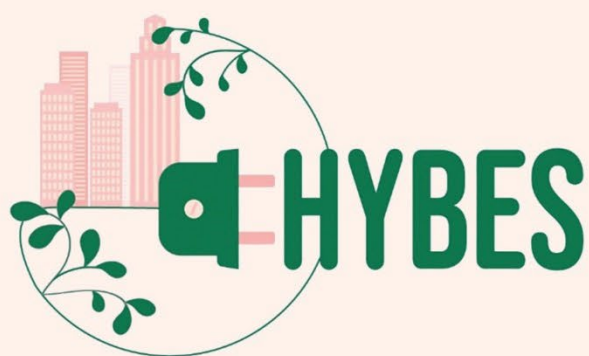




HYBES

HYBRID ENERGY SYSTEMS
FOR REMOTE COMMUNITIES
IN THE ARCTIC

WORK PACKAGE

Activity: 2.4 Energy Monitoring and Behavioural Change
for Educators and Educational Facilities

Deliverable: 2.4.2 12-week Educational Module

Issued on 15/09/2025

Author(s): Peter Luddy on behalf of NCE Insulation



POSITION WITHIN HYBES PROJECT

Work Package:	2	Energy Efficiency and Management: Monitoring and Assessment
Activity:	2.4	Energy Monitoring and Behavioural Change for Educators and Educational Facilities
Deliverable(s):	D.2.4.2	12-week Educational Module
Contributing to Output(s):	Output 2.2	Jointly developed energy monitoring and educational tool for educators and educational facilities
Contributing to Output Indicator(s):	RCO116_2.1	Jointly developed solutions
Contributing to Result Indicator(s):	RCR104_2.1	Solutions taken up or up-scaled by organisations

TABLE OF CONTENTS

AUTHOR(S).....	4
LIST OF FIGURES & TABLES.....	5
GLOSSARY OF ACRONYMS	6
EXECUTIVE SUMMARY	7
1. INTRODUCTION	13
1.0 D.2.4.2 in the context of the HYBES Project.....	14
1.1 Developing the report.....	16
2. BRIEF FOR A 12-WEEK EDUCATIONAL MODULE.....	19
2.0 Module Descriptor.....	20
2.1 Schedule/Structure.....	26
2.2 Note on Accreditation	32
3. APPENDICES	33
Appendix A: NCE's 'Education Module Developer' job posting.....	34
Appendix B: Index of existing educational resources and tools	35
Appendix C: Schools Co-creation Questionnaire.....	37
Appendix D: Schools Co-creation Responses.....	42

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P E T E R L U D D Y
P E A D A R Ó L O I D I D H

B S c (H o n s) A r c h | M A r c h

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Peter Luddy is an architectural graduate, educator and researcher/writer. Peter holds a MArch degree from the Cork Centre for Architectural Education (CCAIE) and has enjoyed several years of experience in practice and occasional freelance work. He is currently a part-time Assistant Lecturer (design studio and history & theory) at CCAIE and a Research Assistant at University College Cork (UCC) on the EU-Interreg-NPA-funded *Bauhaus Goes North* project. He has also previously worked as a Research Assistant at the intersection of climate and the built environment at UCD, and participated in the Irish Architecture Foundation's (IAF) national 'Architects in Schools' post-primary programme. Peter's independent historical research and writing has also been published or disseminated publicly and nationally.

LIST OF FIGURES & TABLES

No table of figures entries found

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GLOSSARY OF ACRONYMS

BE	Built Environment
CCC	Cork County Council
CPD	Continuing Professional Development
D	Deliverable
DZ	Decarbonising Zone
ESD	Education for Sustainable Development
ETB	Education and Training Board
HYBES	Hybrid Energy Systems for Remote Communities in the Arctic
ISS	Irish Schools Sustainability Network
Jems	North-West Europe Joint Electronic Monitoring System
NCCA	National Council for Curriculum and Assessment
NCE	Northside Community Enterprises
NEA	National Energy Authority (Orkustofnun), Iceland
NEB	New European Bauhuas
NGO	Non-Governmental Organisation
NPA	Northern Periphery and Arctic
QQI	Quality and Qualifications Ireland
RES	Renewable Energy Sources
SDGs	Sustainable Development Goals
SEAI	Sustainable Energy Authority of Ireland
SEC	State Examinations Commission
SESE	Social, Environmental and Scientific Education
SPHE	Social, Personal, and Health Education
TY	Transition Year
UCC	University College Cork
UN	United Nations
UMU	Umeå University
WP	Work Package

EXECUTIVE SUMMARY

1.0 D.2.4.2 in the context of the HYBES Project

The HYBES Project (NPA0100025), funded by the Interreg NPA Programme, aims to strengthen capacity for climate change adaption and decarbonisation in the NPA region by providing education on energy/resource efficiency and developing sustainable hybrid energy systems. HYBES recognises that providing educational resources for children/young adults will arm them with the knowledge and tools necessary to combat climate change, and can initiate cultural shifts in the wider community towards decreasing carbon emissions and other sustainable practices.

UMU and Umeå Municipality co-lead WP2, which delivers technical assessments of decarbonisation and develops educational outreach. As part of this, NCE Insulation lead Activities 2.4 and 2.5 which focus on influencing curriculum and behavioural change through targeted educational interventions. Having already conducted a 12-week pilot project — The Carbon Club's School Competition — in Cork DZ in 2022/23, NCE Insulation will now develop a new 12-week post-primary educational module on the theme of 'Sustainability and Decarbonisation'. This report provides the basis/outline of a brief for how that module might be developed and delivered.

1.1 Developing the report

This report — D.2.4.2 — is one of three WP2 educational deliverables developed by NCE Insulation (D.2.4.1 was delivered in period 4 and preparation of D.2.5.1 is ongoing). These will be combined into a single report upon their completion.

Constraints of project funding require that any module developed be easily replicable and feasible for school staff to deliver without external educators. NCE Insulation appointed Peter Luddy as 'Education Module Developer' in May 2025 to develop D.2.4.2 on their behalf.

Desktop Research

Initial work in June 2025 included a review of existing HYBES educational content (D.2.4.1 and HYBES Co-Creation Café on 'Education and Circularity') and an appraisal of existing open-access educational resources/tools available in NPA regions (please see Appendix B).

Joint Development and Co-Creation

In July 2025 co-creation questionnaires were issued to ten post-primary schools in Cork ETB (participants in the Carbon Club pilot) — to leverage expertise and ensure development aligned with stakeholder needs. Their feedback was received in early

September 2025 (please see Appendices C-F) and incorporated into the design of the module brief.

