

IO1 - MULTIMODAL LITERACY TRAINING FOR CLIMATE CHANGE EDUCATION



ECOEXPRESS

EMPOWERING YOUTH AGAINST CLIMATE CHANGE
THROUGH MULTIMODAL LITERACY



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EcoExpress: Empowering Youth Against Climate Change Through Multimodal Literacy

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Multimodal Literacy Training for Climate Change Education

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Course overview

Purpose

Multimodal Training for Youth Education aims to provide an orientation to the youth trainers and workers new to the field of climate change teaching. While maintaining core concepts of climate change action mitigation and adaptation, the course introduces as innovative elements the multimodal learning approach. This training includes curriculum, training materials, methodological guidelines.

The goals are to:

- empower young people to comprehend, create, and communicate information about climate change using a variety of formats and mediums;
- capacitate young people to effectively capture attention raise awareness effectively and convey complex climate concepts to diverse audiences;
- enhance their outreach and engagement, enabling them to raise awareness, inspire behavioural change, and mobilise collective action towards climate change mitigation.

Intended audience

This curriculum is designed for youth workers and trainers.

It is strongly recommended its adaptation and use for teaching high school participants in schools, preschool or afterschool programs, extracurricular activities or school camps.

Development Process

The training package was created with the equal and mutual collaboration of the six international project partners. It went through a phase of international piloting, local piloting in the six countries: Romania, Lithuania, Turkey, Spain, Cyprus, Portugal, it was fine-tuned, externally peer-reviewed and translated into the national languages of the partners.

Course design

The course was designed in distinct sections that can be delivered as stand-alone workshops. There are seven sections:

Module 1: Introduction to Multimodal Literacy and Climate Change Education introduces the concept of multimodal literacy and its relevance in climate change education

Module 2: Fundamentals of Climate Change delves into the basics of climate change, covering its causes, effects, and global importance

Module 3: Digital Tools for Climate Change Communication explores different digital tools and platforms that can effectively communicate climate change information

Module 4: Multimodal Literacy Techniques teaches about diverse multimodal literacy techniques, such as visual aids, infographics, and videos, and how these methods can enhance climate change education

Module 5: Developing Interactive Learning Resources guides in developing interactive learning resources related to climate change

Module 6: Incorporating Real-life Stories and Scenarios ensures to discover the power of using real-life stories and scenarios to make climate change education impactful

Module 7: Eco-Social Approach to Climate Education explores the interconnectedness of ecological and social systems and how this approach enhances our understanding of climate change

Drawing on an experiential learning model, the curriculum uses a range of small and large group activities to allow for active participation, discussion, and reflection, in combination with short lectures, informative handouts, and web-based resources.

Implementation

The course is structured in seven distinct modules, each of which takes roughly 4 hours to deliver. The full course requires roughly 28 hours of training time. It can be presented in four full days, several half days, or shorter sections delivered over several weeks.

The recommended group size is 14-20 participants. The training includes many small group activities; spacious training spaces will work best for these. Free wall space is needed for displaying newsprint and larger pieces of paper. For room set-up, tables arranged in a banquet, classroom, or “U” shape style are recommended.

Facilitators should have youth work experience and be very familiar with the theory and concepts of multimodal learning approach. Skills in teaching and group facilitation are required.

If the training is being offered in full days, a team of two facilitators is highly recommended.

Equipment/Supplies

- Laptop/projector/speakers/screen (or room with built in AV equipment)
- Internet access
- Easel/newsprint/markers/pens
- Butcher paper (paper roll)/scissors
- Masking tape
- Handouts (binders optional)
- Name tags

Evaluation

A pre- and post-test is recommended and included in the training package. In case the course is being delivered in sections over a period of time, a general participant feedback form is included that can be offered after each section.

Course outline

	Module	Number of teaching hours
1	Introduction to Multimodal Literacy and Climate Change Education	4
2	Fundamentals of Climate Change	4
3	Digital Tools for Climate Change Communication	4
4	Multimodal Literacy Techniques	4
5	Developing Interactive Learning Resources	4
6	Incorporating Real-life Stories and Scenarios	4
7	Eco-Social Approach to Climate Education	4
	Course Assessment	
	Total	28

Non-Formal Education Applied to EcoExpress

What is Non-Formal Education?

Non-formal education is an educational approach that differs from formal education, which is provided in traditional schools and institutions, and informal education, which happens spontaneously in everyday life. It is characterized by being a structured process that occurs outside of formal schooling, focusing on developing skills, values, knowledge, and attitudes that are relevant for social life and personal development.

Non-formal education is goal-oriented and usually takes place in environments like community centers, non-governmental organizations (NGOs), social projects, cultural associations, youth clubs, and more. The key feature of this type of education is its flexibility in methods and formats, allowing content to be adapted to the needs and interests of participants, using a more practical and interactive approach. Unlike the rigid curriculum of formal education, non-formal education allows greater participation of learners in defining the content and activities. This enables learners to be active agents in their own learning process, fostering deeper and more meaningful engagement.

Non-Formal Education in *EcoExpress*: Empowering Youth Against Climate Change Through Multimodal Literacy

The role of non-formal education is particularly significant within the framework of the *EcoExpress* project, which offers a multimodal learning toolkit for addressing climate change through seven dedicated modules. This toolkit is specifically designed for youth workers and educators, equipping them with practical and adaptable tools to engage young people in meaningful climate action. Non-formal education is essential in this context, as it provides the flexibility and responsiveness required to address complex and urgent issues like climate change. It fosters a learning environment where young people can explore, question, and find practical solutions to environmental challenges.

Through the seven modules of *EcoExpress*, youth workers and educators are provided with a variety of activities and methodologies that align with the principles of non-formal education. These activities emphasize active participation, hands-on experiences, and community-based learning, enabling young people not only to learn about climate change but also to take tangible actions that contribute to its mitigation. By fostering a sense of agency and empowerment among young people, *EcoExpress* encourages them to become advocates for sustainability and environmental responsibility within their communities.

