

Inspiring young people in STEM program

Curriculum structure in the UK – January 2017

Curriculum for England

In England, the National Curriculum aims to provide primary and secondary school pupils with the essential knowledge required to be educated citizens.

Key Stages:

The national curriculum is divided into blocks of years called 'key stages' (KS)

Key Stage	Age (start of school year)	Year Group
1	5-7	Y1-2
2	7-11	Y3-6
3	11-14	Y7-9
4	14-16	Y10-11

Y = year

Key Stage 1 to 3 Subject Areas

- English
- Maths
- Science
- Design and technology
- History
- Geography
- Art and design
- Music
- Physical education
- Computing
- Ancient foreign languages (KS2)
- Modern foreign languages (KS2&3)
- Citizenship (KS3)

Key Stage 4 Compulsory – Core and Foundation Core

- English
- Maths
- Science

Foundation

- Computing
- Physical Education
- Citizenship

Schools must offer at least one subject from each of these areas:

- Arts
- Design and technology
- Humanities
- Modern foreign languages

Qualifications

- GCSEs
- Advanced Subsidiary (AS)
- A Levels

Curriculum Structure

The supporting documents are divided into KS1 & 2, 3 and 4. Using the Science curriculum as our example, we can see that KS1 & 2 describes a programme of study designed to build a solid foundation of knowledge and concepts as well as how to predict and analyse. Topics are outlined and progressed through Year groups, as explored with our example below of Plants in Year 1 and Plants in Year 3.

Further Info:

What is the English National Curriculum?

<https://www.gov.uk/government/collections/national-curriculum>

Direct Links to STEM Curriculum

Science <https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study>

Maths <https://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study>

Design and technology <https://www.gov.uk/government/publications/national-curriculum-in-england-design-and-technology-programmes-of-study>

Computing <https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study>

English National Qualifications

GCSEs <https://www.gov.uk/education/secondary-curriculum-key-stage-3-and-key-stage-4-gcses>

AS and A Levels <https://www.gov.uk/education/key-stage-5-as-and-a-levels>

Curriculum for Scotland

In Scotland, the 'Curriculum for Excellence' lays out the knowledge, skills and attributes children will learn throughout their school career, from early years to S6. It is divided into two sections:

1. Broad General Education

(Nursery to Secondary 3)

Purpose: Develop the knowledge, skills, attributes and capabilities of the four capacities of Curriculum for Excellence:

- Successful learners
- Confident individuals
- Responsible citizens
- Effective contributors

2. Senior Phase (Qualifications)

- National 5 in S4 (age 15-16)
- Highers in S5 (age 16-17)
- Advanced Highers in S6 (age 17-18)

There are eight curriculum areas

- Expressive arts
- Health and wellbeing
- Languages (including English, Gaidhlig, Gaelic learners and modern languages)
- Mathematics
- Religious and moral education
- Sciences
- Social studies
- Technologies

Key Stages:

The curriculum is divided into blocks of years called 'key stages' (KS). Broad General Education encompasses the KS Early to Fourth.

Key Stage	Age (start of school year)	Year Group
Early	3-5	Nursery - P1
First	5-8	End of P4
Second	8-11	End of P7
Third and Fourth	11-14	S1-S3
Senior phase	14-17	S4-6 College Other means of study

Curriculum Structure

A comprehensive list of 'Experience and Outcomes' (Es + Os) provide guidance on the specific learning and progression in each curriculum area.

What is Curriculum for Excellence?

[https://education.gov.scot/scottish-education-system/policy-for-scottish-education/policy-drivers/cfe-\(building-from-the-statement-appendix-incl-btc1-5\)/What%20is%20Curriculum%20for%20Excellence](https://education.gov.scot/scottish-education-system/policy-for-scottish-education/policy-drivers/cfe-(building-from-the-statement-appendix-incl-btc1-5)/What%20is%20Curriculum%20for%20Excellence)

Curriculum for Excellence Benchmarks

<https://education.gov.scot/improvement/Pages/Curriculum-for-Excellence-Benchmarks.aspx>

Direct links to the STEM Experiences and Outcomes:

Sciences <https://www.education.gov.scot/Documents/sciences-eo.pdf>

Numeracy and Mathematics <https://www.education.gov.scot/Documents/numeracy-maths-eo.pdf>