Drafting and Completion

A first draft was circulated to NCE Insulation and CCC for review on 31 July 2025. A second draft was circulated to NCE Insulation on 22 September 2025. It was intended that the report would be included in the merged educational report, which would be made available on the HYBES Capitalisation Plan website ahead of HYBES Partners' meeting in September/October 2025 (Bodø, Norway). Minor revisions to D.2.4.2 were suggested, and the finalised report was subsequently delivered on 15 January 2026.

2.0 Module Descriptor

The following descriptor outlines a vision a 12-week educational module — detailing key considerations and suggestions for its development.

Module Title

Classroom to Climate Action: Empowering Cork's Sustainable and Decarbonised Future

Overview

An educational module on 'Sustainability and Decarbonisation' for schools who participated in the Cork DZ pilot. It will connect global climate challenges with Cork's local context through case studies, student-led projects, and active learning.

Goal/Objective(s)

- Educate students on sustainable development, stewardship, and responsibility.
- Equip learners with knowledge and skills to contribute to a sustainable future

Target Audience(s)

Designed for TY students (15–17), but adaptable for Junior Cycle (12–15) and senior primary (8–12) students. Also promotes thematic awareness across the wider community.

Module Content

Covers climate science, justice, and SDGs; the environment and biodiversity; circularity; sustainable travel; energy efficiency; food and fashion impacts; and individual/collective solutions.

Learning Outcomes

Students will:

- analyse the climate crises — locally and globally
- reflect on climate justice
- define/apply the concepts of sustainability, circularity, and decarbonisation.
- evaluate Ireland's climate targets and envision Cork's future.
- assess lifestyle choices and demonstrate waste and conservation strategies
- recognise renewable energy technologies
- collaborate on school sustainability projects
- connect learning to the UN SDGs.

Format/Duration

12-week curriculum (8 hours total) of instruction, based on 1 class/week for 12 weeks or 2 classes/week for 6 weeks. Calculated for schools which use a 40-minute class/period format. Schools following a 60-minute format can use the additional time for further work.

Teaching Methods and Delivery

Delivered by existing teaching staff with digital supports. Approaches may include direct instruction, Socratic dialogue, field trips, project-based work, and transnational collaboration via online workshops.

Resources and Materials

Comprehensive lesson plans, factsheets, media, activity packs and templates could be provided through the creation of a shared digital hub.

Assessment and Evaluation

No formal exams. Continuous evaluation via discussions, debates, quizzes, and a final group project/presentation.

Cross-Curricular Links

Science; Geography; CSPE; Business; Home Economics; Art & Design and English.

Evaluation & Sustainability

Teacher and student reflections, and resource reviews will support long-term integration.

2.1 Schedule/Structure

The following list outlines a vision for how the educational module might be structured:

1. Introduction & Climate Basics
2. Climate Justice & Equity
3. UN Sustainable Development Goals (SDGs)
4. Local Action for Cork
5. Energy Efficiency & Decarbonisation
6. Circularity & Waste
7. Biodiversity & Ecosystems

8. Food Systems
9. Fast Fashion
10. Sustainable Travel
11. Project Development
12. Presentations & Reflection

2.1 Note on Accreditation

Further research is required on this area for the development of any module. However, a list of potential agency leads are provided.

1. INTRODUCTION

1.0 D.2.4.2 in the context of the HYBES Project

Extreme weather conditions, long periods of darkness, and limited infrastructure means that Arctic communities still rely on environmentally-unsustainable fossil fuels. The primary objective of the HYBES project, no. NPA0100025, funded by the Interreg Northern Periphery and Arctic (NPA) Programme, is to strengthen capacity for climate change adaption and decarbonisation in the NPA region by:

1. providing education on energy and resource efficiency and its environmental or financial value for households and communities
2. developing, implementing and promoting sustainable hybrid energy systems — stable and flexible infrastructures which integrate locally-produced Renewable Energy Sources (RES) and storage technologies

Umeå University (UMU) are lead partners for Work Package (WP) 2 *Energy Efficiency and Management: Monitoring and Assessment*, with Umeå Municipality operating as co-lead. This WP seeks to monitor, measure and evaluate contributions to decarbonisation offered by renewable energy storage and management strategies in domestic and community buildings. However, it is also charged with developing and delivering on the educational needs of the HYBES project. Activities 2.4 (*Energy Monitoring and Behavioural Change for Educators and Educational Facilities*) and 2.5 (*Decarbonisation as an Influencer for Educational Curriculum Change*) focus on the latter goal in particular. Northside Community Enterprises (NCE) are the lead partners for both of these Activities, supported by the other partners.

HYBES recognises the green transition as a multi-generational effort that requires all parts of society to be involved. Children and young adults are the demographic most likely to be affected by climate change, but they are also poised to be the greatest contributors in efforts to combat against it. The provision of educational modules for children and young adults now will arm them with the knowledge and tools which are necessary for the future. However, the provision of these resources can also trickle upwards to support the education of the wider community — engaging parents/guardians, administrators, teachers and others to think critically about the environmental and financial values of climate change adaption, energy and resource efficiency, and decarbonisation. In the short term it is hoped that promoting awareness of energy consumption will initiate decreases in carbon emissions. However, the ultimate long-term goal is to transform

curriculum change into real behavioural change and a widespread cultural shift towards sustainable practices.

Thus, one of the intents of Activity 2.4 is for partners to develop a behavioural change energy management system for second-level (post-primary school) students which can provide a live demonstration on the benefits of decarbonisation. This has already been completed through the development of a 12-week pilot project — The Carbon Club's School Competition — which was run in post-primary schools in Cork city and county from Sept 2022-May 2023 (please see NCE's D.2.4.1: *Collaborative Report on Energy Monitoring and Behavioural Change for Educational Facilities* for further details). The current document, D.2.4.2, will build on this and progress Activity 2.4 further by outlining a brief for a new 12-week educational module for post-primary schools in the Cork Decarbonising Zone (DZ) pilot which focuses on the theme of 'Sustainability and Decarbonisation'. The details of the brief for this module will be revealed in the following sections.

1.1 Developing the report

The following deliverables for WP2 were identified as addressing the educational needs of the HYBES project:

- D.2.4.1: Collaborative Report on Energy Monitoring and Behavioural Change for Educational Facilities
- D.2.4.2: 12-week Educational Module.
- D.2.5.1: Report on the Potential for Educational Curriculum Change for the Delivery of Decarbonisation Goals

The *Joint Action Plan for the HYBES Project* marked NCE Insulation responsible for developing each of these deliverables. It was agreed at a HYBES Partners' meeting in March 2025 (Cork County Council, Ireland) that all three deliverables, upon their completion, could be merged into a single report, owing to their overarching theme of education. D.2.4.1 was completed and delivered by NCE Insulation in Period 4 (month 19-24, 01.08.2024-31.01.2025). Meanwhile, D.2.4.2 (the current document) and D.2.5.1 (preparation is ongoing) will both be completed and delivered from Period 5 (month 25-30, 01.02.2025-31.07.2025) onwards.

