



Project Number: 2022-1-IT02-KA220-SCH-000087872



Syllabus for Sustainable Development

Methodological Framework



Co-funded by the
Erasmus+ Programme
of the European Union

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Contents

1. Introduction	3
2. General Objectives	4
3. Didactic Principles	5
4. Learning Objectives	6
5. Content	6
6. Syllabus structure	7
7. Assessment	7





1. Introduction

This Trans-national Pilot Syllabus is designed for those students in the first two years of secondary school. The syllabus aims to provide students with the knowledge, skills and competences to take an active role in Sustainable Development. The European Union sets out the broad principles of sustainable development from the strategic objectives of the United Nations' Agenda 2030. At the same time, the development of a European sustainability competence framework is one of the policy actions set out in the European Green Deal as a catalyst to promote learning on environmental sustainability in the European Union. It provides a common ground to learners and guidance to educators, advancing a consensual definition of what sustainability as a competence entails.

This Trans-national Pilot Syllabus aims to make a significant contribution to the development of future European students. It is intended to endow them with a critical spirit and an awareness of sustainability. It is envisioned it would support them in being ready to play an active role in the 21st century world. This course is specifically designed for beginners.

In this way, this document presents the structure of a Syllabus for a course of study on Environmental and Sustainable Development transversal to the traditional school curricula of the first two years of secondary school.

It should be noted that the juridical principle on which the European Union's educational cooperation policy is grounded, since the Maastricht Treaty, is that the content of teaching and the organisation of educational systems are the exclusive competence of the Member States. If there is an area in which a convergence in the definition of learning outcomes, teaching content and methodologies seems to be gradually being achieved at European level, that is education for sustainability.

The education of "sustainable citizens" is one of the macro-objectives of the ongoing cooperation framework for the building of the European Education Area, shared by all national education systems of the European Union. Hence the statement of the Council of European Union in the Recommendation of 16 June 2022 on learning for the green transition and sustainable development (2022/c 243/01): "all European educators, whatever their discipline or sector of education, are sustainability educators who need to support their learners in preparing for the green transition". This principle of 'educational co-responsibility' translates into the cross-disciplinary nature of learning for sustainability and a whole-school approach advocated in all European documents.

The proposed syllabus structure is consistent with the general view of learning for sustainability that arises in European Union policy documents (EEA Strategic Framework-Working Group on Schools, Subgroup on Education for Environmental Sustainability): recognition of GreenComp as the framework for defining learning objectives; transversality with respect to disciplinary teaching; learner-centred pedagogies that emphasise active learning and task-based work; whole school approach.

As the school and subject curricula differ from country to country, a proposal for a syllabus at European level should have an "open" and "flexible" structure.

The aim is not to build a curriculum for learning for sustainability shared at European level but, while respecting the diversity and autonomy of educational systems, to develop a common framework in terms of teaching and pedagogical methodologies, assessment tools and expected learning outcomes and adaptable, in terms of content and thematic areas, to the reality of different Member States.





2. General Objectives

The secondary section of the secondary schools of the European educational systems has the two objectives of providing formal, subject based education and of encouraging students' personal development in a wider social and cultural context. Formal education involves the acquisition of knowledge and understanding, concepts and skills within each subject area. Personal development takes place in a range of spiritual, moral, social and cultural contexts. It involves an awareness of appropriate behaviour, an understanding of the environment in which students work and live, and a development of their individual identity.

These two objectives, which are in practice inseparable, are nurtured in the context of an enhanced awareness of the richness of European culture. Awareness and experience of a shared European life should lead students towards a greater respect for the traditions of each individual country and region in Europe, while developing and preserving their own national identities.

The students of the secondary schools of the European educational systems are future citizens of Europe and the world. As such, they need a range of competences if they are to meet the challenges of a rapidly-changing world. In 2006 the European Council and European Parliament adopted a European Framework for Key Competences for Lifelong Learning. It identifies eight key competences which all individuals need for personal fulfilment and development, for active citizenship, for social inclusion and for employment:

1. Literacy competence
2. Multilingual competence
3. Mathematical competence and basic competences in science and technology
4. Digital competence
5. Personal, social and learning to learn competence
6. Citizenship competence
7. Entrepreneurship competence
8. Cultural awareness and expression competence

The secondary schools of the European educational systems curriculum seeks to develop all of these key competences in the students. The Environmental Sustainability syllabus makes a significant contribution to the aforementioned competences, but primarily to the sustainability competences of the GreenComp framework. This framework emerges in response to the burgeoning necessity to enhance students' knowledge, skills and attitudes to embrace sustainability. Designed to support lifelong educational and training initiatives, it is aimed at students of all ages and educational levels, within diverse learning environments (formal, non-formal, or informal).

Embracing sustainability competences empowers learners to cultivate systemic and analytical thinking capabilities, fostering agency and establishing a foundational knowledge to safeguarding the current and future state of our planet.

GreenComp is structured around four educational topics in sustainability that form interconnected areas: values, complexity, futures and action. This framework is designed to be a non-prescriptive reference for learning schemes and comprises four interrelated competence areas:





Embodying sustainability values

- valuing sustainability
- supporting fairness
- promoting nature

Embracing Complexity in Sustainability

- systems thinking
- critical thinking
- problem framing

Envisioning sustainable futures

- futures literacy
- adaptability
- exploratory thinking

Acting for sustainability

- political agency
- collective action
- individual initiative

It is now increasingly recognised that formal education has so far failed to play the necessary proactive role in empowering and stimulating personal and collective commitment to a way of life that does not collide with planetary boundaries and people's inalienable rights. In fact, it has become clear that education has been stripped of its profound political content and particularly of its potential to form citizens capable of thinking a different economic and social order.

