understanding the impact and significance of religion, moral issues and philosophical questions
- ability to give detailed factual and abstract knowledge and understanding
- analysing and reflecting on religious, moral and philosophical questions and responses and their impact

### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
World Religion - Buddhism	World Religion - Buddhism
Morality and Belief - Medicine and the Human Body	Morality and Belief - Medicine and the Human Body
Religious and Philosophical Questions - The Problem of Evil and Suffering	Religious and Philosophical Questions - The Problem of Evil and Suffering
<p><b>Added Value Unit</b></p> <p>This unit enables the learner to demonstrate the skills they have learnt by applying these to an assignment/ project. All pupils will research a topic within the subject area and creating a piece of work to display their findings. This is internally assessed.</p>	<p><b>Assignment (20 Marks)</b></p> <p>All pupils will write an Assignment under exam conditions based on their chosen Religious, Moral or Philosophical Question. This will be externally marked by the SQA</p> <p><b>Question Paper (80 Marks)</b></p> <p>All pupils will also sit an external written exam to assess knowledge and understanding and written skills.</p>

### Progression / Career Pathways

National 4 pupils who pass can progress to National 5 RMPS and National 5 pupils who gain A-C grades can progress to Higher RMPS. Religious, Moral and Philosophical Studies is about people, their beliefs and the cultures and traditions that they follow. Therefore, it is an essential qualification for any job which involves working with people. These jobs include: Police Officer, Teacher, Lawyer, Nurse, Social Services, Journalism



## RMPS — HIGHER

### Course Description

The Higher Religious, Moral and Philosophical Studies Course enables learners to investigate, critically analyse and evaluate religious, moral and philosophical questions and responses, and to develop the ability to express detailed, reasoned and well-structured views. The Course will explore the questions that religious and non-religious responses raise and the solutions or approaches they offer. Learners will have opportunities to reflect on these and on their own experience and views. The Course will help learners develop an understanding of religious, moral and philosophical issues of relevance in the world today. Learners will develop skills which are transferable to other areas of study and which they will use in everyday life.

### Skills Development

The skills of analysis, evaluation and synthesis are a big focus of the Higher RMPS Course. Pupils will develop the following skills in Higher RMPS:

- investigating, explaining and critically analysing religious, moral and philosophical questions and responses
- researching, analysing, evaluating and synthesising information to draw detailed, reasoned and well-structured conclusions
- identifying and responding to different ideas and viewpoints
- interpreting the meaning and context of sources in depth and explaining relevant abstract ideas
- understanding the impact and significance of religion, moral issues and philosophical questions
- ability to give in-depth factual and abstract knowledge and understanding
- the ability to critically analyse, reflect on and express reasoned views about religious, moral and philosophical questions and their impact

### Unit Breakdown

HIGHER (Grades A - D)
World Religion - Buddhism
Morality and Belief - Medicine and the Human Body
Religious and Philosophical Questions - The Problem of Evil and Suffering
<b>Assignment (27%)</b> All pupils will write an Assignment under exam conditions based on their chosen Religious, Moral or Philosophical Question. All pupils will also sit an external written exam to assess knowledge and understanding and analysis and evaluation skills.
<b>Question Paper (73%)</b> All pupils will also sit an external written exam to assess knowledge and understanding and analysis and evaluation skills.

### Progression / Career Pathways

Pupils who gain an A or B grade at Higher level can progress to Advanced Higher RMPS. A pass at Higher level will also enable pupils to progress to a Higher course in another Social Subject. Alternatively, pupils can gain access to college courses and university. Religious, Moral and Philosophical Studies is about people, their beliefs and the cultures and traditions that they follow. Therefore, it is an essential qualification for any job which involves working with people. These jobs include: Police Officer, Teacher, Lawyer, Nurse, Social Services, Journalism



## Biology — NATIONAL 4/5

### Course Description

Biology is the study of life, from a tiny micro-organism to the complex physiology of the human body. Pupils will build on the knowledge and experiences they have gained in S1-S3. The course will not only increase their knowledge of the biological systems, it will help develop both problem solving, investigative and numeracy skills.

### Skills Development

- The aims of the course are to allow learners to develop:
- Confidence in laboratory techniques
- Investigative and inquiry skills
- The ability to interpret and present data
- To apply problem solving skills in an unfamiliar context
- Numeracy & literacy skills

### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
<b>Multi-Cellular Organisms</b> <i>Pupils will explore many aspects of the human body including the nervous, cardiovascular and respiratory systems. They will develop their understanding of hormones, reproduction and genetics.</i>	<b>Multi-Cellular Organisms</b> <i>Pupils will explore many aspects of the human body including the nervous, cardiovascular and respiratory systems. They will develop their understanding of hormones, reproduction and genetics.</i>
<b>Cell Biology</b> <i>Pupils will explore pathways and mechanisms of cell biology including: cell division, protein production, respiration, photosynthesis and genetic engineering</i>	<b>Cell Biology</b> <i>Pupils will explore pathways and mechanisms of cell biology including: the role of cells, protein production, respiration and genetic engineering</i>
<b>Life on Earth</b> <i>Pupils will develop their understanding of animals and their environments through the study of food webs, sampling techniques, the nitrogen cycle, speciation and intensive farming.</i>	<b>Life on Earth</b> <i>Pupils will develop their understanding of animals and their environments through the study of food webs, sampling techniques, photosynthesis, speciation and intensive farming.</i>
<b>Assessment</b> <i>At National 4, students will need to pass three unit assessments, write a scientific report and complete an assignment on a biological topic. All of this is internally assessed.</i>	<b>Assessment</b> <i>National 5 consist of two external elements: a written scientific assignment and an external exam at the end of the year.</i>

### Progression / Career Pathways

This course provides progression to the Higher Biology course. Pupils may also wish to study other short courses at National 5 level including: Working in the Health Sector, Forensic Science and Laboratory Science. Career pathways include:

- Health Service - nursing, medicine, laboratory technician
- Pharmaceutical or Biotechnology industries-researcher, sales
- Fitness/Beauty industry-PE teaching, personal trainer, beautician
- Food and drinks industry- product development, marketing
- Environmental Biology- marine biologist, conservationist





## **Biology — HIGHER**

### Course Description

The purpose of the Higher biology is to develop enthusiasm for biology as well as developing skills of scientific inquiry and investigation. This will enable students to become scientifically literate citizens and be able to review the science-based claims they will meet. The course allows students to develop deeper understanding of the underlying themes of biology: the biochemistry of cell processes, animal behaviour and the key roles they play in the ecosystem and the importance of genetic information in understanding evolution and cell processes.

### Skills Development

The aims of the course are to allow pupils to develop:

- Confidence in laboratory techniques
- Investigative and inquiry skills
- The ability to interpret and present data
- To apply problem solving skills in an unfamiliar context
- Numeracy & literacy skills

### Unit Breakdown

HIGHER (Grades A - D)
<b>Metabolism &amp; Survival</b> <i>Pupils will investigate the interaction of the different reactions that make up metabolism and the enzymes that control these pathways. They will then go on to study the factors that influence these pathways.</i>
<b>DNA &amp; Genome</b> <i>Pupils will further develop their knowledge and understanding of DNA and proteins and apply this to the study of evolution, stem cell treatments and forensic science.</i>
<b>Sustainability &amp; Interdependence</b> <i>Pupils will explore plant and animal breeding and behaviours. They will further develop their knowledge of biodiversity, photosynthesis and the ecosystem</i>
<b>Assessment</b> <i>At Higher level, students will need to pass three unit assessments, write a scientific report and pass an external element. The external element is split into two sections: a written scientific assignment and an <b>external exam</b> at the end of the year.</i>

### Progression / Career Pathways

This course provides progression to the Advanced Higher Biology. Pupils who enjoy Biology but don't wish to progress to Advanced Higher may also wish to study other short courses at National 5 level including: Working in the Health Sector, Forensic Science and Laboratory Science. Career pathways include:

Health Service - nursing, medicine, laboratory technician  
Pharmaceutical or Biotechnology industries-researcher, sales  
Fitness/Beauty industry-PE teaching, personal trainer, beautician,  
Food and drinks industry- product development, marketing  
Environmental Biology- marine biologist, conservationist



## Biology — ADVANCED HIGHER

### Course Description

The purpose of Advanced Higher biology is to deepen students' knowledge and understanding of Biology to that of university level, as well as developing skills of scientific inquiry and investigation through an independent research project. This will enable students to be better prepared for the independent learning they will encounter at university. The course allows students to develop deeper understanding of the underlying themes of biology: the biochemistry of cell processes, animal behaviour and the key roles they play in the ecosystem and the importance of genetic information in understanding evolution and cell processes.

### Skills Development

The aims of the course are to allow pupils to develop:

- Confidence in laboratory techniques
- Investigative and inquiry skills
- The ability to interpret and present data
- To apply problem solving skills in an unfamiliar context
- Numeracy & literacy skills

### Unit Breakdown

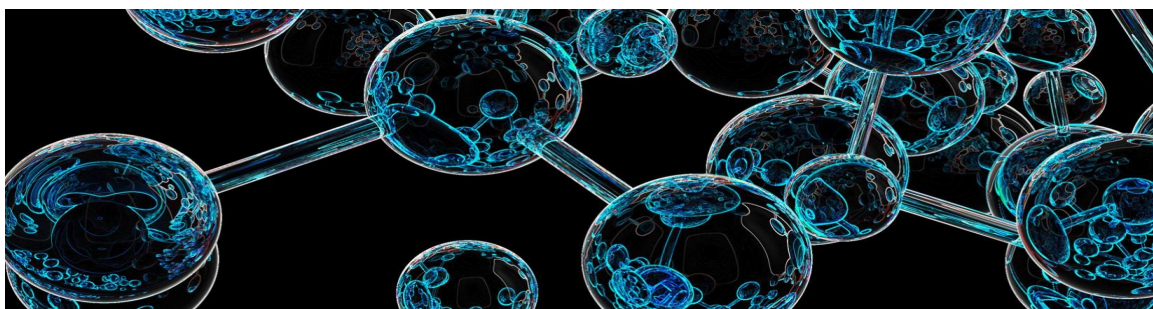
ADVANCED HIGHER (Grades A - D)
<b>Cell Biology</b> This unit focuses on the key role that proteins play in the structure and functioning of cells and organisms. It builds on the knowledge gained in Unit 1 of Higher Biology concerning DNA and the Genome.
<b>Organisms &amp; Evolution</b> This unit explores the importance of parasites in evolution. It builds on the understanding of genomics,
<b>Investigative Biology</b> This unit will give learners a solid grounding in both the principles and the practice of Investigative Biology. The focus will be on the gathering, and organisation of knowledge with a particular focus on the testability and refinement of knowledge through experimentation.
<b>Assessment</b> <i>At Advanced Higher level students will need to pass three unit assessments, an <b>external exam</b> and design and carry out a scientific project. They will then write a scientific report based on their findings, which also will be <b>externally assessed</b>.</i>

### Progression / Career Pathways

This course provides progression to university level study.

Career pathways include:

Health Service - nursing, medicine, laboratory technician  
Pharmaceutical or Biotechnology industries-researcher, sales  
Fitness/Beauty industry-PE teaching, personal trainer, beautician,  
Food and drinks industry- product development, marketing  
Environmental Biology- marine biologist, conservationist





## Chemistry — NATIONAL 4/5

### **Introduction**

Chemistry, the study of matter and its interactions, contributes essential knowledge and understanding across all aspects of our lives. Chemistry explains the links between the particulate nature of matter and the macroscopic properties of the world. Chemistry research and development is essential for the introduction of new products. The chemical industry is a major contributor to the economy of the country.



### **Course Outline**

#### **Unit 1: Chemical Changes and Structure**

Learners will develop scientific skills and knowledge of the chemical reactions in our world. Through practical experience learners will investigate rates of reaction, energy changes of chemical reaction, and the reactions of acids and bases and their impact on the environment. Focusing on these reactions, learners will work towards the concept of chemical equations. Learners will research atomic structure and bonding related to properties of materials.

#### **Unit 2: Nature's Chemistry**

Learners will research the Earth's rich supply of natural resources which are used by each and every one of us. Learners will investigate how fossil fuels are extracted and processed for use. They will investigate: the chemistry of using fuels, their effect on the environment and the impact that renewable energy sources can have on this; plants as a source of fuels, carbohydrates and consumer products; and how chemists use plants in the development of products associated with everyday life.

#### **Unit 3: Chemistry in Society**

Learners will focus on the chemical reactions, properties and applications of metal and alloys. The chemistry of metals in chemical cells is explored. Through research, learners will compare and contrast the properties and applications of plastics and new materials. Learners will investigate the use of fertilisers, the formation of elements, and the presence of background radiation, and will research the use of chemical analysis for monitoring the environment.

#### **Unit 4: Added Value Unit**

Learners will carry out a research investigation in which they will draw on and apply the skills and knowledge they have learned during the Course. Learners will investigate a topical issue in Chemistry.