The constraints of project funding meant that the 12-week Educational Module that emerged out of the HYBES project would have to be delivered by the existing teaching staff of any schools which avail of the module, rather than by a designated external educator. As such, the module that was developed would need to be simple, accessible, feasible and replicable.

In early May 2025 NCE Insulation sought an 'Education Module Developer' who could design and develop D.2.4.2 on their behalf (please see Appendix A for job posting). Upon a successful application and meetings with representatives of NCE Insulation in late May (21/5) and early June (3/6) 2025, Peter Luddy was appointed to the position.

Desktop Research

The report was initially developed through independent desktop research, which began in June 2025. This included:

- A review of existing HYBES materials related to the theme of education, including the D.2.4.1 report *Collaborative Report on Energy Monitoring and Behavioural Change for Educational Facilities*, and a video recording of the HYBES Co-Creation Café on ‘Education and Circularity’ (May 2025).
- An appraisal/evaluation of the existing educational resources and tools related to sustainability and decarbonisation which are openly available (rather than pay-for-access) in each of the partner states across the NPA region. A full index of the resources and tools which were reviewed are documented in Appendix B, with summary descriptions of their contents.

Joint Development and Co-Creation

The production of the report also required joint development or co-creation with various project stakeholders— to gather information, leverage local expertise and ensure that the project aligns with their interests and needs. In particular, this engagement sought to gather suggestions/ideas on how to make the module more meaningful and impactful for students and teachers. To this end a template of a Co-creation Questionnaire were prepared and issued to a selected sample of post-primary schools.

The post-primary schools who received a copy of the Co-Creation Questionnaire were those which had previously participated in NCE Insulation’s 12-week pilot Carbon Club’s School Competition between September 2022 and May 2023 (which was documented as part of D.2.4.1). This included the following ten schools in Cork city and county, all of whom are in the Cork Education and Training Board (ETB) system:

- Clonakilty Community College
- St. Colman’s Community College, Midelton
- Glanmire Community College,
- Coláiste Pobail Naomh Mhuire, Buttevant
- Coláiste an Chraoibhín, Fermoy
- Coláiste Choilm, Ballincollig
- Coláiste Fionnchua, Mitchelstown
- Coachford College
- Schull Community College
- Coláiste Treasa, Kanturk

The questionnaires were issued to all the schools listed above in July 2025. Their feedback was received in early September 2025 and incorporated into the finalised report (please see Appendices C & D for copies of the questionnaires and responses).

Drafting and Completion

A first draft of D.2.4.2 was circulated to NCE Insulation and Cork County Council (CCC) for review and comment on 31 July 2025. Any feedback was noted and incorporated into a second draft, issued on 22 September 2025. It was intended that the finalised combined report, holding all three educational deliverables, would be circulated through the HYBES Capitalisation Plan website prior to the HYBES Partners' meeting in September/October 2025 (Bodø, Norway). Some subsequent minor revisions were suggested, and made, with the finalised copy of D.2.4.2, as presented here, delivered on 15 January 2026.

2. BRIEF FOR A 12-WEEK EDUCATIONAL MODULE

2.0 Module Descriptor

The following descriptor outlines a vision a 12-week educational module — detailing key considerations and suggestions for its development.

Module Title

Classroom to Climate Action: Empowering Cork's Sustainable and Decarbonised Future

Overview

An educational module focused on the theme of 'Sustainability and Decarbonisation' for schools that previously participated in the Cork DZ pilot project (i.e. The Carbon Club's School Competition). This module equips students with the knowledge, skills, and values to understand climate change, explore sustainability, and take action for decarbonisation within their communities. Using local case studies, student-led projects, and active learning methods, the course bridges global sustainability challenges with Cork's local context.

Goal/Objective(s)

This module seeks to:

- educate students on the principles, practices, and challenges of sustainable development, environmental stewardship and social responsibility
- equip learners with the knowledge and skills necessary to contribute positively to a sustainable future

Target Audience(s)

The specific target audience of the module is second-level (post-primary school) students engaged in Transition Year, aged 15-17 years old. However, it is envisioned that the provision of this resource can also trickle down, up and even outwards to support the wider education needs of the community:

- some schools may decide to deliver the module to Junior Cycle students, aged 12-15, instead
- information/materials appropriate for senior first-level (primary school) students, aged 8-12, could be extracted and used within their curriculum

- awareness and critical thinking around sustainability and decarbonisation will be promoted amongst the wider school community (parents/guardians, administrators, teachers and others) and professionals through the delivery of the module.

A note on the logic behind 'Target Audience(s)':

Initially the module was targeted at second-level (post-primary school) students engaged in the wider senior cycle, aged 15-18 years old. However, the surveyed schools (please see Appendix D) timetable for the senior cycle can be quite full, especially in exam years. Therefore, Transition Year classes have been identified as the most likely and feasible point of insertion into the senior cycle.

Furthermore, there are national plans to introduce 'Climate Change and Sustainable Development' as a new and integrated Leaving Certificate subject in the senior cycle. It will be piloted in 43 schools in September 2025 before a national rollout begins in 2027. Therefore, the 12-week module outlined in this document might be viewed as an opportunity for schools to experiment with the subject in a more causal and less rigorous (not exam-focused) manner prior to adopting it as a core subject.

Module Content

Amongst others, the module examines the following key terms and concept:

- Understanding the climate crisis and the basics of climate science
- Climate justice and equity
- UN Sustainable Development Goals
- The environment — biodiversity and ecosystems (incl. agriculture)
- Circularity
- Sustainable travel to school
- Energy efficiency and decarbonisation at home and school
- Food miles and food waste
- Fast fashion and textile production/waste
- Individual and collective actions/solutions (reduce, reuse, recycle; etc.)

Learning Outcomes

On successful completion of this module, students should be able to:

1. analyse the causes and effects of the climate crisis at global and local levels
2. reflect on climate justice and the social impacts of climate change
3. define and apply the concepts of sustainability, circularity and decarbonisation
4. evaluate Ireland's climate action targets, identify opportunities and envision future scenarios for a more sustainable and decarbonised Cork, and their role within it
5. evaluate personal lifestyle choices and demonstrate practical strategies for reducing waste and conserving energy
6. recognise key renewable energy technologies
7. collaborate to design, communicate and implement small-scale sustainability project/initiatives for their schools
8. connect their learning and actions to the UN SDGs

Format/Duration

This 12-week curriculum amounts to a total of 480 minutes or 8 hours of instruction, based on a 40-minute class/period (i.e. 12 x 40 minutes). A school which follows 60-min class/period framework can use the extra time for additional reflection, discussion, individual research or project work.

