

Early Childhood



Primary



Junior Cycle



Senior Cycle



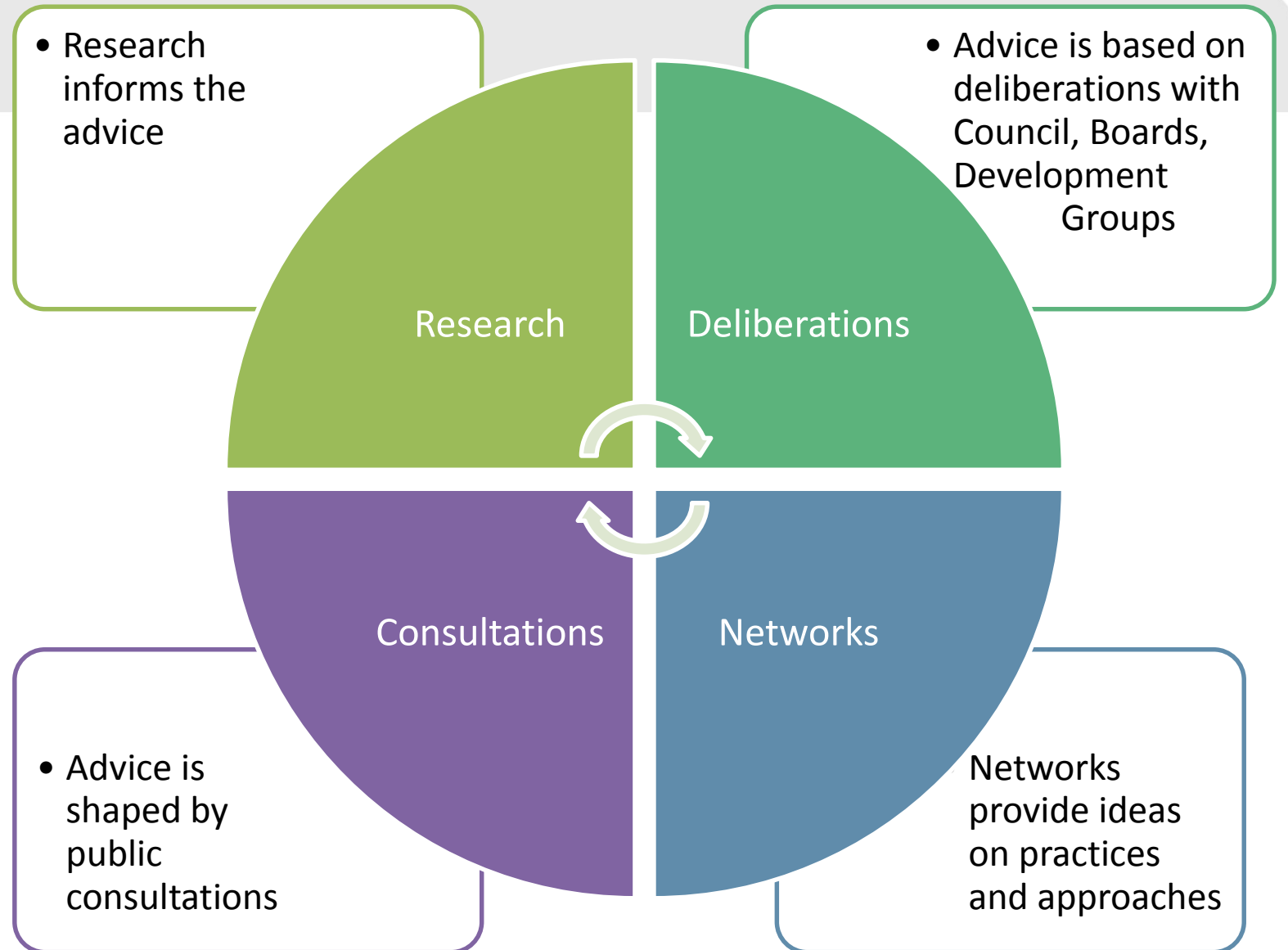
ESD curriculum opportunities and linkages
(primary and post-primary)

National Forum on Education for Sustainable Development
Farmleigh House
15th November 2017

NCCA: What we do

The NCCA advises the Minister for Education and Skills on:

- curriculum and assessment for early childhood education, primary and post-primary schools.
- assessment procedures used in schools and examinations on subjects which are part of the curriculum.



National Strategy on Education for Sustainable Development

The overall objective of the strategy is ‘to ensure that education contributes to sustainable development by equipping learners with the relevant **knowledge** (the ‘what’), the key **dispositions** and **skills** (the ‘how’) and the **values** (the ‘why’) that will motivate and empower them throughout their lives to become informed active citizens who take action for a more sustainable future.’

The strategy identifies eight priority action areas which are considered to be key leverages for the advancement of the ESD agenda in Ireland:

Priority action area 3. Curriculum at pre-school, primary and post primary.

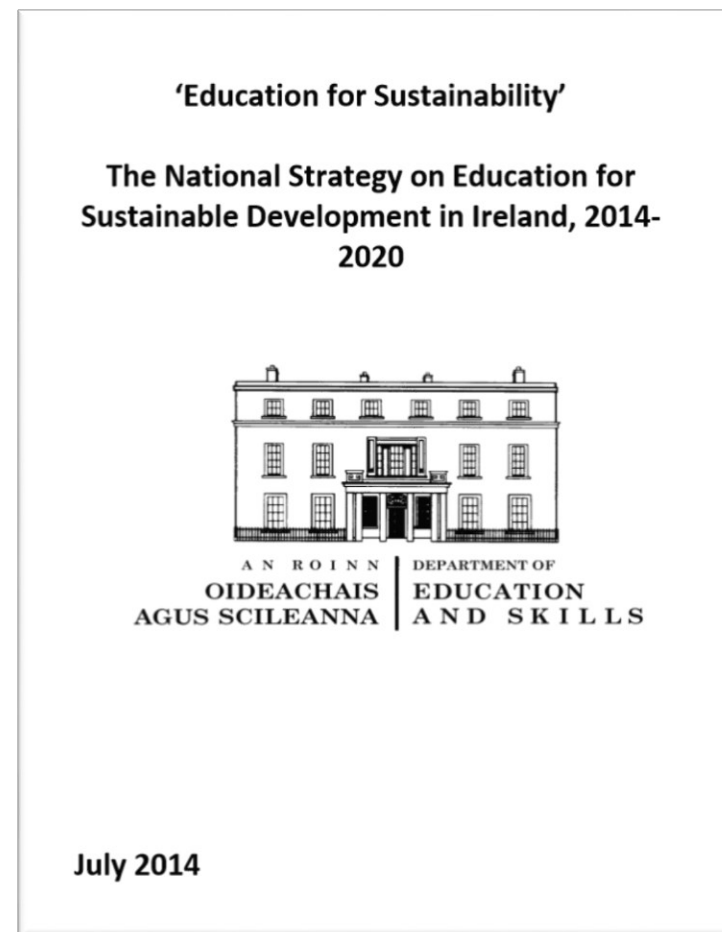
(DES, 2014: 3, 12)