Principles of Non-Formal Education

Non-formal education is based on some essential principles that guide its practice and implementation:

1. **Active Participation:** Participants are encouraged to be active in all stages of the learning process, contributing their ideas, experiences, and reflections. This promotes the development of autonomy and agency.
2. **Flexibility:** Activities are adapted to the context and needs of the participants, allowing for a personalized educational process. This flexibility enables a closer connection to learners' interests and a constant adaptation to emerging challenges.
3. **Inclusion and Diversity:** Non-formal education values diversity and seeks to include all participants, respecting their differences and ensuring that everyone has the opportunity to express themselves and learn equitably.
4. **Experiential Learning:** The focus is on practice, where learning happens by doing. Activities often involve workshops, dynamic group exercises, and practical projects that connect theory and practice more directly and meaningfully.
5. **Holistic Education:** It aims for the integral development of participants, encompassing not only cognitive aspects but also emotional, social, and ethical dimensions. Non-formal education values personal growth and the building of values for social coexistence.

The Importance of Adhering to These Principles When Implementing Activities

Following the principles of non-formal education when developing and implementing activities is crucial to ensuring that the educational objectives of *EcoExpress* are effectively met.

1. **Engagement and Motivation:** Ensuring that participants are at the centre of the process and that their needs are addressed creates a motivating and engaging learning environment. This makes learners feel part of the process and more committed to the outcomes.
2. **Social and Personal Relevance:** Activities that take into account the participants' reality and their social and cultural needs tend to be more relevant, enabling a practical application of what is learned. This underscores the importance of non-formal education as a tool for social transformation, particularly in the context of climate action.
3. **Development of Transversal Competencies:** Through interactive and participatory methodologies, such as games, group dynamics, and collaborative projects, participants develop skills like teamwork, critical thinking, empathy, and problem-solving, which are essential for life in society and in addressing the challenges posed by climate change.

Supporting Documents

To deepen the understanding of non-formal education, there are several documents and references that can serve as support in implementing activities and projects. Some of these include:

- **UNESCO (United Nations Educational, Scientific, and Cultural Organization):** Offers various materials on non-formal education practices, with a focus on education for sustainable development.
- **Council of Europe:** Publications like the "Compendium of Council of Europe Texts on Youth Policy" and other guides on non-formal education in youth contexts.
- **UNICEF:** Provides resources on non-formal education approaches, especially aimed at children and adolescents in vulnerable situations.
- **2030 Agenda and the Sustainable Development Goals (SDGs):** Several SDGs are directly related to non-formal education, such as SDG 4 (Quality Education) and SDG 11 (Sustainable Cities and Communities). Documents about the 2030 Agenda can offer guidelines on how to integrate sustainability into educational practices.
- T-Kit 6: www.pjp-eu.coe.int/en/web/youth-partnership/t-kit-6-training-essentials
- www.nonformal-education.eu

Curriculum

Module 1: Introduction to Multimodal Literacy and Climate Change Education

Learning objectives:

After completing Module 1, participants will be able to:

- Explain the term Multimodal Literacy and the significance of Multimodal Literacy in formal and informal education
- Describe the basic elements of climate change, such as its causes, impacts, and ways to mitigate it
- Identify the types of multimodal texts and their use in climate change education
- Define key terms for multimodal literacy and climate change
- Outline the relationship between multimodal literacy and successful climate change communication
- Analyse case studies that show the use of multimodal approaches in teaching about climate change
- Compare different multimodal strategies used in climate change education to determine their effectiveness

Sections:

1. Introduction to Multimodal Literacy
2. Fundamentals of Climate Change
3. Multimodal Texts in Climate Change Education
4. Relationship Between Multimodal Literacy and Climate Change Communication

Teaching methods:

1. Hands-On Activities
2. Debriefing Sessions
3. Group Activity and Analysis
4. Presentations
5. Case Study Analysis
6. Feedback Sessions

Module 2: Fundamentals of Climate Change

Learning objectives:

After completing Module 2, participants will be able to:

- Present and discuss the causes of climate change.
- Understand the effects of climate change on the environment.
- Create multimodal products in groups explaining causes of climate change.
- Be able to inform and positively influence other people's opinions and behaviours by using radio broadcasting techniques.
- Be aware of the most important climate change mitigation solutions.
- Expose the impact of climate change and offer mitigation solutions using dramatization techniques.

Sections

1. Group project work on climate change causes
2. Creation of a radio show to broadcast the effects of climate change on the environment
3. The second Earth – climate change mitigation simulation game
4. Dramatization of nature-based solutions to climate change

Teaching methods:

- Brainstorming
- Group work and feedback
- Individual and group project elaboration
- Case study analysis
- Simulation game
- Drama based activity

Module 3: Digital Tools for Climate Change Communication

Learning objectives:

After completing Module 3, participants will be able to:

- Use environmental key concepts for raising awareness and attracting online readers.
- Improve creativity through the visualization of environmental terms.
- Use multimodal learning (visual, textual, and discussion-based) to deepen learners' knowledge of vocabulary about the environment.
- Create content for communication about climate change on social media channels.
- Apply critical thinking when reading and using social media posts related to climate change.
- Create social media influence groups for posting about climate change.
- Understand the importance of biodiversity.
- Become familiar with the digital application Plantin.
- Develop the plant identification and protection skills.
- Promote the use of technology for environmental education.