SCHOOL FRAMEWORK	
40-min class/periods	60-min class/periods**
1 class/week for 12 weeks	1 class/week for 12 weeks
2 classes/week for 6 weeks*	2 classes/week for 6 weeks*
*Could be delivered as a double class (i.e. delivered back-to-back) if: • the schedule of the school term is constrained • a more intense delivery is desired in Senior Cycle	

A note on the logic behind 'Format/Duration':

The module has been framed from the outset as a 12-week curriculum. However, it was clear from the survey feedback (please see Appendix D) that:

- schools operate under different schedules/timetables and frameworks
- timetable for the senior cycle can be quite full, especially in exam years, so schools might consider introducing the module at different stages/cycles of the post-primary programme.

Therefore, 12 weeks was taken as a baseline — the maximum duration, or total amount of content to be produced (based on a 40-minute class/period, i.e. 12 x 40 minutes) — and different options were calculated accordingly.

Teaching Methods and Delivery

This new module will be delivered by existing teaching staff in class, supported by up-to-date online or hybrid resources and supports (please see the next heading for further details). As the module progresses it will move from a teacher-led introductory phase to a more student-centred experience. A variety of teaching methods can be utilised over those periods including:

- **Lecture-based:**

During the early/introductory parts of the module teachers will provide direct instruction to relay foundational information on key topics around the module theme.

- **Socratic:**

Teachers will act as facilitators in dialogue and probe questions to stimulate students' critical thinking, uncover assumptions, and explore their underlying beliefs. In doing so they might employ:

- 'Think, Pounce and Bounce' — whereby the teacher first poses a question or problem (pausing to allow suitable thinking time), before pouncing on one student for an initial answer and bouncing to another student who builds on the response.
- 'Think-Pair-Share' — whereby students are first asked to think individually about a question or problem, before being paired with a partner to discuss their ideas, and finally they are invited to share their collective thoughts with the wider class group.

- **Experiential:**

Field trips and visits to relevant local initiatives or groups working in the community, could bring students outside the classroom to interact with real-world issues and witness

practical examples/solutions. This would help to enhance engagement and consolidate knowledge gained from the module.

- **Flipped classroom:**

Although the module will not prescribe any homework assignments, students might be encouraged to explore certain topics further on their own time (individual research) as they progress towards project work (group work). This will ensure that class time can be dedicated to discussions or active, hands-on and collaborative learning activities under the teacher's guidance.

- **Active project-based learning:**

As students gain confidence, the module can culminate in group project work which will coalesce the learnings gained across the module.

There is also the option to avail of transnational collaboration through online workshops with schools or other groups in NPA partner regions. These could be relatively simple endeavours — prerecorded or live presentations and open discussions facilitated by video call — which highlight topics and initiatives around 'Sustainability and Decarbonisation' in other contexts and thus encourage students to think about these themes as common or shared issues.

Resources and Materials

A comprehensive set of curriculum and educational materials (e.g., structured lesson plans, factsheets, presentations/videos, activity packs and worksheets, templates for project work, etc.) will be provided which draws on the best resources which can be found both inside and outside the NPA region. The creation of a shared digital hub would allow for the exchange of ideas and materials between participating teachers. This could be pre-filled, but it could also provide opportunities to be supplemented/updated with any additional discoveries.

A note on the logic behind 'Resources and Materials':

The constraints of HYBES project funding means that the module must be delivered by existing teaching rather than by a designated external educator. However, feedback from the surveyed schools (please see Appendix D) revealed that existing teaching staff feel underprepared to teach on sustainability and decarbonisation in a meaningful and practical way due to lack of specialist training. Therefore, the provision of up-to-date teaching resources and ongoing external support is critical for the successful delivery of the module. Simple digital tools like

online quizzes and videos should help with effective delivery of the module in all schools, not just those marked as 'iPad schools'.

Assessment and Evaluation

Students' understanding of the module will be softly evaluated as they progressed rather than formally assessed through written examinations, essays etc. Formative evaluation will occur through in-class discussions, debates and quizzes, while a final group project and presentation will provide an opportunity for summative evaluation at the culmination of the programme.

Cross-Curricular Links

Although the module is envisioned as a standalone programme, the themes of sustainability and decarbonisation presents opportunities for cross-curricular links across numerous subject areas including:

- Science (all strands) — climate, biodiversity, energy
- Geography — climate, environment and human impact
- CSPE — citizenship, human rights and climate justice
- Business — economic benefits, circular economy and sustainable enterprises
- Home Economics — waste, resource management (food, textile, etc)
- Art & Design — posters, upcycling projects, etc.
- English — debate, persuasive writing on environmental topics

Evaluation & Sustainability

To ensure quality and long-term adoption, the module includes:

- Teacher reflections and student surveys upon completion to capture teaching/learning experience
- Annual reviews to refresh resources, etc.

2.1 Schedule/Structure

The following section outlines a vision for how the educational module might be structured. The table below gives an overview of the weekly breakdown (please see 'Format/Duration' under Section 2.0 for further explanation). A school which follows 60-min class/period framework can follow the same schedule but use the extra time for additional reflection, discussion, individual research or project work.

	TOPICS	12-WEEK PATHWAY	6-WEEK PATHWAY
1	Introduction & Climate Basics	Week 1	Week 1
2	Climate Justice & Equity	Week 2	
3	UN Sustainable Development Goals (SDGs)	Week 3	Week 2
4	Local Action for Cork	Week 4	
5	Energy Efficiency & Decarbonisation	Week 5	Week 3
6	Circularity & Waste	Week 6	
7	Biodiversity & Ecosystems	Week 7	Week 4
8	Food Systems	Week 8	
9	Fast Fashion	Week 9	Week 5
10	Sustainable Travel	Week 10	
11	Project Development	Week 11	Week 6
12	Presentations & Reflection	Week 12	

Sample schedule for 'Classroom to Climate Action: Empowering Cork's Sustainable and Decarbonised Future' educational module

1 — Introduction & Climate Basics

- **Theme:**

Understanding the climate crisis (overview of challenges), the basics of climate science (greenhouse gases, etc.) and how it might relate to the local Cork context.
 - **Activities:**
 - Icebreaker quiz on climate myths (true vs. false)
 - Discuss student observations on local climate impacts in Cork (flooding, etc.)
 - Create a climate 'word wall' in classroom to highlight key terms.
 - **Sample resource links:**
 - downloadable presentations/activities at [Green Schools Ireland – Climate Change](#)
 - Irish curriculum-aligned climate lessons at [ISSN – Sustainability in Schools](#)
-

2 — Climate Justice & Equity

- **Theme:**

Who is most affected by climate change? Inequality between Global North and South.
 - **Activities:**
 - Storytelling on 'A day in the life' which presents different contexts for children globally
 - 'Think-Pair-Share' or short debate on the topic of 'Is climate change fair?'
 - **Sample resource links:**
 - age-graded lesson packs at [Trócaire – Climate Justice Education](#)
 - interactive maps on global inequality at [UN SDG Education resources via Scoilnet](#)
-

3 — UN Sustainable Development Goals (SDGs)

- **Theme:**

Connecting Cork to the 17 global goals.