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National Strategy on Education for Sustainable Development

Recommendation 6

The NCCA should be asked to audit, from a sustainable development perspective, the primary and post primary curriculum by 2017. The audit should identify opportunities for building on existing practice and should identify potential linkages between different subject areas in primary and post primary schools. The results of the audit should be published by the Department of Education and Skills.



(DES, 2014: 3, 13)

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Target audience

- Department of Education and Skills
- National Council for Curriculum and Assessment
- Stakeholders engaged in curriculum resource development/support (other government departments, civil society organizations/non-governmental organisations etc)
- Teacher educators (ITE/CPD)



Recommendation 6: Approach

What are we doing well?

Where can we improve?

Potential challenges

Key Competences of Sustainability

17 Sustainable Development Goals

Frameworks for Aistear, Primary, Junior Cycle and Senior Cycle

Subject Case Studies

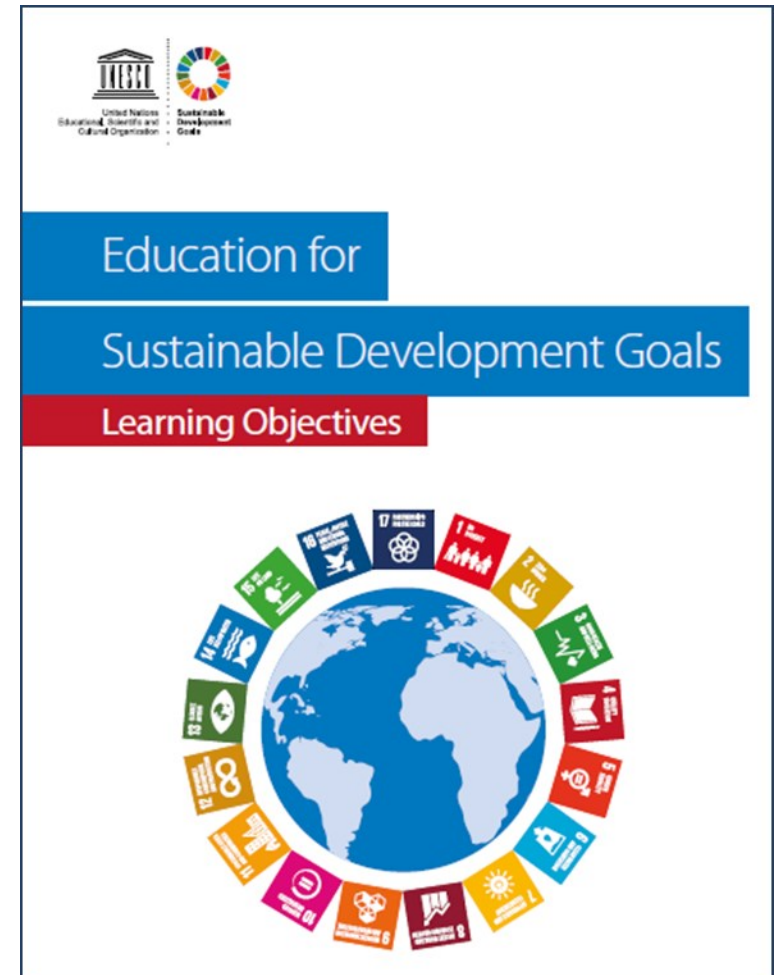
Recommendation 6: Approach

Case study criteria – inclusion of curriculum elements:

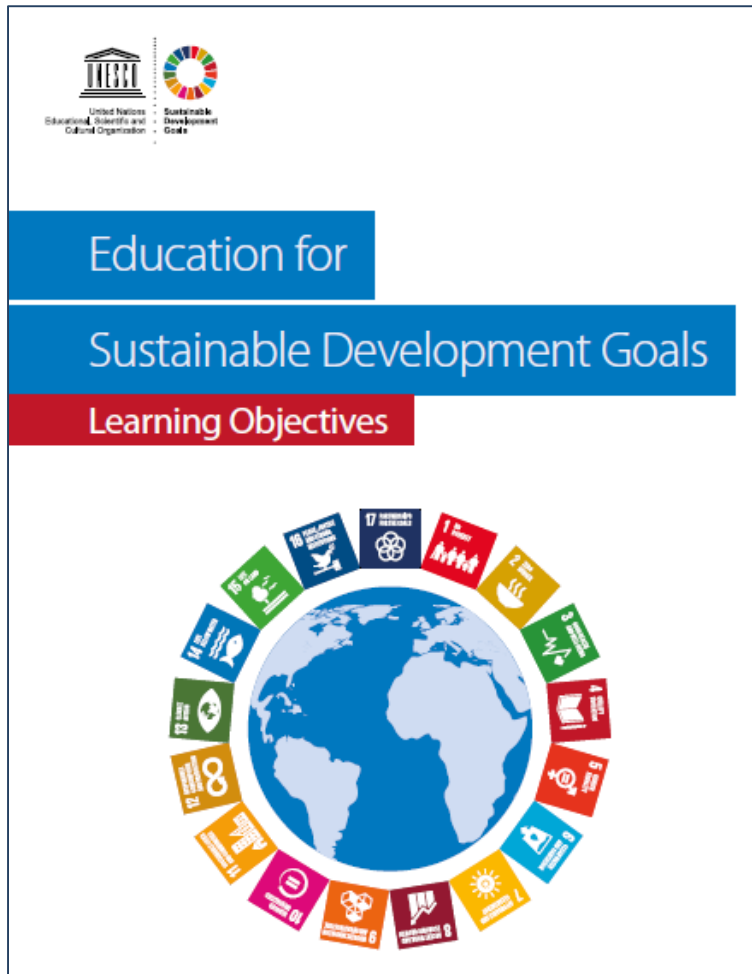
- from each level
- that stand alone and have continuity between levels
- have been recently revised (with some exceptions)
- with explicit ESD content and those less explicit in terms of content



