Step by Step

Eco-digital training toolkit

Co-funded by
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SUMMARY

INTRODUCTION

The Step by Step – Community Education for Sustainable Development and Eco-Digital Transition training program has been designed to support trainers, teachers, and facilitators in developing educational actions that foster a culture of sustainability.

It is the result of a European cooperation between three partners committed to education and pedagogical innovation:

- LENA – Ligue de l'enseignement Nouvelle-Aquitaine (France),
- FAL 19 – Fédération de la Corrèze de la Ligue de l'enseignement (France),
- and STRIPES Cooperative (Italy).

This partnership was developed within the framework of an Erasmus+ project, promoting mobility, exchange of expertise, and the creation of shared tools that support inclusive and sustainable education across Europe.
In a context of ecological, social, and technological transformation, adult education plays a key role in connecting global challenges with local and practical actions. This training pathway offers educational professionals the tools and methods to address ecological and digital transitions with their learners.

- Each module combines knowledge, practice, and pedagogical resources to:
- better understand the Sustainable Development Goals (SDGs);
- identify major environmental and social challenges;
- experiment with sustainable and inclusive practices;
- use digital tools to support active learning;
- encourage ethical reflection and cooperation.

This toolkit is intended as a living and adaptable resource, suited to different educational contexts. It provides materials, methods, and examples of activities to explore, enrich, or reinvent.
Its ambition: to empower each trainer to become a knowledge facilitator and change agent, capable of inspiring ecological and civic awareness step by step.

TRAINING MODULES AND ACTIVITIES

INTRODUCTION

Step by Step: For Community Education on Sustainable Development

This introduction module presents the Step by Step project, its objectives and partners, as well as the organization and content of the training, in order to prepare adult educators to promote sustainable development with their learners.

Module's learning objectives

- Present the Step by Step project in its conception and its partners.
- Presentation of the training modules.
- Presentation Training schedule.

Description of the module

Presentation of the objectives of the Step by Step project.

- Contribute to generating an "ecological awareness" that can be a source of motivation and leadership for environmental protection and sustainable development.
- Ensure that adult educators and their learners acquire theoretical and practical knowledge and skills related to actions for a sustainable transition.

Ways to achieve these objectives:

- Create educational resources to support educational stakeholders (adult trainers, facilitators, teachers, volunteers) in their work of teaching and guiding young adults and families, particularly those with fewer opportunities.
- Equip educational stakeholders with the necessary knowledge concerning Sustainable Development Goals (SDGs), green and digital skills to help their target audience understand the complex issues of environmental sustainability.
- Provide educators with tools and innovative digital techniques to address green and digital dimensions with adult learners.

Presentation of the training modules: content and objectives by module.

Presentation of the training schedule.

Useful materials :

- Introduction training presentation
- Screen and projection materials

Module
Introduction
Resources

MODULE 1

The SDGs: Sustainable Development Goals

This module introduces the 2030 Agenda and its 17 Sustainable Development Goals (SDGs). It aims to help adult educators understand the SDGs, raise awareness among diverse audiences, and encourage individual and collective action for sustainable development.

Module's learning objectives

- Know the SDGs
- Be able to present the SDGs
- Facilitate individual and collective ownership of the SDGs

Description of the module

The SDGs are at the heart of the 2030 Agenda, a universal program for sustainable development.
- Presentation of the training, context, objectives (5 minutes)
- Quiz to assess participants' knowledge of the Sustainable Development Goals (15 minutes)
- Part 1: Understanding the SDGs (30 minutes) Tool: SDG definition game.
- Part 2: How to present the SDGs (35 minutes)
- Part 3: Individual and collective ownership of the SDGs (30 minutes)
Tool: SDG enJEUX game.
To create a more livable world and address the sustainable development challenges described in the Sustainable Development Goals (SDGs), every human being must become an agent of change focused on sustainability. To do this, they need the knowledge, skills, values, and attitudes that will enable them to contribute to sustainable development. Education is therefore essential to achieving sustainable development, especially Education for Sustainable Development (ESD), as it empowers citizens to make informed decisions and act responsibly in favor of environmental.

Useful materials :

- Computer
- Internet connection
- PowerPoint presentation with integrated quiz
- Tool #1: "SDG Definition Game" to print and cut out
- Tool #2: "SDG enJEUX" to print and cut out
- Glossary
- Optional:
  Display of the Good Planet Foundation's exhibition "Sustainable Development Goals"

Module 1 Resources

MODULE 2

Understanding environmental challenges in order to act as responsible citizens.
What kind of planet for tomorrow ?

Today, no one questions global warming and biodiversity loss. Our climate is warming rapidly, extreme weather events are intensifying, and biodiversity and ecosystems are disappearing. The consequences of climate change are complicating the achievement of the United Nations Sustainable Development Goals.

Module's learning objectives

The main objective is to raise awareness of the challenges posed by global warming.

Description of the module

The SDGs are at the heart of Agenda 2030, a universal sustainable development program.

- Presentation of the training course, context, objectives (5 minutes)
- Raising awareness of the challenges of global warming: quiz to determine participants' positions.
- Part 1: How to define climate change (40 minutes). "Génialement" tool with integrated videos.
- Part 2: The economic impact of the challenges associated with global warming (10 minutes).
- Part 3: Understanding in order to take action (10 minutes)

Useful materials :

- Computer
- Internet connection
- Genial tool
- PowerPoint presentation with integrated quiz
- Glossary
- Optional: Climate change exhibition (10 panels)

Module 2 Resources

To go further: ADEME (Agency for Ecological Transition): a French public institution under the supervision of the Ministry of Ecological Transition and the Ministry of Higher Education and Research. ADEME website

IPCC Report (Intergovernmental Panel on Climate Change):
Created in 1988, the IPCC provides detailed assessments of the state of scientific, technical, and socio-economic knowledge on climate change, its causes, potential impacts, and response strategies.

MODULE 3

Key sustainable practices – How to take action ?

Module's learning objectives

By the end of this module, participants will be able to understand and apply key sustainable practices in their personal and professional lives, thereby contributing to environmental, social and economic sustainability.

Description of the module

1. Introduction to sustainable development (40 minutes)
What is sustainability? Brainstorming
Brief definition of sustainability: meeting the needs of the present without compromising the ability of future generations to meet their own needs.

- Presentation of the three pillars of sustainability: environmental, social and economic sustainability.

Why is sustainability important?

- Climate change, resource depletion, pollution and inequality.
- Impact on businesses, communities and the planet.
- Growing consumer demand for sustainable products and practices.
- Classify each image according to the pillars of sustainable development
- (Activity: Knowledge test)

2. Fundamental sustainable practices (40 minutes)
Presentation of the activity (5 min)

- Display the themes on the wall (sustainable use of resources, waste reduction, etc.)
- Create 3 to 4 groups (2 to 3 people)
- Give each group 15 minutes to fill in the 4 themes on the wall with their ideas (using post-it notes or an online activity with Beekast).
- The trainer reads the answers and adds to them if necessary.

A. Sustainable use of resources
- Energy efficiency:
Importance of reducing energy consumption in homes, offices and industries.
Practical tips: LED light bulbs, energy-efficient appliances and renewable energy sources (solar, wind, etc.).
- Water conservation:
The importance of reducing water waste.
Practical actions: Repairing leaks, using low-water appliances, reducing single-use plastics.