- **Activities:**
 - Group poster/**infographic** on how SDGs link to school/community
 - SDG 'Bingo' activity to learn all 17 SDGs
 - **Sample resource links:**
 - Ireland's approach explained at [Gov.ie – National Strategy on Education for Sustainable Development](#)
 - Projects by Irish schools at [ISSN \(Irish Schools Sustainability Network\)](#)
-

4 — Local Action for Cork

- **Theme:**

How Cork is responding to the climate crisis through community groups, city initiatives, etc.
 - **Activities:**
 - Guest speaker/local NGO visit
 - Map which pins local Cork case studies/projects
 - **Sample resource links:**
 - Cork-based case studies at [ISSN – School Sustainability Networks](#)
-

5 — Energy Efficiency & Decarbonisation

- **Theme:**

Where our energy comes from and how to reduce emissions (school and home).
 - **Activities:**
 - Energy survey of classroom (lights, heating, appliances).
 - Compare renewable vs. fossil fuels
 - **Sample resource links:**
 - teacher packs, energy survey tools at [SEAI – Schools Energy Programme](#)
 - interactive simulations at [Scoilnet – Energy Science](#)
-

6 — Circularity & Waste

- **Theme:**

Circular economy principles; waste management; rethinking consumption and ‘reduce, reuse, recycle’.
 - **Activities:**
 - Waste audit of bins in school
 - design challenge — reimagine a disposable product as circular
 - **Sample resource links:**
 - downloadable activities at [Green Schools Ireland – Waste & Litter](#)
 - practical worksheets at [Scoilnet – Home Economics/Waste reduction](#)
-

7 — Biodiversity & Ecosystems

- **Theme:**

Local biodiversity, agriculture, and ecosystem services. Highlight examples (local and global) of biodiversity loss.
 - **Activities:**
 - Discussion (unbiased) around rural realities — how farming contributes to emissions but that it also provides livelihoods.
 - School grounds biodiversity audit
 - Field sketching to create a biodiversity map of local plants and insects, etc.
 - **Sample resource links:**
 - ready-made lesson plans at [Scoilnet – Biodiversity resources](#)
 - action booklets & case studies at [Green-Schools – Biodiversity Theme](#)
-

8 — Food Systems

- **Theme:**

Sustainable food systems — where food comes from and waste reduction.
- **Activities:**
 - Food diary/mapping — log the origin of packed lunches
 - Brainstorm – ‘How to cut school food waste’

- **Sample resource links:**
 - curriculum-linked resources at [Scoilnet – Home Economics & Food Resources](#)
 - interactive activities at [Green-Schools – Global Citizenship Food](#)
-

9 — Fast Fashion

- **Theme:**

Textile waste and ethical consumption in the fashion industry
 - **Activities:**
 - Clothing life-cycle mapping
 - upcycling workshop — turn old t-shirts into bags, etc.
 - **Sample resource links:**
 - Information on fair trade & supply chains at [Trócaire – Global Supply Chains Education](#)
 - global trade resources at [Green-Schools – Global Citizenship themes](#)
-

10 — Sustainable Travel

- **Theme:**

Transport choices and emissions (particularly in context of schools)
 - **Activities:**
 - Mapping student travel routes — ‘how do you commute?’
 - brainstorm solutions
 - **Sample resource links:**
 - walking/cycling activity packs at [Green Schools Ireland – Travel Theme](#)
 - interactive energy and transport lessons at [SEAI – Travel & Energy Education](#)
-

11 — Project Development

- **Theme:**

Student-led sustainability projects (e.g., school garden, recycling campaign).
- **Activities:**

- Use flipped classroom model with online research.
 - Group work sessions to propose and design school/community initiatives.
 - **Sample resource links:**
 - project templates and guidance at [SEAI One Good Idea resources](#)
 - templates at [Green-Schools – Action Plan templates](#)
-

12 — Presentations & Reflection

- **Theme:**

Showcase and evaluate what has been learned.
- **Activities:**
 - Group presentations to teachers/peers
 - teacher/student surveys and reflective journals
- **Sample resource links:**
 - posters/presentations at [Scoilnet digital tools](#)
 - platform to share projects nationally at [ISSN – School network sharing](#)

2.2 Note on Accreditation

Further research is required on this area for the development of any module. However, the below list of agencies are amongst those which could be contacted or explored to draw more conclusive information regarding educational accreditation.

- National Council for Curriculum and Assessment (NCCA)
- Quality and Qualifications Ireland (QQI)
- Government of Ireland — Department of Education and Youth — State Examinations Commission (SEC)
- Local education centres such as the Cork Education and Training Board

3. APPENDICES

Appendix A: NCE's 'Education Module Developer' job posting

Tender on Education Module on Sustainability

Position Title: Education Module Developer – Sustainability and Decarbonisation

We are seeking an experienced and passionate educator or curriculum developer to design and develop an educational module focused on sustainability. This module will aim to educate students and professionals on the principles, practices, and challenges of sustainable development, environmental stewardship, and social responsibility. The goal is to equip learners with the knowledge and skills necessary to contribute positively to a sustainable future.

Key Responsibilities:

- **Module Design & Development:**
 - Develop a comprehensive curriculum and educational materials (e.g., lesson plans, presentations, assignments, quizzes) centered around sustainability and decarbonisation.
 - Ensure content covers a broad range of sustainability topics, including environmental, social, and economic sustainability, climate change, biodiversity, circular economy, and sustainable business practices.
 - Integrate practical case studies, real-world examples, and interactive elements to enhance engagement and learning outcomes.
- **Learning Objectives & Assessment:**
 - Define clear learning objectives and outcomes for the module to guide learners' understanding of sustainability concepts.
 - Design assessments (e.g., quizzes, projects, and discussion topics) to evaluate learners' progress and understanding.

Required Qualifications:

- Proven experience in curriculum development and instructional design, particularly in sustainability or environmental education.
- Familiarity with various teaching methodologies, including experiential learning, project-based learning, and online learning platforms.
- Excellent written and verbal communication skills.
- Strong organizational and time-management skills.
- Ability to work independently and collaboratively.
- Ability to submit quote.

Preferred Qualifications:

- Experience developing online or hybrid learning modules.
- Experience with educational technologies and digital content creation tools.

Work Environment:

- This position may be remote or office-based, depending on the organization.
- Collaborative team environment with occasional meetings, workshops, and feedback sessions.
- Flexible work hours to accommodate project deadlines and educational goals.

How to Apply: Please submit your resume, a cover letter detailing your experience with sustainability education, and samples of any educational materials or modules you've developed in the past to wodonnell@nce.ie

Appendix B: Index of existing educational resources and tools

NOTE: While non-exhaustive, the overview below identifies the key sources of open-access knowledge which were found to be currently available or are applicable in the NPA region. Further searching and local expertise is required to fill out the blank fields and expand on others.

