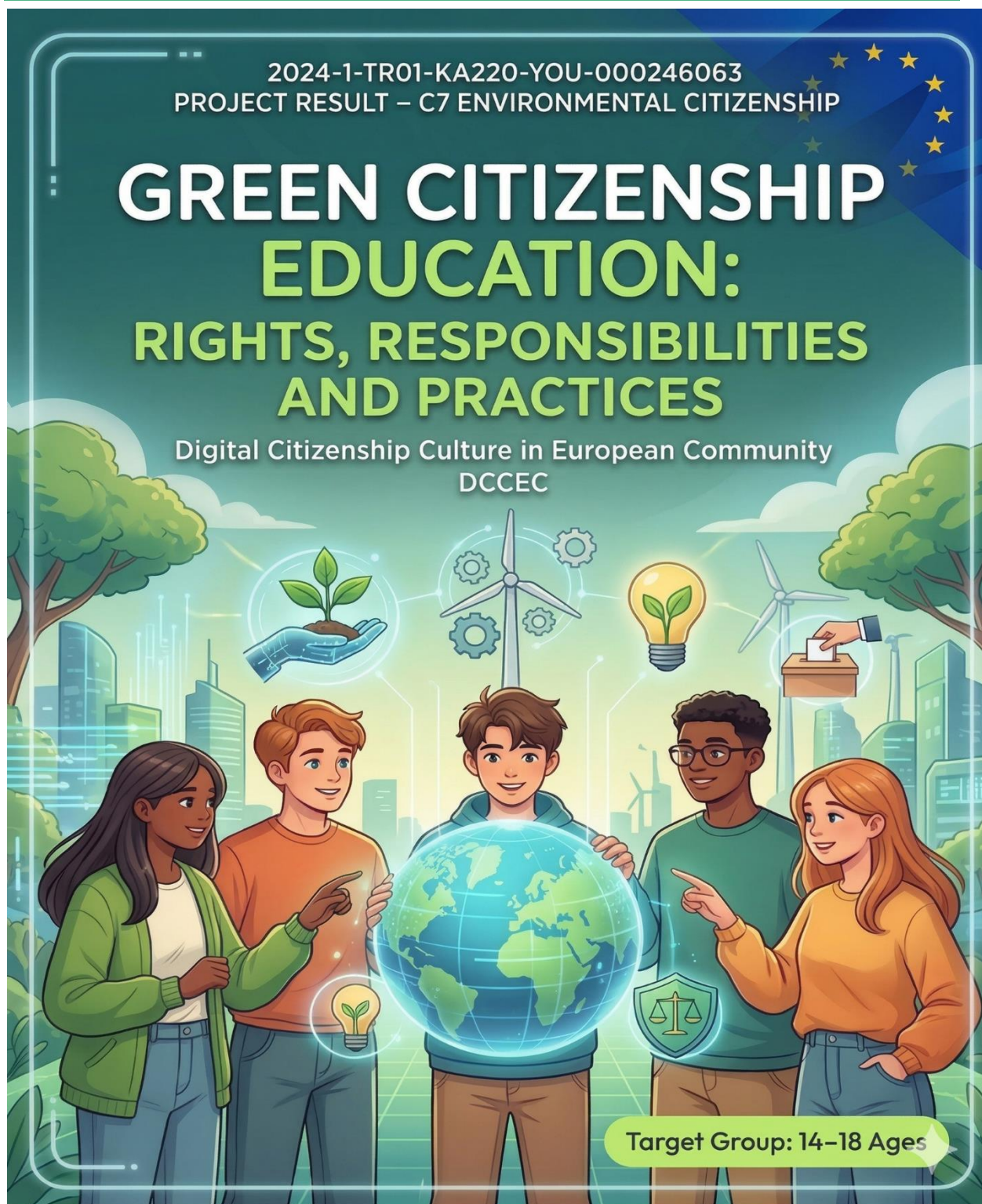




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Understanding Green Citizenship

What is Green Citizenship?

Green citizenship — also referred to as environmental citizenship — denotes the rights, responsibilities, and active participation of individuals in protecting and sustaining the natural environment. It extends beyond legal and political citizenship by placing humanity's relationship with the planet at the centre of civic identity.

The concept builds on the foundational work of British sociologist T.H. Marshall, who described citizenship as comprising three pillars: civil, political, and social rights. Green citizenship adds a fourth pillar: the right to a clean, healthy, and sustainable environment, alongside the corresponding duty to act as a responsible steward of the Earth for present and future generations.

Emerging in the 1990s alongside the global sustainability movement, green citizenship has since been embedded in international frameworks including the Rio Declaration (1992), Agenda 21, the Aarhus Convention (1998), and the United Nations Sustainable Development Goals (SDGs, 2015).

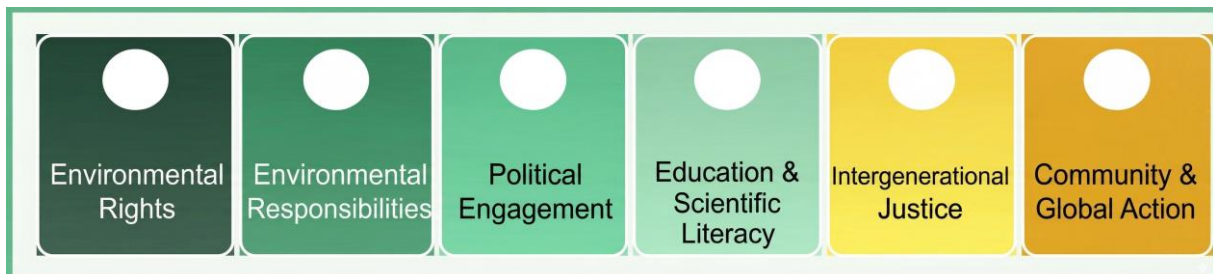


Fig 1. Six Core Dimensions of Green Citizenship.

Key Elements of Green Citizenship:

Element	Description
Environmental Rights	The right to clean air, clean water, healthy food, and a safe natural environment for every person, regardless of age, background, or location.
Environmental Responsibilities	The duty to reduce waste, conserve natural resources, adopt sustainable consumption habits, and protect biodiversity.
Political Engagement	Participating in environmental governance, public consultations, and civic advocacy — including holding governments and corporations accountable.
Education & Scientific Literacy	Understanding ecological systems, climate science, biodiversity, and the policy frameworks that govern the environment.



Element	Description
Intergenerational Justice	Recognising the obligation to protect the rights of future generations to inherit a liveable, biodiverse planet.
Community & Global Action	Acting collectively at local, national, and European levels, recognising that environmental challenges cross all borders.

Green citizenship is not only an environmental concept — it is a political, social, and cultural commitment. It calls on every individual to see themselves as a steward of the Earth, embedded in a global community of shared ecological destiny.