B. Waste reduction

- Reduce, reuse, recycle: Key concepts and examples from everyday life.
How to reduce waste at home, at work and in the community.
Composting and recycling as alternative waste management solutions.
Circular economy: Concept of circular economy: creating a closed-loop system in which products are reused and materials are recycled rather than disposed of.

C. Choosing a sustainable diet

Eating locally and seasonally:
Benefits of reducing food miles and supporting local farmers.
Reducing food waste by adopting proper storage and consumption practices.
Plant-based diets:
The environmental impact of animal agriculture and how plant-based diets reduce carbon footprints.

D. Eco-friendly transport

Walking, cycling and public transport:
How reducing car use can lower carbon emissions and improve public health.
Benefits of using electric vehicles (EVs) and carpooling.

3. Corporate social responsibility and sustainability (20 minutes)

The trainer reminds participants that there are sustainable practices that can be implemented individually, but that it is also possible to implement them with your organisation and colleagues.

- Presentation of the definition of corporate social responsibility (CSR): how companies integrate sustainable practices into their activities and strategies.
- Provide information on some case studies of companies that are at the forefront of sustainability efforts (e.g., Patagonia, IKEA).
- Reiterate employees' commitment to sustainable development: Encourage sustainable behaviour in the workplace. Initiatives focused on sustainable development (e.g., green offices, remote working, zero waste initiatives).

4. Practical action plan and conclusion (1 hour)

- Create your own action plan for sustainable development:
Help participants identify one or two areas where they can make changes, either personally or professionally, to promote sustainability.
-The trainer will give some tips on setting realistic and measurable sustainability goals.
Practical case study (in pairs) on the company Écobât
Final quiz : CSR at Écobât

Alternative

If participants find it difficult to project themselves into the future, the trainer can ask each participant to identify which of the practices presented they already implement (at least one) and which they commit to working on (at least one).

Q&A and discussion

The trainer invites participants to ask questions and share their ideas. The trainer also presents the tools and practical activities for participants to use with their audiences.

Useful materials :

- Powerpoint with integrated quiz
- Turnkey workshops for organisations involved in ecological transition "Transformer" kit!
- Workshops on climate and behavioural change 2tonnes | The immersive climate workshop
- Climat Fresk (world) - Climat Fresk

Module 3 Resources

MODULE 4

Outdoor education: how to foster a connection with nature to promote ecological literacy

Module's learning objectives

- Understand the concept of ecological literacy.
- Recognize the importance of outdoor education in fostering a connection with nature.
- Implement effective strategies to promote ecological literacy through outdoor learning experiences.
- Create opportunities for students or participants to explore, appreciate, and understand their environment.

Description of the module

Introduction (10 minutes)

- What is ecological literacy?
- Why is it important in today's world?
- How outdoor education can promote ecological literacy?

Understanding ecological literacy (15 minutes)

- Definition and key Concepts: Ecological literacy refers to the ability to understand natural systems and the relationship between humans and the environment. It includes knowledge about ecosystems, biodiversity, sustainability, and environmental challenges.

The four pillars of ecological literacy:

- Awareness: recognizing environmental issues.
- Knowledge: understanding ecological concepts.
- Action: taking responsibility to protect the environment.
- Attitudes: developing a sense of care and stewardship.

Why ecological literacy matters:

- Preparing individuals to engage with global challenges (climate change, conservation, sustainability).
- Building a community of environmentally responsible citizens.

Connecting with Nature (15 minutes)

Why a connection with nature is essential:

- Builds awareness and empathy for the environment.
- Encourages physical and emotional well-being.
- Fosters long-term care and responsibility for the planet

Key Benefits of Outdoor Education:

- Cognitive benefits (problem-solving, creativity, critical thinking).
- Emotional benefits (reduced stress, improved mood, connection to place).
- Physical benefits (increased physical activity, connection to local environments).

Case Studies and Examples:

- Real-life examples where outdoor education has led to increased environmental awareness and action (FAL19, STRIPES, others...)
- Discuss successful programs (e.g., nature-based learning in schools, outdoor environmental clubs, eco-tourism).

Strategies to foster a connection with nature (15 minutes)

Outdoor activities and approaches:

- Nature walks and hikes: Encourage curiosity through exploration. Promote observation and reflection.
- Ecological field studies: Observe and study local ecosystems, plants, animals, and the effects of human interaction.
- Gardening and nature projects: Hands-on experiences with planting, harvesting, and learning about biodiversity.
- Sensory exploration: Engage all five senses during outdoor activities to deepen the connection.
- Storytelling and nature journals: Encourage storytelling about nature experiences and keeping nature journals.

Promoting reflection:

- After outdoor activities, facilitate group discussions, art projects, or reflective journaling to encourage deeper thinking about the experience.

Incorporating ecological education into everyday life:

- Practical tips for educators, parents, and community leaders to integrate ecological learning into daily routines, such as recycling, composting, and community clean-ups.

Practical application and group activity (10 minutes or one hour more if possible)

Activity:

- Plan an outdoor lesson or activity that fosters ecological literacy.
- Break into small groups.
- Create a brief plan for a one-hour outdoor activity that promotes ecological awareness (e.g., a nature walk with identification of plants and animals, a trash pickup activity with discussion of waste management).
- Share the plans with the group for feedback and ideas.

Conclusion and questions (5 minutes)

Summarize key takeaways:

- Ecological literacy is essential for a sustainable future.
- Outdoor education can help foster a deep connection with nature.
- A variety of activities can promote learning about the environment.
- Open the floor for questions and reflections.

Useful materials :

- Whiteboard/Flipchart & markers
- Nature journals or paper and pens for participants
- Powerpoint
- Outdoor space for activities (optional)
- Handouts summarizing ecological literacy and outdoor education strategies (articles, vidéos, reports)

Module 4
Resources

MODULE 5

The ability to adapt to new digital tools and technologies as they emerge and incorporate them into the classroom when appropriate

Module's learning objectives

1. Understanding the role of new technologies in the educational context;
2. Acquiring theoretical and practical skills to identify, evaluate, and implement technological tools;
3. Promoting a critical and responsible approach to the integration of digital technologies in education.

Description of the module

1. **Introduction**
   Digital Innovation as an Indispensable Element of the World Around Us (30 minutes)
2. **Development of the module**
   What Digital Technologies Can Be Used in Educational and Teaching Contexts? (1 hour)
   Why and How Should We Best Integrate These Digital Technologies into Teaching and Education? (1 hour)
3. **Conclusion**
   Best practices and examples of activities for different target ages (30 min)

Useful materials :

- Making the difference
- Why is it so important to integrate digital technologies in educational and teaching contexts?
- Educational Technologies
- Making the difference
- Artificial intelligence in schools
- Video-mapping: a new skilling for artistic and cultural jobs
- Examples of using makey makey with natural conductive materials to produce soundsor make a keyboard
  https://www.youtube.com/watch?v=rfQqh7iCcOU
  https://www.youtube.com/watch?v=jo-NEDlWQ_g
  https://www.youtube.com/watch?v=Ls7BTZpxZy4
  https://www.youtube.com/watch?v=uswQM6pu0FI
- Lemon citrus for smart plant monitoring
  https://www.youtube.com/watch?v=PR6R-uvsP5c
  https://www.youtube.com/watch?v=YTJs2CFmrzk
- AR for nature discovery

https://www.youtube.com/watch?v=fl2OpGLIbCE
https://www.youtube.com/watch?v=nj15SULK1U0

- Apps for learning about the natural world
  https://tinybop.com/apps/plants
  https://groplay.com/apps/grow-recycling/
  https://scuolainsoffitta.com/2023/11/06/app-per-outdoor-education/

Development of the module (content and steps)

Digital Innovation as an Indispensable Element of the World Around Us (30 minutes)

This module will focus on two fundamental aspects: why it is crucial to develop the ability to adapt to emerging technologies and how we can effectively integrate these tools into educational settings.