Technologies <https://www.education.gov.scot/Documents/Technologies-es-os.pdf>

Health and Wellbeing <https://www.education.gov.scot/Documents/health-and-wellbeing-eo.pdf>

Scottish National Qualifications

<http://www.sqa.org.uk/sqa/58062.3806.html>

Curriculum in Wales

The structure of the Welsh National Curriculum is similar to the English curriculum, apart from the early stage. In 2011, Key Stage 1 was replaced in the Welsh system with the 'Foundation Phase'. This encompasses children from the ages of 3 to 7 years old and focuses on creativity and learning through practical activities. The subject areas for Key Stages 2 to 4 are listed below.

A non-statutory 'Skills framework for 3 to 19-year olds' supports learning across the Curriculum, developing key skills in thinking, communication, ICT and numbers. During KS2 and 3, learners should also be given various opportunities around personal and social development, and of great relevance to this course, awareness of careers and the world of work.

Key Stage	Age (start of school year)	Year Group
Foundation Phase	3-7	pre-school, 1-2
2	7-11	Y3-6
3	11-14	Y7-9
4	14-16	Y10-11

Y= year

Foundation Phase

The statutory Areas of Learning in the Foundation Phase are:

- Personal and social Development, well-being and cultural diversity
- Language, literacy and communication skills
- Mathematical development
- Welsh language development
- Knowledge and understanding of the world
- Physical development
- Creative development

Key Stage 2 and 3 Subject Areas

- English
- Welsh
- Maths
- Science
- Design and Technology
- Information and Communication technology
- History
- Geography
- Art and Design
- Music
- Physical Education
- Modern Foreign Language (KS3 only)

Key Stage 4 Subject Areas

- English
- Welsh
- Maths
- Science
- Physical Education

Qualifications

- GCSEs
- Advanced Subsidiary (AS)
- A Levels

Curriculum Structure

Guidance for each subject area is shaped out per key stage. The example of 'Interdependence of Organisms' below shows how learning progresses through Key Stages 2 and 3. Learning objectives are stated, supported by more specific detail on what pupils should be engaging with. You can also see how the skills framework is supported across the curriculum and at different key stages with the 'Communication' example.

What is the Welsh National Curriculum?

<http://learning.gov.wales/resources/collections/statutory-guidance?lang=en>

Direct Links to STEM Curriculum

Maths <http://learning.gov.wales/resources/browse-all/mathsnw/?lang=en>

Science <http://learning.gov.wales/resources/browse-all/science-in-the-national-curriculum/?lang=en>

Design and Technology <http://learning.gov.wales/resources/browse-all/design-and-technology-in-the-national-curriculum-for-wales/?lang=en>

Information and Communication Technology <http://learning.gov.wales/resources/browse-all/ict-in-the-national-curriculum-for-wales/?lang=en>

Welsh National Qualifications

<http://qualificationswales.org/qualifications/framework-overview/?lang=en>

Please note that a new curriculum is currently being developed for Wales which is expected to be available by September 2018.

Northern Ireland Curriculum

The Northern Irish Curriculum was introduced in 2007 with a focus on the learning process as well as educational outcomes. Equal emphasis is given to knowledge, understanding and skills as well as practical learning.