Key Elements of Green Citizenship:





Fundamentals of Environmental Welfare

Environmental welfare refers to the condition of natural systems — clean air, clean water, fertile soils, and biological diversity — and to the quality of the relationship between human societies and the natural world. Green citizenship frames environmental welfare not as a luxury, but as a fundamental social right and shared responsibility.

Six guiding principles underpin environmental welfare and provide the ethical foundation for all learning scenarios in this e-book:

Sustainability	Meeting the needs of the present without compromising future generations' ability to meet their own needs. (Brundtland Commission, 1987.) Sustainability encompasses environmental, social, and economic dimensions — the three pillars often depicted as overlapping circles.
Environmental Justice	Fair distribution of environmental benefits and burdens across all social groups. Vulnerable communities — lower-income neighbourhoods, Indigenous peoples, migrants — are disproportionately exposed to pollution and climate risk. Justice demands this be addressed.
Scientific Literacy	Evidence-based understanding of climate change, biodiversity loss, soil degradation, and ocean acidification. Literate citizens can evaluate competing claims, interpret data, and engage meaningfully in public debate.
Collective Responsibility	Environmental problems cannot be solved individually. They require co-operation at community, national, and international levels. The concept of the "commons" — shared air, water, biodiversity — is central to this principle.
The Precautionary Principle	When an action risks environmental or public health harm, precautionary measures should be taken even before cause-and-effect relationships are scientifically established. It is wiser to act cautiously than to await conclusive proof of harm.
Systems Thinking	Human societies and natural ecosystems are deeply interconnected. Actions in one domain produce consequences throughout the system. Systems thinking helps learners identify root causes rather than only treating symptoms.



Environmental Security and Ecosystem Services

Environmental security refers to the extent to which the natural environment is protected from degradation and can continue to provide the services on which human life depends. These ecosystem services fall into four broad categories:

Category	Examples
Provisioning Services	Food, fresh water, timber, medicinal plants, fuel, genetic resources.
Regulating Services	Climate regulation, flood control, water purification, pollination, disease control.
Cultural Services	Recreation, tourism, spiritual value, aesthetic experience, environmental education.
Supporting Services	Soil formation, nutrient cycling, photosynthesis — the foundations that enable all other services.

For young citizens aged 14–18, environmental security is not abstract: it concerns the quality of the air they breathe, the water they drink, the food they eat, and the climate they will inhabit throughout their lives. Green citizenship education makes these connections visible and actionable.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) estimates that around one million plant and animal species are currently threatened with extinction — many within decades. Protecting biodiversity is not optional: it is the foundation of all environmental security.

Environmental Policies in the European Union

The European Union has positioned itself as a global leader in environmental governance. The European Green Deal (2019) is the EU's flagship strategy to achieve climate neutrality by 2050. It encompasses policies on clean energy, sustainable industry, farm-to-fork food systems, biodiversity protection, and sustainable mobility.

EU Policy / Initiative	Goal	Relevance to Green Citizenship
European Green Deal	Climate neutrality by 2050	Master framework for all environmental rights and duties
EU Biodiversity Strategy 2030	Protect 30% of land and sea by 2030	Nature protection as a civic duty for every citizen
Farm to Fork Strategy	Sustainable food systems end-to-end	Responsible consumption choices and food literacy
Fit for 55 Package	55% emissions cut by 2030	Civic role in the clean energy transition
Circular Economy Action Plan	Reduce waste, extend product lifespans	Sustainable consumption and production literacy
European Climate Law	Legally binding net-zero by 2050	Right to legal climate protection and accountability
Just Transition Fund	Support fossil-fuel communities in transition	Environmental justice made concrete and funded
EU Biodiversity Strategy	Restore 20% of degraded ecosystems by 2030	Active participation in habitat restoration projects

Within the Erasmus+ framework, projects such as DCCEC (Digital Citizenship Culture in European Community) integrate environmental citizenship into youth education programmes, directly connecting local action and school-based learning to European-level policy and the SDGs.

Identifying Needs and Developing Programs

Identifying Needs and Developing Programs

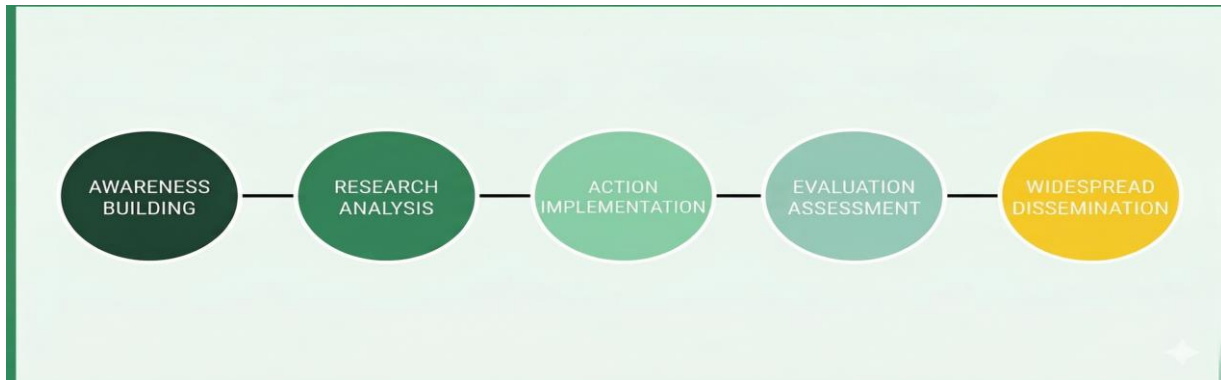


Fig 2. Green Citizenship Education Program Cycle.

Designing effective green citizenship education for 14–18-year-olds begins with understanding where learners currently stand: their knowledge, attitudes, behaviours, and motivations. A needs analysis identifies knowledge gaps, misconceptions, and the environmental issues learners most care about — ensuring that subsequent programme design is relevant, engaging, and contextually grounded.

The programme development cycle operates through five iterative stages: Awareness → Research → Action → Evaluation → Dissemination. This cycle mirrors the process of genuine environmental citizenship itself, transforming learners from passive recipients of information into active agents of environmental change.

Why Needs Analysis Matters

- Avoids generic content that fails to engage the specific cohort.
- Reveals local environmental issues that can serve as authentic learning contexts.
- Identifies which students have prior experience (e.g. family recycling habits, outdoor activities) that can enrich peer learning.
- Provides a baseline against which learning outcomes can later be measured.
- Builds student ownership of the programme from the outset — young people whose concerns shape the curriculum are more invested in its outcomes.



Survey on Green Citizenship

A short pre-programme survey, administered before the first lesson, gives educators the data needed to calibrate scenarios, choose relevant local examples, and adapt language to the group's existing level. The table below provides a sample survey instrument.