Outline of sample opportunities to address UN Sustainable Development Goals (knowledge)



UNESCO: Key competencies for sustainability



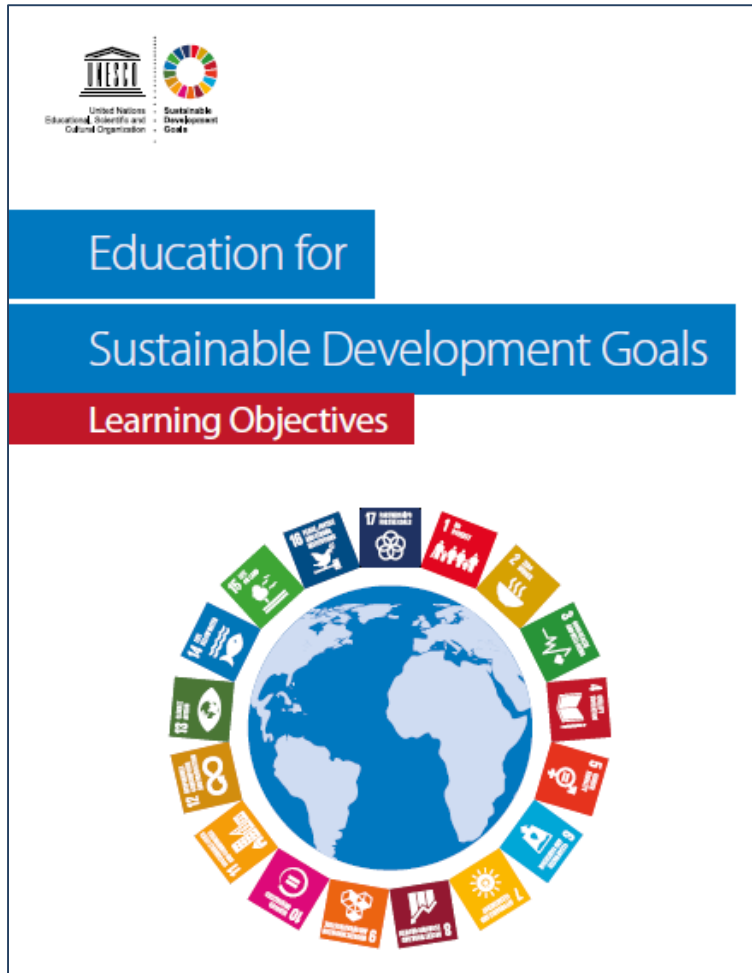
Systems thinking: the ability to recognize and understand relationships; to analyse complex systems; to think of how systems are embedded within different domains and different scales; and to deal with uncertainty.

Anticipatory competency: the ability to understand and evaluate multiple futures – possible, probably and desirable; to create one’s own visions for the future; to apply the precautionary principle; to assess the consequences of actions, and to deal with risks and changes.

Normative competency: the abilities to understand and reflect on the norms and values that underlie one’s actions and to negotiate sustainability values, principles, goals, and targets, in a context of conflicts of interest and trade-offs, uncertain knowledge and contradictions.

Strategic competency: the abilities to collectively develop and implement innovative actions that further sustainability at the local level and further afield.

UNESCO: Key competencies for sustainability



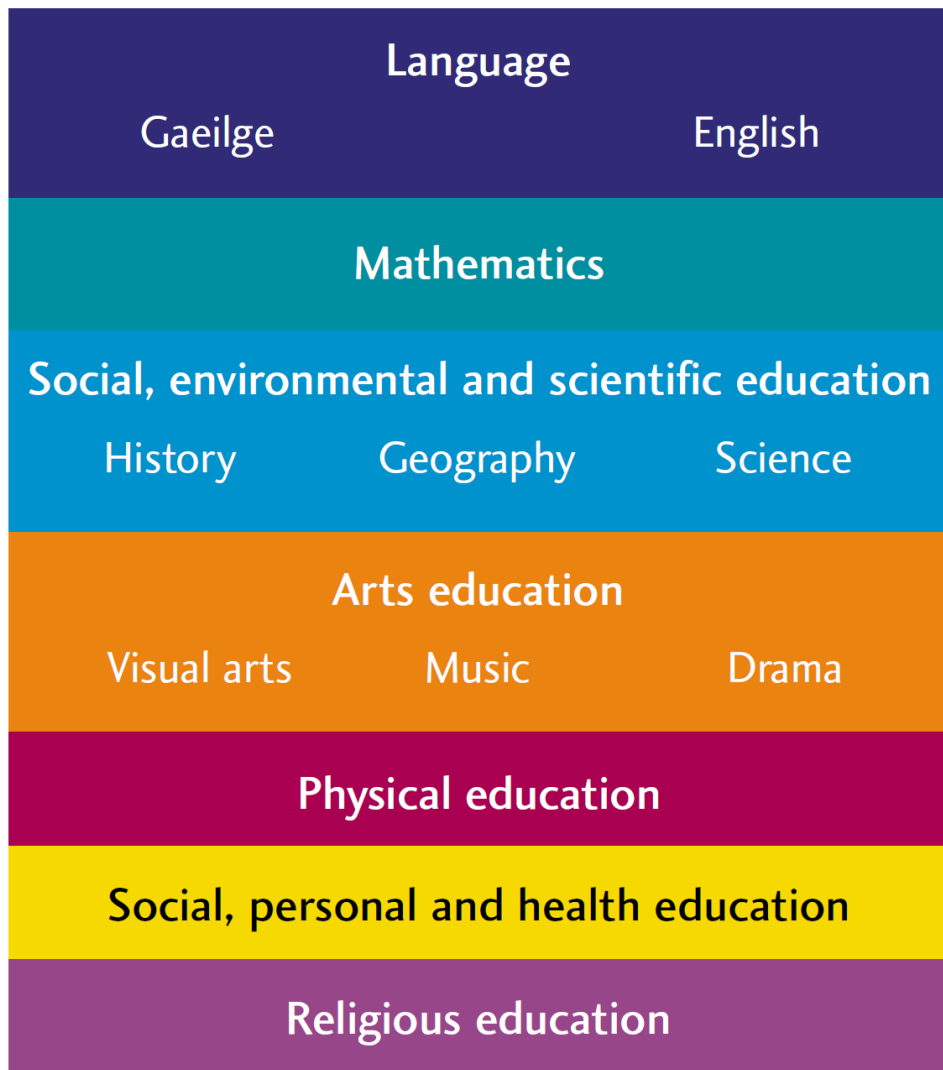
Collaboration: the abilities to learn from others; to understand and respect the needs, perspectives and actions of others (empathy); to understand, relate to and be sensitive to others (empathetic leadership); to deal with conflicts in a group; and to facilitate collaborative and participatory problem solving.