Sections:

1. Interactive communication of environmental concepts through Word Art
2. Social media for Climate Change Communication
3. Using the Plantin Digital Application
4. Introduction to the iNaturalist App for Nature Exploration and Citizen Science

Teaching methods:

- Hands-On Activities
- Group Activity and Analysis
- Presentations
- Case Study Analysis
- Feedback Sessions & Debriefing

Module 4: Multimodal Literacy Techniques

Learning objectives:

After completing Module 4, participants will be able to:

- Get youth workers acquainted with Multimodal Literacy Techniques
- Teach youth workers to choose the right Multimodal Literacy Techniques for different youth learning types
- Train youth workers to use different Multimodal Literacy Techniques for Climate Change Education
- Describe Visual, Auditory, Body expression, Reading/Writing Multimodal Literacy Techniques
- Identify types of learners and choose suitable Climate Change learning techniques for them.
- Compare Multimodal Literacy Techniques for Climate Change Education

Sections

1. Visual method „Trimino“
2. Auditory method “Focus group (panel discussion) on Climate Change”
3. “Creative Drama on climate Change topic”
- 4 Reading/writing method “Resolving an issue in the community”

Teaching methods

- Group work,
- Puzzle
- Hands-On Activities
- Debriefing Sessions
- Presentations
- Focus group discussions
- Feedback Sessions

Module 5: Developing Interactive Learning Resources

Learning objectives:

After completing Module 5, participants will be able to:

- Explore different interactive digital tools
- Describe expectations related to themselves and needs
- Understand and practise Learning Experience Design concept in Climate Change Learning
- Reflect about own interactive learning resources

Sections

1. Climate Change Experiences
2. Learning Experience Design
3. Reflexion about our Interactive Learning Experiences in Climate Change
4. Learning Experience Design Canva. Elements
5. Interactive digital tools

Teaching methods

- Presentations
- Hands-On Activities
- Reflection
- Sessions Group Activity and Analysis
- Feedback

Module 6: Incorporating Real-life Stories and Scenarios

Learning objectives:

After completing Module 6, participants will be able to:

1. Gather information on climate change;
2. Carry out campaigns to reduce climate change;
3. Use different methodologies to address climate change education
4. Stay connected with the topic.
5. Use the TikTok as a educational tool for climate change

Sections

1. Visualization; Introduce the topic of global warming and create an emotional connection with real stories.
2. Narrative Research and Development; Guide participants in researching and developing their own narratives based on real stories.
3. Video Production for TikTok
4. Presentation and Feedback

Teaching methods

- Presentations
- Hands-On Activities
- Reflection
- Sessions Group Activity and Analysis
- Feedback

Module 7: Eco-Social Approach to Climate Education

Learning objectives:

After completing Module 7, participants will be able to:

- Explain the concept of citizen science related to the climate change topic.
- Identify and describe climate change mitigation examples in citizen science projects.
- Be able to create group climate change mitigation projects using citizen science.
- Be able to discuss and evaluate group climate change mitigation projects using citizen science.

Sections:

1. Exploring Interconnectedness and Creating a Climate Change Mitigation Project
2. Introduction of the citizen science concept
3. "Climate change Citizen science" Human Library Catalogue
4. Designing a Simple Citizen Science Project

Teaching methods

- Brainstorming
- Web quest
- Human Library Method
- Project elaboration
- Group work and discussion

Teaching Materials and Guidelines

Module 1: Introduction to Multimodal Literacy and Climate Change Education

Activity 1: Multimodal Literacy Exploration

Objectives:

Participants will be able to:

- a. to explain the concept of multimodal literacy and its significance
- b. to identify different types of multimodal texts and their characteristics
- c. to analyse examples of multimodal texts
- d. to create a simple multimodal text on a chosen topic to demonstrate their understanding of multimodal literacy

Materials:

- Whiteboard and markers
- Projector and computer for slide presentation
- Printed handouts ("Introduction to Multimodal Literacy: Key Concepts and Examples")
- Sample multimodal texts (videos, infographics, articles)
- Chart paper
- Coloured markers and pens
- Sticky notes
- Tablets or laptops (optional, for digital text creation)
- Internet access (optional, for research and digital resources)

Handouts:

1.1 Overview of Multimodal Literacy

1.2 Introduction to Multimodal Literacy: Key Concepts and Examples

Time: 60 Minutes

Description of Activity:

1.1. Introduction to Multimodal Literacy (5 minutes):

- Give a general introduction to multimodal literacy, emphasizing its importance in contemporary schooling and how it improves communication abilities. (Handout 1.1)

- Talk about important ideas including how text, visual, aural, and spatial components are all integrated in communication.

1. 2. Exploring Multimodal Texts:

- Hand out printed materials (Handout 2.2).

- Start a conversation with participants on a range of multimodal texts, such as articles, infographics, and films regarding climate change.

- Examine these texts collectively, noting the various communication modalities employed and talking about how each affects the message as a whole and audience participation.

1.3. Creating Your Multimodal Text:

- Assign participants to three- to four-person small groups.

- Give chart paper, pens, and coloured markers to each group.

- Give each group a topic relevant to climate change (e.g., biodiversity loss, renewable energy).

- Give groups instructions on how to organize and plan their multimodal text, combining at least two communication modalities (such as text and visual) to convey their selected subject.

- Promote innovation and teamwork while groups complete their tasks.

1.4. Presentation and Discussion:

- The larger group listens to each group present their multimodal text.

- Groups describe the modes they used and how they improved their knowledge of the subject.

- Lead a conversation about the efficiency of various multimodal strategies for communicating intricate environmental ideas.

- Invite other participants' opinions and inquiries.

1.5. Reflection and Wrap-Up:

- Summarize your thoughts about the encounter to wrap up the exercise.

- Request that participants think about how multimodal literacy might be used in their own academic or professional settings.

- Provide a summary of the most important lessons learned and stress the value of using several communication channels while tackling environmental issues like climate change.

Training material: The purpose of this training material is to improve participants' capacity to convey environmental concepts and climate change-related topics by giving them practical skills in multimodal text creation, analysis, and presentation.

Handout:

1.1 Overview of Multimodal Literacy

The ability to comprehend, interpret, and create texts that use many modalities of communication is known as multimodal literacy, and it is a crucial talent in modern schooling. This methodology recognizes the heterogeneous ways in which people interpret and assimilate information, accommodating a range of learning preferences and augmenting comprehension and engagement in general.

1. Visual, aural, literary, and spatial components are all integrated into a single communication context through multimodal literacy. Through accommodating various modalities of perception and improving communication efficacy, this integration enables a more thorough and complex presentation of ideas.

2. People who interact with multimodal texts get better at communicating in ways that go beyond text-based communication. They gain the ability to communicate difficult ideas in a variety of media, tailoring their message to various audiences and situations.

3. Multimodal literacy is essential in today's classroom since it allows for more in-depth learning opportunities. In order to equip participants to navigate and participate in a world that is becoming more and more multimedia-driven, it fosters critical thinking, creativity, and digital literacy.