We live in an era where technology evolves rapidly; tools that seemed indispensable just a few years ago are constantly being replaced by more advanced solutions.
In the field of education, this represents both a challenge and an opportunity: technologies can enhance teaching, promote inclusion, and offer new ways of learning. But that's not all. As Linda Liukas explains so well in this video, digital education is about the future of all of us.

VIDEO: https://www.youtube.com/watch?v=vcxwcWuq7KQ&t=663s

However, Adapting to Technological Change Is No Easy Task
It requires a flexible mindset, continuous learning, and practical skills to select and use the right tools. New tools and platforms are constantly emerging and ignoring them could mean missing opportunities to enhance teaching and learning.
Successfully navigating technological changes requires:

- **Curiosity**: Maintaining an open attitude towards innovation.
- **Competence**: Gaining the skills needed to use new tools.
- **Adaptability**: Accepting that change takes time and practice.
  In the educational field, it is essential to assess:
- The **relevance** of digital technologies to teaching objectives.
- Their **accessibility** for both students and educators.
- Their **impact** on the learning process.

A teacher might choose to use an augmented reality platform to teach history or opt for virtual reality to explain the solar system. How do these technologies enhance the experience of those who engage with them?

VIDEO: https://www.youtube.com/watch?v=XGkWh4v1hCE

ARTICLE: https://link.springer.com/article/10.1007/s10639-019-09908-0

What Digital Technologies Can Be Used in Educational and Teaching Contexts? (1 hour)

In recent years, various technologies have revolutionised the educational landscape, enhancing interactivity, personalisation, and accessibility in learning. Here is an overview of the key technologies and their impact:

1. Coding and Computational Thinking

Coding has become a fundamental component of educational curricula in many schools, thanks to its ability to foster critical, logical, and creative thinking.

- **Tools**: Scratch, Blockly, Python, platforms like Code.org.
- **Impact**: Teaches transferable skills such as problem-solving and collaboration, which are valuable beyond the technological sphere.

ARTICLE: **Coding with me: exploring the effect of coding intervention on preschoolers' cognitive skills**

2. Educational Robotics

Robotics provides an engaging way to teach not only coding but also concepts in physics, mathematics, and engineering.

- **Tools**: Lego Mindstorms, mBot, Arduino, Bee-Bot.
- **Impact**: Encourages hands-on, interdisciplinary learning, boosting student motivation and interest.

3. Interactive and Collaborative Platforms

Platforms like Padlet and Kahoot have transformed classroom management, making learning more collaborative and dynamic.

- **Padlet**: Facilitates collaboration through shared digital boards.
- **Kahoot**: Brings gamification into learning via interactive quizzes.
- **Impact**: Enhances engagement and provides immediate feedback.

4. Augmented Reality (AR) and Virtual Reality (VR)

AR and VR offer immersive experiences that make learning more tangible and memorable.

- **Tools**: Google Expeditions (now integrated into other platforms), Merge Cube, ClassVR.
- **Impact**: Allows students to explore virtual environments (e.g., ancient civilisations or human anatomy) without physical limitations.

5. Artificial Intelligence (AI)

AI is one of the most transformative technologies in education.

- **Tools**: ChatGPT (learning support and content creation), Grammarly (writing assistance), adaptive platforms like ALEKS or DreamBox.
- **Impact**: Personalises learning by adapting to individual student needs, automates administrative tasks for teachers, and offers data-driven insights.

Video: **AI in education: Opportunities and Challenges #artificialintelligence**

6. Hybrid Learning and LMS Platforms

The pandemic accelerated the adoption of Learning Management Systems (LMS) and video conferencing tools.

- **Tools**: Google Classroom, Microsoft Teams, Moodle, Zoom.
- **Impact**: Supports remote and blended learning, ensuring educational continuity even in emergencies.

7. Gamification

Gamification has introduced game-like dynamics into teaching, making learning more engaging.

- **Tools**: Classcraft, Duolingo, Quizizz.
- **Impact**: Increases motivation and encourages active participation among students.

These technologies have transformed traditional teaching methods, making learning more accessible, personalised, and engaging, with a significant impact on both students and educators.

Video: [The Power of Gamification in Education | Scott Hebert | TEDxUAlberta]

Insight: presentation "Educational Technologies"

Why and How Should We Best Integrate These Digital Technologies into Teaching and Education? (1 hour)

Integrating digital technologies into teaching and education is essential for preparing students for the future, as it provides numerous benefits to both teaching and learning.
Here's why and how we should best integrate them:

Why:

1. **Enhances Learning Experience**: Digital technologies offer interactive tools that make learning more engaging, allowing students to explore concepts in creative ways. This includes virtual simulations, educational games, and multimedia resources that cater to various learning styles.
2. **Access to Information**: Technology provides easy access to a wealth of information, resources, and research, enabling students to explore beyond the textbook and engage in independent learning.
3. **Personalised Learning**: Digital tools can adapt to individual student needs, offering tailored learning paths that cater to different learning speeds and styles. This can help both struggling students and those who need more challenging material.
4. **Collaboration and Communication**: Online platforms and tools support collaboration among students, allowing them to work together in real-time, share ideas, and communicate more effectively.
5. **Skill Development**: Using digital technologies helps students develop critical 21st-century skills, such as digital literacy, problem-solving, creativity, and

collaboration, which are essential for success in the modern world.

6. **Preparation for the Future**: In a rapidly evolving job market, proficiency with digital technologies is a vital skill. Integrating these tools in education ensures students are ready for future careers that will heavily rely on technology.

How:

1. **Start with Pedagogy**: Before introducing new technologies, teachers should focus on how these tools can enhance their teaching methods. Technology should align with the learning objectives and pedagogical goals to ensure it's used effectively.
2. **Choose the Right Tools**: Not all digital tools are appropriate for every classroom. Teachers should carefully select tools that match the subject matter, student needs, and the learning environment. It's important to choose technology that enhances, rather than distracts from, the learning process.
3. **Professional Development for Teachers**: Teachers need ongoing training and support to effectively integrate digital technologies into their teaching. Professional development programs can help educators stay updated on the latest tools and teaching strategies.
4. **Encourage Interactive Learning**: Use tools like educational apps, online discussions, virtual labs, and interactive simulations to make lessons more engaging and to help students better understand complex concepts.
5. **Promote Collaborative Learning**: Platforms like Google Classroom, Microsoft Teams, and collaborative tools like Trello or Padlet encourage students to work together, share ideas, and engage in peer feedback.
6. **Assessment and Feedback**: Digital tools allow for real-time assessment and immediate feedback. Teachers can use online quizzes, surveys, and learning analytics to monitor student progress and adjust instruction accordingly.
7. **Ensure Digital Equity**: It's crucial to ensure that all students have access to the technology they need to succeed. Schools should work to provide devices, reliable internet access, and digital literacy training to bridge any digital divides.
8. **Create a Blended Learning Environment**: Combining traditional face-to-face teaching with online learning platforms allows students to benefit from both in-person interactions and the flexibility of online resources.
   By integrating digital technologies thoughtfully and strategically, educators can create more dynamic, inclusive, and effective learning environments that prepare students for the challenges and opportunities of the digital age.