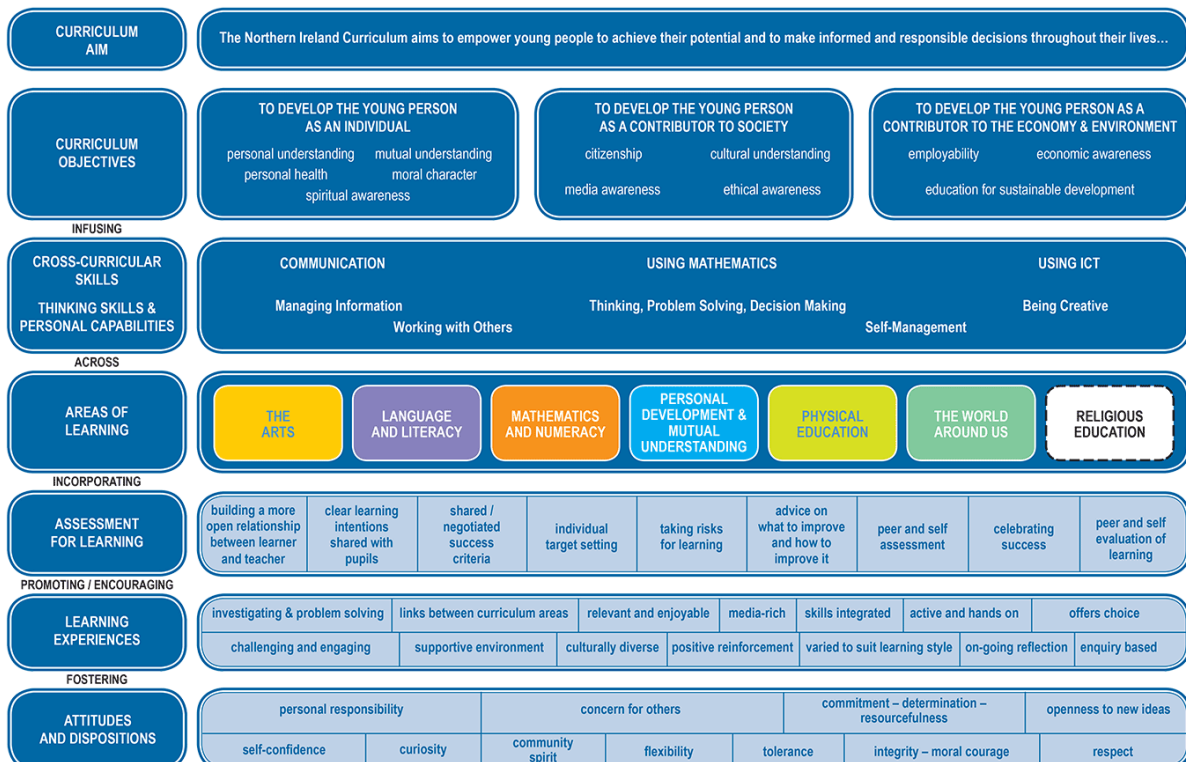
Key Stage	Age (start of school year)	Year Group
1	4-7	P1-3
2	7-11	P4-7
3	11-14	Y8-10
4	14-16	Y11-14