### **Assessment Arrangements**

National 4 – 4 Unit Assessments, internally assessed. These are three course units and one added value assessment. A mandatory experiment and report must also be successfully completed. There is no final external examination for National 4 Chemistry.

National 5 – There are two components to the final examination process and course award at National 5. Pupils must complete an assignment under exam conditions in class which is sent to SQA to be marked externally. This contributes towards 20% of the overall course award. The remaining 80% is achieved by an externally set and marked question paper (2hrs 30mins), a multiple choice and extended answer, totalling 100marks. Pupils will achieve a grade based on a combination of these two components.

### **Progression**

Learners gaining an award at National 4 may be able to progress to National 5 Chemistry. Learners gaining an award at National 5 may be able to progress to Higher Chemistry.

A qualification in this subject is useful in many different areas, for example hairdressing, veterinary medicine, food science, geologist, environmental control, conservation, soil science, emergency management, laboratory technician, medicine, engineering and forensics to name a few.

### **Further Information:**

More Information on Chemistry is available at the link below:



## Chemistry — HIGHER

### Introduction

The purpose of the Course is to develop learners' curiosity, interest and enthusiasm for chemistry in a range of contexts. The skills of scientific inquiry and investigation are developed throughout the Course. The relevance of chemistry is highlighted by the study of the applications of chemistry in everyday contexts. This will enable learners to become scientifically literate citizens, able to review the science-based claims they will meet.



### Entry Requirements

The Course is suitable for learners who are secure in their attainment of National 5 Chemistry (Grade A or B).

### Course Outline

#### **Unit 1: Chemical Changes and Structure**

This Unit covers the knowledge and understanding of controlling reaction rates and periodic trends, and strengthens the learner's ability to make reasoned evaluations by recognising underlying patterns and principles. Learners will investigate collision theory and the use of catalysts in reactions. Learners will explore the concept of electro-negativity and intra-molecular and intermolecular forces. The connection between bonding and a material's physical properties is investigated.

#### **Unit 2: Nature's Chemistry**

This Unit covers the knowledge and understanding of organic chemistry within the context of the chemistry of food and the chemistry of everyday consumer products, soaps, detergents, fragrances and skincare. The relationship between the structure of organic compounds, their physical and chemical properties and their uses are investigated. Key functional groups and types of organic reaction are covered.

#### **Unit 3: Chemistry in Society**

This Unit covers the knowledge and understanding of the principles of physical chemistry which allow a chemical process to be taken from the researcher's bench through to industrial production. Learners will calculate quantities of reagents and products, percentage yield and the atom economy of processes. They will develop skills to manipulate dynamic equilibria and predict enthalpy changes. Learners will investigate the ability of substances to act as oxidising or reducing agents and their use in analytical chemistry through the context of volumetric titrations. Learners will use analytical chemistry to determine the purity of reagents and products.

#### **Added Value Unit: Researching Chemistry**

This Unit covers the key skills necessary to undertake research in chemistry. Learners will research the relevance of chemical theory to everyday life by exploring the chemistry behind a topical issue. Learners will develop the key skills associated with collecting and synthesising information from a number of different sources. Equipped with the knowledge of common chemistry apparatus and techniques, they will plan and undertake a practical investigation related to a topical issue. Using their scientific literacy skills, learners will communicate their results and conclusions.

### Assessment Arrangements

Higher Course Award: Pupils will undertake the SQA Exam and Assignment to achieve a graded Course Award.

The course assessment consists of 2 components. Firstly, a **Question Paper** set and externally marked by SQA. This is undertaken as two papers, Paper 1 is Multiple Choice (25marks: 40mins) and Paper 2 is Extended Answer (95marks: 2hr 20min). Secondly, an **Added Value Assignment** set and carried out by schools under controlled conditions but externally marked by SQA. Pupils will achieve a grade based on a combination of these two components.

### Progression

This course may provide progression to Advanced Higher Chemistry, other qualifications in Chemistry or related areas or further study, employment and/or training.

### Further Information

More Information on Higher Chemistry is available at the links below:  
<http://www.sqa.org.uk/sqa/47913.html>





## Chemistry — ADVANCED HIGHER

### Entry Requirements

There is a minimum entry level of A or B in Higher Chemistry

### Course Outline

The purpose of the Advanced Higher Chemistry Course is to develop learners' knowledge and understanding of the physical and natural environments beyond Higher level. The Course builds on Higher Chemistry, continuing to develop the underlying theories of chemistry and the practical skills used in the chemistry laboratory. The Course also develops the skills of independent study and thought that are essential in a wide range of occupations and serves to equip all learners with an understanding of the impact of chemistry on everyday life, and with the knowledge and skills to be able to reflect critically on scientific publications and media reports concerning chemistry.

By using the broad skills base and knowledge and understanding of detailed chemistry key areas, learners will become scientifically literate citizens and be able to review the science-based claims they will meet and to communicate in an evidence-based manner. This also allows learners to make their own reasoned decisions on many issues within a modern society increasingly dependent on chemistry, science and technology.

### Unit 1: Inorganic and Physical Chemistry

Learners will discover how electromagnetic radiation is used in atomic spectroscopy to identify elements. They will extend an understanding of the concept of atomic structure by considering atomic orbitals and electronic configuration related to the periodic table. Using electron pair theory, learners will predict the shape of molecules. Learners will gain an understanding of the physical and chemical properties of transition metals and their compounds. Learners will investigate the quantitative component of chemical equilibria. They will develop their understanding of the factors which influence the feasibility of chemical reactions. Learners will progress their understanding of reaction kinetics by exploring the order and mechanisms of chemical reaction.

### Unit 2: Organic Chemistry and Instrumental Analysis

Learners will research the structure of organic compounds, including aromatics and amines, and draw on this to explain the physical and chemical properties of the compounds. They will consider the key organic reaction types and mechanisms, and link these to the synthesis of organic chemicals. Learners will discover the origin of colour in organic compounds and how elemental analysis and spectroscopic techniques are used to verify chemical structure. They will study the use of medicines in conjunction with the interactions of the drugs.

### Researching Chemistry Unit

Learners will be given the opportunity to gain an understanding of stoichiometric calculations, to develop practical skills and to carry out research in chemistry. Learners will develop the key skills associated with a variety of different practical techniques, including the related calculations. Equipped with the knowledge of chemistry apparatus, techniques and an understanding of concepts, learners will identify, research, plan and safely carry out a chemistry practical investigation of their choice.

### Assessment Arrangements

To achieve a graded course award the course assessment consists of 2 components. Firstly, a **Question Paper** (110marks: 3hrs) set and externally marked by SQA and secondly, a **Project** report (25marks) based on independent work in school but externally marked by SQA. The Course assessment will provide the basis for grading attainment in the course award.

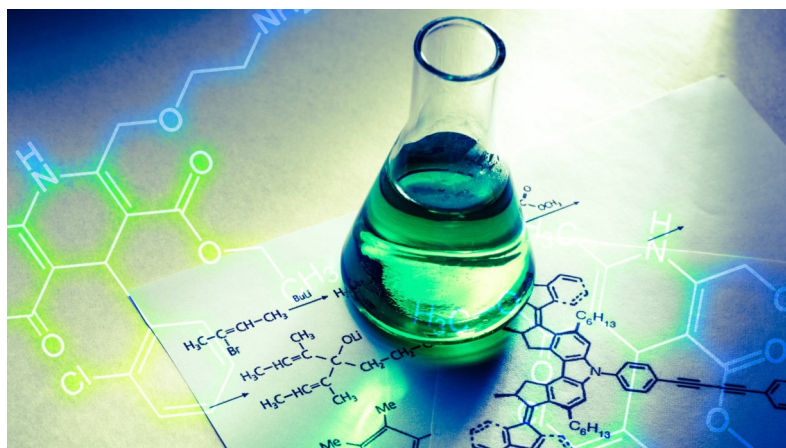
### Progression

This Course or its Units may provide progression to other qualifications in Chemistry or related areas or further study, employment and/or training.

### Further Information

More Information on Advanced Higher Chemistry is available at the link below:

<https://www.sqa.org.uk/sqa/48459.html>







## Physics — NATIONAL 4/5

Pupils who have not studied Physics since S3 may take National 4 or National 5 Physics. The department will recommend which course is suited to individual pupils based on their previous attainment in S3 Physics.

### **Electricity and Energy**

This theme considers the applications of electricity and energy on our lives as well as the implications on society & the environment. Learners consider the potential role of different methods of electricity generation to ensure a future sustainable energy supply on earth. The relationship between electricity and magnetism is considered in a range of applications. Electronic systems feature in this theme along with heat and gas laws.

### **Waves and Radiation**

This theme considers electromagnetic waves which are fundamental to our physical world. Learners consider the applications of waves and radiation on our every day lives, as well as applications across society. This theme also focuses on the nature of nuclear radiation and associated uses and applications in medicine and industry. The risks and benefits of radioactivity are debated and considered.

### **Dynamics and Space**

This theme considers the key areas of speed and acceleration, and applications in different forms of travel. Learners will consider applications of Newton's laws to identify forces acting on moving objects including frictionless movement and space travel. Relationships between forces, motion and energy, satellites and cosmology will feature in this theme allowing learners to consider the challenge of space exploration and the associated risks and benefits.

### **How will I be assessed?**

Both National 4 & National 5 Physics courses are assessed by end of Unit assessments with National 5 also having an external exam. Learners must also complete practical assessments to gain an overall course award at a particular level. At National 5 the external exam will account for 80% of the overall course award. The exam is undertaken in 2 hours 30 minutes and worth 100 marks.

### **Added Value Unit**

Both National 4 and National 5 Physics courses have an Added Value Unit which is delivered as part of the course. An assignment for this is carried out under "open-book conditions" where learners will use their skills, knowledge and understanding developed through the themed Units to undertake an investigation into a topical issue in physics. Learners will work in partnership and in teams when undertaking the assignment. At National 4 the assignment is marked in school while at National 5 it will be marked by the SQA and contributes 20% (20 marks) to the overall course award.

### **Careers in Physics**

Physics opens doors in all directions and is a well respected subject when applying for further education or university. Physicists are to be found in all fields of employment including medicine, telecommunications, transport, engineering, music, television, education, energy, law, finance, computing and government to name a few.





## Physics — HIGHER

The Higher Physics course develops learners' curiosity, interest and enthusiasm for physics in a range of contexts. The skills of scientific inquiry and investigation are developed throughout the course, and the relevance of physics is highlighted by the study of the applications of physics in everyday contexts.

S6 pupils who have not studied physics before may also take Higher Physics however, it is preferable that they would have achieved a pass in either Higher Chemistry or Higher Biology in S5.

The Higher course provides progression from National 5 Physics. The course covers 4 mandatory Units. These are:

- Unit 1: Our Dynamic Universe
- Unit 2: Particles and Waves
- Unit 3: Electricity
- Unit 4: Researching Physics

The assessment for Units 1-3 is completed both in class and through an external exam set by SQA. Unit 4 will be completed in school where pupils will work as a team on a small research project.

### Our Dynamic Universe

This theme considers the key areas of motion, forces, energy and power. Learners will consider the interaction of bodies through explosions, gravitation and mass. Space is covered in relation to special relativity, the expanding universe and big bang theory.

### Particles and Waves

This theme considers the standard model and the interaction of particles in nuclear reactions. Light is studied in detail and the resulting interference and diffraction of light. The refraction of light which results in spectra is considered in some detail.

### Electricity

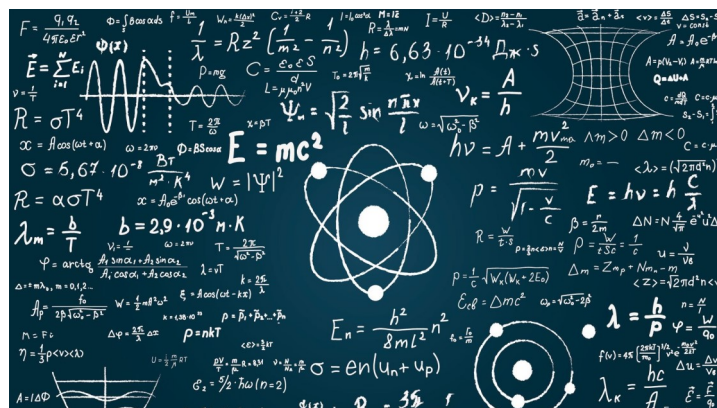
This theme considers the transfer of electrical energy and the monitoring of electrical currents. Modern electronic components are introduced in addition to considering the application of capacitors, semi-conductors and p-n junctions.

### How will I be assessed?

In Higher Physics there are end of Unit assessments which are undertaken in class. Learners must also complete practical assessments to gain an overall course award in addition to the final course exam which is worth 120 marks. In addition all learners will complete and submit an assignment report which is worth a further 30 marks. The assignment provides the course "added value". Learners will apply skills of scientific inquiry, using related knowledge to carry out a meaningful and challenging task in physics and communicate findings. The overall course award is graded A - D with the grade determined on the total mark out of 150.