To do this effectively, it is important to explore some theoretical aspects and pedagogical methodologies that form the foundation for designing activities with digital tools.

…and what about the workshops in nature?

The integration of technology in outdoor education laboratories offers numerous benefits that enhance the educational experience. Firstly, it supports active learning through direct documentation of experiences using cameras and mobile devices, enabling students to record observations and reflections in the field.

Additionally, real-time access to information through educational apps and online resources enriches activities by providing scientific data and contextual explanations useful for deepening the topics covered.
The use of technology also develops essential digital skills, as students learn to use technological devices for research, data processing, and creating multimedia content.
This aspect helps prepare them for the ever-evolving digital world.
Another significant advantage is the increased student engagement and motivation due to interactive tools, augmented reality applications, and gamification platforms that make activities more stimulating and enjoyable.
Technology also enhances the monitoring and evaluation of outdoor activities. Environmental sensors, drones, and digital tools collect precise data, while teachers can track students' progress through online platforms. This approach enables continuous assessment based on real data.
From a didactic perspective, the use of technology facilitates interdisciplinary integration, combining subjects such as science, geography, art, and technology into complex and meaningful projects. Finally, technology promotes inclusion and accessibility through adaptive devices that support students with special educational needs and tools like translators and speech synthesizers that facilitate communication in multilingual environments.
These elements make outdoor education more equitable and accessible to all.

Best practices and examples of activities for different target ages (30 min)

This part of the course focuses on providing effective strategies and creative activity ideas that are tailored to the unique needs of various age groups. This guide emphasizes the importance of aligning activities with developmental stages, ensuring they are engaging, educational, and age-appropriate. It may explore activities that foster cognitive, social, and physical growth, such as coding unplugged and educational robotics for children, team-building exercises for teenagers, and skill-enhancing workshops for adults.
By combining proven methodologies with practical examples, it serves as a versatile resource for educators and professionals seeking to create meaningful and impactful experiences for diverse audiences with digital tools.

- **Presentation: Making the difference with educational robotics (target 3-10 y.o)**
- **Presentation: Artificial Intelligence in Schools (target 11-18 y.o)**
- **Presentation: Video-mapping: a new skilling for artistic and cultural jobs (target over 18)**

Module 5
Resources

MODULE 6

Project-Based Learning: Creating projects that blend green and digital themes

Module's learning objectives

1. To become aware of the educational value of natural spaces and materials.
2. To acquire a basic knowledge of the theoretical and practical aspects of nature and digital education.
3. Implement the ability to plan and realise activities in nature and ecodigital projects aimed at different target groups.
4. Introduce digital tools in the workshops to make the experiences richer.
5. Develop the capacity to accompany different groups into nature.

Description of the module

This module focuses on developing participants' ability to design **eco-digital activities** that combine nature and technology. Through experiential learning in natural environments, participants will explore *biophilia*—the innate human connection with life—while also receiving pedagogical guidance for creating meaningful outdoor activities.

The module encourages **exploration, curiosity, and sensory engagement** through activities such as:

- Connecting personally with nature via natural elements.
- Spatial exploration exercises inspired by *How to Become an Explorer of the World*.
- Sensory activation activities, including paired blindfolded walks to heighten awareness of non-visual senses.
- Collective land art creation using natural materials to foster creativity and group collaboration.

By the end of the module, participants will be equipped to design and facilitate engaging, multisensory, and eco-conscious activities for diverse audiences.

Introduction

Experiencing nature means having experiences in direct contact with the elements and rhythms of nature, which foster a relationship with the surrounding world in a spontaneous and immediate dimension.

Contact with the natural space is fundamental to arousing a sense of harmony in inhabiting the world, understood as proximity to the essence of things.

However, living and not dwelling in natural space is increasingly rare due to rhythms and lifestyles that are concentrated for most of the year indoors in urban spaces.

But the experiences of openness, serenity, silence, and exploration aroused by open green spaces are still present in us as archetypes.

From the natural world come calls that dissolve the static nature of the body, towards a movement that is not only bodily, but is planning and appropriateness of one's being in life; it is an experience of momentum.

In educational contexts, on the other hand, open spaces are often outside of a design or educational intention, relegated to the time of recreation, of the pause, of the transitory passage, neglected in terms of layout or trivially furnished.

The educational project in nature finds its fullness, on the other hand, in teaching how to take a meaningful look at the wonder of colours, the variety of sensory qualities, the transformations linked to the changing seasons; but also how to respect nature and place oneself in an ecological perspective.

The experience of the natural environment is then rooted in the encounter with the world of natural elements: an exploration that is made of leaves, earth, flowers, stones, skies, small animated worlds.

An educational project is a connector between the inside and the outside, the natural and the artificial, to reactivate a 'natural sensitivity' and develop ecological thinking.

Frequent and continuous immersion in nature promotes the psychophysical development of the person in all its physical, social and psychological dimensions.

A simple stop in nature can be beneficial in itself, but the true effectiveness of the natural environment is experienced where the facilitator himself, by virtue of his knowledge of being in nature, assumes an authentic exploratory attitude and is able to provide the group with a slow and rich activation time, tools for reflection and opportunities for new and involving personal experience.

In relating the natural and the artificial, with respect to the eco-digital dimension as a learning space, we reflect on how, working in the direction of a sustainable, rich and nourishing future, eco-digital education can enrich the educational experience of an audience of adults with different backgrounds, of different generations, and how, in turn, it can build activities with an educational impact on different target audiences (educators, pedagogues, volunteers, active in the educational sector in activities with children, adults, elderly, etc.).

Development of the module

To foster the development of the capacity to design eco-digital activities and/or workshops, two preliminary phases are proposed:

1. experiential learning activities
2. pedagogical indications and theoretical-practical hints for designing outdoor activities and accompanying groups in nature.

The overall aim of these two activities is to enable participants to explore their relationship with nature **(biophilia)** on a multidimensional level (emotional, sensory, relational, cognitive, creative) and to activate an attitude of research and curiosity.

Biophilia is defined as the innate human tendency to experience a deep connection with other life forms and the surrounding environment in nature.

A curious attitude (G. Bateson, Towards an Ecology of Mind) towards the world of which we are a part is fundamental to understanding the educational potential of the natural environment that we frequent on a daily basis but which may seem obvious to our eyes (K. Smith, How to Become an Explorer of the World).

The proposed activities, once experienced, can in turn be proposed in training to accompany other groups of adults.

These experiences are intended to invite adults to:

- Introducing oneself to the group through the expedient of natural matter, with the aim of activating a personal relationship with nature (biophilia), activating processes of identification and observation, creating a circle moment to introduce oneself/listen.
- Exploring space and overcoming the 'obvious'. The activity is introduced by sharing some pages from the text 'How to become explorers of the world' and a guide sheet is provided (see attached pages and facsimile sheet). Objective: activate an exploratory attitude and explain the importance of generative questioning as a pedagogical tool to support the processes of observation, attention to detail, learning and overcoming the 'obvious'.
- Sensory activation: we normally use sight more than the other senses; by excluding it we can notice the immediate activation of other important cognitive channels.