Critical thinking: the ability to question norms, practices and opinions; to reflect on one's own values, perceptions and actions; and to take a position in the sustainability discourse.

Self-awareness: the ability to reflect on one's own role in the local community and (global) society; to continually evaluate and further motivate one's actions; and to deal with one's feelings and desires.

Integrated problem-solving: the overarching ability to apply different problem-solving frameworks to complex sustainability problems and develop viable, inclusive and equitable solutions that promote sustainable development, integrating the other competencies.

Primary curriculum overview and developments



1999: revised primary curriculum published
Since 1999: Research, reviews and evaluations - highlighted strengths and challenges

2016: NCCA proposal to redevelop the whole primary school curriculum focusing on how the curriculum should be structured and how time would be allocated to the curriculum elements
2017: significant consultation process on these proposals

2018 onwards: Consultation report will provide direction for future phases of curriculum development

UNESCO key competencies for sustainability in primary curriculum 'framework'

Primary School Curriculum Introduction



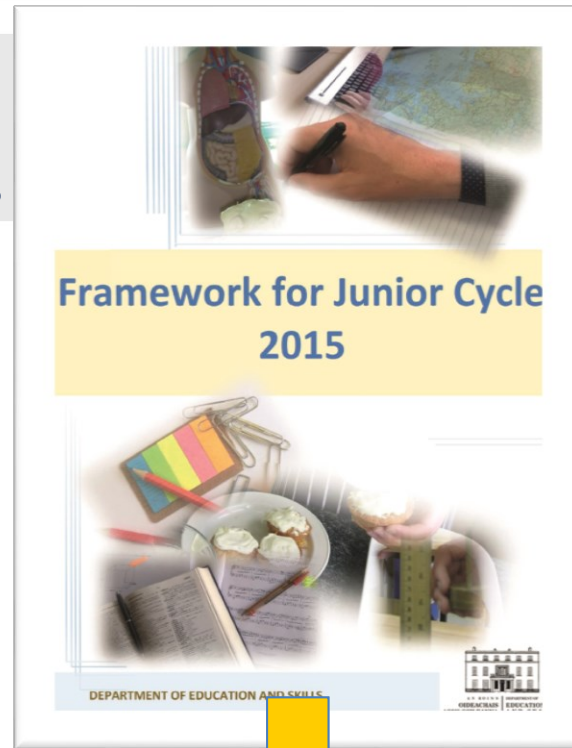
Key issues in primary education

The curriculum acknowledges, too, the importance of a balanced and informed awareness of the diversity of peoples and environments in the world. Such an awareness helps children to understand the world and contributes to their personal and social development as citizens of a global community.

Specific aims (#11) and general objectives (#25) focus on following UNESCO key competencies:

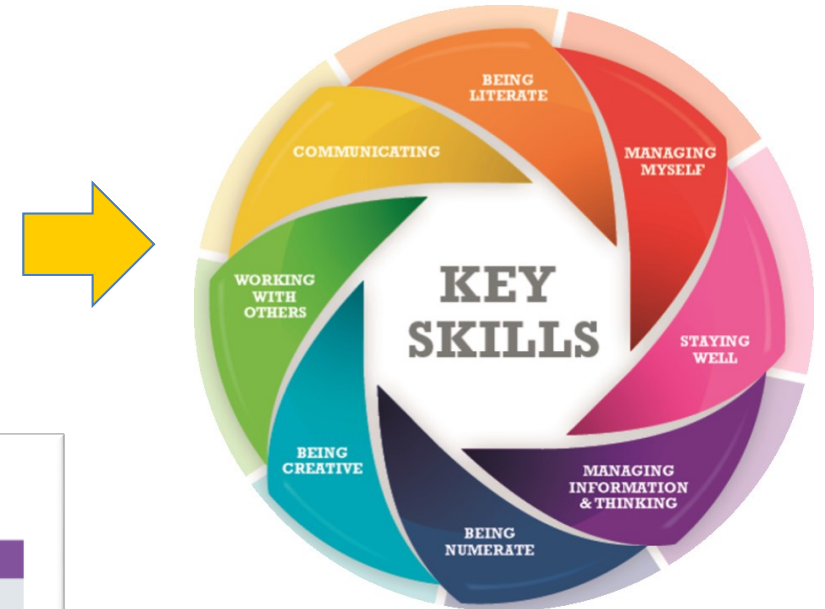
- Self-awareness
- Systems thinking
- Collaborative