Survey Domain	Sample Question
Prior Knowledge	Can you name three causes of climate change?
Attitudes	How concerned are you about environmental problems in your area? (1–5 scale)
Behaviours	How often does your household recycle or sort waste? (Never / Sometimes / Always)
Motivation	If you wanted to help the environment, what would stop you? (Open-ended)
Policy Awareness	Do you know what the EU Green Deal is? (Yes / Heard of it / No)
Learning Preference	Which learning style suits you best? (Project / Debate / Field Work / Digital)
Local Concern	What is the most serious environmental problem in your neighbourhood? (Open-ended)

Survey responses should be analysed both quantitatively (average scores, frequency distributions) and qualitatively (student narrative responses to open-ended questions). Findings directly inform which scenarios are prioritised, the sequencing of content, and the selection of local examples for fieldwork activities.

Program Development Elements

A well-designed green citizenship education programme for the 14–18 age group integrates the following seven elements. Each element is addressed explicitly within the ten learning scenarios presented in Part 5 of this e-book.

Element	Description
Target Audience Analysis	Age, prior knowledge, cultural context, language background, and environmental concerns are all profiled before content selection.
Needs Identification	Survey, focus group, and classroom observation data are synthesised to identify knowledge gaps, attitudinal barriers, and motivational levers.
Learning Objectives	Measurable outcomes are defined across three domains: knowledge (what students understand), skills (what they can do), and values/dispositions (what they care about).
Content Selection	EU environmental policies, local ecological issues, and global SDGs are balanced to ensure both relevance and breadth.
Methodology Selection	Inquiry-based learning, project work, debate, digital storytelling, and fieldwork are combined according to the scenario and learning objectives.
Assessment	Knowledge tests, process portfolios, peer evaluation, and reflective journals are used in combination — authentic, meaningful, and aligned to GreenComp.
Dissemination	Student work is shared with the school community, local authorities, the DCCEC partner network, and — where possible — local or national media.

Programme quality is greatest when students have a genuine voice in content selection and scenario design. A student "Green Advisory Group" consulted at programme design stage significantly increases engagement, ownership, and the relevance of selected contexts.



Analyzing Survey Results

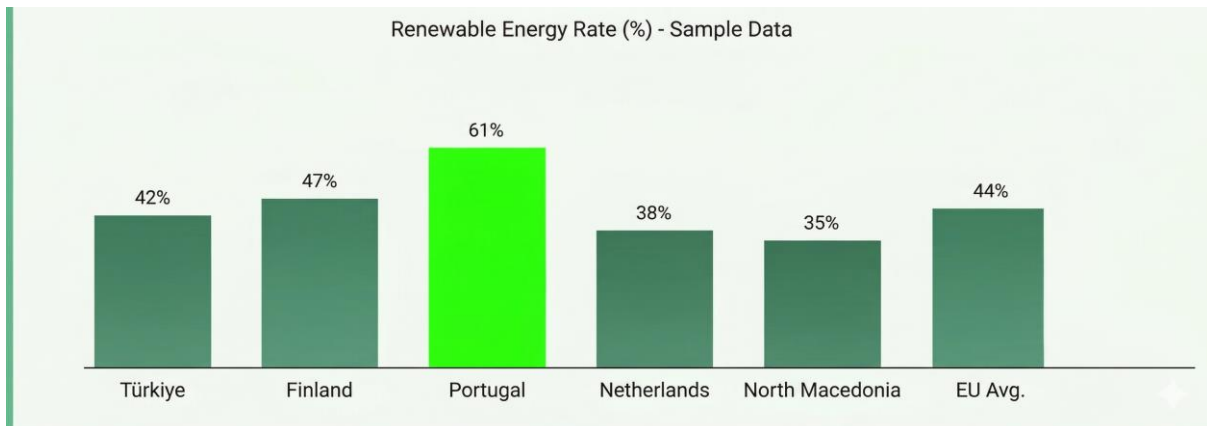


Fig 3. Renewable Energy Rate (%) – DCCEC Partner Countries (Sample Data)

Survey data is best presented visually — bar charts comparing knowledge scores across topics, pie charts showing preferred learning styles, word clouds generated from open-ended responses about local environmental concerns. Visual analysis makes findings accessible to all stakeholders, including students themselves.

Key analytical questions include: Which environmental concepts do students understand least? Which issues generate the highest concern? What are the main motivational barriers? What prior positive environmental behaviours already exist that the programme can build upon?



Integrating Green Citizenship Principles into Education

Green citizenship does not require a standalone subject. Its principles can be integrated across the existing school curriculum, enriching Biology (ecosystem science), Geography (climate and land use), Physics (energy), Chemistry (pollution), Social Studies (environmental justice and policy), Media Literacy (environmental communication), and Art (creative responses to ecological themes).

Subject Area	Green Citizenship Integration Examples
Biology	Biodiversity audits, ecosystem services mapping, species identification fieldwork.
Geography	Carbon footprint mapping, GIS environmental justice analysis, climate data interpretation.
Physics & Chemistry	Renewable energy calculations, pollution chemistry, lifecycle assessment of products.
Social Studies	EU Green Deal policy analysis, mock parliament debates, environmental justice case studies.
Media Literacy	Digital environmental storytelling, campaign analysis, fact-checking climate claims.
Art & Design	Urban green infrastructure design challenge, art-from-waste competitions, visual advocacy posters.
Home Economics	Farm-to-fork food systems workshop, sustainable school menu design.