A simple suggestion for sensory activation could be to divide the group into pairs and let them walk around freely in space, blindfolded in turn while the other accompanies them to explore the environment (e.g. bring a leaf closer to their fingers, take them into the shade and then into the sun, accompany them to hug a tree, etc.).

At the end, a circle is made to return and exchange experiences.

Objective: to make the importance of multisensory learning explicit.

d. as an alternative to the previous experience: an invitation to create a work of land art.

The proposal can be introduced by the presentation of some images with examples of land art. The activity ends with the sharing of all the works and a feedback circle on the experience made. Objective: to experiment with the possibilities and potential of natural materials, creating a group activity situation in which to experiment outdoors.

Useful materials :

Conclusion

Pedagogical indications and theoretical-practical hints for planning outdoor activities and accompanying groups in nature.

Activities in nature are 'occasions' aimed exclusively at activating personal exploration of the world on a multi-sensory and multi-dimensional level and must therefore be understood as open invitations that can be freely interpreted or customised by the participants.
It is suggested that the number of operational indications be limited to the essential, concentrating instead on the choice and preparation of sufficiently varied and complex natural environments: presence of different materials and trees, low shrubs, undergrowth with branches, stones, earth, dry leaves, water, etc.
The trainer is responsible for informing participants about the appropriate equipment and clothing to have.
The trainer's intervention must be geared towards providing a living model of immersion in nature (sitting on the ground, feeling comfortable outdoors in different weather conditions, distinguishing risks and dangers, not being afraid to get dirty, knowing how to use natural material, grasping the unexpected, etc.).
Moments of contemplation, silence, experimentation and confrontation between participants must be preserved. It is natural that any collateral learning, i.e. not directly inherent to the activity itself, should manifest itself and be encouraged with generative questions.
Avoiding emphasising the end product or competition dynamics allows the facilitator to dwell on slow processes and cultivate connections.
Rules and reminders must be limited to the effective protection of the safety of people and the environment.

Activities must be designed taking into account the type of recipients, weather conditions and the characteristics of the available natural environment.
Activities involving the collection of natural materials, while simple, stimulate different channels of expression and can be adapted according to age. In addition to baskets and sticky surfaces, small personal frames or large frames can be used to create collective surfaces (see frame a).

With regard to the use of digital technology, the target audience must also be taken into account; it is essential that the participants are comfortable and confident with the robotics, artificial intelligence or application tools for them to be able to express themselves in the activity.
It is therefore useful to express the technology used within the activity before the workshop begins, so that participants have time to explore the technologies to be applied.
It is possible to design itinerant experiences, such as exploratory walks, during which it is advisable to propose a 'collection' tool (e.g. a walking stick on which each participant can tie with a thread the significant natural objects they encounter, see frame b) or focus on the use of a specific sense (e.g. propose a sound walk and make a map of the sounds encountered).
Some activities can be carried out both during the day and in the evening, by starlight (see activity c and d). In this case, equipment should include torches and secluded or fenced locations if working with families and young children.
In order to encourage an in-depth exploration of certain themes, long routes can be proposed, consisting of two or three appointments, in which a single theme can be developed, e.g. the exploration of the 'earth' and the variety of shapes and colours in nature (see Annex e).
The individual activities can be reinterpreted and re-proposed in an itinerant way to characterise a park or a forest, by setting up posters at various points along the route on which ideas for play and independent experimentation with natural materials are proposed (see facsimile in appendix f)
Presentation of a portfolio of exemplary practical activities to be proposed outdoors to different categories of users. The proposals are accompanied by suggestions of illustrated books to stimulate reflection at the beginning or reworking at the end of the activity.

Examples of proposed exploratory activities

a. Photo chassis
b. Photo walking stick
c. Treasure hunt
d. Sunset experiences, to be organised during an evening walk with families
e. Exploration of the earth and infinite variables - activity project
f. Activities in the forest

Module 6
Resources

MODULE 7

Online collaboration - Implementation of a collaborative digital platform for trainers and/or learners

Module's learning objectives

1. Understand the benefits of using a collaborative space online
2. Apply and memorise the subjects covered in order to enrich your own experience
3. Use available ideas to create new ones

Description of the module

This Step by Step padlet is a real communication tool in the form of an interactive virtual wall.
It allows anyone to post documents, text, images, sound extracts, videos and web pages after being invited to do so via a link in the email address.
This collaborative and evolving space is open to all
And a real teaching tool, both on the computer and on a smartphone.
Presentation of the padlet – goals and tools for the learners and educators (15 min)
Group exercise (20 min)
Presentation of the tablet of the group (10 min)
Evaluation - exchange on the use and interest of this tool and alternatives (15 min).

Useful materials :

- Computer tool
- smartphone
- Internet access
- access link
- messaging service

Module 7
Resources

MODULE 8

Ethical Considerations in Sustainability: Encouraging students to think critically about ethical issues related to environmental sustainability, such as equity in access to resources and the consequences of environmental decisions.

Module's learning objectives

- Underscore the importance of incorporating ethical considerations into sustainability practices, promoting a fair and equitable approach to solving global environmental challenges
- Evaluate the training
- Prepare next steps

Description of the module

The trainer will use this module to pass on key messages on Ethics and sustainability, evaluate the training and prepare next steps.

Ethics definition (5 min)
Ethics refers to a set of moral principles or values that guide individuals or groups in determining what is right and wrong, good or bad. It involves the study of what is considered morally acceptable or unacceptable behavior in various contexts, such as personal, social, professional, or environmental situations. Ethics helps individuals and communities make decisions that align with values like fairness, justice, honesty, and respect for others.

The definition of **ethics** does not originate from a single author but is rather a concept that has been developed and discussed by many philosophers and thinkers throughout history. Some key authors who have significantly contributed to the field of ethics include:

1. **Aristotle** – Ancient Greek philosopher known for developing **virtue ethics**, which emphasizes the importance of developing good character and moral virtues.
2. **Immanuel Kant** – German philosopher who proposed **deontological ethics**, focusing on the importance of duty and moral rules in decision-making.
3. **John Stuart Mill** – English philosopher who is a key figure in the development of **utilitarianism**, which suggests that actions should aim to promote the greatest good for the greatest number.
4. **Confucius** – Ancient Chinese philosopher whose teachings on ethics emphasize harmony, respect, and moral relationships.

Ethics is a broad field with contributions from various cultures and schools of thought, so it cannot be attributed to a single author but is the result of centuries of philosophical inquiry.

Key messages Ethical Considerations in Sustainability (15 min)

1. Sustainability is a Holistic Concept

- Sustainability involves balancing environmental, social, and economic considerations. It's not just about protecting nature, but also ensuring fairness, equity, and justice for all communities, now and in the future.

2. Equity in Access to Resources is Critical

- The distribution of resources such as water, energy, and food is often unequal, with marginalized communities facing the most severe consequences of environmental degradation. We must consider fairness in access to these resources when making sustainability decisions.

3. Environmental Decisions Have Lasting Consequences

- Every decision, from industrial practices to daily consumer choices, has ethical implications. These choices affect not only the environment but also people's lives, particularly those who are most vulnerable.

4. Intergenerational Responsibility

- We have a moral obligation to protect the environment for future generations. Decisions made today will determine the world our children and grandchildren inherit, which requires considering long-term impacts over short-term gains.