REGION	TITLE	URL / DOI	EST. DATE	LEVEL	TYPES OF RESOURCES /CONTENT	SUMMARY DESCRIPTION
GLOBAL						
EUROPE/NPA						
FAROE ISLANDS						
FINLAND						
ICELAND						
IRELAND	Green-Schools Ireland (Eco-Schools Ireland)	https://greenschoolsireland.org/	Current	Primary; Post-primary	contests/competitions; factsheets; lesson plans; projects/campaigns; workshops	Ireland's leading environmental education programme, Green-Schools promotes student-led, whole-school approaches to sustainability and decarbonisation. It provides themed resources on energy, climate action, biodiversity, transport, waste, SDGs, etc. to support teachers with planning, implementation, and community involvement. Includes SEAI-run workshops and a seven-step Eco-Schools model aiming towards the Green Flag.
	Irish Schools Sustainability Network	https://www.issn.ie/	Current	Primary; Post-primary	CPDs; projects/campaigns; lesson plans; worksheets; workshops; videos	Student and teacher-led network which supports schools and fosters collaboration on sustainability and biodiversity action through interactive workshops and providing class support materials.
	National Strategy on Education for Sustainable Development in Ireland	https://www.gov.ie/en/department-of-education/publications/national-strategy-on-education-for-sustainable-development-in-ireland	2018-present	All levels	contests/competitions; CPD listings; guidelines/ policies; self-assessment tools; templates; toolkits;	Government of Ireland's framework to support the contribution that the education sector is making and will continue to make towards a more sustainable future at a number of levels: individual, community, local, national and international. Looks to embed sustainable development and climate action into curricula, school policy and teacher CPD.
	Scoilnet	https://www.scoilnet.ie/	Current	Primary; Post-primary	activity/project packs; curriculum mapping; ESD directory; lesson plans;	This official Irish education portal hosts, amongst others, dedicated ESD pages and a directory of further resources/organisations across sustainability and decarbonisation themes. These include curriculum-aligned and classroom-ready resources (for geography, SESE, SPHE, etc.,).
	Sustainable Energy Authority of Ireland (SEAI)	https://www.seai.ie/plan-your-energy-journey/schools	Current	Primary; Post-primary	activity/project packs; factsheets; interactive materials; lesson plans; projects/campaigns; videos; worksheets; workshops;	Ireland's national sustainable energy authority. Alongside practical supports, it provides a suite of curriculum-aligned/subject-integrated educational resources around sustainability and decarbonisation. Introduces topics such as climate action, energy sources and reducing energy use through real-world applications, interactive lessons, and age-appropriate activities.
	Trócaire Development Education	https://www.trocaire.org/our-work/educate/	2016-present	All levels	CPDs; lesson plans; projects/campaigns; worksheets; videos	This Irish NGO, working internationally, has developed free educational resources, videos and games to support educators in exploring global issues, including SDGs, climate change and climate justice.

NORWAY	The Climate School	https://www.klimaskolen.no/	2019-present	Primary; Post-primary	activity/project packs; curriculum mapping; ESD directory; lesson plans; self-assessment tools; videos	This website was developed by Oslo's Climate Agency (Klimaetaten) and Education Authority to support students and teachers to find curriculum-aligned and quality-assured educational resources about climate and the environment. It also offers 'Climate Pilots' which are trained young/student speakers on climate and environmental issues.
	Grønt Flagg (Eco-Schools Norway)	https://grontflagg.fee.no/	Current	Primary; Post-primary	activity/project packs; curriculum mapping; projects/campaigns; toolkits;	Part of the international Eco-Schools (FEE) network, over 1,000 Norwegian schools and kindergartens engage in the Grønt Flagg network. This includes hands-on school projects/campaigns centred on sustainability and decarbonisation, with opportunities for recognition and knowledge-sharing at the municipal and national levels.
	University of Inland Norway's Centre for Collaborative Learning (CCL) for Sustainable Development	https://www.inn.no/english/ccl/resources-for-teachers/index.html	2024	Primary; Post-primary	CPDs; guidelines/policies; lesson plans;	Provides Norway-specific teacher training modules and ESD resources incorporating case studies, active learning strategies, and tools tailored for all contexts.
SWEDEN	Swedish Society for Nature Conservation (SSNC, Naturskyddsforeningen)	https://www.naturskyddsforeningen.se/skola/	Current	Primary; Post-primary	curriculum mapping; factsheets; lesson plans; quizzes, videos; worksheets;	Works to promote learning for sustainable development by providing school materials and teacher training about nature, climate and the environment.

Appendix C: Schools Co-creation Questionnaire

12-Week Educational Module — Schools Co-creation Questionnaire

The primary objective of the HYBES project, funded by the Interreg Northern Periphery and Arctic (NPA) Programme, is to strengthen capacity for climate change adaption and decarbonisation in the NPA region by, amongst others, providing education on energy and resource efficiency and its environmental or financial value for households and communities. One of the ways it will do this is by developing a 12-week Educational Module for second level (post-primary) schools which focuses on the theme of 'Sustainability and Decarbonisation'.

This module is being developed by Peter Luddy (an architectural educator and researcher based in Cork, Ireland) on behalf of Northside Community Enterprises (NCE) Insulation. However, it also seeks to include other NPA stakeholders in joint development or co-creation — to gather information, leverage local expertise and ensure that the module aligns with the interests and the needs of its stakeholders. The post-primary schools which previously participated in NCE Insulation's 12-week pilot Carbon Club's School Competition (Sept 2022 – May 2023) are amongst these stakeholders. We would welcome your ideas on how to make this module more meaningful and impactful for students and teachers.

To progress our development of this module (and our report) we ask that you please fill out the following questionnaire to the best of your ability. I understand that many of you will be on annual leave over the coming weeks but please return a copy of the completed Word file to pluddy@ucc.ie (or your point of contact for this email) when you are able.

Do let us know if you have any comments/queries in the meantime. We look forward to receiving your responses.

Le gach dea-ghuí,

Peter Luddy on behalf of Secure and Fix It Enterprises, trading as Northside Community Enterprises (NCE) Insulation.



PETER LUDDY
PEADAR Ó LOIDIDH
BSc(Hons) Arch | MArch

SCHOOL INFORMATION	
School Name(s), Location:	
Person(s) involved in filling out form: (please include role/title)	
CONTEXT/CHALLENGES	
What are some challenges/opportunities around sustainability and decarbonisation in your country/region?	
Are there any barriers which prevent or impair education on this topic? (general or specific to your local context)	
Are there misconceptions or cultural sensitivities around this topic that must be considered?	
EXISTING CURRICULA	
What age profile does second level (post- primary) education in your country cover? (e.g. 12-18 years etc.)	