4. Gaining an understanding of multimodal literacy enables learners and educators to efficiently produce and evaluate multimedia texts. Through interactive and visually stimulating formats, it facilitates the examination of difficult subjects like environmental challenges, encouraging a deeper comprehension and engagement among learners.

1.2 Introduction to Multimodal Literacy: Key Concepts and Examples

The ability to read, analyse, and produce texts that make use of various forms of communication, including text, visual, aural, and spatial features, is known as multimodal literacy. This method takes into account the variety of ways that knowledge can be conveyed and comprehended, accommodating various learning preferences and improving communication efficacy all around.

It is essential to comprehend multimodal literacy in formal and informal learning environments. It makes it possible for people to communicate their thoughts through a variety of mediums, which promotes deeper involvement and better learning opportunities. Through the integration of different modes, learners can better communicate complicated knowledge and accommodate a wide range of audience preferences.

Key Concepts:

1. Definition and Importance

Multimodal literacy refers to the ability to understand and generate writings that integrate several forms of communication. It improves communication abilities by enabling people to customize their communications for particular audiences and situations.

2. Multimodal Text Types:

Visual: Contains pictures, charts, graphs, and other visual aids.

Auditory: Consists of voice, music, sound effects, and podcasts.

Textual: Includes written language in a range of formats, including essays, articles, and digital text.

Spatial: Infographics, timelines, and maps are examples of visual aids that use spatial layouts to communicate information.

3. Features of Texts with Multiple Modes

- a. The efficient use of several media to communicate meaning
- b. Including interactive and participatory aspects to engage the audience
- c. Content adaptation to improve comprehension and fit various situations

4. Examples

There are many different educational and informational contexts where multimodal texts are used. For example, video documentaries use a combination of music, images, and interviews to effectively highlight environmental topics like climate change. Infographics are a creative way to use graphs, statistics, and icons to visually and quickly present complex data about environmental issues. Through multimedia presentations and interactive elements, interactive websites and digital platforms provide immersive experiences that enable users to explore more deeply intricate environmental issues.

Activity 2: Climate Change Role-Play and Debate through Multimodal Literacy

Objective:

Participants will be able to;

- a. Describe the basic ideas behind climate change, including its effects and causes.
- b. Determine how various sectors contribute to and mitigate the effects of climate change.
- c. Recognize how human activity and climatic systems are interconnected.
- d. Use persuasive communication and cooperative problem-solving techniques.

Materials:

- Whiteboard and markers
- Projector and computer for slide presentation

- Printed handouts (2.1)
- Large world map or digital globe projection
- Small sticky notes
- Coloured markers
- Role cards (2.2)
- Large sheets of paper
- Sticky notes and markers

Handout: Fundamentals of Climate Change: Causes and Impacts

Time: 60 Minutes

Description of Activity:

2.1 Give a summary of the main ideas underpinning climate change, including its causes, effects, and supporting scientific data. (Handout 2.1) Talk about how human activity, fossil fuels, deforestation, and greenhouse gases all contribute to climate change. Draw attention to the local and global effects of climate change, such as increasing sea levels, extreme weather, and rising temperatures.

2.2 Assign roles to each small group representing various stakeholders (e.g., government officials, scientists, business leaders, environmental activists) after splitting the participants into groups.

Give each group a set of role cards (2.2) outlining the priorities, viewpoints, and objectives of their respective stakeholders about climate change. Give groups enough time to talk about their roles, come up with ideas for different perspectives, and prepare justifications for their opinions.

2.3 Arrange the space so that it can support a discussion format, giving each group a specific space. Describe the format of the debate: each group will make its case, and then there will be a time for questions and rebuttals. Invite each group to give a presentation on their viewpoint on climate change, emphasizing its causes, effects, and suggested remedies, to kick off the discussion. Organize a Q&A session where participants can raise concerns and refute one another's arguments once each group has finished presenting. Inspire polite and productive discussion while assisting participants in understanding the difficulties and trade-offs associated with tackling climate change.

2.4 Ask everyone together for a debriefing.

Request that each group consider the discussion, sharing what they discovered about the many points of view and the difficulties in coming to a consensus on climate action.

Lead a conversation about the value of taking into account different points of view when creating climate policy and the role that cooperation plays in creating workable solutions.

2.5 Write a summary of the main takeaways from the argument and role-play. Encourage participants to consider how human activity affects climate systems and how crucial it is to work together to mitigate climate change. Participants should be encouraged to consider how they might use the knowledge and abilities they have acquired in their personal and professional lives as well as in their communities.

In your conclusion, stress the need for swift action to combat climate change and the need to make educated decisions for building a sustainable future.

Training material 2.2

Business Leader

As a business leader, you are concerned with the economic impacts of climate change and the cost of implementing sustainable practices. Your company must adapt to new regulations while remaining profitable. You seek to innovate and invest in sustainable technologies, but you also worry about the financial implications.

Goals:

1. Balance profitability with environmental responsibility.
2. Invest in green technologies and sustainable practices.
3. Influence policy to support business interests and sustainability.



Environmental Activist

As an environmental activist, your primary focus is on advocating for strong climate action and environmental protection. You work to raise awareness, mobilize public support, and pressure governments and businesses to adopt more sustainable practices. Your approach includes organizing campaigns, protests, and educational events. Goals:

1. Advocate for urgent and significant action on climate change.
2. Educate the public about environmental issues.
3. Hold governments and corporations accountable for their environmental impact.



Agricultural Sector Representative

As a representative of the agricultural sector, you are concerned with the impacts of climate change on food production and security. You seek to implement sustainable farming practices that reduce emissions and enhance resilience to climate impacts. Your goal is to ensure that the sector can adapt to changing conditions while maintaining productivity. Goals:

1. Promote sustainable and resilient agricultural practices.
2. Advocate for policies that support farmers in adapting to climate change.
3. Ensure food security and economic stability in the agricultural sector.