Developing Recommendations for Educational Programs

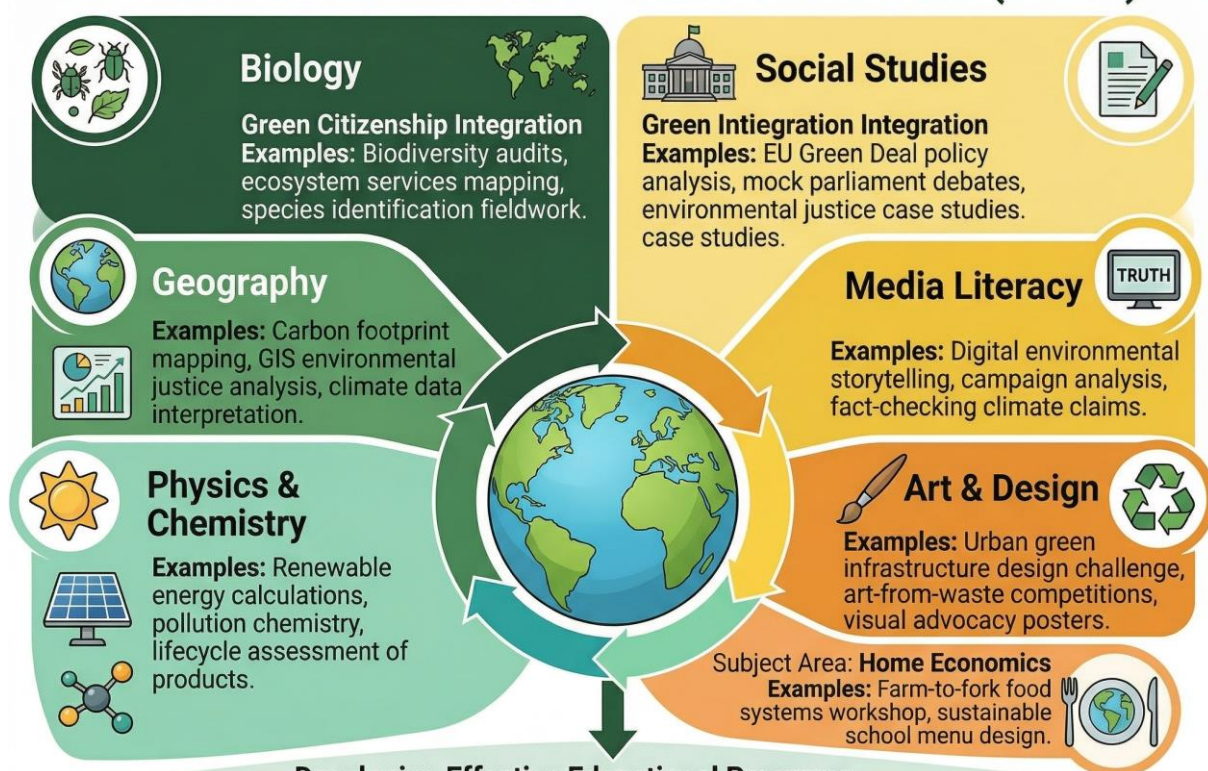
Drawing on needs analysis data, European sustainability frameworks (GreenComp), and the DCCEC project's cross-national learning, the following recommendations guide the design of effective green citizenship education programmes for 14–18-year-olds.

1. Ground learning in local, authentic contexts — students engage most deeply when the environmental issue under study is visible in their daily lives.
2. Ensure genuine audience and action — every scenario should culminate in students presenting work to a real external audience or taking a concrete, documented environmental action.
3. Balance challenge and support — environmental content can be emotionally heavy (climate anxiety is real among young people). Build in space for constructive hope and agency alongside uncomfortable truths.
4. Use cross-national comparison — partner school exchanges within the DCCEC network allow students to discover how similar issues are approached in Finland, Portugal, the Netherlands, and North Macedonia.
5. Centre student voice — students' own identified environmental concerns should shape content selection and the framing of scenarios wherever possible.

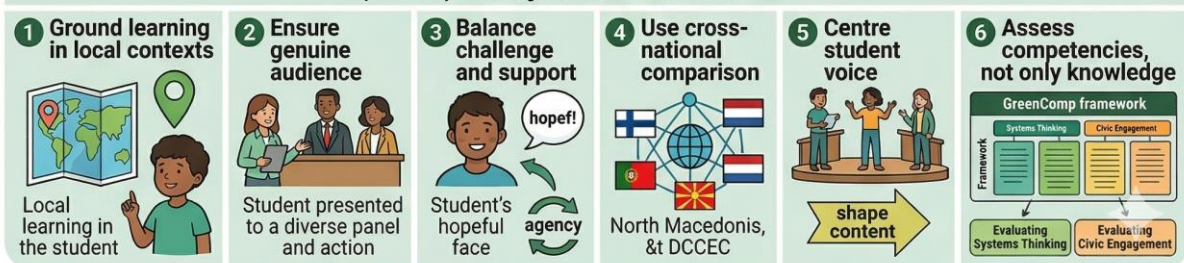
6. Assess competencies, not only knowledge — use GreenComp as the assessment framework, evaluating systems thinking, civic engagement, action competence, and values alongside factual recall.

The ten learning scenarios in Part 5 of this e-book are direct translations of these recommendations into classroom and community practice, designed specifically for the 14–18 age group within the DCCEC project framework.

Developing and Integrating Green Citizenship Education: A Curricular and Recommended Framework (14-18)



Developing Effective Educational Programs (14-18): 6 Key Recommendations



Green Citizenship Curriculum and Activities

Curriculum and Activities

The Green Citizenship curriculum for ages 14–18 is organised into three interconnected learning rings: (1) Conceptual Foundation — environmental rights, climate science, EU policies; (2) Analytical Skills — data interpretation, systems thinking, policy analysis; (3) Action Competencies — project management, communication, advocacy, and creative problem-solving.

These three rings are connected through lessons, project work, and extracurricular activities. The curriculum is designed for cross-disciplinary integration across Biology, Geography, Social Studies, ICT, Media Literacy, and the Arts.



Fig 4. 10 Learning Scenarios – Gradual Structure

Curriculum Overview

Phase	Scenarios	Focus
Foundation (1–3)	Carbon Footprints; Biodiversity Audit; Mock Parliament	Core environmental literacy and democratic engagement
Active Citizenship (4–6)	Zero-Waste Campaign; Farm-to-Fork; Environmental Justice Map	Community action, advocacy, and justice literacy
Digital & Entrepreneurial (7–8)	Renewable Energy Pitch; Digital Storytelling	Digital civic skills and green entrepreneurship
Design & Research (9–10)	Urban Green Infrastructure; Capstone Action Research	Systems design, community engagement, and autonomous inquiry



Curriculum Design and Environmental Policy Differences

Partner countries in the DCCEC project — Türkiye, Finland, Portugal, the Netherlands, and North Macedonia — each have distinct national environmental policy contexts, energy mixes, biodiversity profiles, and civic culture. Effective curriculum design acknowledges these differences and uses them as comparative learning opportunities rather than treating EU policy as a uniform monolith.

Country	Key Environmental Context	Curriculum Adaptation Note
Türkiye(Hatay) Türkiye(Söke)	Rapid renewable energy growth; coastal biodiversity; water stress in Aegean and Mediterrenian region	Focus on local Aegean and Mediterrenian ecosystem and Türkiye's energy transition as a case study
Finland	World leader in circular economy and forest management; high climate literacy	Use as a model for sustainable resource management; connect to Finnish outdoor education tradition
Portugal	High solar/wind energy share; Atlantic biodiversity; fire risk from climate change	Use wildfire and renewable energy as authentic local contexts for scenarios
Netherlands	Below sea-level geography; world-leading water management; progressive circular economy	Sea-level rise as a visceral climate justice case; circular economy as an entrepreneurship model
N. Macedonia	Significant air pollution challenges; biodiversity-rich but economically constrained	Use environmental justice scenarios; connect to EU accession and environmental standards

Cross-national scenario: in Scenario 8 (Digital Storytelling), students from each partner country produce an environmental story. Schools then exchange stories and provide peer feedback. This transforms policy differences into a rich comparative learning experience.

Teaching Strategies and Extracurricular Activity Selection

The ten scenarios in this e-book deploy a range of research-validated pedagogical strategies. The choice of strategy in each scenario is driven by the learning objectives, the age group's developmental stage, and the authentic environmental context.