5. Ethical Dilemmas Require Critical Reflection

- Sustainability decisions often involve complex ethical dilemmas. Balancing economic growth, environmental protection, and social justice requires critical thinking and understanding different perspectives.

6. Ethical Frameworks Can Guide Decision-Making

- Ethical frameworks like utilitarianism (greatest good), deontological ethics (duty-based), and virtue ethics (character-based) can help us navigate difficult decisions, ensuring that actions taken align with principles of fairness, justice, and respect for both people and the planet.

7. Everyone Has a Role in Sustainability

- Individual actions, from reducing waste to supporting ethical businesses, matter. Sustainable solutions require the collective efforts of governments, businesses, and individuals working together to achieve lasting change.

8. Real-World Issues Require Ethical Evaluation

- Case studies like deforestation, climate change, and resource scarcity illustrate the need for thoughtful, ethical evaluation in decision-making. These complex issues highlight the importance of considering diverse stakeholders and the broader consequences of our actions.

Evaluation questions (questionnaire or open discussion) 15 min

1. **Interest in the Topic**
   - How interested are you in teaching sustainability and environmental topics to your publics after this training? What aspects of the training did you find most engaging?
2. **Application to Your Work**
   - How do you plan to incorporate the knowledge from this training into your daily teaching/training practices? Are there specific strategies or activities you would like to try?
3. **Use of Digital Tools and Technology**
   - How likely are you to use digital tools and technology to teach sustainability topics? Which tools discussed in the training would you consider integrating into your lessons?
4. **Long-Term Impact**
   - How do you think this training will influence your future approach to environmental education and sustainability in your classroom or community?
5. **Further Learning**
   - Would you be interested in additional training or resources on sustainability and environmental education? What specific topics would you like to learn more about?

Next steps :
Participants are asked to test one or more activities, already registered in the Padlet or created by them, with the themes and digital approaches learned in the next months. The educators will be present to watch/live it or have a feedback call afterwards. These activities must be organised before the end of september 2025.

Alternative
The trainer may choose to implement the hands on learning activity of module 8 and evaluate the training after.

Useful materials :

- Computer tools,
- Smartphone
- Internet access
- Various media from environmental organisations (youtube, reports, etc.)
- Powerpoint
- Hands on learning activities

Module 8 Resources

GLOSSARY

A

Agenda 2030 is a sustainable development program adopted in 2015 by all Member States of the United Nations (UN). It establishes 17 Sustainable Development Goals (SDGs) to be achieved by 2030, aiming to eradicate poverty, protect the planet, and ensure prosperity for all. Each goal includes specific targets. The program emphasizes balanced development across economic, social, and environmental dimensions, ensuring no one is left behind.
Source : United Nations – 2030 Agenda for Sustainable Development
https://sdgs.un.org/2030agenda

AUGMENTED REALITY (AR)
A technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view.
It blends digital elements with the real world. Through AR, students can view and interact with computer-generated content overlaid onto their physical surroundings using devices like smartphones, tablets, or AR glasses. For example, students can see 3D models of historical landmarks or scientific phenomena in real time, right in front of them, as if they were physically present.

ARTIFICIAL INTELLIGENCE
The capacity of computers or other machines to exhibit or simulate intelligent behaviour; the field of study concerned with this. In later use also: software used to perform tasks or produce output previously thought to require human intelligence, esp. by using machine learning to extrapolate from large collections of data. Also as a count noun: an instance of this type of software; a (notional) entity exhibiting such intelligence.

B

Biodiversity: Refers to the variety and variability of living organisms, including diversity within species, between species, and across ecosystems. It encompasses all forms of life on Earth and the complex relationships between them, contributing to ecosystem balance and human well-being.
Source : Convention on Biological Diversity (CBD), United Nations Environment Programme (UNEP)
https://www.cbd.int/
https://www.unep.org/

BIOPHILIA
The innate human tendency to experience a deep connection with other life forms and the surrounding environment in nature.

C

Climate Change: Refers to a long-term change in average climate parameters—such as temperature, precipitation, and winds—observed over multiple decades or longer. This phenomenon is largely driven by human activities, chiefly greenhouse gas emissions, which lead to global warming and diverse impacts on ecosystems and societies.

Source: IPCC (Intergovernmental Panel on Climate Change)

Fair Trade: Fair trade is a trading partnership based on dialogue, transparency, and respect, aimed at achieving greater equity in global trade. It contributes to sustainable development by ensuring better trading conditions and respect for the rights of producers and workers, especially in the Global South. Key principles include:

- A fair price paid to producers
- Decent working conditions
- Respect for the environment
- Building local capacities

Source: FINE (2001) – common definition adopted by major fair trade organizations (e.g., Fairtrade, WFTO)

Sustainable Consumption: Refers to consuming goods and services in ways that meet basic needs while reducing environmental, social, and economic impact, to preserve resources for future generations. It involves:

- Reducing waste (energy, water, food, etc.)
- Choosing ethical and eco-responsible products
- Prioritizing durability (reuse, recycling, repairability)
- Considering production conditions (human rights, labor conditions, etc.)
- This concept is central to sustainable development policies and is part of UN SDG 12: “Ensure sustainable consumption and production patterns.”

FINE (2001) – Common definition adopted by the main international fair trade organizations (Fairtrade, WFTO, etc.). Source: WFTO – World Fair Trade Organization

CODING AND COMPUTATIONAL THINKING: Coding is the process of writing instructions, or code, for a computer to follow, while computational thinking is the problem-solving process that comes before coding and involves breaking down problems into smaller parts, recognizing patterns, and developing step-by-step solutions. In short, computational thinking is the "thinking" part of solving a problem, and coding is the "doing" part, translating that solution into a language a computer can understand.

IN EDUCATION: In recent years, the term coding has significantly expanded its definition, encompassing all activities aimed at developing computational thinking.

It is the ability that allows us to solve problems, both with logic and creativity. This approach is extremely useful in fostering problem-solving.

D

Climate Disruption: Refers to rapid and abnormal changes in Earth's global climatic conditions, mainly caused by human activities such as burning fossil fuels, deforestation, and greenhouse gas emissions. These changes result in extreme weather events, rising average temperatures, sea-level rise, and ecosystem disruptions. **Source:** ADEME; IPCC

Sustainable Development: Development that meets present needs without compromising the ability of future generations to meet their own needs. It is based on three interconnected pillars: social (poverty reduction, access to education, health), economic (responsible growth, innovation, employment), and environmental (natural resource preservation, climate change mitigation).

Source: Brundtland Report (1987) – UN World Commission on Environment and Development

E

Circular Economy:

An economic model aimed at producing goods and services sustainably, by minimizing resource consumption and waste generation. It operates on a closed-loop logic: each stage of the product lifecycle (design, production, consumption, recycling) is designed to prolong use, reuse materials, and reduce environmental impact. Core principles include eco-design, use over ownership, reuse, repair, recycling, and waste minimization.
Source: ADEME (France)

Education for Sustainable Development (ESD): A process that aims to equip individuals with the knowledge, skills, values, and attitudes needed to contribute to sustainable development.
Source: UNESCO – ESD

Greenhouse Effect: A natural phenomenon in which certain gases in the Earth's atmosphere trap heat emitted from the surface, maintaining temperatures compatible with life. Without it, Earth's average temperature would be around –18 °C instead of the current +15 °C. However, human-induced increases in greenhouse gases intensify this effect, leading to global warming.