Junior cycle curriculum overview and developments

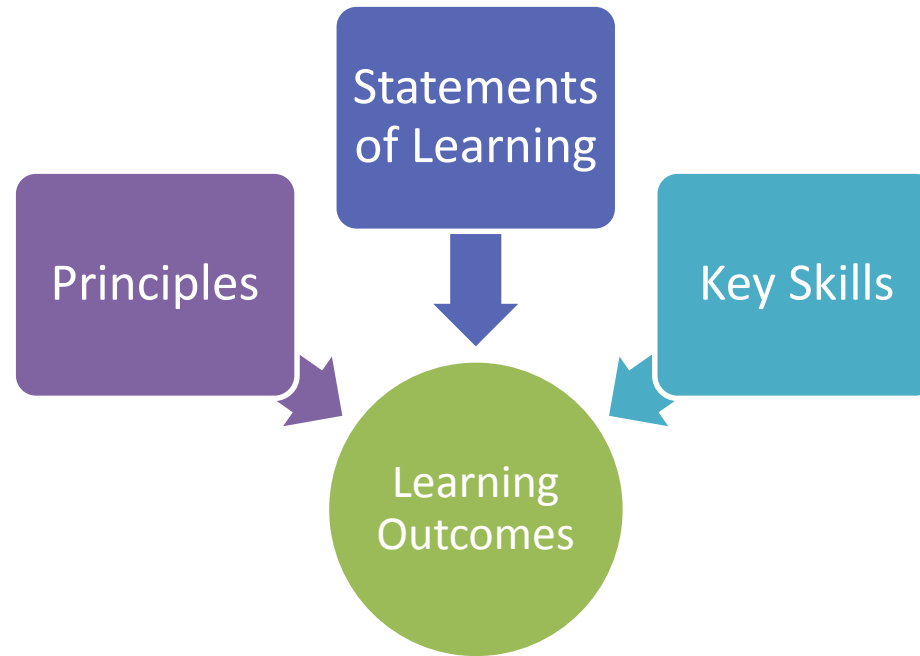
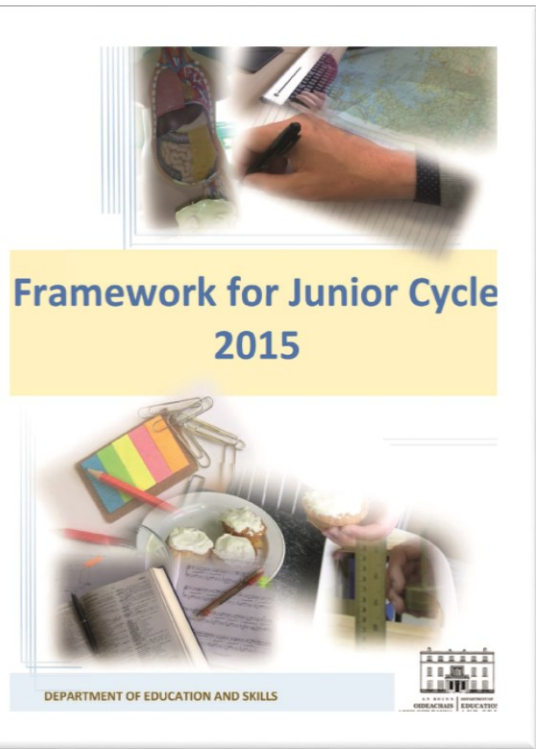


Statements of Learning

The student	
1	communicates effectively using a variety of means in a range of contexts in L1*
2	listens, speaks, reads and writes in L2* and one other language at a level of proficience to her or his ability
3	creates, appreciates and critically interprets a wide range of texts
4	creates and presents artistic works and appreciates the process and skills involved
5	has an awareness of personal values and an understanding of the process of moral development
6	appreciates and respects how diverse values, beliefs and traditions have contributed to culture in which she/he lives
7	values what it means to be an active citizen, with rights and responsibilities in local and global contexts
8	values local, national and international heritage, understands the importance of the past and current events and the forces that drive change
9	understands the origins and impacts of social, economic, and environmental aspects of human activity



Junior cycle curriculum overview and developments



Learning outcomes are statements in curriculum specifications to describe the **knowledge**, **understanding**, **skills** and **values** students should be able to demonstrate after a period of learning.

2014-2015

2016-2017

2017-2018

2018-2019

2019-2020

Audit of junior cycle Statements of Learning (SoLs) using UNESCO key competencies for sustainability

Statements of Learning

The student

- 1 communicates effectively using a variety of means in a range of contexts in L1*
- 2 listens, speaks, reads and writes in L2* and one other language at a level of proficiency that is to her or his ability
- 3 creates, appreciates and critically interprets a wide range of texts
- 4 creates and presents artistic works and appreciates the process and skills involved
- 5 has an awareness of personal values and an understanding of the process of moral decision making
- 6 appreciates and respects how diverse values, beliefs and traditions have contributed to the culture in which she/he lives
- 7 values what it means to be an active citizen, with rights and responsibilities in local and wider contexts
- 8 values local, national and international heritage, understands the importance of the relationships and current events and the forces that drive change
- 9 understands the origins and impacts of social, economic, and environmental aspects of the world
- 10 has the awareness, knowledge, skills, values and motivation to live sustainably
- 11 takes action to safeguard and promote her/his wellbeing and that of others
- 12 is a confident and competent participant in physical activity and is motivated to be physically active
- 13 understands the importance of food and diet in making healthy lifestyle choices
- 14 makes informed financial decisions and develops good consumer skills
- 15 recognises the potential uses of mathematical knowledge, skills and understanding in all areas
- 16 describes, illustrates, interprets, predicts and explains patterns and relationships
- 17 devises and evaluates strategies for investigating and solving problems using mathematical knowledge, reasoning and skills
- 18 observes and evaluates empirical events and processes and draws valid deductions and conclusions
- 19 values the role and contribution of science and technology to society, and their personal, social and environmental impact
- 20 uses appropriate technologies in meeting a design challenge
- 21 applies practical skills as she/he develops models and products using a variety of materials and processes

SoL 10: has the awareness, knowledge, skills, values and motivation to live sustainably

SoL 7: values what it means to be an active citizen, with rights and responsibilities in local and wider contexts

SoL 5: has an awareness of personal values and an understanding of the process of moral decision making

SoL 6: appreciates and respects how diverse values, beliefs and traditions have contributed to the communities and cultures in which she/he lives

SoL 11: takes action to safeguard and promote her/his wellbeing and that of others

SoL 16: describes, illustrates, interprets, predicts and explains patterns and relationships

Audit of junior cycle Key Skills using UNESCO key competencies for sustainability

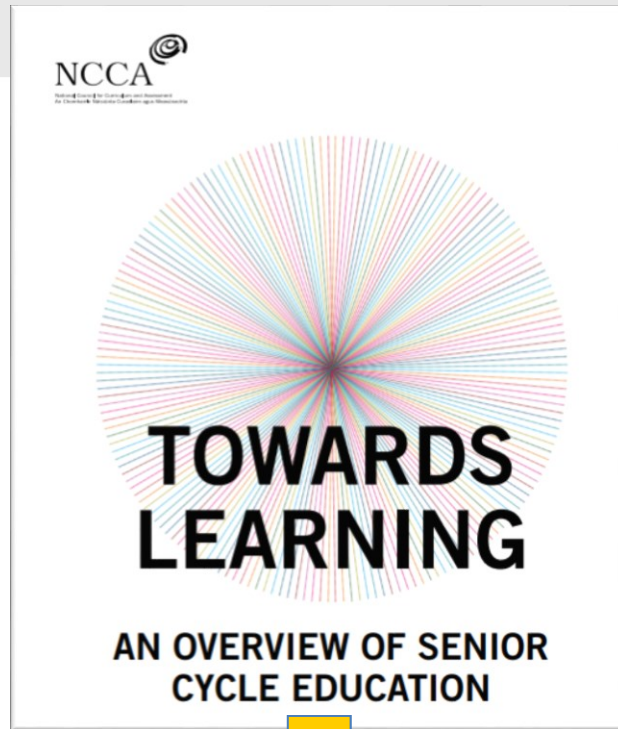


UNESCO key competency	Managing myself	Staying well	Managing information & thinking	Being numerate	Being creative	Working with others	Communicating	Being literate
Systems thinking		X	X	X	X		X	
Anticipatory	X	X	X	X	X	X	X	
Normative	X	X	X	X	X	X	X	
Strategic	X	X	X		X	X		
Collaboration	X	X	X		X	X	X	
Critical thinking	X	X	X		X	X		
Self-awareness	X	X			X	X		
Integrated problem-solving	-	-	X	X	X	X	-	