Strategy	Description and Application Example
Inquiry-Based Learning	Students pose questions, collect and analyse data, and present evidence-based conclusions. Used in Scenarios 1, 2, and 4.
Project-Based Learning	Students address a real problem through an extended project with a genuine product and audience. Used in Scenarios 4, 7, and 10.
Debate and Role Play	Students argue from assigned stakeholder positions to develop empathy and argumentation skills. Used in Scenario 3.
Digital Storytelling	Students produce original media (video, podcast, photo essay) on an environmental theme. Used in Scenario 8.
Fieldwork and Citizen Science	Students collect real data in outdoor settings and contribute to European databases. Used in Scenarios 2 and 6.
Community Consultation	Students engage with real local stakeholders to design evidence-based solutions. Used in Scenarios 5 and 9.
Design Thinking	Students apply a structured innovation process to produce a community-relevant green solution. Used in Scenarios 7 and 9.

Recommended Extracurricular Activities

- Biodiversity survey of school grounds and upload to iNaturalist
- 30-day Zero-Waste Challenge across the entire school community
- Climate Cafe: exploring climate science through a card game
- Visit to a local renewable energy installation (solar farm, wind turbine, biogas plant)
- School garden project — growing seasonal, local produce
- Art-from-waste design competition judged by external guests
- Letter-writing campaign to local municipality or regional authority
- DCCEC partner school digital exchange: share environmental stories and data

Implementing Green Citizenship Education

Developing an Implementable Green Citizenship Education Program for Institutions

For green citizenship education to take root in a school or youth organisation, three conditions must be met simultaneously: institutional leadership support, curriculum integration, and community partnerships. Without leadership support, programmes remain isolated pilot projects. Without curriculum integration, they become add-on activities that compete with core timetable priorities. Without community partnerships, learning remains theoretical and disconnected from real civic life.

Implementation Phase	Key Actions
Preparation (Months 1–2)	Conduct needs survey; secure leadership commitment; identify partner NGO or local authority; review curriculum integration opportunities.
Design (Months 2–3)	Map scenarios to curriculum subjects; plan fieldwork logistics; prepare materials, assessment rubrics, and parent communication.
Implementation (One Semester)	Deliver scenario-based lessons; organise field sessions and guest speakers; begin portfolio process; maintain student green team.
Evaluation	Apply process evaluation (portfolio, observation) and outcome evaluation (pre–post knowledge test, stakeholder feedback, documented actions).
Dissemination	Share student work on school website, local media, and DCCEC partner network; present at community event or school conference.
Institutional Embedding	Revise programme for next year using student and teacher feedback; embed in school development plan; train new staff.

Schools that appoint a student-led "Green Team" with a genuine brief — conducting audits, advising on scenario selection, and leading dissemination events — report significantly higher programme engagement and more durable behaviour change.

Implementing Green Citizenship Education for Educators

Educators do not need to be environmental scientists to implement this programme effectively. They do need: a working knowledge of EU environmental policy, confidence in facilitative pedagogy, access to assessment tools aligned to GreenComp, and a network of peer educators for mutual support.

Training Component	Format and Duration
EU Green Deal and GreenComp Orientation	2-hour online module; self-paced with discussion forum
Scenario-Based Learning Design Workshop	Half-day face-to-face session; focus on adapting scenarios to local context
Assessment Tools Development	3-hour online session; building portfolios, rubrics, and peer assessment forms
Cross-National Educator Exchange (DCCEC)	1-hour video conference with partner country educator; share good practice
In-Programme Coaching	2 classroom observation visits during implementation; peer coaching protocol
Post-Programme Reflection	1-hour structured debrief with school leadership; recommendations for next cycle

The educator's most important shift is from "expert who gives correct answers" to "facilitator who guides students to find their own evidence-based conclusions." Uncertainty and complexity are not problems to be avoided — they are the very fabric of genuine environmental citizenship education.



Green Citizenship Education Curriculum

Module 1: Foundations of Green Citizenship

- Definition and history of green citizenship (from Rio 1992 to the EU Green Deal 2019)
- Key theories and thinkers: T.H. Marshall's citizenship framework extended to environmental rights; Andrew Dobson on ecological citizenship; the Brundtland Commission on sustainability
- Importance of environmental welfare in modern societies: ecosystem services, biodiversity, climate stability
- Citizens' environmental rights and responsibilities under EU and international law
- Introduction to the GreenComp Sustainability Competence Framework

Module 2: Environmental Policies and Ecosystem Services

- The role of environmental policies in ensuring long-term welfare and security
- Overview of EU environmental governance systems: the European Green Deal, EU Climate Law, ETS
- Education, public health, and employment as intersecting environmental rights
- Case studies of successful environmental programmes: Dutch water management, Finnish circular economy, Portuguese renewable energy transition
- Analysis of environmental policy differences across DCCEC partner countries

Module 3: Implementing Green Citizenship in Education

- Strategies for integrating green citizenship across curriculum subjects (cross-disciplinary approaches)
- Extracurricular activities that promote genuine civic environmental engagement
- Methods for assessing the impact of green citizenship education (GreenComp-aligned rubrics)
- Best practices in environmental welfare, inclusion, and environmental justice

GreenComp Competency	Assessment Method
Knowledge Understanding &	Written test, research report, concept map, policy brief
Critical Thinking	Essay, debate performance, case study analysis, argument evaluation
Systems Thinking	Action research projects, systems mapping, interdependency analysis
Civic Engagement	Campaign portfolios, stakeholder presentations, letters to authority



GreenComp Competency	Assessment Method
Action Competence	Capstone project, evidence of action taken, peer assessment
Values & Attitudes	Reflective journal, self-assessment rubric, pre–post attitude survey

Assessment in green citizenship education must ask not only "what does this student know?" but "what can this student do, and what kind of citizen are they becoming?" Authentic assessment before a real audience is always more meaningful than a test paper.



10 Learning Scenarios — Ages 14–18

The ten scenarios below are designed for educators and youth workers working with 14–18-year-old students in formal and non-formal educational settings. Each scenario is self-contained but also fits within the progressive structure described above. They have been developed to be contextually adapted by partner educators across Turkey, Finland, Portugal, the Netherlands, and North Macedonia.

Scenario

1

The Carbon Footprint Investigation

Overview

Students investigate their personal and household carbon footprints using online calculators and structured data-collection tools. They compare results within their class and with EU and global averages, developing data literacy alongside a personal sense of responsibility.

Learning Objectives

1. Calculate and interpret personal carbon footprint data across key consumption categories. 2. Identify the major sources of greenhouse gas emissions in their daily lives. 3. Develop, justify, and commit to a personal carbon reduction plan.

Age Group & Subject

14–18 | Science, Geography, or Citizenship Studies

Duration

4 lessons × 45 minutes (may be spread across 2 weeks)

Methodology

Inquiry-based learning. Students begin with a hypothesis about their carbon footprint, collect data using the EU Carbon Footprint Calculator, analyse results in small groups, and present findings in a whole-class "Carbon Summit" that concludes with a democratic vote on one collective pledge.