### Careers in Physics

Physics opens doors in all directions and is a well respected subject when applying for further education or university. Physicists are to be found in all fields of employment including medicine, telecommunications, transport, engineering, music, television, education, energy, law, finance, computing and government to name a few.





## Physics — ADVANCED HIGHER

The Advanced Higher Physics Course will equip learners with an understanding of the positive impact of physics on everyday life. The study of Advanced Higher Physics should also foster an interest in current developments in and applications of physics. This course may provide progression to an HND/degree in a physics/career such as engineering, electronics, computing, design, architecture or medicine. Careers in a physics-based discipline or a related area such as oil and gas exploration, renewable energy, construction, transport or telecommunications.

The Advanced Higher course contains 4 mandatory Units, 3 of which are taught in class. These are:

Unit 1: Rotational Motion and Astrophysics

Unit 2: Quanta and Waves

Unit 3: Electromagnetism

Unit 4: Researching Physics

### **Rotational Motion and Astrophysics**

This Unit develops the knowledge related to rotational motion and angular momentum. An astronomical perspective is developed through a study of gravitation, leading to work on general relativity and stellar physics.

### **Quanta and Waves**

This Unit develops the knowledge of quanta and waves through the principals of situations involving quantum theory and waves. The Unit introduces non-classical physics and considers the origin and composition of cosmic radiation. Simple harmonic motion is also introduced.

### **Electromagnetism**

This Unit develops the knowledge relating to electromagnetism. It develops the understanding of electric and magnetic fields and capacitors and inductors used in d.c. and a.c. circuits.

### **Research Project**

In addition to the 3 Units there is a research project to be completed at Advanced Higher and this provides the “added value”. The purpose of the project is to allow the learner to carry out an in-depth study. A topic is then researched/ investigated and will involve independent working. The project will assess the application of skills of scientific inquiry and related physics knowledge. The project will have 30 marks (23% of the total mark) and is marked by SQA.

### **External Exam**

The course exam consists of a question paper worth 100 marks. The majority of the marks are awarded for knowledge and understanding with some marks for the application of knowledge and problem solving. The overall course award is graded A - D with the grade determined on the total mark out of 130.

### **Further Information on all Physics Courses**

For further information and details about all Physics courses please contact Mr. Semple or go online to the SQA Physics website [www.sqa.org.uk/sqa/45729.html](http://www.sqa.org.uk/sqa/45729.html).

### **Careers in Physics**

Physics opens doors in all directions and is a well respected subject when applying for further education or university. Physicists are to be found in all fields of employment including medicine, telecommunications, transport, engineering, music, television, education, energy, law, finance, computing and government to name a few.





## Music — NATIONAL 4/5

### Course Description

The Music Course enables learners to perform challenging music, create original music using compositional methods and music concepts, and broaden their knowledge and understanding of music and musical literacy. The Course also enables learners to develop knowledge of the social and cultural factors that influence music.

### Performing Skills

Pupils will:

- develop performing skills in solo and/or group settings on 2 selected instruments, or on one instrument and voice
- perform music with sufficient accuracy while maintaining the musical flow
- reflect on and evaluate their own musical skills and identify areas for improvement



### Composing Skills

Pupils will:

- create original music using compositional methods and music concepts when composing, arranging or improvising
- understand the creative process and common approaches used by composers and musicians
- reflect on and evaluate their own creative skills and choices and identify areas for improvement

### Understanding Music

Pupils will:

- develop knowledge of and understanding of the social and cultural factors influencing music
- develop knowledge and understanding of music and music literacy by listening to music and identifying level-specific music signs, symbols and music concepts
- reflect on their own work and that of others

### Unit Breakdown

NATIONAL 4 (Pass/Fail)	NATIONAL 5 (Grades A - D)
Performing Skills	Performing Skills
Composition Folio	Composition Folio
Understanding music	Understanding music
Added Value Unit: Performing Learners will prepare and perform a programme of music in a solo setting and/or as part of a group	Performing exam (50%) An 8 minute programme of contrasting pieces with a minimum of 2 minutes per instrument will be performed to an external examiner. It is important to note that this is between Feb and March. Question Paper (35%) Composition Folio (15%)



## Music — HIGHER

### Course Description

The purpose of the course is to provide a broad practical experience of performing and creating music and develop related knowledge and understanding of music.

### Performing Skills

Pupils will develop their skills on two chosen instruments on consultation with their teacher. They need to demonstrate secure knowledge of a range of musical styles and an understanding of musical concepts embedded within the music they perform. They will reflect on the skills they have developed and critically analyse their own performances.

### Composing Skills

Pupils will experiment with and explore a range of different compositional techniques used in the many different forms of music covered. Pupils are required to reflect on and justify their processes and choices used within each task.

### Understanding Music

Pupils will study a range of different musical styles and techniques and will be required to identify concepts from audio examples. They will develop an understanding of musical literacy and recognise the different signs and symbols used in music notation. Pupils will also explore the social context in which different styles of music have been developed and reflect on their own understanding of the given information.

### Skills Development

The aims of the course are to allow pupils to develop:

- Independence and responsibility
- collaboration with others
- planning and organisation skills
- decision making skills
- listening skills
- focus and determination in learning to play instruments
- identifying and analysing the social and cultural influences that have led to the development of specific music styles and their distinctive sounds
- analysing the compositional methods and music concepts used by others
- experiment with using music concepts and compositional methods to develop and create their own original music

### Unit Breakdown

Pupils will be required to perform on two instruments in front of a visiting examiner. A 12 minute programme of contrasting pieces with a minimum of 4 minutes per instrument is necessary within the programme. Both instruments must be of Grade 4 standard or above. This will be worth 60% of the final awarded grade. Pupils will then be required to sit a listening paper which is worth 40% of the final grade.

It is recommended that pupils should sit National 5 music and have gained at least a B Grade before attempting Higher music.

### Progression/Career Pathways

This course provides progression to Advanced Higher music and also to Music Technology and/or Musical Theatre NPA. Pupils can move on to study courses such as, Music and Performing Arts, Commercial Music, Music teaching, Electronics with music, Music business courses, Sound production, music technology, music therapy, composition, acting and events management.





## Music — ADVANCED HIGHER

The Advanced Higher Music Course develops learners' skills in performing, creating, understanding and analysing music. Learners develop the skills they need to perform challenging music with musical and technical accuracy and fluency, while realising composers' intentions, and develop their own composing skills in sophisticated and creative ways.

### Performing Skills

This unit allows learners to demonstrate advanced levels of creativity and applied musical skills when performing a prepared programme of music on either two selected instruments, or a selected instrument and voice.

The programme of music should last a total of 20 minutes. The performance time on either of the two selected instruments, or instrument and voice, must be a minimum of eight minutes within the overall twenty minute programme. These should be grade 5 standard or above.

This performance will give learners the opportunity to demonstrate the following skills, knowledge and understanding:

- the ability to perform a prepared programme of musically and technically demanding music
- the ability to maintain musical flow and realise the composer's intentions
- interpretive flair and musicality when performing

The performance will have 60 marks (60% of the total mark). The same overall mark weighting will apply to each instrument/voice in the programme. (30/30)

### Composing Skills

In this unit, pupils will analyse how a range of advanced compositional methods and music concepts are used by composers for specific effect and the contexts which influenced their work. Learners will experiment and use a range of music concepts and compositional methods in sophisticated and creative ways to develop, refine and create original music

Learners will develop ideas which make musical sense and realise their creative intentions and finally, critically reflect on their music and the impact of their creative choices and decisions

### Understanding Music

This unit assesses learners' knowledge and understanding of music concepts and music literacy.

Learners will demonstrate conceptual knowledge and understanding of music by responding to music excerpts and an associated range of questions in sophisticated and challenging musical contexts. All questions in the paper are compulsory.

The range of question types within the question paper will allow scope for assessing understanding of music literacy and the learners' ability to identify and analyse the use of music concepts. The question paper will give learners an opportunity to demonstrate the following skills, knowledge and understanding:

- advanced levels of aural discriminatory ability
- in-depth knowledge of a range of level-specific and other music concepts from other SQCF levels
- knowledge and applied use of music literacy

This question paper will have 40 marks (40% of the total marks).





## Music Technology — NATIONAL 5

### Course Description

The purpose of the National 4/5 Music Technology Courses is to enable learners to develop their knowledge and understanding of music technology and of music concepts, particularly those relevant to 20th and 21st century music. Learners will engage in the development of technical and creative skills through practical learning. This Course will provide opportunities for learners to develop their interest in music technology and to develop skills and knowledge relevant to the needs of the music industry.

### Skills Development

The aims of the course are to allow learners to:

- develop skills in the use of music technology hardware and software to capture and manipulate audio
- use music technology creatively in sound production in a range of contexts
- develop skills in musical analysis in the context of a range of 20th and 21st century musical styles and genres
- develop a broad understanding of the music industry
- critically reflect on their own work and that of others

### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
Music Technology Skills	Music Technology Skills
Understanding 20 <sup>th</sup> and 21 <sup>st</sup> Century Music	Understanding 20th and 21st Century Music
Music Technology in Context	Music Technology in Context
<b>Added Value Unit: Music Technology Assignment</b> <i>This Unit requires the learner to apply and integrate skills, knowledge and understanding from the other Units to plan and carry out a short creative production using music technology.</i>	<b>Assignment (70 marks)</b> <i>The assignment will demonstrate the ability to apply knowledge and skills to plan, implement and evaluate a completed creative sound production. This will be underpinned by knowledge and understanding of music and music technology equipment and techniques.</i>
	<b>Question Paper (30 marks)</b> <i>The question paper will assess breadth of knowledge and understanding of concepts related to music technology and 20th and 21st century music.</i>

### Progression / Career Pathways

The Course provides opportunities for vertical and lateral progression to National Courses and to other SQA qualifications in music technology, music and related fields. These include the Higher Music Technology course (SCQF level 6) and also courses such as the NC in Music (SQCF level 6), the NC in Sound Production (SCQF level 6) and the NPA in Music Business (SCQF level 6).



## Art & Design — NATIONAL 4

The Three Components of the Art and Design National 4 course are as follows.

### Main Units

Expressive Activity (Drawing & Media Handling)	Internal PASS/FAIL
Product Design	Internal PASS/FAIL
Art and Design Studies (Historical Studies)	Internal PASS/FAIL



### Course Aims

The aims of the Course are to enable learners to

- communicate personal thoughts, feelings and ideas through the imaginative use of art and design materials, techniques and technology
- Develop knowledge and understanding of art and design practice.
- Plan, develop, produce and present creative art and design work.
- Develop understanding of the social and cultural influences on artists and designers and their work.
- Develop problem solving, critical thinking and reflective practice skills.

### Entry

Pupils undertaking study at National 4 should be secure at Level 3 experiences and outcomes for Art and Design.

### Progression

This Course or its Units may provide progression to other qualifications in Art and Design at National 5 level/NPA Photography, further study, employment and/or training.

### Conditions of award

To achieve the National 4 Art and Design Course, learners must pass all of the required Units, including the Added Value Unit. It is awarded on a pass/fail basis.

### Career opportunities

Photography	Jewellery Design
Architecture	Automotive(car) and Transport Design
Graphic Design	Fashion and Textiles
Product Design	Illustration
Animator/Animation	Production Designer (theatre/ television), Set Designer, Special Effects Design
Fine Art	Secondary/ Primary Teacher



## Art & Design — NATIONAL 5

The **Three Components** of the Art and Design National 5 course are as follows.

### Main Units

Component	Assessment	% Of Course
1. Expressive Activity(Drawing and Media handling)	External SQA	40%
2. Product Design	External SQA	40%
3. Art and Design Studies(Historical Studies)	External SQA	20%

### Course Aims

The aims of the Course are to enable learners to

- communicate personal thoughts, feelings and ideas through the imaginative use of art and design materials, techniques and technology
- Develop knowledge and understanding of art and design practice.
- Plan, develop, produce and present creative art and design work.
- Develop understanding of the social and cultural influences on artists and designers and their work.
- Develop problem solving, critical thinking and reflective practice skills.

### Entry

Pupils undertaking study at National 5 should have achieved a pass at National 4/Level 4 secure, in Art and Design.

### Progression

This Course or its Units may provide progression to other qualifications offered such as Higher Art and Design and Higher Photography/NPA Photography, further study, employment and/or training.

### Conditions of award

To gain an award the learner must pass all of the Units as well as the Course assessment. The course Assessment will be in the form of an Expressive and Design portfolio submitted to SQA for grading, A-D.

### Career opportunities

#### Photography

Architecture

Graphic Design

Product Design

Animator/Animation

Fine Art

#### Jewellery Design

Automotive(car) and Transport Design

Fashion and Textiles

Illustration

Production Designer (theatre/ television), Set Designer, Special Effects Design

Secondary/ Primary Teacher



## Art & Design — HIGHER

### **Purpose**

The Higher Art and Design course is a progressive skills based course that leads on from prior knowledge and understanding, taught in the National 5 course. Pupils develop and apply skills of investigation, media handling, problem solving and evaluation through expressive and design practical activities, linked to related visual arts, design and historical studies. Literacy skills are further enhanced through the critical analysis and contexts of the understanding of Art and Design historical studies. This is integral to the course award.