Senior cycle curriculum overview and developments

PRINCIPLES
quality
inclusive education
continuity
choice and flexibility
participation, relevance and enjoyment
well-being
creativity and innovation
lifelong learning

VALUES
human dignity and respect
equality and inclusion
justice and fairness
freedom and democracy




resourceful
confident
engaged
active
LEARNERS



Audit of senior cycle Key Skills using UNESCO key competencies for sustainability

UNESCO key competency	Information processing	Critical and creative thinking	Being personally effective	Communicating	Working with others
Systems thinking	X	X	X	X	
Anticipatory		X	X	X	X
Normative				X	X
Strategic		X	X		X
Collaboration		X	X	X	X
Critical thinking	X	X	X	X	X
Self-awareness		X		X	X
Integrated problem-solving	X	X	-	-	-


United Nations Sustainable Development Goals



United Nations Educational, Scientific and Cultural Organization

Sustainable Development Goals

Education for Sustainable Development Goals Learning Objectives



<p>1 NO POVERTY</p> 	<p>2 ZERO HUNGER</p> 	<p>3 GOOD HEALTH AND WELL-BEING</p> 	<p>4 QUALITY EDUCATION</p> 	<p>5 GENDER EQUALITY</p> 
<p>6 CLEAN WATER AND SANITATION</p> 	<p>7 AFFORDABLE AND CLEAN ENERGY</p> 	<p>8 DECENT WORK AND ECONOMIC GROWTH</p> 	<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> 	<p>10 REDUCED INEQUALITIES</p> 
<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p> 	 <p>THE GLOBAL GOALS For Sustainable Development</p>		<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p> 	
<p>13 CLIMATE ACTION</p> 	<p>14 LIFE BELOW WATER</p> 	<p>15 LIFE ON LAND</p> 	<p>16 PEACE AND JUSTICE STRONG INSTITUTIONS</p> 	<p>17 PARTNERSHIPS FOR THE GOALS</p> 

Selected case studies – primary, junior and senior cycle

Early childhood/Primary	Junior cycle (levels 2 & 3)	Senior cycle
Aistear framework	Civic, Social and Political Education (CSPE)	Agricultural Science
Language (new infants-2nd class)	Business Studies	English
SESE (History, Geography & Science)	English	Politics and Society
Social, Personal and Health Education (SPHE)	History	Geography
	Science	
	Visual Art	
	Caring for animals (level 2 short course)	

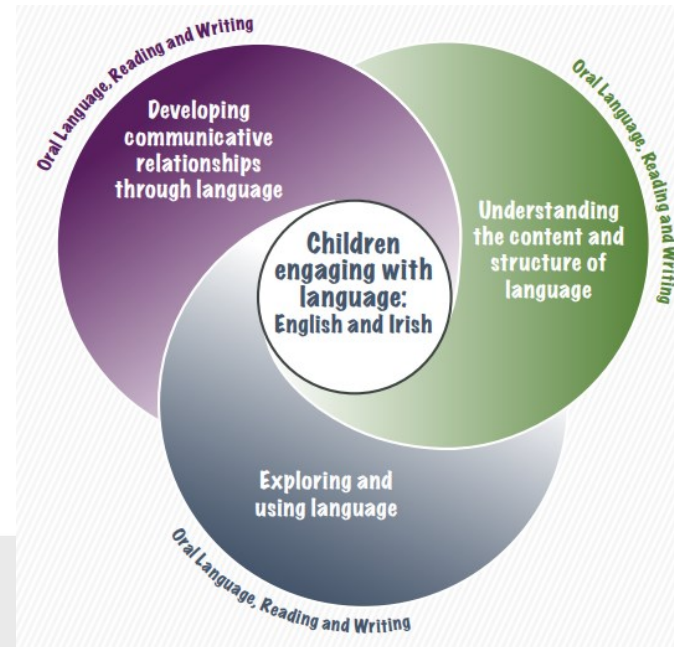
Primary sample case study: Primary Language Curriculum

Rationale

Language learning enables children to understand the world around them and to communicate effectively with others. ...Language enables children to engage emotionally, socially, cognitively, imaginatively and aesthetically in relationships and cultural experiences. It empowers children to develop their thinking, expression, reflection, critique and empathy, and it supports the development of self-efficacy, identity and full participation in society

Aims

...broaden children's understanding of the world through a rich variety of language experiences and through fostering an awareness and appreciation of other languages and cultures in an enriching learning environment...



Primary sample case study (contd.)

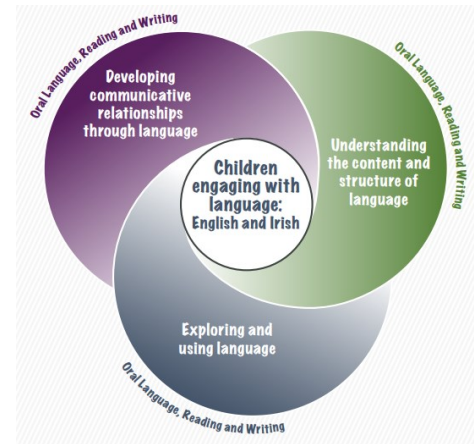


Sample Learning Outcomes

Recognise that language style changes with different relationships and audiences and show understanding of the listener's needs while initiating, sustaining and engaging in conversations on personal and curriculum-based topics and responding non-verbally and verbally. (LO 2 - Communicating: Jnr & Snr Infants)

Demonstrate understanding through the ability to give and follow instructions, comprehend narratives and explanations, and clearly state a case including speculating, hypothesising, justifying, negotiating, arguing and complaining. (LO 7 - Understanding: Jnr infants – 2nd class)

Describe, predict and reflect upon actions, events and processes relating to real and imaginary contexts. (LO 14 - Exploring and using: Jnr infants – 2nd class)



Junior cycle sample case study: Business Studies

Rationale

Young people are growing up in a globalised and dynamic world. New opportunities and challenges will emerge in their lifetimes that are virtually unimaginable today. Developing technologies, environmental and societal challenges, demographics, global competition and changing consumer demand will drive these changes. Studying business helps to equip students with the understanding, skills and attitudes to participate fully in an interconnected world.