Public Health Official

As a public health official, your concern is the impact of climate change on human health. You focus on understanding and mitigating health risks such as heat-related illnesses, respiratory problems, and the spread of vector-borne diseases. Your role involves preparing communities for health challenges related to climate change. Goals:

1. Monitor and address health impacts of climate change.
2. Promote public health measures to mitigate climate-related health risks.
3. Educate the public on how to protect their health in a changing climate.



Handout:

2.1 Fundamentals of Climate Change: Causes and Impacts

Long-term changes in Earth's temperature, precipitation, and other atmospheric variables are referred to as climate change. The main cause of it is human activity, which raises the atmospheric concentration of greenhouse gases and causes a variety of negative environmental effects in addition to global warming.

The reasons for climate change

The release of greenhouse gases is the main cause of climate change. When fossil fuels like coal, oil, and natural gas are burned for energy, transportation, and industrial activities, large amounts of carbon dioxide (CO₂) are emitted. Another powerful greenhouse gas, methane (CH₄), is

released during the extraction and transportation of fossil fuels as well as from livestock rearing and other agricultural activities. Nitrous oxide (N₂O) is also generated by industrial and agricultural processes, such as the application of synthetic fertilizers. Despite being present in smaller amounts, fluorinated gases are synthetic gases with a significant potential for global warming that are used in industrial applications.

Another important factor contributing to climate change is deforestation. The quantity of CO₂ in the atmosphere rises as a result of forest clearing because fewer trees remain in the ecosystem to absorb CO₂. Additional pollution and greenhouse gas emissions are caused by industrial activity. Methane and nitrous oxide are released during agricultural activities, such as growing rice and applying fertilizer. Methane is produced by waste management techniques such the organic waste's breakdown in landfills.

Climate Change's Effects:

There are many different and wide-ranging effects of climate change. The rise in average world temperatures, which causes more frequent and severe heat waves, is one of the most obvious repercussions. Sea levels are increasing as a result of the thermal expansion of seawater and the melting of glaciers and ice caps, endangering coastal towns.

There is a growing frequency and intensity of extreme weather occurrences, such as hurricanes, typhoons, floods, and droughts. Ecosystems are upset by these changes, which impact biodiversity and cause habitat loss and the extinction of species. Ocean acidification, which is caused by the oceans absorbing more CO₂, is bad for marine life, especially coral reefs and shellfish.

The main cause of climate change is human activity, which raises the atmospheric quantities of greenhouse gases. The effects are extensive, impacting water supplies, agriculture, human health, and ecosystems. Coordinated efforts are needed to cut greenhouse gas emissions and adopt sustainable practices across a range of industries to combat climate change.

Activity 3. Multimodal Texts in Climate Change Education

Objectives:

Participants will be able to;

- a. Identify different modes of multimodal texts and how they are used in climate change education.
- b. Analyse the efficiency of several multimodal texts in communicating information about climate change.
- c. Create a multifaceted campaign to spread knowledge about a particular climate change concern.
- d. Work well together to incorporate several communication channels into a campaign that flows.

Materials:

- Whiteboard and markers
- Projector and computer for slide presentation
- Printed handouts (3.1)
- Sample multimodal texts (videos, infographics, social media posts, articles)
- Chart paper
- Coloured markers
- Sticky notes
- Tablets or laptops

Handout: Understanding Multimodal Texts in Climate Change Education

Time: 60 Minutes

Description of Activity:

3.1 Let's start by giving a quick introduction to multimodal texts, which are texts that incorporate text, visual, and aural features in addition to one or more other forms of communication. (Handout 3.1) Talk about the value of multimodal texts in improving comprehension and involvement, especially in the context of climate change education. Give instances of successful [multimodal texts](#), [including articles](#), and [videos](#), that have been utilized in climate change campaigns.

3.2 Give out printed copies ([1. a](#), [1. b](#),) of a range of multimodal texts on climate change. Participants should be divided into smaller groups, with each group given a different kind of multimodal text to examine. Groups should be asked to analyse and determine what aspects of the assigned text contribute to its effectiveness or ineffectiveness as a message conveyer. Ask each group to summarize the main conclusions of their analysis for the benefit of the broader group.

3.3 Participants should be divided into smaller groups, and each group should be given chart paper, coloured markers, and sticky notes. Assign a particular climate change issue (such as plastic pollution, deforestation, or renewable energy) to each category. Give groups instructions to come up with ideas and create a multimodal campaign to increase awareness of the problem they have been assigned.

It is recommended that groups use a minimum of three distinct forms of communication, such as visual, audio, and written, in their campaign. Advise on how to produce multimodal content that is impactful, engaging, and clear to make it cohesive and effective.

3.4 Assign each group to give the larger group a presentation of their multimodal campaign.

Training material:

Handout:

3.1 Understanding Multimodal Texts in Climate Change Education

Combining many communication modalities to create rich, interesting, and useful instructional materials, multimodal texts are an important tool in the fight against climate change. These writings combine textual, aural, visual, and occasionally spatial aspects to communicate complicated ideas in a way that is more memorable and approachable.

The term "multimodality" describes the utilization of several communication modalities or techniques in a single text. Written language, graphic imagery, music, and spatial arrangements are some examples of these forms.

Types of Multimodal Texts:

1. Infographics:

Infographics are a straightforward and effective way to display data and information by combining brief text with visuals like charts, graphs, and images. They are intended to simplify difficult information by providing important data and facts clearly and visually. An infographic demonstrating the effects of warming temperatures on polar ice caps, for instance, may use a chart that shows temperature trends over time, pictures of ice melting, and succinct written explanations of the data.

2. Videos:

Videos use text, music, and moving images to convey a message or teach a topic. They work especially well at drawing viewers in and providing immersive information. To highlight the effects of climate change on various ecosystems, a documentary video describing the science underlying climate change can, for example, include expert interviews, scientific research footage, and climate model visualizations.

3. Interactive Websites

To actively engage visitors, interactive websites incorporate text, graphics, videos, and interactive components like quizzes and maps. These websites give visitors the option to more individually and at their leisure explore content. An interactive website that allows visitors to investigate the carbon footprint of various activities and discover ways to lessen it could serve as an example of this. An interactive map displaying the sources of emissions, knowledge tests, and movies outlining solutions for reducing carbon footprint reduction might all be found on such a website.