Step-by-Step Activities

Lesson 1: Introduction to greenhouse gases and climate science; watch and discuss a short documentary clip (e.g., a BBC or DW climate segment). | Lesson 2: Individual carbon calculation across four categories — travel, diet, energy use, consumption. Record results in a data table. | Lesson 3: Data comparison session — personal score vs. class average vs. EU average vs. global average. Identify outliers. Discuss what drives differences. | Lesson 4: "Carbon Summit" — groups present one carbon reduction strategy each; class votes on the single most impactful collective action; write up the pledge and post it in the classroom.

Expected Outcomes

Measurable climate literacy; personal agency in emission reduction; experience of democratic decision-making about environmental action; documented individual and collective pledges.



EU Connection

European Green Deal | Fit for 55 Package | EU Emissions Trading System (ETS) | SDG 13 (Climate Action)

Assessment

Written personal carbon reduction plan (300 words); peer evaluation of Carbon Summit presentation using a structured rubric; data analysis worksheet.



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2

Biodiversity Audit of the School Grounds

Overview

Students conduct a systematic biodiversity audit of their school's outdoor spaces, recording species of plants, insects, birds, and fungi. Verified data are uploaded to the iNaturalist citizen science platform, contributing authentic information to EU biodiversity monitoring databases.

Learning Objectives

1. Apply field observation and species identification skills in a real ecological context. 2. Understand biodiversity as the primary indicator of ecosystem health. 3. Contribute authentic, verified data to European citizen science initiatives.

Age Group & Subject

14–17 | Biology, Environmental Science, or Nature Studies

Duration

5 lessons + 2 field sessions (approximately 6 hours in total)

Methodology

Citizen science. Students function as genuine scientists contributing to live European biodiversity monitoring. Teams are assigned different zones (lawn, hedgerow, planted beds, mature trees) and equipped with identification guides, magnifying lenses, and smartphone identification apps (e.g. iNaturalist, PlantNet).

Step-by-Step Activities

Pre-field (Lesson 1): Introduction to biodiversity concepts; EU Biodiversity Strategy 2030 targets; Natura 2000 network explained. | Field Session 1: Grid-based plant survey using quadrats; photography; species ID apps. | Field Session 2: Invertebrate survey using sweep nets and pitfall traps; bird listening walk with audio guides. | Lesson 2 (Classroom): Data verification and upload to iNaturalist; create species richness heatmap for the school site. | Lesson 3 (Final): Small groups present findings to school management; recommend specific habitat improvements (e.g. wildflower strips, insect hotels, bird boxes).

Expected Outcomes

Scientific field observation skills; experience of authentic contribution to EU science; actionable school habitat improvement recommendations produced for a real decision-making audience.

EU Connection

EU Biodiversity Strategy 2030 | Natura 2000 network | GBIF (Global Biodiversity Information Facility) | SDG 15 (Life on Land)

Assessment

Species survey data sheet (submitted to iNaturalist); individual reflection journal (3 entries); group habitat improvement proposal report.

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3

Climate Justice Debate and Mock Parliament

Overview

Students participate in a structured mock parliamentary debate on a real EU climate policy proposal. Assigned stakeholder roles — member states, industries, NGOs, and youth delegations — they research, argue, and vote, experiencing the complexity of democratic environmental governance first-hand.

Learning Objectives

1. Understand the intersection of climate science, policy, and democratic governance. 2. Develop evidence-based argumentation and active listening skills. 3. Experience the EU legislative process as an engaged young citizen.

Age Group & Subject

15–18 | Social Studies, Philosophy/Ethics, or Geography

Duration

3 lessons × 45 minutes (preparation + debate + debrief)

Methodology

Role play and deliberative democracy. Students are assigned real stakeholder roles — Turkey – Hatay Governorship: Regional public authority, focusing on disaster management and energy security; Turkey – Söke District Directorate of National Education: Education policymaker, emphasizing youth awareness and curriculum integration; Finnish Company: Private sector actor, advocating for innovative green technologies and sustainable investments; Portuguese High School: Youth and education institution, highlighting the social impacts of climate change; Dutch College: Academic institution, presenting research-based perspectives on European environmental policies; Macedonian Association: Civil society organization, stressing community participation, local interests, and social justice — and must research and argue from that position even if it differs from their personal views. Assigned roles rotate if time allows.

Step-by-Step Activities

Lesson 1: Introduction to chosen policy (e.g. Carbon Border Adjustment Mechanism); assign stakeholder roles; guided research session to build position papers. | Lesson 2: Mock Parliament in session — opening statements (2 min each), structured questions, rebuttals, proposed policy amendments; facilitator (teacher) ensures equal speaking time; class votes on final policy text. | Lesson 3: Debrief — compare debate positions to real EU outcome; discuss what "environmental justice" means in practice; personal reflection on what changed in their thinking.

Expected Outcomes

Deep understanding of environmental policy complexity; empathy for diverse stakeholder perspectives; confidence in democratic participation; documented policy position papers.

EU Connection

EU Emissions Trading System | Fit for 55 | Carbon Border Adjustment Mechanism | Just Transition Fund | SDG 16 (Peace, Justice, and Strong Institutions)

Assessment

Stakeholder position paper (research brief, 400 words); peer assessment of debate performance; individual reflection essay on environmental justice (200 words).

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4

Zero-Waste Challenge: 30-Day School Campaign

Overview

Students design, lead, and evaluate a 30-day Zero-Waste Challenge across their school. Using audit data, creative communications, and peer education, the campaign targets waste reduction in the cafeteria, classrooms, and corridors — demonstrating that institutional behaviour change is possible.

Learning Objectives

1. Apply circular economy principles within a real institutional setting. 2. Develop leadership, project management, and communication skills. 3. Measure, track, and report the environmental impact of behaviour change quantitatively.

Age Group & Subject

14–18 | Cross-curricular / Extracurricular project (best as a school-wide initiative)

Duration

4-week campaign; 6 planning lessons (pre-campaign); 2 evaluation sessions (post-campaign)

Methodology

Project-based learning with genuine community impact. An elected student "Green Team" (6–8 students) coordinates the campaign. They conduct a 3-day baseline waste audit, set measurable reduction targets, design all communications materials, train one peer ambassador per class, and present end results to school leadership with evidence-based policy recommendations.

Step-by-Step Activities

Week 0: Baseline waste audit — weigh and categorise all school waste over 3 consecutive days. | Week 1: Launch event — all-school assembly presentation; poster and video campaign; waste sorting stations installed in key locations. | Weeks 2–3: Daily Green Team check-ins; peer ambassador class visits; social media updates; art-from-waste competition launched. | Week 4: Final waste audit; quantitative comparison with baseline; press release to local newspaper or school website. | Debrief: Structured reflection on what worked and what did not; formal written proposals for 3 permanent school policy changes.