Aim

Business Studies aims to stimulate students' interest in the business environment and how they interact with it. It develops skills, knowledge, attitudes and behaviours that allow them to make informed and responsible decisions with all of the resources available to them, ensuring their and society's well-being, while becoming more self-aware as learners.



Business Studies (contd.)

Junior Cycle Business Studies



SDGs	Sample Learning Outcomes
12, 13	Review the personal resources available to them to realise their needs and wants and analyse the extent to which realising their needs and wants may impact on individuals and society [S1 – PF: LO 1.1]
1, 6-8, 10-15	Debate the ethical and sustainability issues that arise from their consumption of goods and services and evaluate how they can contribute to sustainable development through consumer behaviour [S1 – PF: LO 1.9]
Any	Describe the skills and characteristics of being enterprising and appreciate the role of an entrepreneur in an organisation, in society and to the economy [S2 – E: LO 2.2]
8 + others	Explain how economic growth can impact positively and negatively on society and the environment and justify the promotion of sustainable development [S3 – OE: LO 3.6]
6, 7, 10, 12, 13	Evaluate the benefits and costs of a government economic policy and assess who enjoys the benefits and who bears the costs [S3 – OE: LO 3.11]

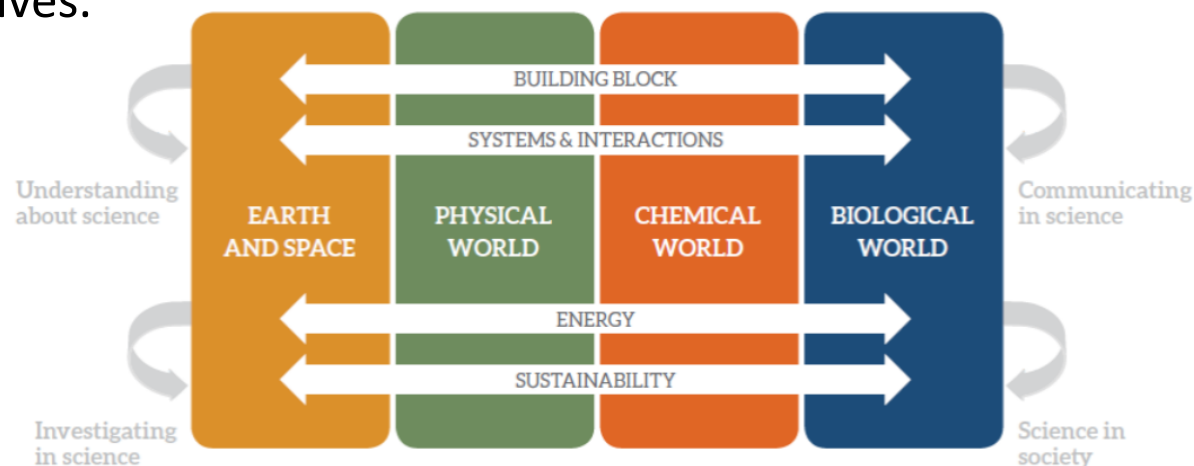
Junior cycle sample case study: Science

Rationale

The wider benefits of scientific literacy are well established, including giving students the capacity to make contributions to political, social and cultural life as thoughtful and active citizens who appreciate the cultural and ethical values of science. This supports students to make informed decisions about many of the local, national and global challenges and opportunities they will be presented with as they live and work in a world increasingly shaped by scientists and their work.

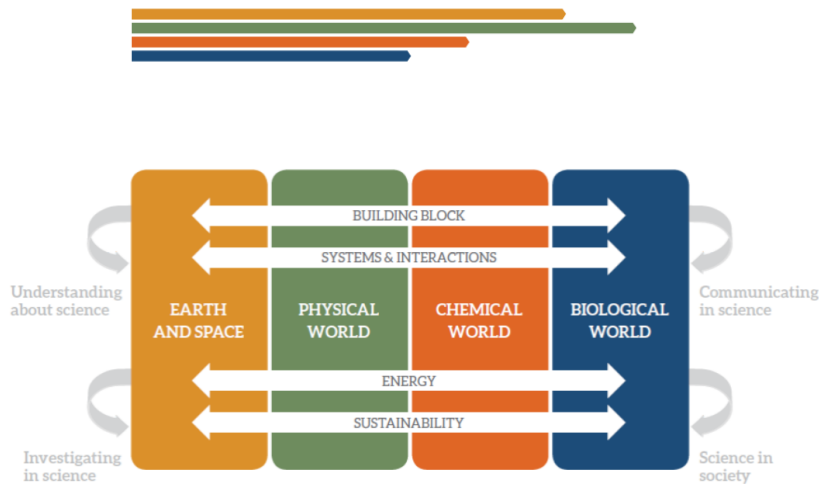
Aim

Science in junior cycle aims to develop students' evidence-based understanding of the natural world and their ability to gather and evaluate evidence: to consolidate and deepen their skills of working scientifically; to make them more self-aware as learners and become competent and confident in their ability to use and apply science in their everyday lives.



Junior cycle sample case study: Science

Junior Cycle Science



SDGs	Sample Learning Outcomes
6 & 17	appreciate the role of science in society; and its personal, social and global importance; and how society influences scientific research. [S1 – NoS: LO 10]
Any	examine some of the current hazards and benefits of space exploration and discuss the future role and implications of space exploration in society. [S2 – E&S: LO 8]
9, 11 & 12	evaluate how humans contribute to sustainability through the extraction, use, disposal, and recycling of materials. [S3 – CW: LO 10]
6, 7, 9 & 11	research and discuss the ethical and sustainability issues that arise from our generation and consumption of electricity [S4 – PW: LO 8]
6, 13, 14, 15 & 17	evaluate how humans can successfully conserve ecological biodiversity and contribute to global food production; appreciate the benefits that people obtain from ecosystems. [S5 – BW: LO 10]