What body accredits educational modules and courses in your country/region?	
Do sustainability and decarbonisation currently feature on any national or regional curricula? (please indicate level and if a core subject or simply integrated elsewhere)	
Please share examples of best practice in education (initiatives and resources) around sustainability, and decarbonisation which you find valuable. (e.g. websites, videos, lesson plans, toolkits, etc.)	
POTENTIAL CURRICULA	
What key topics must be included in a module on sustainability and decarbonisation?	
What learning objectives should be presented? (i.e. what knowledge, values and skills should	

students possess by the end of the module)	
What teaching methods should be used? e.g. teacher-centred (lecture, Socratic), student-centred (project or problem-based learning) experiential (field trips/work) or other (blended, flipped classroom, gamification)	
Should online delivery be considered and what digital tools would facilitate this?	
Are there local or regional case studies which could be integrated into the module?	
Would this module benefit from transnational student collaboration or projects?	
What assessment methods should be used?	

e.g. diagnostic, formative (quizzes, peer/self-assessment, journals) or summative (projects, essays, tests)	
SCHOOL LOGISTICS	
What year group(s) and subject areas would this module be suitable and for in your school?	
How much time could realistically be allocated to this module in your current school programme? (i.e. per week or term)	
What resources/supports would your school need to successfully deliver such a module?	
ADDITIONAL COMMENTS	
Please share any further suggestions, comments or concerns.	

Appendix D: Schools Co-creation Responses

NOTE: Table indicates all feedback received as of 22 September 2025

SCHOOL INFORMATION			
School Name(s), Location:	Coláiste Pobail Naomh Mhuire, Buttevant, Station Road, Buttevant, Co Cork.	Glanmire Community College, Glanmire, Cork.	Coláiste Fionnchua, Mitchelstown, Co Cork.
Person(s) involved in filling out form: (please include role/title)	Elaine Whyte (AP2 – Green Schools Co-ordinator)	Tom Pittam William Horgan	Aoife O'Keeffe (Principal)
CONTEXT/CHALLENGES			
What are some challenges/opportunities around sustainability and decarbonisation in your country/region?	- Public transport Vs singular cars on the road - Access to electric car charger stations - Upgrading old buildings e.g. Insulation/solar panels	Challenges: - Reducing fossil fuel reliance - Infrastructure insufficient - Affordability, e.g. electric cars. Opportunities: - Expansion of renewable energy (solar, wind, etc.) - Energy efficiency improvements and clean technology innovation - Public awareness, partnerships - Potential for new jobs.	Specific to Coláiste Fionnchua and the north Cork region we are experiencing the following challenges & opportunities: Challenges: Our Heating System is Reliant on Fossil Fuels The school still uses oil & gas boilers, which are inefficient, and lack modern low-carbon heating technologies. Immediate need of retrofitting to heat pumps etc. involves capital cost, structural work, and electrical system upgrades. Electrical Infrastructure Limitations The electrical supply is not sized for modern loads (for heating via electricity, increased IT use, EV chargers, etc.). Upgrading supply, capacity, cabling is needed, which has cost & planning implications. We frequently experience 'phase' outages across the building that require technical support from ESB crew. We have limited capacity for the creation of renewable energy generation (solar panels) at present also which means we are heavily reliant on fossil fuels also. Budget, Grant Timing & Administration Even with grants, the capital outlay, matching funds, procurement, planning/permitting, and scheduling works to avoid severe disruption can be a barrier. Coláiste must phase works (e.g. over holidays) which slows things and increases costs. Awareness & Skills Ensuring that staff & students are familiar with low energy practices is key but is very difficult to implement in a building that is poorly insulated and contradicts the sustainability learning in the classroom. Opportunities: National / EU Grant & Retrofit Programmes REPowerEU Programme: A site survey was carried out in Colaiste Fionnchua in early March 2025 looking at the energy usage, and energy efficiency of the school. The school was noted to be in the lowest category and the opportunity to use REPowerEU funds to deep-retrofit the schools, aiming for a Building Energy Rating (BER) of at least B would consolidate classroom teachings on sustainability. In securing funding as part of this retrofit programme, it would allow the building to operate more sustainably and efficiently. Solar for Schools Programme Supports roof-mounted solar PV for schools were welcome and panels were installed in July 2025. There remains the opportunity to increase the solar capacity of the school to lower the reliance on fossil fuels for electricity usage. A display screen in the school showing the

			input and output of energy generated allows students to view and learn about renewables. • Climate Action Summer Works Scheme An application has been submitted under or CAWAS with environmental focus; this has made the school community more aware. • Energy Monitoring & Behavioural Change Participating in energy monitoring/reporting programmes (e.g. via SEAI or School Hub), involving students in Green Schools energy themes etc. boosts hands on learning for students. • Community Collaboration Students gain much in terms of experience & knowledge by working with local initiatives Tidy Towns, Cork County Council & local development organisations e.g. Allotments groups
Are there any barriers which prevent or impair education on this topic? (general or specific to your local context)	At the time of completing the Carbon Club challenge, I didn't have a specific group of students or a Green-Schools committee to regularly meet with to carry out some activities. I now have a regular TY Sustainability class that I meet with every week which I think would make is easier to run any similar initiatives. I had been completing the tasks/activities during my Science and SPHE classes which probably did impair some education on the topic.	• Top-down leadership, e.g. all ETB schools should have the same vision lead from the top (CEO) • Should be a priority at school leadership level. • Barriers are when it is teacher led without senior management input.	• Curriculum Constraints Sustainability and climate education is not yet fully embedded across all subjects; it tends to appear in science, geography, or CSPE (Civic, Social & Political Education), but not as a cross-curricular theme. Teachers may struggle to fit sustainability topics into an already full timetable. • Teacher Training & Confidence Many teachers feel underprepared to teach climate change, energy, and decarbonisation in a meaningful, practical way. Lack of access to specialist training or CPD on sustainability topics can reduce confidence. We are lucky to have a new staff member who is confident in the area and is taking the lead on initiatives moving into the new academic year. • Resources & Materials We lack up-to-date teaching resources, lab equipment, or digital tools to demonstrate sustainability concepts. Existing resources can be fragmented — some come from SEAI, some from Green Schools— but not always well integrated. • Infrastructure Mismatch The school building itself is energy-inefficient (e.g. a 1970s build with oil boilers, poor insulation), it sends mixed messages to students about sustainability.
Are there misconceptions or cultural sensitivities around this topic that must be considered?	• That one school/town/house can't make a difference in terms of sustainability. • That some green forms of energy are very expensive	No	• Agriculture & Rural Identity Farming is central to Mitchelstown's culture and economy. Discussions around emissions (especially methane from cattle) can feel like an attack on farmers' and students home lives. Framing farming as a problem in classroom discussions is met negatively. • Urban-Rural Divide Cork City schools may have more access to sustainability initiatives, while North Cork schools can feel overlooked. If lessons don't reflect rural realities (long commutes, oil heating, farming), they risk alienating students.
EXISTING CURRICULA			
What age profile does second level (post-primary) education	12-19	12-18	Student profile of 12 – 19 years.