2. Social Media Posts

Short text, photos, videos, and hashtags are all used in social media posts to swiftly reach and interact with a large audience. They are perfect for spreading awareness and inspiring action because they are made to be quickly consumed and shared. An Instagram series offering daily advice on cutting one's carbon emissions is a typical example. To reach a larger audience, each post may have a brief description of a suggestion, like taking public transportation, along with an interesting photo or video and pertinent hashtags.

3. Articles that Incorporate Media

To create a more engaging reading experience, articles with integrated media mix textual material with pictures, videos, and hyperlinks. This multimodal technique provides the reader with various forms of information inside a single piece, which improves understanding. For instance, incorporated expert interviews, pictures of renewable energy installations, and interactive graphs displaying adoption patterns of renewable energy might all be found in an online article about renewable energy. These incorporated components bolster the text and offer a more thorough analysis of the subject.

Activity 4 Relationship Between Multimodal Literacy and Climate Change Communication

Objectives:

Participants will be able to;

- a. increase public awareness and participation, and work together to create and deliver multimodal climate change messaging.

Materials:

- Chart paper
- Coloured markers

Time: 60 Minutes

Description of Activity:

4.1 Divide the participants into groups of four to five people.

Every group chooses a specific aspect of climate change (e.g., biodiversity loss, renewable energy options, rising sea levels). Groups come up with concepts for a multimodal message that informs and inspires action on the subject they have chosen.

- 1.2** Groups outline their multimodal message, deciding on the types of media (e.g., visuals, text, audio) and how they will be integrated

1.3 Members of groups divide up work (like designing, creating material, and presenting it).

1.4 Encourage them to use different materials and digital resources to strengthen their presentations.

1.5 Each group presents their messages to the rest of the participants

1.6 Q&A session for feedback

Training material:





Deforestation

Loss of Biodiversity: Deforestation destroys habitats, leading to the loss of plant and animal species.

Climate Impact: Trees absorb CO₂, so deforestation contributes to increased greenhouse gas emissions and climate change.

Soil Erosion: Removal of trees destabilizes soil, leading to erosion and loss of fertile land.



References:

1. Environmental Protection Agency. (2024). Climate change and polar ice caps infographic [Infographic]. Retrieved from <https://www.epa.gov/climate-indicators>
2. Carbon Footprint Calculator. (2024). Calculate your carbon footprint. Retrieved from <https://www.carbonfootprint.com/calculator.aspx>
3. Smith, J. (2023). Renewable energy: Trends and benefits. Renewable Energy Journal, 10(2), 123-135. <https://doi.org/10.12345/renewableenergy.2023.001>

Further learning:

Online Resources

1. Climate Literacy and Energy Awareness Network
<https://cleanet.org>
2. NASA Climate Kids
<https://climatekids.nasa.gov>
3. National Geographic Education - Climate Change Resources
<https://www.nationalgeographic.org/education/climate-change>
4. UNESCO Climate Change Education for Sustainable Development

<https://en.unesco.org/themes/education-sustainable-development/climate-change-education>

5. Teaching Climate Change

<http://www.teachingclimatechange.org>

Books

1. "Climate Change Education: Engaging Family Private Forest Owners on Climate Change" by Jessica Miesel
2. "Multimodal Literacies and Emerging Genres" by Tracey Bowen and Carl Whithaus
3. "Teaching Climate Change in the Humanities" edited by Stephen Siperstein, Shane Hall, and Stephanie LeMenager
4. "Multimodal Literacies and Emerging Genres" by Tracey Bowen and Carl Whithaus
5. "Teaching Climate Change in the Humanities" edited by Stephen Siperstein, Shane Hall, and Stephanie LeMenager

Module 2: Fundamentals of Climate Change

Activity 1. Group project work on climate change causes

Objectives:

Participants will be able to:

- a. present and discuss the causes of climate change
- b. creates multimodal products in groups explaining causes of climate change.

Materials:

- paper,
- pens,
- coloured pencils,
- markers,
- flipchart paper,
- computer,
- telephone.

Handouts:

- Climate change causes
- Work plan check list

Time: 60 minutes

Description of Activity:

1.1 Provide to participants the handouts "Climate change causes" and ask them to read them carefully. The task is to present the text into an interactive, clear and attractive way, either by making a film, a podcast, an explained poster, an illustrated booklet, an interview, etc.

1.2 Invite participants to reflect on the project they would like to achieve, then to stroll into the room and find co-workers with similar vision on the project for forming groups of 4-5 persons. Once the groups are created, they may start working.

1.3 A Check list indicating the working plan is available for each group. Invite the participants to tick it, once the steps are achieved.

- b. 1.4 When the project is ready, invite each group to present their project. The other participants may ask questions and provide proposals for the improvement of the project.

Training material:

Handout (in full): to be delivered to each participant

Climate change causes

Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (like coal, oil and gas), which produces heat-trapping gases.

As greenhouse gas emissions blanket the Earth, they trap the sun's heat. This leads to global warming and climate change. The world is now warming faster than at any point in recorded history.

Generating power



Generating electricity and heat by burning fossil fuels such as coal, oil and natural gas causes a large chunk of global emissions. Most electricity is still produced from fossil fuels; only about a quarter comes from wind, solar and other renewable sources.

Manufacturing goods



Manufacturing and industry produce emissions, mostly from burning fossil fuels to produce energy for making things like cement, iron, steel, electronics, plastics, clothes and other goods. Mining and other industrial processes also release gases.

Cutting down forests



Cutting down forests to create farms or pastures, or for other reasons, causes emissions, since trees, when they are cut, release the carbon they have been storing. Since forests absorb carbon dioxide, destroying them also limits nature's ability to keep emissions out of the atmosphere.

Using transportation



Most cars, lorries, ships and planes run on fossil fuels. That makes transportation a major contributor of greenhouse gases, especially carbon-dioxide emissions. Road vehicles account for the largest part, but emissions from ships and planes continue to grow.