### **Content**

The course comprises three main units each including historical studies and time built in for preparation and presentation. All three units are externally assessed by SQA

Unit 1 Expressive Activity

Unit 2 Design Activity

Unit 3 Art and Design Historical and Critical Studies

### **Recommended Entry**

Students are expected to have achieved an A/B pass for National 5 Art and Design.

### **Desirable**

National 5 pass in English at A/B.

### **Assessment**

Assessment is conducted through internal on-going unit assessment throughout the year.

### **External Assessment**

Expressive and Design folio plus an evaluation submitted for external assessment to SQA.

Art and Design Studies written exam (Externally assessed by SQA)

### **Progression**

Successful students may progress to Advanced Higher in Art and Design and/or Higher Photography.

### **Career Opportunities**

Higher Art and Design can be used to access the following career paths

#### **Photography**

Architecture

Graphic Design

Product Design

Animator/Animation

Fine Art

#### **Jewellery Design**

Automotive(car) and Transport Design

Fashion and Textiles

Illustration

Production Designer (theatre/ television), Set Designer, Special Effects Design

Secondary/ Primary Teacher





## Photography — NPA

The Three Components of the NPA Photography course are as follows.

### Main Units

Component	Assessment
1. Photographing People	Internal PASS/FAIL
2. Photographing Places	Internal PASS/FAIL
3. Working with Photographs	Internal PASS/FAIL

### Course Aims

The aims of the Course are to enable learners to

- communicate personal thoughts, feelings and ideas through the imaginative use of photography and image manipulation software.
- Develop knowledge and understanding of photographic practice.
- Plan, develop, produce and present creative photographic work.
- Develop understanding of the social and cultural influences on artists and designers and their work.
- Develop problem solving, critical thinking and reflective practice skills.

### Entry

Pupils undertaking this course should have achieved a pass at National 4/Level 4 secure, in Art and Design.

### Progression

This Course or its Units may provide progression to other qualifications offered such as Higher Photography/Short Course in Photography, further study, employment and/or training.

### Conditions of award

To gain an award the learner must pass all of the Units as well as the Course assessment. The course Assessment will be in the form of a photographic portfolio which will be internally assessed with a pass or fail result.

### Career opportunities

Photography	Jewellery Design
Architecture	Automotive(car) and Transport Design
Graphic Design	Fashion and Textiles
Product Design	Illustration
Animator/Animation	Production Designer (theatre/ television), Set Designer, Special Effects Design
Fine Art	Secondary/ Primary Teacher



## Photography — HIGHER

### Purpose

The Higher Photography course covers many facets of society including: Reportage, Fashion, Sports, Wildlife etc. but its true strength lies as a creative tool which offers the individual an opportunity to reflect upon their own lives and interpret the world around them. The course examines social issues such as the environment and how photographs can be powerful artistic tools of communication. The course prepares the student to both produce and evaluate media images. The course requires the candidate to complete three units and a Practical Assignment.



### Content

The Practical Assignment is submitted to the S.Q.A. It is designed to emphasise skills relating to the application of practical skills and related knowledge, and also an understanding of a situation that involves task management. The students are provided with a brief and are expected to demonstrate attainment relating to: organisation; interpretation of a brief; investigative techniques; assignment planning; IT; layout, presentation and communication. The student will also develop and apply related knowledge of the researched theme and visual communication.

### Assessment

Pupils will sit a 1 hour written paper which will assess their general camera knowledge as part of their unit assessment. External assessment (which is submitted to SQA) includes a 1000 word plan; twelve thematic photographs and a 1000 word evaluation written under exam conditions.

### Recommended Entry

A minimum of an A/B at National 5 Art and Design is required. Due to the demand of the Higher Photography course and the restriction on resources, pupils will only be allowed entry to the course based upon their previous attainment in Art and Design.

**Desirable:** A minimum C pass for Higher Art and Design. National 5 pass in English A/B.

### Progression

This Higher qualification would specifically help and also contribute to a portfolio for Art school or other Further Education college courses. Equally it can be used for application to University through UCAS as a separate qualification from Higher Art and Design.

### Career opportunities

Photography	Art/ Creative Director for TV/ Films
Film Director	Wedding/ Studio Photographer
Graphic Design	Visual Communication
Camera operator (TV/ Film)	Visual Merchandising (Window Displays/ Shop layouts)
Animator/Animation	Production Designer (theatre/ television), Set Designer, Special Effects Design
Fine Art Photography	Secondary/ Primary Teacher/ Lecturer



## Art & Design — ADVANCED HIGHER

### Purpose

Art and Design provides opportunities to develop aesthetic understanding, creativity and visual awareness, knowledge and appreciation. It encourages candidates to use a range of media and technology to understand, appreciate and respond to their world. The Course promotes creative thinking, encourages independent thought, initiative, innovation, problem solving and the development of personal opinions.

The course also recognises the need for pupils who require a portfolio for submission to Art school or a further education college.

### Content

Pupils will choose to either produce a Design or an Expressive Folio based upon their chosen area of specialism. For design this could be Architecture, Fashion, Jewellery, Product, Textile or Graphic Design. If pupils elected to undertake an Expressive folio, they would choose a theme from the expressive arts that could be based upon Portrait, Landscape or Still life. The folio could also be a combination of all three.

### Assessment

Assessment is conducted through internal on-going assessment throughout the year. External assessment consists of a practical folio of work submitted to SQA.

### Recommended Entry

Higher Art and Design at A grade.

### Desirable

An A/B pass for Higher English

### Progression

This can be College and Schools of Art, Faculties or Departments of Art and Design. Degree courses in Art and Design can be achieved by attending the following establishments. Glasgow School of Art, Edinburgh College of Art, Duncan of Jordanstone, Gray's School of Art Aberdeen, Scottish College of Textiles Galashiels, Napier University Edinburgh, Glasgow, Glasgow Caledonian University.

This will allow pupils to progress to a career within the creative industries. This can allow for a dynamic and wide ranging career choice with many exciting opportunities available ranging from Fine Arts in many media including Painting, Photography, Film and Video, Interactive Media, Sculpture and Performance to Design and Craft in Graphic Design, Advertising, Jewellery, Fashion, Interior, Ceramic, Three Dimensional Design, Architecture and Spatial Design, Computer Games Design, Film, Animation and Television.

### Career Opportunities

Photography	Jewellery Design
Architecture	Automotive(car) and Transport Design
Graphic Design	Fashion and Textiles
Product Design	Illustration
Animator/Animation	Production Designer (theatre/ television), Set Designer, Special Effects Design
Fine Art	Secondary/ Primary Teacher



## Health & Food Technology — NATIONAL 4/5

### Course Description

The Course focuses on health and the nutritional properties of food as well as developing safe, hygienic and informed practices in food preparation. It raises learners' awareness of the importance of a balanced diet and healthy lifestyle. The Course also develops learners' knowledge and skills so they can become informed food consumers.

### Skills Development

The aims of the course are to allow learners to develop:

- practical food preparation skills and techniques using appropriate tools and equipment
- application of safe and hygienic practices during food preparation
- technological skills related to food production
- organisational skills necessary to plan, prepare and reflect on products and processes
- skills in solving straightforward problems related to a range of health, food and nutrition
- skills to apply their knowledge in practical contexts
- organisational and technological skills to make food products
- safe and hygienic practical skills in practical food preparation

### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
<b>Food for Health</b> Learners will develop knowledge of the relationship between food, health and nutrition. They will also develop knowledge of dietary needs of individuals at various stages of life and describe current dietary advice. Through practical activities, the learner will produce food products which meet individual needs.	<b>Food for Health</b> Learners will complete the same tasks as those pupils studying at National 4 level, but will be expected to produce evidence showing a greater depth of knowledge, understanding and application.
<b>Food Product Development</b> Learners will develop knowledge and understanding of the functional properties of ingredients in food and their use in developing food products. They will also develop a basic understanding of the stages involved in developing a food product. Through a problem-solving approach, learners will make a food product to meet specified needs. They will develop and apply a basic knowledge and understanding of safe and hygienic food practices and techniques.	<b>Food Product Development</b> Learners will complete the same tasks as those pupils studying at National 4 level, but will be expected to produce evidence showing a greater depth of knowledge, understanding and application.
<b>Contemporary Food Issues</b> Learners will develop knowledge of consumer food choices. They will consider factors which may affect food choices and develop knowledge of contemporary food issues. They will consider technological developments in food and organisations which protect consumer interests. They will also develop knowledge of food labelling and how it helps consumers make informed food choices.	<b>Contemporary Food Issues</b> Learners will complete the same tasks as those pupils studying at National 4 level, but will be expected to produce evidence showing a greater depth of knowledge, understanding and application.
<b>Added Value Unit</b> Learners will work through an Added Value Unit which will require application of knowledge and skills from across the Units. They will develop a product to meet a given brief. The Added Value Unit will be sufficiently open and flexible to allow for personalisation and choice.	<b>Assignment (60 marks)</b> Learners will work through an Assignment which will require application of knowledge and skills from across the Units. Learners will develop a product to meet a given brief. The Assignment will be sufficiently open and flexible to allow for personalisation and choice.
	<b>Question Paper (60 marks)</b> Pupils are required to demonstrate integration of knowledge and understanding from across the Units.

### Progression / Career Pathways

The National 4 course provides progression to the National 5 Health and Food Technology course.  
 The National 5 course provides progression to the Higher Health and Technology course.

S5/6 pupils may also wish to study other food related courses at National 5 including: Hospitality.  
 Some may wish to progress to work, apprenticeships or training in food related fields. Career pathways include: Employment/training in the following areas - care, childcare, hospitality, hotel management.





## Hospitality—Practical Cookery — NAT 5

### Course Description

This Course is designed for those who are interested in food and cooking and who enjoy being creative with food. Learners who have chosen to follow it may wish to utilise their cookery knowledge and skills at home, in the wider community or, ultimately, in the hospitality industry.

Learners need to pass all three units and their final grade (A to D) will be based on their performance in an internal practical activity.

### Skills Development

The aims of the course are to allow pupils to develop:

- a range of both generic and practical cookery skills, including food preparation techniques and the ability to follow cookery processes;
- the ability to choose, weigh and measure ingredients and calculate proportions, as well as the cost of ingredients and portions;
- the ability to follow recipes to produce successful dishes
- evaluation of end products
- the ability to plan and produce meals and to present them appropriately
- the ability to work safely and hygienically
- planning, organisational and time management skills in the cookery context.

### Unit Breakdown

#### NATIONAL 5 (GRADES A - D)

##### Cookery Skills, Techniques and Processes

This Unit aims to enhance learners' cookery skills, food preparation techniques and their ability to follow cookery processes in the context of producing dishes. Learners will also develop an understanding of the importance of safety and hygiene and the ability to follow safe and hygienic practices at all times.

##### Understanding and Using Ingredients

This Unit aims to enhance learners' knowledge and understanding of ingredients from a variety of different sources and of their characteristics. It also addresses the importance of sustainability, the responsible sourcing of ingredients and of current dietary advice. Learners will further develop the ability to select and use a range of appropriate ingredients in the preparation of dishes and to do so safely and hygienically.

##### Organisational Skills for Cooking

This Unit aims to extend learners' planning, organisational and time management skills. Learners will develop the ability to follow recipes; to plan, produce and cost dishes and meals; and to work safely and hygienically. They will also extend their ability to carry out an evaluation of the product.

##### Practical Activity - 75% of final grade

The learner will be assessed by a practical activity drawing on the knowledge, understanding and skills developed across the Course. The activity will require learners to extend cookery-related knowledge, understanding and skills, and to apply them in the production of a meal to a given specification. Learners will plan, prepare and cook a three-course meal for a given number of people within a given timescale and present it appropriately.

##### Question Paper - 25% of final grade

The question paper will require integration of knowledge and understanding from across the Units

### Progression / Career Pathways

Progression to -

- National 4/5 Health and Food Technology

Employment/training in the following areas - care, childcare, hospitality, hotel management.



## Health & Food Technology — HIGHER

### Course Description

The course addresses contemporary issues affecting food and nutrition and how they affect consumer choices. These include: ethical and moral considerations, sustainability of sources, food production and development. Learners analyse the relationships between health, food and nutrition, and plan, make and evaluate food products for a range of dietary and lifestyle needs.