Source: French Ministry of Ecological Transition

Carbon Footprint: An indicator measuring the total amount of greenhouse gases (GHGs) emitted directly or indirectly by an activity, person, product, company, or territory, usually expressed in equivalent CO_2 (CO_2e). It includes direct emissions (e.g., transportation, heating) and indirect emissions (e.g., production of goods, food, services). **Source:** ADEME (France)

Renewable Energy: Energy from natural sources that are continuously replenished at human timescales—such as solar, wind, water (hydropower), Earth's heat (geothermal), or biomass. Unlike fossil fuels, they are inexhaustible and produce few or no GHG emissions, making them key to energy transition. Main types include solar (photovoltaic, thermal), wind, hydropower, biomass (wood, organic waste), and geothermal.

Source: ADEME (France)

ESG (Environmental, Social, Governance): Refers to three non-financial criteria used to assess a company's societal responsibility and sustainability:

- Environmental (E): company's impact on the planet (CO_2 emissions, waste management, energy use, biodiversity)
- Social (S): how the company manages relationships with employees, suppliers, customers, and communities (working conditions, diversity, human rights)
- Governance (G): how the company is managed and controlled (business ethics, transparency, anti-corruption, board composition)
- ESG criteria are widely used today in sustainable finance to evaluate organizations beyond financial metrics.

Source: AMF (France) Financial Markets Authority (France) – ESG and Sustainable Finance

EDUCATIONAL ROBOTICS : Educational robotics refers to the use of robots and related technology as tools for teaching and learning. It combines practical application with theoretical knowledge, helping students explore and understand a variety of subjects in an engaging and interactive way.

F

Green Finance:

Refers to investments and financial products that support projects or activities with positive environmental impacts (e.g., renewable energy, sustainable resource management, emission reduction).

Source: World Bank
https://www.banquemondiale.org/fr/topic/financialsector/brief/green-finance

FINE: An informal acronym created from initial letters of four key fair trade organizations that harmonized definitions and principles:

- F – Fairtrade Labelling Organizations International (now Fairtrade International)
- I – International Fair Trade Association (now WFTO)
- N – Network of European Worldshops
- E – European Fair Trade Association (EFTA)
- Formed from 1998, FINE is a collaborative platform for defining common fair trade standards. **Source:** WFTO – FINE definition origins

Fast Fashion: A model of garment production and consumption characterized by rapid and low-cost reproduction of current fashion trends, aiming to refresh collections frequently to encourage high-volume consumer purchasing. This leads to significant social (poor working conditions) and environmental (massive resource use, pollution, textile waste) impacts.

Source: French Ecological Transition Agency : ADEME

G

GAMIFICATION
It's the concept of applying game-design thinking to non-game applications in order to make them more engaging and effective.
Gamification refers to the use of game-like elements in educational settings, making learning more interactive and enjoyable. By incorporating features such as rewards, points, challenges, and levels, gamification taps into students' natural desire for achievement and competition, turning traditional learning into a more engaging experience.

GHGs (Greenhouse Gases): Gases in the atmosphere that trap heat from the Earth's surface, contributing to the natural greenhouse effect which maintains life-compatible temperatures. Major GHGs include CO_2, CH_4 (methane), N_2O (nitrous oxide), and fluorinated gases. Human activities increasing these gases intensify the effect and cause global warming
Source : French Ecological Transition Agency (ADEME)

IPCC: The Intergovernmental Panel on Climate Change, established in 1988 by the World Meteorological Organization (WMO) and UNEP. Its mission is to provide objective scientific, technical, and socio-economic information on climate change, its impacts, and adaptation or mitigation options. Its assessment reports guide policymakers worldwide.

Source : GIEC – Official Website : https://www.ipcc.ch/about/

Sustainable Governance: Refers to how institutions, public and private actors, and civil society make decisions and implement policies that promote inclusive and balanced economic, social, and environmental development over the long term.
Source: UNEP (UNEP) https://www.unep.org/fr

H

HYBRID LEARNING
Hybrid learning is an educational model that combines in-person classroom instruction with online learning experiences. It allows students to participate in learning activities either physically in a classroom or remotely via digital platforms.

I

Social Impact: All positive or negative effects (intentional or not) that an organization, project, or action has on society. This covers :

- individuals' living conditions
- social cohesion,
- employment,
- health,
- education,
- the broader socio-cultural and economic environment.

It is central to the social and solidarity economy, impact investing, and equitable sustainable development policy.

Source: Avise - Engineering agency for doing business differently (France)

SDG Monitoring Indicators: Statistical measures that evaluate progress in implementing the Sustainable Development Goals at global, national, and local levels.

Source: UN – SDG Indicators Database

O

SDGs – Sustainable Development Goals:

These are a set of 17 global goals adopted in 2015 by the 193 Member States of the United Nations as part of the 2030 Agenda. They aim to eradicate poverty, protect the planet, and ensure prosperity for all by 2030, through balanced development across economic, social, and environmental dimensions.

Among these 17 goals are:

- Access to quality education
- Gender equality
- Climate change mitigation
- Promotion of peace and justice
- Sustainable consumption and production patterns

The SDGs are interdependent and apply to all countries, whether developed or developing.

Source: United Nations – SDGs https://sdgs.un.org/goals (or in French via UN France: https://www.un.org/sustainabledevelopment/fr/objectifs-de-developpement-durable/)

MDGs – Millennium Development Goals :

These were a set of eight international goals adopted in 2000 by the 189 Member States of the United Nations (UN), with the aim of reducing extreme poverty worldwide by 2015.

These goals addressed major global development challenges, such as:

1. Reducing extreme poverty and hunger
2. Achieving universal primary education
3. Promoting gender equality and empowering women
4. Reducing child mortality
5. Improving maternal health
6. Combating HIV/AIDS, malaria, and other diseases
7. Ensuring environmental sustainability
8. Establishing a global partnership for development

The MDGs led to significant progress in certain areas, but inequalities persisted, which led in 2015 to the launch of their successor: the Sustainable Development Goals (SDGs).

Source: United Nations – Millennium Development Goals
https://www.un.org/fr/millenniumgoals

UN (United Nations) : An international organization founded on October 24, 1945, by 51 countries after World War II. Its primary mission is to maintain international peace and security, promote human rights, sustainable development, and strengthen international cooperation. Today, the UN consists of 193 Member States and operates across areas such as poverty reduction, humanitarian aid, environmental protection, public health, education, and gender equality—through agencies like UNESCO, WHO, FAO, UNICEF, etc.
Source: United Nations – About Us –official website : https://www.un.org/fr/about-us

P

Partnerships for the SDGs (SDG 17) : The partnership for the SDGs (Goal 17) emphasizes the importance of collaboration between governments, the private sector, civil society, and international institutions to achieve the objectives set out in the 2030 Agenda.
Source : United Nations, SDG N°17 https://sdgs.un.org/goals/goal17

Permafrost (or pergelisol) :
It refers to a layer of soil or rock that remains permanently frozen for at least two consecutive years. This layer may contain ice and organic matter and plays an important role in cold ecosystems, particularly in Arctic and sub-Arctic regions.