in your country cover? (e.g. 12-18 years etc.)			
What body accredits educational modules and courses in your country/region?	- NCCA - SEC - QQI	Department of Education	- Government of Ireland - Department of Education and Youth - Various County Education Centres
Do sustainability and decarbonisation currently feature on any national or regional curricula? (please indicate level and if a core subject or simply integrated elsewhere)	Yes, Junior Cycle Science, Junior Cycle Home Economics and Leaving Certificate Biology & Home Economics are the subject I teach that cover the areas of sustainability & decarbonisation.	Sustainability has been introduced as a Leaving Cert subject for 2025-26.	Concepts linking with sustainability and decarbonisation appear in a number of subject curricula. Subjects such as geography include wording surrounding “sustainable development”, “climate change” and “sustainability” (Junior Cycle Geography Curriculum) within its course overview which encourage students to engage and reflect on these concepts. Subjects such as CSPE and science (“...analysis of science issues relevant to society, the environment and sustainability”)also make reference to these general ideas. Our school also offers a Transition Year Environment and Sustainability module which has been influenced by the ‘Taking Actions for Sustainable Living: Think, Plan, Act’ document.
Please share examples of best practice in education (initiatives and resources) around sustainability, and decarbonisation which you find valuable. (e.g. websites, videos, lesson plans, toolkits, etc.)	- The Sustainable Energy Authority of Ireland (SEAI) - Bitesize Biodiversity - Scoilnet - WorldWide Global Schools	- The Carbon club that was introduced was a good resource but the organisers support of this declined and wasn't supported after the initiation. - We run a sustainability module for all TY students each year (Education for Sustainability) - SDG's are embedded across subjects taught.	Some examples of initiatives and resources used as part of our schools education include: - Young Environmentalist Awards Resources (https://ecounesco.ie/young-environmentalist-awards/) - Various YouTube Resources - BBC Documentary ‘Climate Change – The Facts’ - Group Climate Projects (Green/Blue Flag, Tidy Towns, etc.)
POTENTIAL CURRICULA			
What key topics must be included in a module on sustainability and decarbonisation?	- Food Miles, Food Waste - Fast Fashion & Textile production/waste - Agriculture & the environment - Sustainable Development Goals - Energy Efficiency at Home & School	- Fast Fashion - Reduce, reuse, recycle - Sustainable travel to school/work - Insulation & heating in school and at home	The following topic areas and concepts should be included: - Understanding the Climate Crisis - Sustainable Development Goals - Energy and Decarbonisation - Biodiversity and Ecosystems - Individual and Collective Actions - Solutions and Awareness
What learning objectives should be presented? (i.e. what knowledge, values and skills should students possess by the end of the module)	- Understand the concept of sustainability and link with Sustainable Development Goals - Analyse the amount of food waste happening around the world - Describe the causes and effects of climate change - Explain what is meant by a carbon footprint and outline methods for reducing it. - Evaluate Ireland's climate action targets and pathways towards a low-carbon economy. - Demonstrate practical strategies for reducing waste, conserving energy, and making sustainable lifestyle choices. - Compare different farming and food production methods, highlighting sustainability challenges and opportunities in Ireland	A better awareness of all of the above	By the end of the module: - Help students discuss sustainability issues present in their everyday lives - Empower students to develop an action for sustainability - Build confidence when speaking to others about sustainability issues and why positive actions can help us live more sustainably
What teaching methods should be used? e.g. teacher-centred (lecture, Socratic), student-centred (project or problem-based learning) experiential (field trips/work) or other (blended, flipped classroom, gamification)	- Student centred projects seem to work best in our school, they can share & discuss similar points they have and can often branch off into sub-topics that they have a big interest in such as farming, composting, carbon footprint & energy efficiency appliances. - Fieldwork & Trips would also consolidate any knowledge gained.	- Student centred - student led - Flipped classroom, active, project-based learning.	A sample of the following teaching methods should be used as part of the noted module: - Teacher Instruction/Lead - Group Work - Project Work - Think, Pair and Share - Think, Pounce and Bounce - Individual Research

			Etc.
Should online delivery be considered and what digital tools would facilitate this?	This could be school-dependent, as an iPad school it could work for us.	Yes, videos & quiz.	For aspects of the module online tutorials or workshops could be implemented for classes to review and learn information.
Are there local or regional case studies which could be integrated into the module?	Not that I'm aware of	- We are currently involved in the Safe Routes to Schools liaising with parents, students surveys, surveys with the city council. - Iaran rod Eireann (are they promoting) - CIE buses? - Solar panels in schools and houses.	There are numerous local or regional case studies which could be explored as part of the module. The following are a list of potential cases: - Multiple wind/solar farms which could be visited. - Local Tidy Town links and talks. - Nature Walks - In School Examples of Sustainability
Would this module benefit from transnational student collaboration or projects?	I'm not sure	Yes	Yes, this module would benefit from transition year students input. TY Students at present are undertaking an 'Environment and Sustainability' module in which they explore, plan and enact various actions in the school which will benefit the school and greater environment. TY students present their finding and practices discover to the school to allow all students to learn.
What assessment methods should be used? e.g. diagnostic, formative (quizzes, peer/self-assessment, journals) or summative (projects, essays, tests)	- Group Quizzes - Presentations - Videos	Projects and quizzes	Various assessment methods may be used including: - Open discussion - Debates - Individual Project and Case Studies Research - Group Work - Presentations
SCHOOL LOGISTICS			
What year group(s) and subject areas would this module be suitable and for in your school?	Transition Year	TY	- Transition years - Junior Cycle High Achievers Class.
How much time could realistically be allocated to this module in your current school programme? (i.e. per week or term)	1 hour per week	2 periods per week	- TY – 1 hour 20 minutes – Full academic year - Junior Cycle – 40 minutes – 1 term
What resources/supports would your school need to successfully deliver such a module?	- Access to ready-to-use activity packs, and digital resources. - Templates for portfolio work - A shared digital hub where teachers can exchange ideas and materials.	Structured programme, resources eg videos, quizzes plans along with sustained ongoing external support	To aid the success of the module the following items/resources would be required: - Garden tools - Plant species and seeds - Composting equipment - Links to Tidy Towns/Beach Clean Up Organisations - Access to lab equipment - Transportation - Etc.
ADDITIONAL COMMENTS			
Please share any further suggestions, comments or concerns.		Ongoing external support and resources. We found this was missing in Carbon Club and never reached potential.	