Learners need to pass all three units and their final grade will depend on their performance in -  
Assignment (60 marks)  
Question Paper (60 marks)

### Skills Development

The aims of the course are to allow pupils to develop:

- analysis of the relationship between health, food and nutrition and the application of understanding in practical contexts
- understanding of the practical application of the functional properties of food
- skills to apply knowledge of explaining a range of contemporary issues influencing food choice
- application of a range of technological skills related to food production
- organisational skills necessary to research, plan, prepare and evaluate products and processes
- investigative and research skills
- problem solving skills to make food products to meet specified needs

### Unit Breakdown

HIGHER (Grades A - D)
<b>Food for Health</b> The aim of this Unit is to develop learners' knowledge, understanding and skills to enable them to analyse the relationship between health, food and nutrition. Learners will also analyse dietary needs for individuals at various stages of life and explain current dietary advice. Through practical activities, the learner will produce and evaluate food products which meet individual needs.
<b>Food Product Development</b> The aim of this Unit is to allow learners to develop knowledge and understanding of the functional properties of ingredients in food and their use in developing food products. Learners will develop an understanding of the stages involved in developing a food product. Through a problem-solving approach, learners will produce food products to meet a range of consumer needs. They will also apply knowledge and understanding of safe and hygienic food practices and techniques.
<b>Contemporary Food Issues</b> In this Unit, learners will investigate a range of contemporary food issues. They will explain how these issues influence decisions taken by consumers when making food choices
<b>Assignment (60 marks)</b> The learner will work through an Assignment which will require application of skills, knowledge and understanding from across the Units. Learners will develop a product to meet a given brief. The Assignment will be sufficiently open and flexible to allow for personalisation and choice.
<b>Question paper (60 marks)</b> The question paper will require integration of knowledge and understanding from across the Units.

### Progression / Career Pathways

Pupils may wish to study other related food courses available at National 5 level - Hospitality.

Some may wish to progress to work, apprenticeships or training in food related fields.

Career pathways include employment/training in the following areas - nursing, nutritionist, dietetics, sports nutrition and coaching, childcare, hospitality, food technology, food science, food product development/testing/management, food photography, hotel management, primary teaching, Home Economics teaching.



## Practical Woodworking — NATIONAL

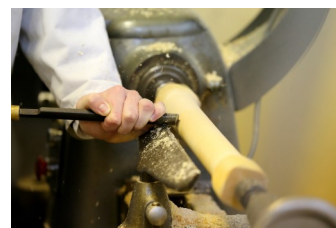
### Course Description

This is a practical course, which combines elements of technique and standard practice with elements of creativity. The course provides opportunities for learners to gain practical woodworking skills and to use a variety of tools, equipment and materials. It allows them to plan for the completion of a finished wooden product. This course would suit learners with an interest in crafts and practical woodworking. The course is structured to cover fundamental woodworking skills in a progressive fashion. Each Unit covers a set of new woodworking skills. All of the Units include skills in measuring, marking out, cutting and jointing techniques.

### Skills Development

The aims of the course are to allow learners to develop:

- Skills in woodworking techniques, measuring and marking out a variety of timber and sheet materials
- Skills in the correct use of tools, equipment and a range of processes and techniques
- Safe working practices in workshop environments
- Skills in reading and following simple woodworking drawings and diagrams.
- Practical creativity and problem-solving skills
- Knowledge of sustainability issues in a practical woodworking context
- Better psychomotor skills and opportunities to build self-confidence
- Thinking, numeracy, employability, enterprise and citizenship skills - in particular, skills in: planning and organising work, working independently and in collaboration with others, communication and self and peer evaluation



### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
Flat Frame Construction	Flat Frame Construction
Carcase Construction	Carcase Construction
Machining and Finishing	Machining and Finishing
<p><b>Added Value Unit: Making a Finished Product from Wood</b></p> <p><i>Pupils are required draw on and extend their practical woodworking skills to successfully complete a practical activity (set by SQA), which is flexible and open to allow for personalisation and choice.</i></p>	<p><b>Practical Activity: Making a Finished Product from Wood (70 Marks)</b></p> <p><i>Pupils are required draw on and extend their practical woodworking skills to successfully complete a practical activity (set by SQA—a new project each year). 15 of the 70 marks are awarded for the successful completion of a logbook.</i></p>
	<p><b>Question Paper (60 Marks, scaled to 30%)</b></p> <p><i>The new question paper will assess the knowledge and understanding that is currently assessed in the units.</i></p>

### Progression / Career Pathways

Pupils may also wish to study other technological courses at N5 including: Graphic Communication, Design & Manufacture and Practical Metalworking. This course prepares pupils for the world of work, apprenticeships and training in design and/or manufacturing related fields. Career pathways include: crafts, construction, manufacturing, engineering, theatre, visual arts and related disciplines.



## Practical Metalworking — NATIONAL 4/5

### Course Description

The Course is largely workshop-based, providing a broad introduction to practical metalworking, which combines elements of technique and standard practice with elements of creativity. The course provides opportunities for learners to gain practical metalworking skills and to use a variety of tools, equipment and materials. It allows them to plan for the completion of a finished metal product. This course would suit learners with an interest in crafts and practical engineering. The course is structured to cover fundamental metalwork skills in a progressive fashion. Each Unit covers a set of new skills. All of the Units include skills in measuring, marking out, cutting and jointing techniques.

### Skills Development

The aims of the course are to allow learners to develop:

- Skills in metalworking techniques, measuring and marking out a variety of metals and sheet materials
- Skills in the correct use of tools, equipment and a range of processes and techniques
- Safe working practices in workshop environments
- Skills in reading and following simple drawings and diagrams.
- Practical creativity and problem-solving skills
- Knowledge of sustainability issues in a practical metalworking context
- Better psychomotor skills and opportunities to build self-confidence
- Thinking, numeracy, employability, enterprise and citizenship skills - skills in: planning and organising work,
- working independently and in collaboration with others, communication and self and peer evaluation

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
Bench Skills	Bench Skills
Machine Processes	Machine Processes
Fabrication and Thermal Joining	Fabrication and Thermal Joining
<p><b>Added Value Unit: Making a Finished Product from Metal</b></p> <p><i>Pupils demonstrate application of skills and knowledge gained through the 3 Units of the Course to produce a finished product to required standards: making a metal product with a minimum of five component parts.</i></p>	<p><b>Practical Activity: Making a Finished Product from Wood (70 Marks)</b></p> <p><i>Please refer to N4 comment.</i></p> <p><i>Pupils are required draw on and extend their practical metalworking skills to successfully complete a practical activity (set by SQA each year). 15 of the 70 marks available are awarded for the successful completion of a logbook.</i></p>
	<p><b>Question Paper (60 Marks, scaled to 30%)</b></p> <p><i>The new question paper will assess the knowledge and understanding that is currently assessed in the units.</i></p>

### Progression / Career Pathways

Pupils may also wish to study other technological courses at N5 including: Graphic Communication, Design & Manufacture and Practical Woodworking. This course prepares pupils for the world of work, apprenticeships and training in design and/or manufacturing related fields. Career pathways include: crafts, construction, manufacturing, engineering, theatre, visual arts and related disciplines.



## Graphic Communication — NATIONAL 4/5

### Course Description

This course introduces pupils to the variety of presentation methods employed in graphic communication. Pupils will have opportunities to gain skills in reading, interpreting, and creating graphic communications. Pupils will initiate, develop and communicate ideas graphically; developing an awareness of graphic communication as an international language. This is a practical course, combining creativity and designing, whilst considering factors that impact on graphic design. Pupils will initiate and produce simple preliminary, production and promotional graphics in straightforward, familiar and some new contexts. It also allows pupils to consider how technologies have impacted on the world of the designer. The course will be delivered through a series of design assignments.

### Skills Development

The aims of the course are to allow learners to develop:

- Skills in graphic communication techniques, including the use of equipment and graphics materials
- A knowledge of a range of computer-aided graphics techniques and practice
- Skills in using software associated with the production of 2D and 3D graphics
- A knowledge and understanding of graphic communication standards, protocols and conventions; and the ability to apply these to familiar and new contexts
- An understanding of how graphic communication technologies impact on our environment and society
- Design skills when developing solutions to simple graphics tasks (with some complex features)
- A knowledge of colour, illustration and presentation techniques in familiar and some unfamiliar contexts
- The ability to take initiative in evaluating work and applying suggestions for improvement in presentation Visual literacy by interpreting simple but unfamiliar graphic communications

### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A – D)
2D Graphic Communication	2D Graphic Communication
3D and Pictorial Graphic Communication	3D and Pictorial Graphic Communication
<b>Added Value Unit</b>  <i>This unit enables the learner to demonstrate the skills they have learnt by applying these to a challenging assignment. Pupils will be able to design and manufacture a graphical response to an assignment brief.</i>	<b>Assignment (40 Marks, 33%)</b>  <i>Pupils apply knowledge and understanding from across the Units to: describe and explain graphic techniques, methods and standards; to interpret unfamiliar graphics and to produce a response to a brief (set by SQA each year and externally assessed).</i>
	<b>Question Paper (80 Marks, 67%)</b>  <i>Pupils are required to demonstrate aspects of breadth and application in a graphic context, based on recognised graphic principles.</i>  <i>Question paper extended to include more questions.</i>

### Progression / Career Pathways

This course provides progression to the Higher Graphic Communication course. Pupils may also wish to study other technological courses at N5 including: Design and Manufacture, Practical Woodworking and Practical Metalworking. Some may wish to progress to work, apprenticeships or training in graphic related fields. Career pathways include: Architecture, Product Design, Engineering, Manufacturing, Marketing and related disciplines.





## Graphic Communication — HIGHER

### Course Description

This Course is intended to develop the learner's knowledge, understanding and set of skills related to graphic communication. It will enable the learner to initiate, develop and communicate ideas and solutions using graphic techniques in 2D and 3D. Pupils will develop their presentation skills through the use of analysis and evaluative skills. Both Units also develop transferable skills — application, creativity, numeracy and ICT. Pupils will develop skills in graphic communication techniques, including the use of equipment, graphics materials and software. They should also apply their creativity in the production of graphic communications to produce visual impact in meeting a specified purpose. An understanding of graphic communication standards, protocols and conventions will need to be displayed alongside an understanding of the impact of graphic communication technologies on our environment and society.

### Skills Development

The aims of the course are to allow pupils to develop:

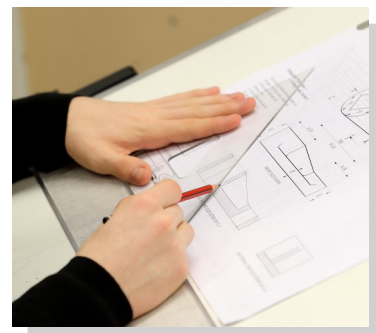
- replicating graphic forms in 2D, 3D and pictorial representations
- applying standards, protocols and conventions in straightforward but unfamiliar contexts
- initiating, planning and producing preliminary, production, promotional, and informational graphics
- applying graphic design skills, including creativity, when developing solutions to graphics tasks
- understanding the application of colour, illustration and presentation techniques
- critically reviewing graphics work as it progresses and evaluating completed task work
- extending visual literacy by interpreting unfamiliar graphic communications
- extending graphic spatial awareness in unfamiliar 2D, 3D and pictorial graphic situations
- selecting, managing, and using graphic communication equipment, software and materials effectively
- understanding a broad range of computer-aided graphics techniques including commercial practice
- an understanding of the impact of graphic technologies on our environment and society

### Unit Breakdown

HIGHER (Grades A - D)
<b>2D Graphic Communication</b>
<b>3D and Pictorial Graphic Communication</b>
<b>Assignment (70 Marks)</b> <i>The added value of the Course is assessed, addressing the key purposes and aims of the Course. To achieve success in the Course, learners must show that they are able to apply their knowledge from across the units to respond effectively to situations within both practical and theoretical graphics contexts: to describe and explain graphic techniques, methods and standards; to interpret unfamiliar graphics and to produce a response to a brief.</i>
<b>Question Paper (70 Marks)</b> <i>The question paper will require learners to demonstrate aspects of breadth and application in a graphic context, based on recognised graphic principles and those used in industry and commerce.</i>

### Progression / Career Pathways

This course provides progression to the Advanced Higher Graphic Communication course. Pupils may also wish to study other technological courses at N5 including: Design and Manufacture, Practical Wood and Metalworking. Some may wish to progress to work, apprenticeships or training in graphic related fields. Career pathways include: Architecture, Product Design, Engineering, Manufacturing, Marketing and related disciplines.





## Design & Manufacture — NATIONAL 4/5

### Course Description

The Course provides a practical introduction to design, and materials and manufacturing processes. Pupils gain skills in designing and communicating ideas. Pupils explore the properties and uses of materials, to make models and prototypes of products. This is a practical course, combining elements of creativity and designing with a requirement to consider the various factors that impact on a product's design. Pupils will consider the life cycle of a product from its inception through design, manufacture, and use, including its disposal or re-use. Pupils will develop the ability to: read drawings and diagrams, articulate and communicate ideas, develop solutions and manufacture their design ideas. It also allows them to consider how technologies have impacted on the world of the designer and on manufacturing. The course will be delivered through a series of design assignments.