The thawing of permafrost due to global warming can release carbon dioxide (CO_2) and methane (CH_4), two powerful greenhouse gases.
Source : French Environment and Energy Management Agency (ADEME)

SDG Cake Diagram : A visual metaphor represented as a multi-tiered cake which illustrates the organization of the SDGs across three key levels:

- Base – Environment: Planet-focused goals (climate, water, biodiversity, energy) form the foundation.
- Middle – Society: Social goals (health, education, equality, justice) stand on that environmental base.
- Top – Economy: Economic goals (growth, decent work, innovation) rest atop the preceding layers.

This hierarchy challenges the notion that the economy is central, instead showing that sustainable development depends first on planetary limits and human needs. Inspired by Raworth's Doughnut Economics and Rockström's planetary boundaries frameworks
Source : Réseau École et Nature – Educational toolkit "SDGs and Education for Sustainable Development".
Also inspired by the vision of **Kate Raworth** (*Doughnut Economics*) and **Johan Rockström's** representation of planetary boundaries.

PROGRAMMING: In the world of computer science, "programming" means giving a sequence of instructions (also called an algorithm) to a computer or robot, so that it performs all the necessary tasks to achieve the expected result.

R

Resilience : It refers to the ability of a community, system, or individual to withstand, adapt to, and quickly recover from disruptive events, such as natural disasters, economic crises, or climate change.

Source : United Nations Development Programme (UNDP)

T

Clean Technologies : Technological innovations designed to reduce negative environmental impacts, notably by lowering energy consumption, reducing pollution, or promoting recycling.

Source: International Energy Agency (IEA)

Doughnut Theory: An economic framework developed by economist Kate Raworth, designed to reconceptualize growth for sustainability and equity. It envisions two boundaries:

- A **social foundation**, below which essential human needs (food, health, education, housing, equity) are unmet
- An **ecological ceiling**, beyond which environmental pressures (climate change, biodiversity loss, pollution) exceed planetary limits
- The "doughnut" represents the safe and just space for humanity—meeting needs without overshooting Earth's capacities.
- **Source:** https://doughnuteconomics.org

V

VIRTUAL REALITY (VR)

It is a computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors. VR immerses students in a completely virtual environment, typically through VR headsets. These environments could be anything from a walk through ancient Egypt to a journey through the human body, all experienced as though the students are physically there. VR isolates users from the real world, allowing them to engage entirely with the virtual one.

VIDEO-MAPPING

It is a technique that uses projection technology to map images or videos onto physical surfaces, such as buildings, landscapes, or sculptures. It combines art, technology, and storytelling to transform static objects into dynamic visual experiences. video-mapping is a technique that uses projection technology to map images or videos onto physical surfaces, such as buildings, landscapes, or sculptures.

TRAINING EVALUATION METHODS

8 tailored evaluation methods, each aligned with the learning goals of each module:

1. SDGs – Sustainable Development Goals

Method: Concept Mapping

Participants create a mind map showing the 17 SDGs and connections to their daily life or professional context.

Evaluates their ability to identify and contextualize the SDGs.

2. Understanding Environmental Challenges / Responsible Citizenship

Method: Case Study Analysis

Learners analyze a short real-world scenario (e.g., climate change, biodiversity loss) and propose sustainable actions.

Evaluates critical thinking and problem-solving.

3. Sustainable Practices – How to Act

Method: Action Plan Design

Each participant drafts a simple action plan (personal or organizational) including 3–5 sustainable practices they commit to.

Evaluates ability to transfer knowledge into actionable steps.

4. Outdoor Education & Ecological Literacy

Method: Field Reflection Journal

After an outdoor activity, participants reflect on their experience and describe how contact with nature builds ecological awareness.

Evaluates personal engagement and depth of reflection.

5. Adaptation to New Technologies

Method: Practical Demonstration

Participants perform a short task (e.g., using a digital tool introduced in the session).

Evaluates hands-on ability to integrate new technology.

6. Project-Based Learning

Method: Mini-Project Presentation

Small groups develop and present a project prototype or idea within the training timeframe.

Evaluates teamwork, creativity, and application of the project-based approach.

7. Online Collaboration / Digital Platform Use

Method: Collaborative Task Completion

Learners complete a shared task (e.g., co-editing a document or discussion in a digital workspace).

Evaluates digital collaboration skills and ability to engage in online teamwork.

8. Ethics & Sustainability – Evaluation and Next Steps

Method: Group Debate / Ethical Dilemma Discussion

Groups discuss a scenario involving ethical choices in sustainable development, then justify their stance.

Evaluates ethical reasoning, argumentation, and capacity to link theory to real issues.

GUIDELINES

Guidelines for Designing and Implementing Experiential Activities with Adult Learners

1. Start with Clear Learning Objectives

Define what participants should know, feel, or be able to do after the activity.

Keep objectives concrete and linked to real-life application.

Example: "Participants will be able to identify three sustainable practices they can integrate into their workplace."

2. Make It Relevant to Adults

Adult learners need to see the practical value of the activity.

Connect the activity to their personal or professional context.

Example: Use case studies or scenarios from their industries.

3. Design the Experience

Use the principle "learning by doing": simulations, role plays, outdoor tasks, group projects, or problem-solving exercises.

Keep activities interactive and participatory.

Allow space for creativity and choice.

4. Provide Clear Instructions

Adults appreciate structure and respect for their time.

Briefly explain:

Purpose of the activity (why it matters)

Steps to follow

Time available

Expected outcomes

5. Facilitate, Don't Lecture

Position yourself as a guide rather than the sole source of knowledge.

Encourage peer learning, collaboration, and exchange of experiences.

Ask open-ended questions to stimulate reflection.

6. Debrief and Reflect

Reflection is crucial in experiential learning (Kolb's cycle).

After the activity, guide participants to process the experience:

What happened?

What did you learn?

How does this connect to your work/life?

How will you apply it?

7. Link Back to Theory/Concepts

Anchor the experience by connecting insights to key frameworks, models, or theories.

This bridges practice ↔ knowledge.

8. Support Application

Ask participants to identify one action they will apply after the session.

Provide tools (action plan templates, digital resources, peer support groups).

Encourage follow-up to maintain accountability.

Example Activity (Sustainability Training for Adults):

Activity: Participants work in small groups to audit the "waste footprint" of their workplace and propose 2 improvement strategies.

Process: 30 minutes group work + 15 minutes presentations.

Debrief: Discuss obstacles, practical solutions, and how this links to the SDGs.

CONCLUSION

Through the eight modules of this training, participants are invited to develop a holistic and experiential approach to sustainable development, where knowledge, action, and reflection go hand in hand. The tools provided—digital, pedagogical, and collaborative—are meant to foster creativity and autonomy in every trainer's practice.

By delivering this content, you contribute to forming citizens who understand today's global challenges and are ready to act with responsibility, discernment, and solidarity. Your role is essential: you are the mediators of change, those who bridge theory and practice, values and action, knowledge and transformation.

This project also reflects a European dynamic of cooperation and mutual learning. Thanks to the collaboration between LENA, FAL 19, and STRIPES, this training is part of a network of shared educational innovation and intercultural exchange. It embodies the power of education to build bridges between cultures and to address together the challenges of the 21st century.

This training journey is not an end in itself but an invitation to continue experimenting, sharing successes, and sustaining collective momentum. Education for sustainable development cannot be decreed—it must be lived, built, and enriched through exchange, participation, and commitment.
Step by step, together, let's make learning a driving force for ecological and civic transition.

Discover the project

#Stepbystep

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