Y = year

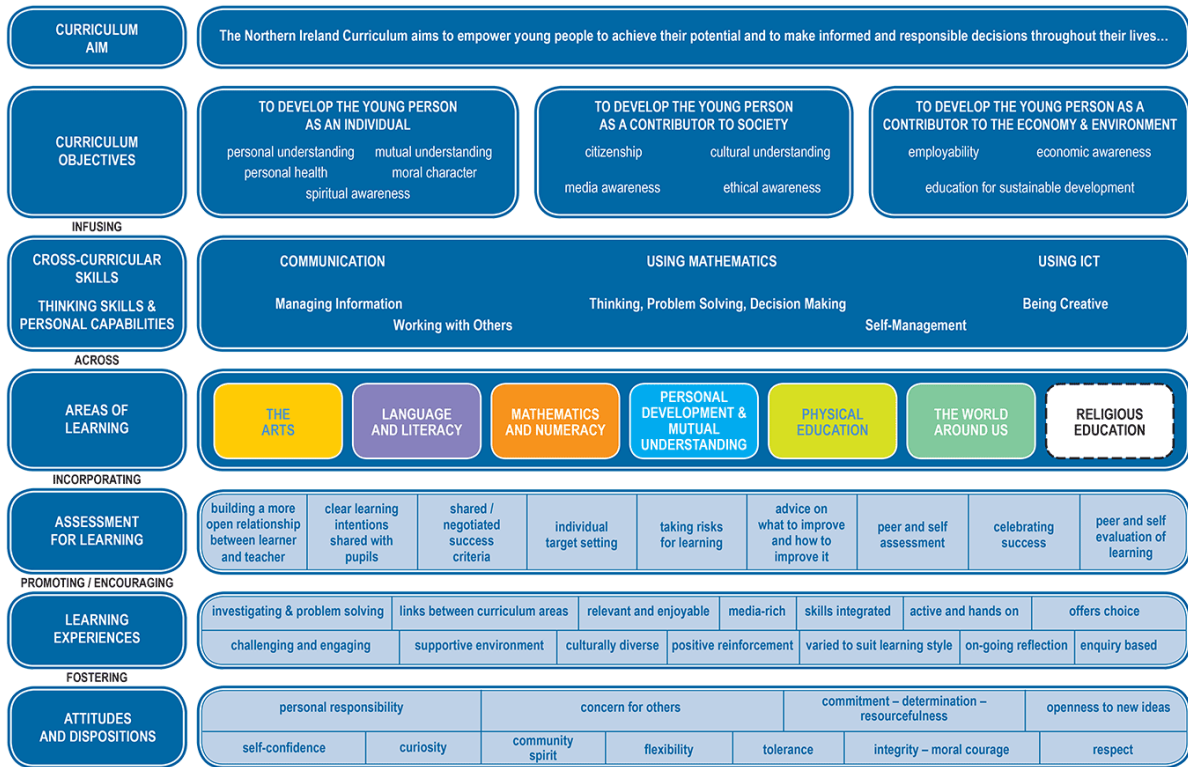
Subject Areas

The Council for Curriculum, Examinations and Assessment have kindly provided very handy infographics for each of the stages, which we include for your ease below. (technical point, images need to be embedded in such a way as to be expandable to read)