### Skills Development

The aims of the course are to allow learners to develop:

- An awareness of design factors and skills to evaluate how effectively products meet user's needs
- Creative problem solving skills and an understanding of the impact of design decisions
- Skills when using a variety of technologies to design and manufacture models, prototypes and products
- The ability to become involved in dialogue and discussions regarding their design tasks
- Sketching, modelling and manufacturing skills to communicate and realise their ideas
- Skills in planning and producing increasingly complex products
- Knowledge and understanding of manufacturing processes and materials, selecting and using a range of tools
- An awareness of Health and Safety when working in a practical environment
- An understanding of the impact of design and manufacturing technologies on the environment and society

### Unit Breakdown

NATIONAL 4 (Pass / Fail)	NATIONAL 5 (Grades A - D)
Design	Design
Materials and Manufacture	Materials and Manufacture
<b>Added Value Unit</b> <i>This unit enables the learner to demonstrate the skills they have learnt by applying these to a challenging assignment. Pupils will be able to design and manufacture a product in response to a brief.</i>	<b>Design Assignment 1 (55 Marks, 30%)</b> <i>Pupils are expected to apply knowledge and skills from the Design Unit to produce a solution to an appropriately challenging design problem.</i>
	<b>Design Assignment 2 (45 Marks, 25%)</b> <i>Pupils are expected to apply knowledge and skills from the Materials &amp; Manufacturing Unit to produce a solution to an appropriately challenging design problem.</i>
	<b>Exam (80 Marks, 45%)</b> <i>Pupils are required to apply knowledge and understanding from the Units, producing explanations related to design and manufacture contexts.</i> <i>The question paper will be restructured and extended.</i>

### Progression / Career Pathways

This course provides progression to the Higher Design and Manufacture course. Pupils may also wish to study other technological courses at N5 including: Graphic Communication, Practical Woodworking and Practical Metalworking. This course prepares pupils for the world of work, apprenticeships and training in design and/or manufacturing related fields. Career pathways include: Architecture, Product Design, Engineering, Mechanic, Manufacturing, Marketing and related disciplines.

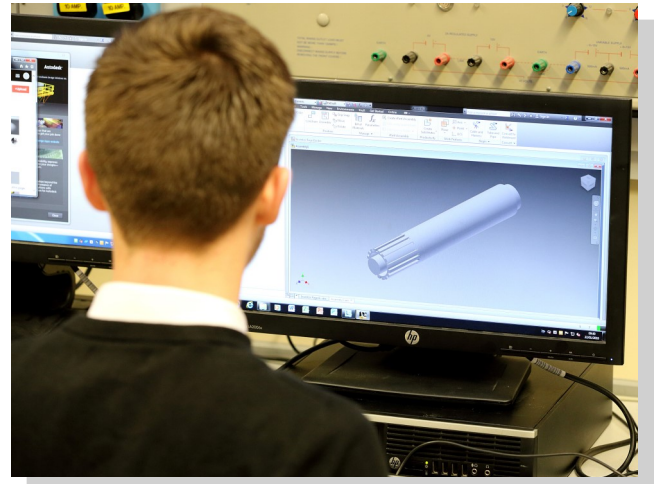


## Design & Manufacture — HIGHER

### Course Description

The Course provides a broad and practical experience in product design and manufacture. It provides opportunities for learners to gain skills in designing and communicating design proposals and opportunities for learners to refine and resolve their design ideas effectively. The Course highlights the close relationship between designing, making, testing, and refining design ideas.

The Course provides opportunities for learners to apply practical skills and an understanding of the properties and uses of materials and manufacturing processes. The Course combines elements of creativity and designing for aesthetic or visual impact with elements of designing for the practicalities of manufacturing. The Course allows learners to consider the various factors that impact on a product's design. It will consider the life cycle of a product from its inception through design, manufacture, and use, including its disposal and/or re-use – cradle-to-cradle.



### Unit Breakdown

Higher
<b>Design</b>
<b>Materials and Manufacture</b>
<p><b>Assignment (70 Marks, 50% of Grade)</b></p> <p><i>The assignment assesses the learner's ability to apply skills, knowledge and understanding to solve a design task in a given context. It assesses the learner's ability to communicate, generate and refine ideas and apply modelling and/or prototyping skills in presenting a potential solution. The assignment should clearly demonstrate the application of knowledge and skills, at an appropriate level from both the Design, and the Materials and Manufacturing Units. Evidence will be in the form of a design folio.</i></p>
<p><b>Question Paper (70 Marks, 50% of Grade)</b></p> <p><i>The question paper assesses the learner's ability to retain and integrate knowledge and understanding from across the Course. The question paper will require the learner to demonstrate: a broad understanding of the impact of a range of design and manufacturing technologies on our environment and society, the critical evaluation of a range of factors that influence the design and manufacture of products and an understanding of a broad range of industrial and commercial manufacturing processes and the properties and uses of materials.</i></p>

### Progression / Career Pathways

This course provides progression to the Advanced Higher Design and Manufacture course. Pupils may also wish to study other technological courses at N5 including: Graphic Communication, Practical Woodworking and Practical Metalworking. This course prepares pupils for the world of work, apprenticeships and training in design and/or manufacturing related fields. Career pathways include: Architecture, Product Design, Engineering, Mechanic, Manufacturing, Marketing and related disciplines.



## PE — NATIONAL 5

The main aims of the Course are to enable the learner to:

- develop the ability to safely perform a comprehensive range of movement and performance skills
- understand factors that impact on personal performance in physical activities
- build capacity to perform effectively
- develop approaches to enhance personal performance
- monitor, record and evaluate performance development

The Course has two mandatory Units:

### **Physical Education: Performance Skills (National 5)**

The general aim of this Unit is to develop learners' ability to perform in physical activities by enabling them to acquire a comprehensive range of movement and performance skills. They will learn how to select, use, demonstrate and adapt these skills. Learners will develop consistency in their control and fluency during movement to enable them to meet the physical demands of performance in a safe and effective way.

### **Physical Education: Factors Impacting on Performance (National 5)**

The general aim of this Unit is to develop learners' knowledge and understanding of the factors that impact on performance in physical activities. Learners will consider the effects of mental, emotional, social and physical factors on performance, and will develop an understanding of how to plan for, monitor, record and evaluate the process of personal performance.

### **Skills, knowledge and understanding**

This covers:

- demonstrating a comprehensive range of movement and performance skills safely
- understanding factors that impact on performance
- planning, developing and implementing approaches to enhance personal performance
- monitoring, recording and evaluating performance development
- decision-making and problem solving in performance contexts
- organisational skills in preparing for, and during, physical activities

### **Physical Education: Performance Skills (National 5)**

In this unit, the learner will be required to demonstrate their ability to perform at National 5 in at least 2 physical activities. They need to show control and fluency in each activity. The activities on offer in Kyle are Volleyball, Basketball, Badminton, Handball, Table Tennis, Football and Netball. All of these activities are on offer as extra-curricular clubs.

### **Physical Education: Factors Impacting on Performance (National 5)**

In this Unit, the learner will be required to demonstrate knowledge, understanding and application of a range of factors that impact positively and negatively on performance in physical activities. The learner will consider the effects of mental, emotional, social and physical factors on their own performance. This understanding will help to develop the learner's ability to plan for, record, monitor and evaluate performance development.

### **Course assessment**

The pupils will complete a portfolio on an activity of their choice which is marked externally by the SQA as well as performing two off performances in 2 different activities of their choice. We strongly recommend that pupils make this choice in activities mentioned above.





## PE — NATIONAL 5 SKILLS FOR WORK IN SPORT AND RECREATION

### Skills for Work: Sport and Recreation National 5 (SCQF level 5)

#### Course Description

National 5 Skills for Work: Sport and Recreation is an introductory qualification. It develops the skills, knowledge and attitudes, needed for work in the industry.

The Course content covers the main practical activities involved in carrying out a supportive role in sport and recreation environments: sourcing information about career pathways, identifying and reviewing skills and experiences; assisting with planning, setting up and delivering activity sessions; dealing effectively and courteously with clients; assisting with emergency procedures; assisting with setting up, dismantling and checking equipment and resources; helping to plan and review a training programme; and establishing good practice in identifying and reviewing goals. The Course also covers health and safety legislation and risk assessment.

#### At National 5, candidates will learn about:

Assisting with planning, setting up and delivering activity sessions

- Assisting with setting up, dismantling and checking equipment and resources
- Assisting with accident and emergency procedures
- Dealing effectively and courteously with clients, staff and others
- Helping to plan and review a personal training programme
- Establishing good practice in identifying and reviewing personal goals
- Sourcing information about career pathways
- Identifying and reviewing skills and experiences

Candidates will develop relevant vocational skills and a variety of employability skills in the context of a sport and recreation setting.

Candidates will also get the opportunity to gain industry recognised qualifications such as:

Tennis leaders

Hockey leaders

Better Movers & Thinkers

Disability Awareness

Competition Organisers Training

Getting started in Basketball

At SCQF level 5, learners work alone or with others on straightforward tasks with support.





## PE — HIGHER

This is aimed at those pupils who have gained an A or B in both English and National 5 PE. Pupils may wish to study Higher PE as part of their general entry requirement for college or university or to gain employment in the Fitness, Health, Leisure and Recreation industries.

### Course Structure:

The 2 elements of the course are **Practical Performance**, and **Factors Impacting on Performance**.

The weighing of the assessment of each element is as follows:

### Practical Performance 60%

Internally assessed and verified by SQA. Broken down into 3 specific areas:

1. Planning and Preparation for a performance (8 Marks)
2. A one off performance where candidates are assessed on their ability to select, apply and combine skills, carry out decisions, follow rules, and control their emotions (40 Marks)
3. Evaluate their performance (12 Marks)

### Factors Impacting on Performance. 40%

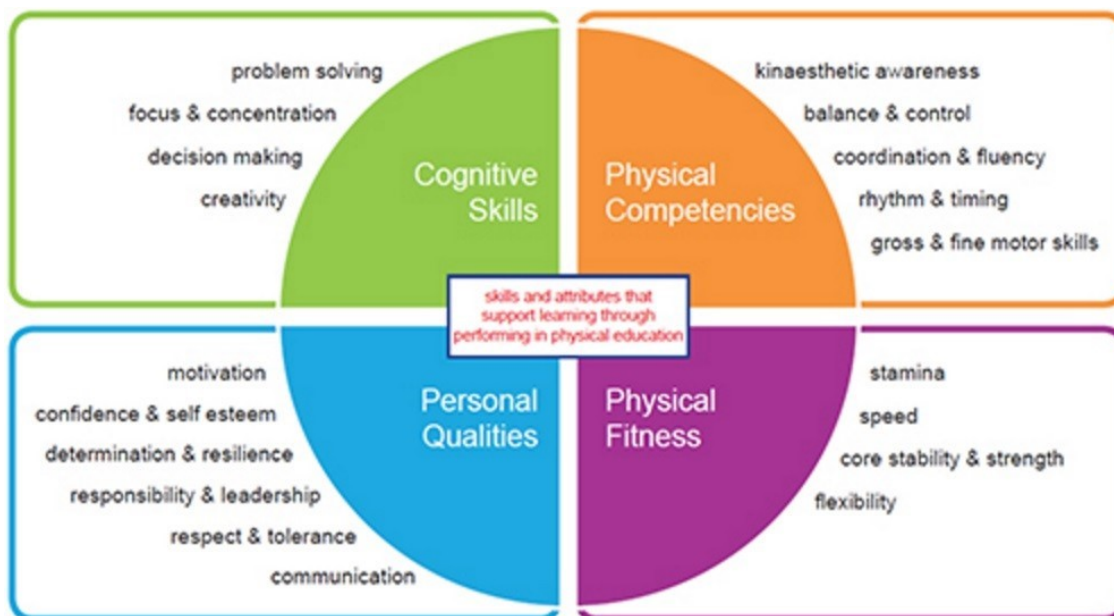
This is an external exam marked by SQA. The pupils will be expected to answer 3 essay type questions each worth 8 marks where candidates are required to demonstrate a breadth of knowledge on 3 of the following factors which impact on Performance. (Mental, Emotional, Social and Physical). A 4<sup>th</sup> question will challenge the pupils' higher order thinking skills in an unknown scenario situation worth 16 marks.

### Practical Performance:

Pupils participate in 3 activities Badminton, volleyball and basketball each for 8 weeks. Pupils will then be given a choice of activity to perform their one off performance in.

### Factors Impacting on Performance.

Pupils will be expected to describe and explain a range of approaches for developing or refining skills, fitness and tactics. They will be expected to plan, develop and implement skills and strategies to their benefit. Learners will also be required to evaluate, analyse and apply strategies and skills that will enable them to improve their performance. The pupils will also need to work out decisions they need to make and how to solve problems in their one off performance.





## Computing Science — NATIONAL 4/5

### Course Description

The National 4&5 Computing Science Course develops knowledge and understanding of key concepts and processes in computing science; enabling learners to apply skills and knowledge in analysis, design, implementation and evaluation to a range of digital solutions. Learners communicate computing concepts and explain computational behaviour clearly and concisely using appropriate terminology, and develop an understanding of the role and impact of computing science in changing and influencing our environment and society.