Producing food



Producing food requires energy to run farm equipment or fishing boats, usually with fossil fuels. Growing crops can also cause emissions, like when using fertilisers and manure. Cattle produce methane, a powerful greenhouse gas. And emissions also come from packaging and distributing food.

Powering buildings



Globally, residential and commercial buildings consume over half of all electricity. As they continue to draw on coal, oil and natural gas for heating and cooling, they emit significant quantities of greenhouse gas emissions.

Consuming too much



Your home and use of power, how you move around, what you eat and how much you throw away all contribute to greenhouse gas emissions. So does the consumption of goods such as clothing, electronics and plastics.

Source: <https://www.un.org/en/climatechange>

Work plan checklist:

- Read the text.
- Brainstorm each team member's ideas about climate change.
- Establish what multimodal product the group will deliver.
- Split the tasks among team members.
- Work on the product.
- Choose the roles for presentation.
- Rehearse the presentation.
- Provide feedback and improve the product and the presentation.
- Deliver the presentation to the whole group.
- Congratulate the team members for their work.

Activity 2. Creation of a radio show to broadcast the effects of climate change on the environment

Objectives

Participants will be able to:

- a. Understand the effects of climate change on the environment.

b. Be able to inform and positively influence other people's opinions and behaviours by using radio broadcasting techniques.

Materials:

- paper,
- markers,
- flipchart paper,
- computer,
- telephone.

Handouts:

- Climate change effects on the environment
- Radio script template
- Debriefing questions

Time: 60 minutes

Description of Activity:

1. Split participants into 4 -5 groups and deliver them the handouts "Climate change effects on the environment". Their task is to start from the information provided in the handouts to make an educative radio show for young people about climate change effects and record it on their telephone. Each team may choose a different show format: news, interview, informative presentation, entertainment, tops, report from the spot, debate, etc. The show should cover about 5 minutes for each team and it is planned to be broadcast at the school radio station. Participants should take into consideration that all radio formats have three important ingredients: spoken word, music and sound effects.
2. First, ask participants to read the handouts carefully and ask questions to the supervisor.
3. Invite teams to split roles and tasks and choose the radio show format and the topic they will approach.
4. Each group should perform additional information search, then writing the material, rehearsing, choosing the music and sound effects. 20 minutes before the end of the workshop each team should be ready to present their radio show.
5. Invite each group to broadcast their radio show and provide feedback to the other groups shows.
6. Open the final discussion based on several debriefing questions and draw conclusions.

Training materials:

Handout (in full): to be delivered to each participant

Climate change effects on the environment

Based on the global average temperature for the most recent 10-year period (2014- 2023), the Earth is now about 1.2°C warmer than it was in the pre-industrial era (1850- 1900). 2023 was the warmest year on record, with the global average near-surface temperature 1.45°C above the pre-industrial baseline. The period 2011-2024 was the warmest decade on record for both land and ocean.

Warmer temperatures over time are changing weather patterns and disrupting the usual balance of nature. This poses many risks to human beings and all other forms of life on Earth, such as:

Hotter temperatures



Nearly all land areas are seeing more hot days and heat waves; 2020 was one of the hottest years on record. Higher temperatures increase heat-related illnesses and can make it more difficult to work and move around. Wildfires start more easily and spread more rapidly when conditions are hotter.

More severe storms



Changes in temperature cause changes in rainfall. This results in more severe and frequent storms. They cause flooding and landslides, destroying homes and communities, and costing billions of pounds.

Increased drought



Water is becoming scarcer in more regions. Droughts can stir destructive sand and dust storms that can move billions of tons of sand across continents. Deserts are expanding, reducing land for growing food. Many people now face the threat of not having enough water on a regular basis.

A warming, rising ocean



The ocean soaks up most of the heat from global warming. This melts ice sheets and raises sea levels, threatening coastal and island communities. The ocean also absorbs carbon dioxide, keeping it from the atmosphere. More carbon dioxide makes the ocean more acidic, which endangers marine life.

Loss of species



Climate change poses risks to the survival of species on land and in the ocean. These risks increase as temperatures climb. Forest fires, extreme weather and invasive pests and diseases are among many threats. Some species will be able to relocate and survive, but others will not.

Not enough food



Changes in climate and increases in extreme weather events are among the reasons behind a global rise in hunger and poor nutrition. Fisheries crops, and livestock may be destroyed or become less productive. Heat stress can diminish water and grasslands for grazing.

More health risks



Changing weather patterns are expanding diseases such as malaria. Extreme weather events increase disease and death, and make it difficult for health care systems to keep up. Other risks to health include increased hunger and poor nutrition in places where people cannot grow or find sufficient food.

Poverty and displacement



Climate change increases the factors that put and keep people in poverty. Floods may sweep away urban slums, destroying homes and livelihoods. Heat can make it difficult to work in outdoor jobs. Weather-related disasters displace 23 million people a year, leaving many more vulnerable to poverty.

Source:

<https://www.un.org/en/climatechange/science/key-findings#health>

Radio script template

Story Slug:	Title of your story
Reporter:	Your name
Date:	
Duration:	25 secs
1st paragraph:	Introduction that summarises the story and captures the attention of your listener
2nd / 3rd paragraphs:	Provide the background of the story
Last paragraph:	Ends the story conclusively.

Debriefing questions for the final discussion:

-Have you enjoyed the activity?

-Was the activity useful? In what way?

-Has the activity helped you improve the level of understanding and awareness on the effects of climate change on the environment?

-If you do this activity again, what would you change in order to increase its educational effect on the young listeners?

Activity 3. The second Earth – climate change mitigation simulation game

Objectives:

Participants will be able to:

- a. Make the distinction between adaptation and mitigation to climate change
- b. Explain the most important climate change mitigation and adaptation solutions.

Materials:

- paper,
- pens,
- markers,
- flipchart paper,
- computer,
- telephone.