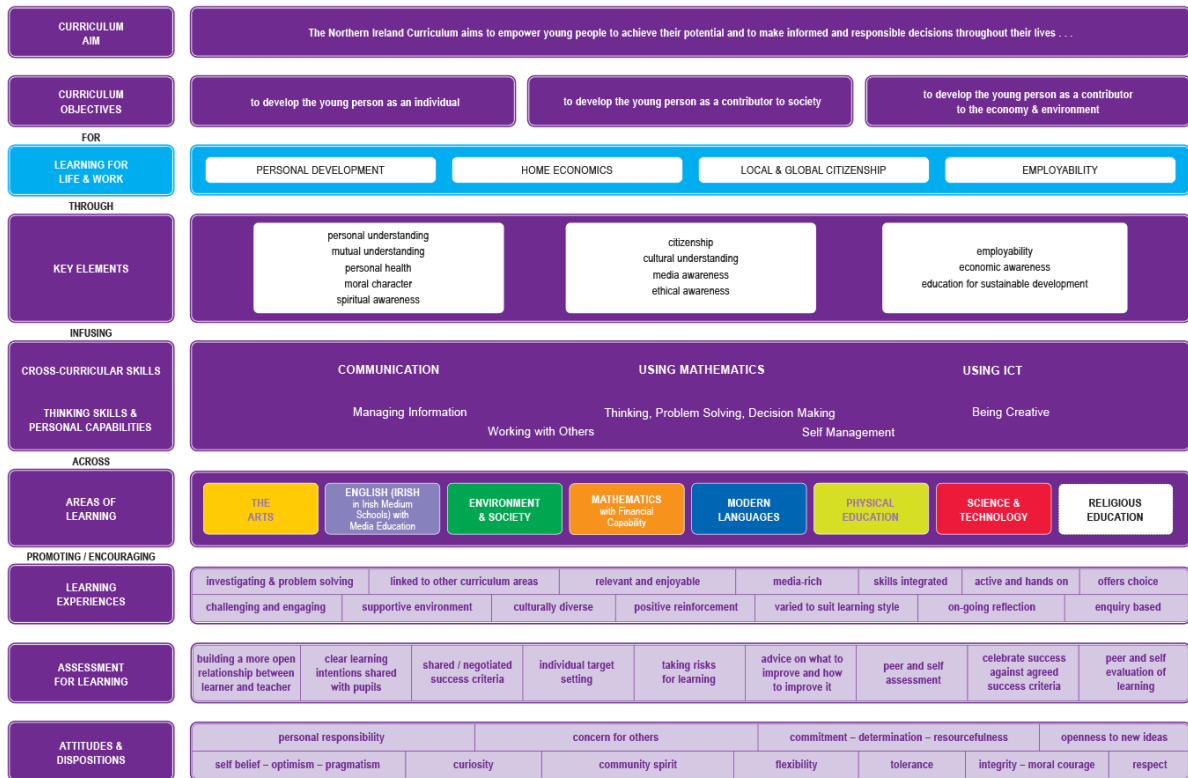
Foundation Stage Overview



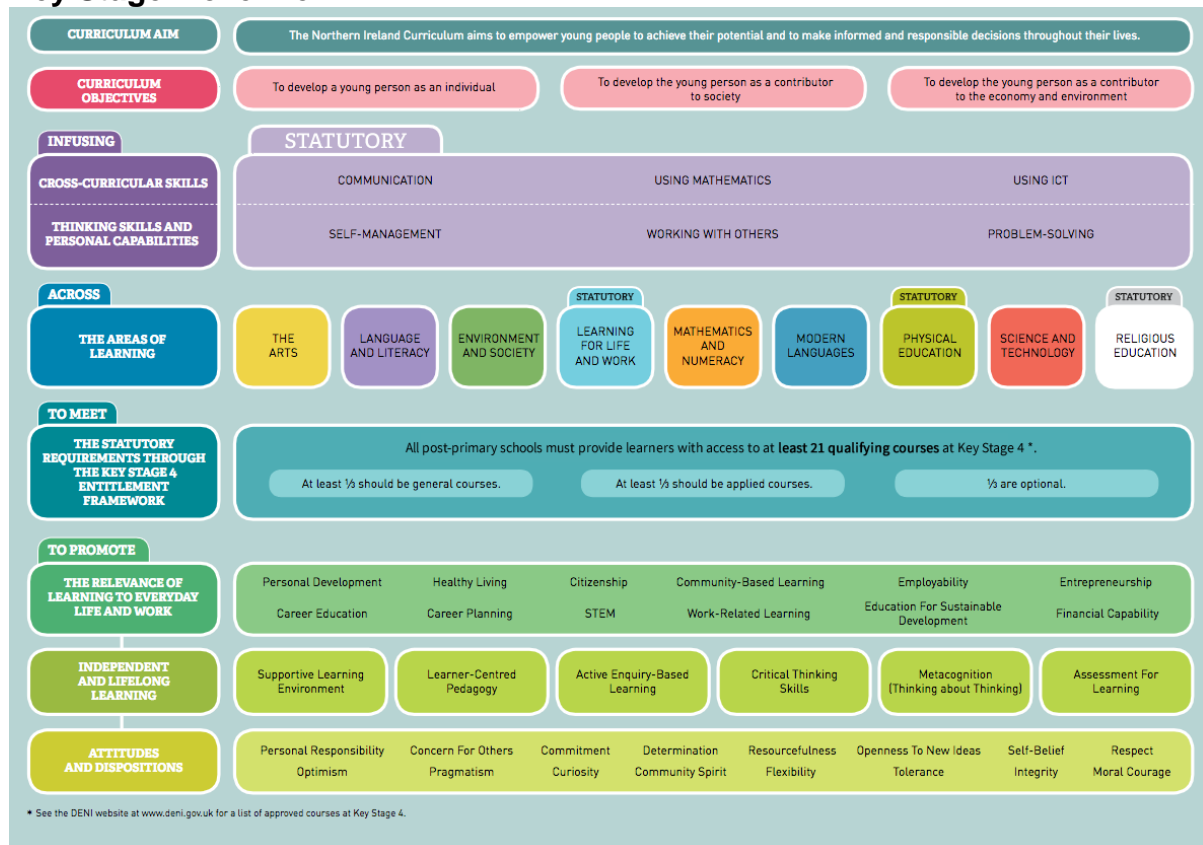
Key Stages 1 & 2 Overview



Key Stage 3 Overview



Key Stage 4 overview



Curriculum Structure

The educator is guided through statutory requirements for areas of learning during KS1 & KS2 with a series of 'Progression Grids' dividing subjects into strands. For example, 'The World Around Us' comprises geography, history, science and technology. Within this, there are 4 strands; Interdependence, Movement & Energy, Place and Change Over Time. Looking at Interdependence as an example (below), we can see its divided into learning per stage (Foundation, KS1, KS2), statutory requirements and learning intentions. We can see how the learner is progressing their knowledge and understanding within the strands over time.

Further Info:

What is the Northern Ireland Curriculum?

<http://ccea.org.uk/curriculum>

The N.I. curriculum information is navigated by the KSs, with subject areas listed within these

Foundation <http://ccea.org.uk/curriculum>

KS1 & 2 http://ccea.org.uk/curriculum/key_stage_1_2

KS3 http://ccea.org.uk/curriculum/key_stage_3

KS4 http://ccea.org.uk/curriculum/key_stage_4