### Skills Development

The aims of the course are to allow pupils to develop:

- develop and apply aspects of computational thinking in a range of contemporary contexts
- extend and apply knowledge and understanding of advanced concepts and processes in computing science
- apply skills and knowledge in analysis, design, implementation and evaluation to a range of digital solutions with some complex aspects
- communicate advanced computing concepts and explain computational behaviour clearly and concisely, using appropriate terminology
- develop awareness of current trends in computing technologies and their impact in transforming and influencing our environment and society

### Unit Breakdown

National 4	National 5 (Grades A - D)
Software Design and Development	Software Design and Development
Information System Design and Development	Database Development Web Development Computer Systems
<p><b>Added Value Unit</b></p> <p>Added Value is about making sure that learners can put their skills, knowledge and understanding into practice.</p> <p>At National 4, learners undertake a compulsory Added Value Unit as part of the Course. Learners complete an Added Value Unit assessment, which also provides the basis for assessing the Course as a whole.</p>	<p><b>Assignment (50 marks)</b></p> <p>The purpose of the assignment is to assess practical application of knowledge and skills from the Units to develop a solution to an appropriately challenging computing science problem. It will assess learners' skills in analysing a problem, designing, implementing and testing a solution to the problem, and reporting on that solution.</p> <p><b>Question Paper (110 Marks)</b></p> <p>The purpose of the question paper is to assess breadth of knowledge from across the Course, depth of understanding, and application of this knowledge and understanding to answer appropriately challenging questions. The question paper Component of Course assessment will require learners to draw on and apply knowledge and understanding</p>

**Progression / Career Pathways**—This Course or its Units may provide progression from National 4 to National 5 Science Course, National 5 to Higher Science Course National, Certificate Group Awards in Computing, IT and related areas, employment, apprenticeships and/or training in IT and related fields and ultimately, for some, to a range of computing-related Higher National Diplomas (HNDs) degrees in Computing, IT and related disciplines careers in Computing, IT and related disciplines

Studying Computer Science opens up a wide array of career opportunities. Along with the traditional computing jobs more and more employers are looking for employees with good digital skills which can be gained from Computing & Cyber Security. The following are a selection of the potential careers open to you if you study Computer Science:

Software Engineer, Web Designer/Developer, Database Developer, Application developer, Videogame Designer/ Developer, Penetration Tester, Digital Forensics Investigator, Security Analyst, Covert Technical Operations Specialist, Cyber Technical Analysts



## Computing Science — HIGHER

### Course Description

The Course is designed to be of value for all learners, especially those considering further study or a career in computing science and related disciplines. It provides sufficient breadth, flexibility, personalisation and choice to meet the needs of all learners.

Learners will develop an understanding of the central role of computing professionals as creative problem-solvers and designers, able to design, implement and operate hardware and software systems, and of the far-reaching impact of information technology on our environment and society. They will also continue to develop a range of transferable skills for learning, skills for life and skills for work, opening up a wide range of career and study opportunities and enabling them to develop as global citizens who can contribute effectively to their communities, society and the world.

### Skills Development

The aims of the course are to allow pupils to develop:

- develop and apply aspects of computational thinking in a range of contemporary contexts
- extend and apply knowledge and understanding of advanced concepts and processes in computing science
- apply skills and knowledge in analysis, design, implementation and evaluation to a range of digital solutions with some complex aspects
- communicate advanced computing concepts and explain computational behaviour clearly and concisely, using appropriate terminology
- develop awareness of current trends in computing technologies and their impact in transforming and influencing our environment and society

### Unit Breakdown

HIGHER (Grades A - D)
Software Design and Development
Database Development Web Development Computer Systems
Assignment (50 marks ) The purpose of the assignment is to assess practical application of knowledge and skills from the Units to develop a solution to an appropriately challenging computing science problem. It will assess learners' skills in analysing a problem, designing, implementing and testing a solution to the problem, and reporting on that solution.
Question Paper (110Marks) The purpose of the question paper is to assess breadth of knowledge from across the Course, depth of understanding, and application of this knowledge and understanding to answer appropriately challenging questions. The question paper Component of Course assessment will require learners to draw on and apply knowledge and understanding

### Progression / Career Pathways

This Course or its Units may provide progression to Advanced Higher Computing Science Course, National Certificate Group Awards in Computing, IT and related areas, employment, apprenticeships and/or training in IT and related fields and ultimately, for some, to a range of computing-related Higher National Diplomas (HNDs) degrees in Computing, IT and related disciplines careers in Computing, IT and related disciplines

Studying Computer Science opens up a wide array of career opportunities. Along with the traditional computing jobs more and more employers are looking for employees with good digital skills which can be gained from Computing & Cyber Security. The following are a selection of the potential careers open to you if you study Computer Science: Software Engineer, Web Designer/Developer, Database Developer, Application developer, Videogame Designer/ Developer, Penetration Tester, Digital Forensics Investigator, Security Analyst, Covert Technical Operations Specialist , Cyber Technical Analysts



## Cyber Security — NPA SCQF level 5/6

### Course Description

The NPAs in Cyber Security at SCQF levels 4, 5 and 6 provide foundation knowledge and skills in data security, digital forensics and ethical hacking – and provide a skills pipeline into the cyber security industry.

These awards are designed to raise awareness of cyber security and fill the current skills gap in this field. They will encourage learners to improve their cyber hygiene and enable them to identify security weakness safely, legally and ethically. They will also help learners to contribute more safely to virtual communities.

As a society we conduct much of our lives over the Internet, as do the Government, the Armed Services, Law Enforcement and industry. The internet brings numerous blessings for society and for business, but it has a darker side as a refuge, resource and recruitment tool for terrorists and criminals. The UK Government takes these risks seriously. That is why the 2010 National Security Strategy rated cyber-attacks as a 'Tier 1' threat and why, despite a tight fiscal situation, the Government set £650 million aside over four years to develop their response.

It was revealed at the Digital Skills committee meeting in the House of Lords that in 2017 there will be a global shortage of two million cyber security workers. This increase of the need for Cyber Security Professionals is due to our reliance on devices connected to the Internet. Stephanie Doman CEO of the Cyber Security Challenge said 'if you look at our lifestyle these days everything we do is based on something connected to the internet'.

### Skills Development

The aims of the course are to allow pupils to develop:

- Structured contexts in which to develop knowledge and skills relevant to the use of Data Security, Digital Forensics and Ethical Hacking.
- Opportunities to deepen knowledge and practical experience of use in personal, educational, business and community contexts.
- Opportunities in which to develop key cognitive skills such as problem solving, analysis and evaluation.
- Opportunities to develop collaborative skills.
- Opportunities to develop employment skills related to National Occupational Standards.

### Unit Breakdown

NPA Cyber Security (levels 4 - 5)
Data Security
Digital Forensics
Ethical Hacking

### Progression / Career Pathways

They are primarily designed as 'feeder' qualifications to more advanced awards. On completion of each award, learners may progress to one of a number of further qualifications in this, or a related, area, for example, NC Digital Media Computing at college. There are also opportunities to progress to Higher National or degree courses in Ethical Hacking.





## Administration & IT — NATIONAL 4/5

### Course Description

Administration and IT links to the world of work and prepares students for a variety of careers. Engineers, doctors, police officers, teachers, receptionists and all office workers will need the skills and knowledge which are offered by this course.

Skills developed will enable learners to organise, manage and communicate information, to carry out administrative tasks and to organise and support events.

The course uses a range of electronic materials in class to support learning and teaching - multiple choice tests, assessments, powerpoint revision notes and clear learning outcomes.

### Skills Development

The aims of the course are to allow pupils to develop:

- Knowledge and application of Microsoft Office software on the PC
- Word processing business documents
- Mail merging
- Producing reports from databases
- Creating complex formula and charts in spreadsheets
- Creating and delivering slideshow presentations
- Creating and producing database reports
- Use of e-mails & attachments
- Use of equipment such as laminator and photocopier
- Customer Care
- Awareness of employment laws and Health & Safety legislation



### Unit Breakdown

National 4 (Pass/Fail) & National 5 (Grades A - D)	
<b>Administrative Theory and Practice</b>	
Customer Care Security of Information and Equipment	Workplace Legislation
<b>IT Solutions for Administrators</b> Creating business documents and advanced use of the IT applications listed below: Presentations - Microsoft Powerpoint	
Word processing - Microsoft Word Spreadsheets - Microsoft Excel Databases - Microsoft Access	E-mail - Microsoft Outlook E-diary - Microsoft Outlook
<b>Communication in Administration</b>	
Communicating Information File Management Systems	Security of Information
<b>N4 Added Value Unit</b> The purpose of this Unit is to draw on the knowledge, understanding and skills developed in the other three Units. Learners will undertake practical administration and IT-based tasks to organise and support a small-scale event.	<b>OR</b>
	<b>Course assessment:</b> <b>N5 Exam and Assignment (120 Marks)</b> The Administration Exam (50 marks) is 2 hours in duration and is marked by the SQA. The Administration Assignment (70 marks) takes place in a 3 hour period and is marked by the SQA.

### Progression / Career Pathways

This course provides progression to the Higher Administration & IT course, college courses and Modern Apprenticeships. Administration & IT skills can be transferred directly to the working environment - they are necessary for office environments and nowadays they are used in a diverse range of occupations including the emergency services, retail sector, banking, health care, education etc.





## Administration & IT — HIGHER

### Course Description

Many managers, supervisors and workers carry out administration duties as part of their daily work routine - not only in traditional office environments but in other occupational areas such as police service, banking, health care, education, retail etc.

This course aims to give you a detailed insight into the world of work and will test your problem solving and practical ICT skills to a high level in a range of business software packages such as word processing, spreadsheets and databases.

### Skills Development

The aims of the course are to allow pupils to develop:

- Ability to use software packages such as word processing, spreadsheets, databases, email, internet
- Ability to select and apply appropriate packages for a given task
- Ability to use the internet safely and make informed decisions based on information obtained using technology
- Confidence when using new information technology
- Time management
- Customer Care
- Awareness of employment laws and Health & Safety legislation

### Unit Breakdown

HIGHER (Grades A - D)
<b>Administrative Theory and Practice</b> <i>Time and task management, Workplace Legislation, Team working, Customer Care, Arranging Meetings</i>
<b>IT Solutions for Administrators</b> <i>Creating business documents and advanced use of the IT applications listed below:                      Word processing - Microsoft Word, Spreadsheets - Microsoft Excel, Databases - Microsoft Access, Presentations - Microsoft Powerpoint, E-mail - Microsoft Outlook, E-diary - Microsoft Outlook</i>
<b>Communication in Administration</b> <i>Communicating Information, Barriers to Communication, File Management Systems, Security of Information</i>
<b>Assignment (70 Marks)</b> <i>Course assessment: This Administration Assignment is completed under timed conditions (worth 70% of final award).</i>
<b>Question Paper (30 Marks)</b> <i>External Exam (worth 30% of final award).</i>

### Progression / Career Pathways

This course provides progression to college courses, Modern Apprenticeships and University Courses. Administration & IT skills can also be transferred directly to the working environment - they are necessary for office environments and nowadays they are used in a diverse range of occupations including the emergency services, retail sector, banking, health care, education etc.



## Business Management — NATIONAL

### Course Description

The Course introduces learners to the dynamic, changing, competitive and economic environment of industry and commerce. It develops skills in communicating and presenting business-related information, in a variety of formats, to the various stakeholders of an organisation. Pupils will continue to build on the business knowledge gained in S2 and S3. There are many varied opportunities for those who wish to pursue a career in business and management. This is an excellent subject to choose if you see your career being in the business world.

### Skills Development

The aims of the course are to allow pupils to develop:

- Knowledge and understanding of the ways in which society relies on businesses to satisfy our needs
- An insight into the systems organisations use to ensure customer's needs are met
- Enterprising skills and attributes by providing pupils with opportunities to explore realistic business situations
- Financial awareness through a business context
- An insight into how organisations organise their resources for maximum efficiency and improve their overall performance
- An awareness of how external influences impact on organisations

### Unit Breakdown

National 4 (Pass/Fail) & National 5 (Grades A - D)	
<b>Understanding Business</b> In this Unit learners will be introduced to the business environment. Learners will carry out activities relating to the role of business organisations and entrepreneurship in society. The Unit will allow learners to explore issues relating to the external environment in which organisations operate and their effects on organisational activity, decision making and survival.	
Understanding how entrepreneurship supports business development How business meet consumer needs	Understanding of key business terms and concepts
<b>Management of People and Finance</b> In this Unit learners will develop skills, knowledge and understanding relating to the internal issues facing organisations in the management of people and finance. Learners will also follow basic theories, concepts and processes relating to financial aspects of business in preparing and interpreting financial information in order to solve financial problems facing businesses.	
Understanding key areas relating to Human Resources including recruitment, legislation and trade unions.	Knowledge and application of financial management and control including Cash Budgets, Break-Even and Trading, Profit & Loss Accounts.
<b>Management of Marketing and Operations</b> In this Unit, learners will develop skills, knowledge and understanding relating to the importance to organisations of having effective marketing and operations systems. Learners will demonstrate an understanding of how marketing can be used to maximise customer satisfaction, and enhance competitiveness. Learners will explore the processes and procedures required to produce goods or services to an appropriate standard of quality.	
Identify factors affecting the management of Marketing	Knowledge of Operations
<b>N4 Added Value Unit</b> In this Unit, learners will draw on and apply the skills, knowledge and understanding they have gained from across the other Units of the Course. This will be demonstrated by a Business Assignment.	<b>OR</b>
	<b>N5 Exam and Assignment (Total 120 marks)</b> The external Exam is represents 90 marks of final award and pupils also complete a Business Assignment worth the remaining 30 marks.