Expected Outcomes

Measurable reduction in school waste (target: $\geq 20\%$ in at least 2 waste categories); permanent behaviour change documented; students demonstrate real-world project leadership and systems thinking.

EU Connection

EU Circular Economy Action Plan | Waste Framework Directive | SDG 12 (Responsible Consumption and Production)

Assessment

Waste audit data report (pre and post); campaign portfolio (all materials produced); evidence-based presentation to school management; peer evaluation of team roles.



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5

Sustainable Food Systems: Farm-to-Fork Workshop

Overview

Through a series of interactive workshops, students explore the environmental impact of food — connecting diet choices, agricultural practices, food miles, and climate change. The scenario culminates in designing a "sustainable school menu" and presenting it to the school canteen manager with an evidence base.

Learning Objectives

1. Understand the lifecycle environmental impact of different food choices. 2. Connect personal dietary decisions to global environmental and social systems. 3. Develop practical skills in sustainable meal planning and evidence-based civic advocacy.

Age Group & Subject

14–18 | Home Economics, Biology, Geography, or Citizenship Studies

Duration

5 lessons (one lesson is a cooking practical)

Methodology

Experiential and inquiry-based learning. Students analyse lifecycle assessment data and food carbon footprint databases, hear from a guest speaker (local organic farmer or food policy NGO), and prepare a traditional low-carbon seasonal recipe in the cooking practical. Cross-national dimension: compare the carbon footprint of traditional dishes from Türkiye, Finland, and Portugal.

Step-by-Step Activities

Lesson 1: The global food system — environmental impacts of food production, food miles, land use change, water footprint. | Lesson 2: Food carbon footprint comparison — beef vs. lentils vs. tofu vs. chicken vs. dairy. Students rank foods by carbon cost per 100 g of protein. | Lesson 3: Guest speaker — local organic farmer or food policy NGO representative; Q&A. | Lesson 4: Cooking practical — prepare a seasonal, locally sourced, low-carbon recipe; calculate the recipe's carbon footprint. | Lesson 5: Design and pitch "Sustainable School Menu" to canteen manager, with carbon and cost analysis supporting the proposal.

Expected Outcomes

Practical food literacy; genuine advocacy experience; understanding that cultural food heritage and environmental responsibility are mutually reinforcing rather than in tension.

EU Connection

Farm to Fork Strategy | EU Organic Action Plan | Common Agricultural Policy reform | SDG 2 (Zero Hunger) | SDG 12

Assessment

Food footprint comparison infographic; sustainable menu proposal with supporting evidence; cooking practical journal entry; peer evaluation of canteen pitch.



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Mapping Environmental Justice in Our City

Overview

Using open data sources and free GIS mapping tools, students investigate which neighbourhoods in their city bear the greatest environmental burdens — pollution, lack of green space, flood risk — and analyse whether these burdens fall disproportionately on lower-income or marginalised communities.

Learning Objectives

1. Apply digital mapping and spatial data analysis skills to real environmental questions. 2. Understand environmental justice as both a social and a civic concept. 3. Produce an evidence-based advocacy brief for equitable urban environmental policy.

Age Group & Subject

15–18 | Geography, Social Studies, or ICT

Duration

6 lessons (2 data analysis sessions + 1 neighbourhood field visit + 3 desk lessons)

Methodology

Data literacy and spatial analysis using freely available tools: Google My Maps, OpenStreetMap, EU Environment Agency open data, national air quality monitoring APIs. Teams represent different city districts; each produces a district environmental profile that feeds into a city-wide environmental justice map and a 500-word policy brief addressed to the local municipality.

Step-by-Step Activities

Lesson 1: Introduction to environmental justice — theory, EU legal framework, case studies from partner countries. | Lesson 2: Identify and access local datasets (air quality index, noise levels, urban green space coverage, flood risk zones, household income maps). | Lessons 3–4: GIS mapping workshop — overlay multiple data layers to reveal correlations between environmental exposure and socio-economic status. | Field visit: Walk two contrasting neighbourhoods; photograph and document differences in air quality, green space, building quality, and traffic. | Lesson 5: Policy brief writing — structured template provided; evidence from map analysis used to justify recommendations. | Lesson 6: Class presentations to invited stakeholder (local councillor, NGO representative, or urban planner); peer Q&A.

Expected Outcomes

Digital civic skills; environmental justice literacy; genuine advocacy experience; documented policy brief submitted to real decision-maker.

EU Connection

EU Environmental Justice principle | European Environment Agency open data | Aarhus Convention | Urban Agenda for the EU | SDG 10 (Reduced Inequalities) | SDG 11 (Sustainable Cities)

Assessment

Environmental justice map product; policy brief (500 words, evidence-based); stakeholder presentation evaluated by rubric; peer review of one other group's brief.



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Renewable Energy Entrepreneurs

Overview

Students become renewable energy entrepreneurs, designing a community energy project (solar, wind, biomass, or geothermal) for their school or neighbourhood. They research technology options, model costs and savings, consider social dimensions, and pitch their proposal to a panel of "investors" (teachers and community guests).

Learning Objectives

1. Understand the key renewable energy technologies and their environmental and economic benefits. 2. Apply systems thinking to local community energy transition challenges. 3. Develop green entrepreneurship, financial literacy, and presentation skills.

Age Group & Subject

15–18 | Physics, Economics, Environmental Science, or Entrepreneurship

Duration

6 lessons + 1 Pitch Day (approximately 3–4 weeks)

Methodology

Entrepreneurship and design thinking. Teams of 3–4 students follow a four-stage innovation process: Discover (research technologies and local energy data), Define (identify the specific community problem), Develop (design the project with cost-benefit modelling), Deliver (5-minute pitch + Q&A). Cross-national dimension: compare energy costs and renewable potential in Turkey vs. the Netherlands vs. Finland.

Step-by-Step Activities

Lessons 1–2: Energy literacy — current energy mix in each partner country, EU renewable energy targets, overview of solar PV, wind, biomass, and geothermal technologies. | Lesson 3: Site-specific analysis — solar irradiance, wind speed, and grid connection data for the local area. | Lessons 4–5: Business plan development — technology selection, installation cost estimates, annual energy savings, payback period, financing options (EU Green Funds, energy cooperatives, community bonds). | Pitch Day: Each team presents their proposal to a panel; audience votes for most innovative and most feasible; winning proposal is written up as a letter to the school or municipal authority.

Expected Outcomes

Understanding of energy transition mechanics; green entrepreneurial agency; financial and systems literacy; experience pitching ideas to a real decision-making audience.

EU Connection

EU Renewable Energy Directive | REPowerEU | European Energy Communities | SDG 7 (Affordable and Clean Energy) | SDG 9 (Industry, Innovation, and Infrastructure)

Assessment

Business plan document (structured template); pitch evaluation rubric (evidence quality, creativity, financial viability, presentation clarity); peer team assessment.