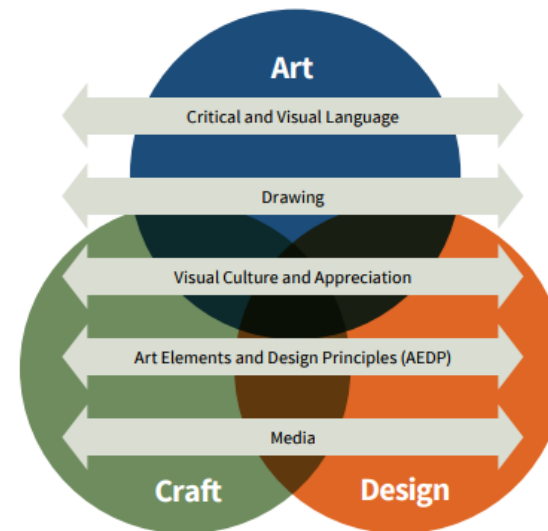
Junior cycle sample case study: Visual Art

Rationale

Contemporary culture is highly visual. Visual literacy is an essential requirement of active citizenship. It enhances the young person's ability to interpret, critique and decode visual messages. The capacity to engage in critical thinking in the art class fosters the young person's competence and confidence in responding to and engaging with the visual culture of the contemporary world and with the natural and built environments. It opens their minds to the traditions and values of other cultures and influences.

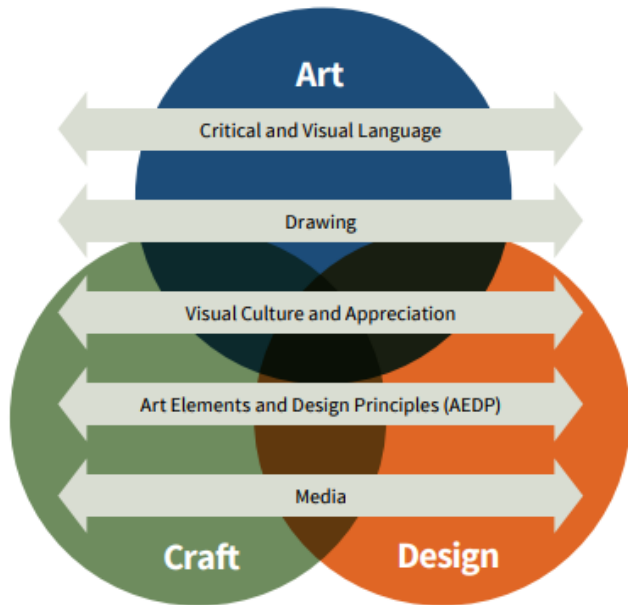
Aim

Through practical engagement in the areas of art, craft and design students will develop self-confidence, inquisitiveness, imagination, and creativity. They will also develop authentic, **real-world problem-solving capacities...**



Junior cycle sample case study: Visual Art (contd.)

Junior Cycle Visual Art



Sample Learning Outcomes

Interpret the world and communicate ideas through visual means (LO 1.5 - Art)

Debate the value that they and society place on an artwork (LO 1.9 – Art)

Interpret the narrative, symbols and functions used in craftwork from their own and other world cultures (LO 2.8 – Craft)

Justify the choice of media in their own or others' craftwork (LO 2.15 – Craft)

Respond to and critique works of design using appropriate visual language (LO 3.3 – Design)

Discuss historical and contemporary design practices (LO 3.8 – Design)

Senior cycle sample case study



Leaving Certificate Politics and Society aims to develop the learner's capacity to engage in reflective and active citizenship, informed by the insights and skills of social and political sciences

STRAND 1 Power and decision-making	STRAND 2 Active citizenship
STRAND 3 Human rights and responsibilities	STRAND 4 Globalisation and localisation

- Developing curriculum specifications with rich learning outcomes which balance **knowledge, skills and values**
- **Key skills frameworks** – these are the main driver for pedagogy that is collaborative, democratic and engaged and they create opportunities for teachers to employ active methodologies which in turn have the potential to contribute to student engagement with UNESCO key competencies
- Integration of **wellbeing** (of self and others) in junior cycle: principles, statements of learning, key skill (standalone and integrated) and as an area of learning (CSPE, SPHE & PE)

- Development of subjects/short course specifications with LOs which demand teaching/learning and assessment w.r.t. sustainability topics (e.g. junior cycle Science & Business Studies, senior cycle Politics and Society) and other specifications which facilitate teaching/learning and assessment about sustainability topics (e.g. new primary Language specification, junior cycle Visual Art etc.) – creates opportunities for students to encounter ESD across different subject areas (potential to raise the status of subjects which may have been marginalised to date, e.g. CSPE)
- Articulation of **Classroom-Based Assessments (CBAs)** which allow students to identify an area of interest to them & assesses the skills that students demonstrate as part of doing CBAs
- Increasingly reaching out to **NGOs and experts** working in the area – submission, development groups etc.

- Ensure every Development Group has a **brief** with terms of reference inclusive of ESD
- Provide relevant ESD related **training inputs** for members of Development Groups/Boards etc
- Ensure **alignment** between framework documents and specifications at different levels and between levels

- Cascade the **wellbeing** focus evident at early childhood and junior cycle to the other levels (ensure citizenship has a core role in wellbeing – this innovative in the definition of wellbeing at junior cycle is vitally important for the position of sustainability/ESD)
- Carry out more frequent **reviews**
- More **targeted approach** to involving ESD stakeholders in consultations
- **Audit** everything NCCA does through lens of ESD – so that it becomes part of how we do business

- **Teacher capacity - ITE/CPD**

More work needs to be done to reorient teacher education to approach ESD in its content and its teaching and learning methodologies. ... In order for teachers to be prepared to facilitate ESD, they must develop sustainability key competencies (including knowledge, skills, attitudes, values, motivation and commitment). But in addition to general sustainability competencies, they also need ESD competencies, which can be described as a teacher's capacity to help people develop sustainability competencies through a range of innovative teaching and learning practices. UNESCO (2016). Education for Sustainable Development Goals: Learning objectives. p. 51

- **Current National Strategy for ESD runs to 2020**

Curriculum review/reform is an ongoing, constantly evolving, contested task. The National Strategy has provided a policy framework to ensure ESD was discussed, what happens after 2020?

Across the developed and the developing world schooling finds itself at the centre of a set of global concerns about the future of the planet, about food and water security, and about the movement of peoples in the face of climate disasters....and increasingly, schools are being asked not simply to teach students about these issues but to shape the next generation of creative problem solvers who can quite literally 'save the world'.

NCCA, 2010. Innovation and Identity, Ideas for the new junior cycle.