### Progression / Career Pathways

This course provides progression to Higher Business Management and college courses. Business Management knowledge and skills can also be transferred directly to the working environment.



## Business Management — HIGHER

### Course Description

Higher Business Management will get you thinking like a manager. This course will introduce you to management and you will develop an in-depth understanding of how businesses operate. Pupil will exercise problem-solving skills and apply them to a number of business situations through the use of real life business scenarios, computer packages and case studies. Pupils will also have the opportunity to take part in a 1 day Business Dynamics course and participate in a factory visit to see modern production methods in operation. Many College and University courses now contain an element of Management and all pupils taking this course will gain a good grounding in this area of study.

### Skills Development

The aims of the course are to allow pupils to develop:

- knowledge and understanding of the impact of business activities on society
- decision making by applying the ideas of ethical and effective business decisions
- understanding of how entrepreneurial attributes can assist in the management of risk and business development
- understanding of leadership styles and how they can be used to enhance business success
- analysing business financial data to draw conclusions
- analysing the effectiveness of a range of marketing activities and understanding how they can be used to enhance customer satisfaction
- analysing a range of activities which can be used during the production process to maximise quality

### Unit Breakdown

#### HIGHER (Grades A - D)

##### Understanding Business

*In this Unit, learners will extend their understanding of the ways in which large organisations in the private, public and third sectors operate. This Unit also allows learners to analyse the impact that the internal and the external environment has on an organisation's activity, and to consider the implications of these factors.*  
*Types of businesses, The Structure of Organisations, Stakeholders, Internal and External factors that impact on an organisation*

##### Management of People and Finance

*This Unit will allow learners to carry out activities that will extend their grasp of relevant theories, concepts and procedures used in planning for an organisation's success, including leadership, motivation and finance.*  
*Dealing with the financial matters of an organisation, The recruitment and welfare of staff, Employee relations and legislation, Leadership and motivation*

##### Management of Marketing and Operations

*In this Unit, learners will extend their knowledge that will deepen their understanding of the importance to large organisations of having effective marketing and operations systems.*  
*Advertising, Marketing and Selling products, Modern production processes, stock management and quality control.*

##### Progression/Career Pathways

*Each Unit is individually assessed.*  
*The external Exam represents 70% of final award and pupils also complete a Business Assignment worth the remaining 30%.*

*This course provides progression to college and university courses. Knowledge and skills obtained in Business Management can also be transferred directly to the working environment.*



## Section 2

### S6 Achievement Bundles

These bundles group short courses, awards and work experience/volunteering together to provide relevant learning with nationally recognised accreditation. This will support applications to college, university, apprenticeships or employment.







## Science Bundles

Pupils studying sciences can complement their learning by choosing two of the following short courses. They can also gain the Saltire Award through volunteering in Science classes to support younger pupils or acting as Study Mentors for National 5 pupils.



### Laboratory Science

#### Course Description

The Laboratory Science National 5 course allows students to become familiar with the type of work which is carried out in many different laboratories. It also allows students to develop a range of skills which any employer would look for. This course will be suitable to a range of pupils from those with a particular interest in science, those looking to improve the skills needed in the work place or pupils who might be considering a future career in this area.

This short course contains two Units of work:

#### Unit 1: Working in a Laboratory

This Unit concentrates on practical skills such as weighing, measuring, handling chemicals and preparing solutions. It also covers the some basic laboratory safety such as storage of chemicals.

#### Unit 2: Practical Skills

This Unit allows students to develop practical skills such as handling microorganisms, measuring radioactivity and performing titrations.

### Forensic Science

#### Course Description

The **National 5** Unit Forensic Science Course has been designed to introduce candidates to fundamental techniques of Forensic Science. The course allows candidates to learn and perform forensic techniques from each of the discrete sciences, Biology, Chemistry and Physics. Pupils will research well known criminal cases and identify ways that Forensic Science helped provide evidence for the prosecution. They will investigate potential future developments in this field and develop an understanding of factors which limit future advances. This qualification will be highly beneficial to students who are interested in pursuing careers in law enforcement or Science at university. There is no final exam all assessment is done via presentations and practical assessments.

### Investigative Science (Advanced Highers only)

#### Course Description

This course is designed specifically for S6 pupils taking Advanced Higher Biology, Chemistry or Physics. As part of your Advanced Higher course you are required to complete 20 hours of independent practical work. The data gathered during your practical work will be used to produce a formal written report of 2500-3000 words on your research. Many candidates find this a very demanding in terms of time management.

There is no formal accreditation for this course. The purpose of the course is give Advanced Higher students additional hours on their timetable to allow them to complete this aspect of their Advanced Higher course. Pupils will have the opportunity to design and complete their research investigation with the support of a mentor during these additional periods.

### Science Baccalaureate (Advanced Highers only)

The Scottish Science Baccalaureate requires two Science courses (at least one of which must be at Advanced Higher level) and Mathematics (this may be at Higher or Advanced Higher level). Young people studying for the Science Baccalaureate will have one period a week with a mentor to work on their interdisciplinary project (Advanced Higher level).





## Health Sector Bundle

Pupils interested in careers in the health sector can complement their learning with this health Sector achievement bundle. They will complete the full National 5 Skills for Work course and complement this with volunteering or work experience in related areas of work.

## Health Sector

### Course Description

The **National 5 Skills for Work Working in the Health Sector** Course has been designed to provide candidates with opportunities to develop employability skills needed for working in the Health Sector. The course explores the structure and working of the NHS, the different job roles available in the Health Sector, as well as numerous opportunities to develop the skills needed for working in this field. Pupils will participate in role play scenarios to develop their interview, patient care and customer care skills. They will learn basic first aid and how to monitor a patient's vital signs. The NHS is a major employer in Scotland and currently employs over 160,000 people. The Life Science industry which supports the working of the NHS currently employs 30,000 people. This qualification will be highly beneficial to students who are interested in working in this sector. There is no final exam all assessment is done via folio work and practical assessments.

### Accreditation

This course has five units of work. Successful completion of all 5 units will result in a National 5 qualification (24 SCQF points)

### This course will provide progression to:

SVQs in Health and Social Care Level 2

Training and employment in the Health Sector

Demonstrate a candidate's commitment and enthusiasm to health-related degrees such as, Nursing, Midwifery and Biomedical Science which will be viewed favourably in university/college applications.





## Creativity Bundles

### Art and Design/Photography Portfolio



#### Purpose

The Art and Design/Photography Portfolio Preparation short course will help pupils meet the requirements for Art School and College Further Education programmes. The course is designed to allow pupils to produce a folio work that will contribute towards an application to a number of Art, Design and Photography Courses. The nature of the short course is tailored towards individual pupil needs and the specific requirements sought by different institutions. Careers advice will also be given to ensure pupils have both academic grades and a portfolio that meets entrance requirements.

#### Content

The content of the course will be driven by pupils based upon the area of Art, Design or Photography that they are interested in applying. Workshops will then take place that will allow for personalisation and choice where pupils will set out a plan for the year, tailored towards the specific requirements of their chosen institution(s). A broad folio of work that covers skills and techniques is possible for pupils choosing this short course.

#### Assessment

Pupils will produce a portfolio of work that will be assessed against the entrance requirements of their area of specialism.

## Music Leaders Scotland Award

The Music Leaders Scotland Awards delivered by The Royal Conservatoire of Scotland comprises three levels:

- **Bronze (24 Credits, SCQF Level 5, Grade 5 level in Music Performance)**
- **Silver (24 Credits, SCQF Level 6, Grade 6 level in Music Performance)**
- **Gold (30 Credits, SCQF Level 7, Grade 8 level in Music Performance)**

The award is targeted at learners who:

- Already play a musical instrument to the standard required by the award (Grade 5 for Bronze, Grade 6 for Silver and Grade 8 for Gold);
- are participating in a musical ensemble;
- are interested in developing their skills in musical leadership;
- are undertaking instrumental lessons either privately or in school.

#### **What are the Pre-Requisites for learners?**

Learners are required to be working towards the appropriate grade level for the stage of the award they are undertaking, as outlined below.

**Bronze Level – Grade 5 level ABRSM/Trinity/Rock School or equivalent in performance.**

**Silver Level – Grade 6 level ABRSM/Trinity/Rock School or equivalent in performance.**

**Gold Level – Grade 8 level ABRSM/Trinity/Rock School or equivalent in performance.**

The award focuses on three main areas of study:



## Leadership Bundles

### SQA Higher Leadership

#### Purpose

The award aims to provide opportunities for learners to develop knowledge and abilities in relation to leadership.

- Leadership principles, styles, skills and qualities

#### Content

- Effective leaders
- Self (own skills, qualities and experience related to leadership)

#### Assessment

The award comprises two units:

- Leadership: an introduction (written assignment)
- Leadership in practice (evidence log of leadership project)



Young people will participate in a range of leadership roles both within and out with school. For example, organising Children in Need events, volunteering in classes to help younger pupils, organising events like Mental Health Awareness Week. Any leadership activities out with school will also count. For example, cadets, scouts, volunteering.

### Duke of Edinburgh's Award—Gold

A structured programme of volunteering, physical and skills based challenges. Skills developed include commitment, determination, teamwork, flexibility, awareness of own potential, self-belief, resilience and independence. It is a nationally recognised award that employers value.

- Volunteering
- Physical Skills
- Expedition
- Residential





## Sport and Recreation Bundle

Young people can choose from the options below. This will be complemented with work experience and volunteering.

### SCQF Level 5 Sports Leader Award

Sports Leaders UK award equip young people with employability skills for life improving motivation, self-esteem, communication, team work and confidence. Leadership volunteering is a central part of the course allowing learners to apply their and build their skills.

#### Assessment

There is no written work. Assessment is made upon a learner's ability to lead and demonstrate their leadership skills over a period of time within a specific setting, for example, a sports club or in the local primary school.

### SCQF Level 5 Dance leader Award

- Developing leadership skills
- Plan, lead and evaluate dance activity sessions
- Assist in planning and leading a dance activity event
- Dance choreography
- Lead dance activity sessions



#### Assessment

Learners keep a record of evidence to demonstrate their achievements. For example, photos, plans and evaluations.

### Sports Coaching Award (UKCC Level 2 /SCQF levels 5)

The NPA Sports Coaching delivers the skills and knowledge required by coaches to plan and deliver coaching sessions while not directly supervised, but as stated within the Scottish Governing Body of Sport Guidelines.

#### Assessment

Learners will complete two units:

- Plan and prepare a series of coaching sessions (in a specific sport)
- Coach participants and develop personal practice (in a specific sport)





## Further Learning Bundles

### Open University—Young Applicants in Schools Scheme (YASS)

This scheme gives S6 students the opportunity to study a range of university level modules at SCQF level 7 in school alongside their other courses. SCQF level 7 is the equivalent of an Advanced Higher or year one of university.

Pupils register for the YASS modules through the school but deal directly with OU for all course work and assessment. Shorter modules normally require up to eight hours study a week, while a longer one can require up to 14 hours a week.

Modules are available in a wide range of subjects (examples below). See the Open University website for more information. <http://www.open.ac.uk/scotland/study/young-applicants-schools/what-can-i-study>

- **Molecules, medicines and drugs: a chemical story**
- **Understanding the frozen planet**
- **Galaxies, stars and planets**
- **Volcanoes, earthquakes and tsunamis**
- **Beginners German**
- **Beginners Italian**
- **Health and social care**
- **Fundamentals of accounting**



**The Open  
University**

### Mental Health and Wellbeing Award SCQF level 5

The course is made up of 3 Units, which could be done as standalone units or as part of the overall award.

**Unit 1 – Influences on Mental health and Wellbeing**

**Unit 2 - Influences on Mental Health and Wellbeing**

**Unit 3 - Coping Strategies and Building Resilience**

The award aims to:

- Reduce stigma surrounding mental health.
- Arm young people with healthy coping strategies.
- Promote knowledge of the impact of mental health on behaviour.
- Dispel myths surrounding mental health.
- Promote understanding of positive and negative impacts on mental health.
- Help individuals to make the right choices.
- Promote understanding of the potential uses and impact of social media and the internet.