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Climate Stories: Digital Storytelling for Environmental Advocacy

Overview

Students create original 2–4 minute digital stories — video, podcast, or photo essay — documenting a local environmental issue or profiling a green community hero. Stories are screened in class, shared on the school website, and submitted to the DCCEC cross-national digital showcase.

Learning Objectives

1. Communicate environmental issues compellingly and accurately to diverse audiences. 2. Apply digital media production skills in a civic advocacy context. 3. Document and amplify community-level environmental action to a European audience.

Age Group & Subject

14–18 | Media Literacy, ICT, Citizenship, or any subject as a cross-curricular project

Duration

5 lessons + 1–2 weeks of independent production time

Methodology

Digital storytelling combined with media literacy analysis. Students learn the principles of effective environmental communication: solutions-focused framing, emotional connection without despair, use of credible evidence, personal narrative alongside structural explanation. Partner school exchange: each DCCEC country class shares its best three stories with partner schools and provides structured feedback.

Step-by-Step Activities

Lesson 1: Analyse 3–4 environmental campaigns (effective and ineffective) — what makes a message land? What creates engagement without generating helplessness? | Lesson 2: Story selection — identify a local environmental issue or green community hero; story-planning canvas completed (character, problem, action, message). | Lesson 3: Media production skills workshop — basic filming, audio recording, photo composition, free editing tools (DaVinci Resolve, Audacity, Canva). | Independent production (1–2 weeks): Produce the 2–4 minute digital story with teacher check-ins. | Lesson 4: Peer review using structured feedback protocol (2 stars and a wish); revise and finalise. | Lesson 5: Class screening; stories submitted to DCCEC partner network; debrief on what was learned about environmental communication.

Expected Outcomes

Confident environmental communicators; digital civic skills; cross-European connection through shared stories; documented environmental advocacy outputs.

EU Connection

European Digital Media Observatory | Erasmus+ digital learning goals | SDG 13 (Climate Action) | SDG 4 (Quality Education — digital literacy)

Assessment

Final digital story (self-assessment + structured peer assessment); production journal (3 reflection entries); cross-school feedback form completed.

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Urban Green Infrastructure Design Challenge

Overview

Students become urban planners and design a green infrastructure intervention for a real, degraded or underused space in their community — a concrete schoolyard, a vacant lot, a polluted stream corridor. Applying ecosystem services knowledge, urban ecology, and community consultation, they produce a design that is both ecologically functional and socially inclusive.

Learning Objectives

1. Understand green infrastructure, nature-based solutions, and urban ecosystem services.
2. Apply participatory design thinking to a real urban environmental challenge.
3. Engage authentic community stakeholders to produce inclusive, evidence-based spatial designs.

Age Group & Subject

15–18 | Geography, Biology, Art & Design, or Architecture/Technology

Duration

7 lessons (including 1 site visit and 1 community consultation event)

Methodology

Place-based and participatory design. Students visit the chosen site, consult with at least 5 community members (elderly residents, local children, nearby businesses), research relevant ecosystem services, and produce a scaled design proposal using hand drawing, physical model, or digital tools (Google SketchUp, Canva, or similar). European case studies (Amsterdam's Rooftop Revolution, Malmö's Augustenborg eco-district) are used for inspiration.

Step-by-Step Activities

Lesson 1: What is green infrastructure? Why does it matter for cities? Case studies from Amsterdam, Malmö, and Aydın. | Lesson 2: Site visit(Virtual or if available on place) — map the chosen space; photograph problems and opportunities; note soil, light, water, and biodiversity conditions. | Lesson 3: Ecosystem services mapping — what functions could green infrastructure provide on this site? (stormwater management, cooling, biodiversity, social cohesion, food growing?) | Community Consultation: Interview/survey ≥5 community members; document their needs, wishes, and concerns. | Lessons 4–5: Design studio — produce annotated site plan with ecological, social, and maintenance features labelled. | Lesson 6: Present to invited stakeholders (municipality officer, NGO, community members); receive feedback. | Lesson 7: Reflect; revise if time allows; submit to any active municipal greening consultation process.

Expected Outcomes

Community engagement skills; professional-quality design artefact; experience linking environmental planning with democratic participation; documented community needs assessment.

EU Connection

EU Green Infrastructure Strategy | Nature-Based Solutions (NbS) policy | Urban Agenda for the EU | SDG 11 (Sustainable Cities and Communities) | SDG 15

Assessment

Design portfolio (site analysis report + annotated final design); community consultation log (evidence of ≥5 conversations); stakeholder presentation peer and self-assessment.

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Green Citizenship Action Research Project (Capstone)

Overview

The capstone scenario. Students conduct a small-scale action research project on a self-selected environmental citizenship question in their own community. They complete a full research cycle — question, literature review, data collection, analysis, concrete action, and reflection — and present findings at a school or community event.

Learning Objectives

1. Apply academic research skills to a real-world environmental citizenship question of personal relevance. 2. Develop autonomous environmental agency and evidence-based problem-solving capacity. 3. Experience the complete citizenship cycle: understand → analyse → act → reflect → share.

Age Group & Subject

16–18 | Any subject — ideally a semester-long cross-curricular capstone project

Duration

8–10 weeks (flexible; integrated with regular timetable across subjects)

Methodology

Action research: a cyclical process of questioning, investigating, acting, and reflecting in which knowledge and action are produced together. Students choose their own research focus (e.g. "Why is the river near our school polluted, and what can we do?" or "How do elderly residents in our neighbourhood experience summer heat stress, and what green infrastructure would help?"). Supported by a teacher mentor, they design a small mixed-methods study and implement one concrete, documented action.

Step-by-Step Activities

Weeks 1–2: Select research question; conduct structured literature review (EU/national policy context + local evidence). | Weeks 3–4: Primary data collection — student-designed surveys, semi-structured interviews, field observation, or secondary data analysis. | Weeks 5–6: Data analysis and interpretation; identify root causes and key leverage points for change. | Week 7: Design and implement one concrete action — formal letter to a public authority, community information event, small-scale habitat improvement, or environmental media piece. | Week 8: Structured reflection — what changed? What was learned? What would I do differently? What should happen next? | Final Presentation: At a school Environment Day, community event, or DCCEC cross-national virtual showcase.

Expected Outcomes

Students emerge as genuine green citizens — with the knowledge, skills, values, and disposition to identify, research, and act on environmental challenges throughout their lives. This scenario is the culmination of the entire programme.



EU Connection	All DCCEC modules (C1–C7) EU Environmental Education Framework Erasmus+ youth learning outcomes All 17 SDGs GreenComp full framework
Assessment	Research report (1,500–2,000 words; structured template provided); documented evidence of action taken; reflective journal (minimum 4 entries); peer and self-assessment; final presentation evaluated by rubric (content + delivery + civic impact).

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