This requires the formation of an eco-citizenship, i.e. citizens who are aware of the essential links between society and nature, informed about socio-ecological realities, critical, competent, creative and committed. Such citizenship is able and willing to participate in public debates, in the search for solutions and in eco-social innovation.

3. Didactic Principles

The evolving nature of Sustainable Development makes it an ideal subject for students to gain an awareness of the need for lifelong-learning. A variety of teaching methods and approaches should be used to develop the key Competences for Lifelong Learning and the sustainability competences within the GreenComp framework. Pedagogical approaches that are effective for empowering and inspiring students to become active sustainable citizens who are capable of critical thinking and able to contribute in the creation of a sustainable future, must be learner-centered, action-oriented and transformative. That is, methods that foster competencies through active learning. Students should work in an interdependent way to solve contextualized real problems, close to their everyday life. Hence, Active Learning, Cooperative Learning and Problem Based Learning should be the pedagogical bases of those didactic approaches. These methodologies are interconnected and the teacher community will work with them in the classroom in a mixed way.

When using these active methodologies, students engage actively in the learning process itself. Therefore, as opposed to the traditional teaching/learning system, when using active didactic methodologies and strategies students show a higher interest and motivation, and they become more involved in the teaching/learning process. Besides, enables developing higher level thinking skills as well as a plethora of competencies, such as key competences for sustainability.





In the same way, Interdisciplinary and transdisciplinary educational approaches and interventions are essential in the field of education for sustainability since real world problems rarely are confined to the artificial fragmentation of academic disciplines. In fact, global problems have increased in complexity and connectivity, especially those with environmental basis (water crisis, climate change, loss of biodiversity, energy demand, population growth, etc.) which forces to focus them as complex, inseparable, and feed backed. Hence, the need to implement a holistic, integral and interdisciplinary vision to solve current problems through the prism of sustainability arises.

4. Learning Objectives

They are defined in terms of knowledge, skills and competence, stating what a learner knows, understands and is able to do upon completion of a learning process.

By the end of Year 2 the student should be able to acquire the appropriate knowledge, skills and competences according to the recommendations of the European Framework for Key Competences for Lifelong Learning and the sustainability competencies within the GreenComp framework.

These educational objectives provide a way to articulate the intended outcomes of learning and guide the development and implementation of the educational programs. They are defined as follows:

- “Knowledge” means the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study;
- “Skills” means the ability to apply knowledge and use know-how to complete tasks and solve problems. In the European Qualifications Framework, skills are categorized into cognitive skills (involving the use of logical, intuitive and creative thinking) and practical skills (involving manual dexterity and the use of methods, materials, tools and instruments).
- “Competence” means the proven ability to use knowledge, skills and personal, social and/ or methodological abilities, in work or study situations and in professional and personal development.

5. Content

By the end of Year 2 the student should have acquired content knowledge about the environmental and social dimensions of the Planet Earth, and recognize human action and its implications on these dimensions. In this syllabus the key themes proposed by UNESCO (2018) have been followed, as they are relevant for sustainable development and because they are linked to the everyday life of citizens and close to the students’ reality on both individual and group level.

The key themes proposed by UNESCO (2018)

- **Climate Change** - This theme underscores the critical role of education in addressing climate crisis. It aims to raise awareness, promote sustainable practices, and empower individuals to take action to mitigate the impact of climate change on our planet.
- **Biodiversity** - Education about biodiversity is essential for understanding the interconnectedness of ecosystems, species, and habitats. By emphasizing biodiversity, UNESCO encourages conservation efforts and sustainable management of natural resources.





- **Global Justice** - Global justice encompasses issues related to human rights, social equality, and fairness. Through education, UNESCO seeks to foster a sense of global citizenship, promote tolerance, and advocate for justice on a global scale.
- **Sustainable Production and Consumption** - This theme focuses on responsible consumption patterns and sustainable production methods. By educating people about resource efficiency, waste reduction, and ethical consumption, UNESCO aims to create a more sustainable world.
- **Poverty Reduction** - Education plays a pivotal role in poverty reduction. By providing quality education and skills development, UNESCO aims to empower individuals to break the cycle of poverty and contribute to economic growth and social well-being.
- **Disaster Risk Reduction** - Education helps communities prepare for and respond to natural disasters. By integrating disaster risk reduction into curricula, UNESCO aims to enhance resilience, save lives, and protect communities from the impact of disasters.

30 sample lesson plans are available to demonstrate how these themes can be addressed in the classroom while developing sustainability competences.

6. Syllabus structure

With reference to the methodological framework a proposal of a possible common syllabus structure is provided. The syllabus must be adapted to the national context and to the specific needs of the school and students.

Download the [syllabus structure](#).

7. Assessment

The assessments should be mainly formative.

By means of teacher observation, tests, and self-assessment, socio-scientific dilemmas, students acquire an awareness of their level and their progress throughout the course. Pre and Post tests result comparisons are particularly useful in demonstrating the progress of the students.

Pre and Post tests result comparisons are particularly useful in demonstrating the progress of the students as a before and after assessment measures whether the expected changes took place in the participants in a lesson.

A standard test, survey, or questionnaire should be applied before participation begins (pre-test or baseline), and re-applied after a set period, or at the end of the program (post-test or endline).

Pre- and post-tests can be given in writing or orally.

As there is a wide range of key themes (6) and competencies (12) it is not envisioned that a school could address all of these issues in a two year period. It is recommended that a minimum of two themes and six competencies would be addressed in any one year.

Download the [exemplary assessment grid](#).