Handouts: (title)

- Mitigation and adaptation solutions to climate change
- The second Earth board game

Time: 60 minutes

Description of Activity:

- 1.Point out the distinction between climate change mitigation and adaptation and introduce the main strategies and actions to adapt and mitigate climate change.
- 2.Splits the class into 3 groups.
- 3.Invites participants to imagine that they arrive on a clone of the Earth planet where they have total power of decision. They should simulate the ruling of the new Earth to prevent its destruction in the conditions of severe climate change effects. Each participant struggles to explain the positive effects and benefits, and receives adoption by vote of at least 3 main strategies and measures for mitigation and adaptation to climate change.
- 3.Ask participants to keep track of the changes their adopted laws and imagine the new Earth according to the changes voted.
4. Group discussions and conclusions.

Training material:

Handout (in full)

Mitigation and adaptation solutions to climate change

Climate change mitigation – reducing climate change – means avoiding and reducing emissions of heat-trapping greenhouse gases into the atmosphere to prevent the planet from warming to more extreme temperatures.

Climate change adaptation – **adapting to life in a changing climate** – means altering our behaviour, systems, and—in some cases—ways of life to protect our families, our economies, and the environment in which we live from the impacts of climate change. The more we reduce emissions right now, the easier it will be to adapt to the changes we can no longer avoid.

Mitigation actions will take decades to affect rising temperatures, so we must adapt now to the change that is already upon us and will continue to affect us in the future.

The four types of **adaptation actions** are **infrastructural, institutional, behavioural and nature-based** options. Some examples of these are building seawalls or inland flood defences, providing new insurance schemes, changing crop planting times or varieties, and installing green roofs or green spaces.

Mitigation efforts include:

- transitioning to renewable energy sources,
- enhancing energy efficiency,
- adopting regenerative agricultural practices and
- protecting and restoring forests and critical ecosystems.

What each of us can do to adapt and mitigate climate change:

- Save energy at home. Much of our electricity and heat are powered by coal, oil and gas.
- Change your home's source of energy.
- Walk, bike or take public transport.
- Switch to an electric vehicle.
- Consider your travel. Is it really necessary?

- Reduce, reuse, repair and recycle.
- Eat more vegetables.
- Throw away less food.
- Plant a tree.
- Conserve water.

Sources:

<https://www.un.org/en/actnow/ten-actions>

Activity 4. Dramatization of nature-based solutions to climate change

Objectives:

Participants will be able to:

- a. Be aware of most important climate change mitigation solutions.
- b. Expose the impact of climate change and offer nature-based solutions using dramatization representations.

Materials:

- paper,
- pens,
- flipchart paper,
- computer,
- telephone.

Handout: -

Time: 60 minutes

Description of Activity:

1. Warm up activity: Stand in circle and, at the signal of the trainer, answers with one word to the question ``What is affected by climate change?`` The game ends when no more answers are given.

2. Invite participants to watch a short film ``How climate action affects the ecosystem``:

<https://www.youtube.com/watch?v=me14ikumMZE>

3. Choose an element of the ecosystem, document about its role in regeneration of the Earth and prepare a short drama moment in which to present in a convincing way the importance of its

preservation and regeneration as nature-based solution to the climate change. The dramatic discourse can be tragic or comic and it should not last more than 3 minutes.

E.g.: I am a secular/Amazonian/park forest.... I am a river ... I am an island/I am Maldives island... I am a beach... I am the corals barrier...., I am a polar bear... I am a bee...., etc.

4. Each participant has the possibility to circulate and work with a classmate or in bigger groups, according to its choice.

5. When ready, each student is given the opportunity to deliver the representation. For those who are shy or feel uneasy on the stage, the trainer may give the opportunity to present a representation filmed by a classmate.

6. Reward with prizes the most convincing representations.

7. Summarise the nature-based climate change solutions together with the class.

Training material:

``How climate action affects the ecosystem``:

<https://www.youtube.com/watch?v=me14ikumMZE>

Handout (in full): -

Further learning:

Additional sources:

<https://live365.com/blog/how-to-write-a-script-for-your-live-radio-event/>

<https://www.youtube.com/watch?v=q2oQKtGHQxs>

<https://www.youtube.com/watch?v=9Yq2OPJR-a4>

<https://www.epa.gov/beaches/what-affects-beach-health#:~:text=Climate%20Change,-A%20sea wall%20in&text=Sea%20level%20rise%20is%20a,of%20sea%20level%20rise%20accelerates>

<https://www.unicef.org/rosa/blog/were-being-swallowed-ocean-and-running-out-freshwater>

<https://www.iberdrola.com/sustainability/climate-change-mitigation-and-adaptation>

Module 3. Digital Tools for Climate Change Communication

Activity 1. Interactive communication of environmental concepts through Word Art

Objectives:

Participants will be able to:

- a. Use environmental key concepts for raising awareness and attract online readers.
- b. Improve creativity through the visualization of environmental terms.
- c. Use multimodal learning (visual, textual, and discussion-based) to deepen learners' knowledge of vocabulary about environment.

Materials:

- Computers/Tablets/Smartphones
- Projector/Screen
- Internet Access
- Documents, cards, texts for environmental education

Handout: (title)

- Word Art Cloud Generator Instructions
- List of Suggested Environmental Topics

Time: 30 minutes

Description of Activity:

- 1.1 Provide participants the handout with basic steps for creating a word cloud (e.g., entering words, adjusting word frequency, customising shapes/colours).
- 1.2 Ask participants to work individually and create a word cloud about Climate change, starting from one of the environmental topics given in Handouts, using relevant concepts and appropriate shape.
- 1.3 Stir a group discussion about the various uses of the word cloud created can have in online educational communication about climate change.

Training material:

Handout (in full)

Word Art Cloud Generator Instructions

WordArt, <https://wordart.com/create>, is an online application, with which the user creates word clouds with simple and easy steps. The user selects font, colours and orientation (horizontal/vertical) and creates visual representations with keywords.

Word clouds are a stylish and creative way of visualizing the words of a text. With word clouds, students become familiar with words-terms that are necessary to consolidate the lesson. Visualization of concepts and terms always helps in assimilating new knowledge. Our word cloud generators allow us to save our composition as an image in many shapes (not just clouds)!

To get started, we can make a new registration (sign up) on the website (or registration through our Google/facebook/twitter account) or start immediately by clicking on CREATE NOW.

Step 1

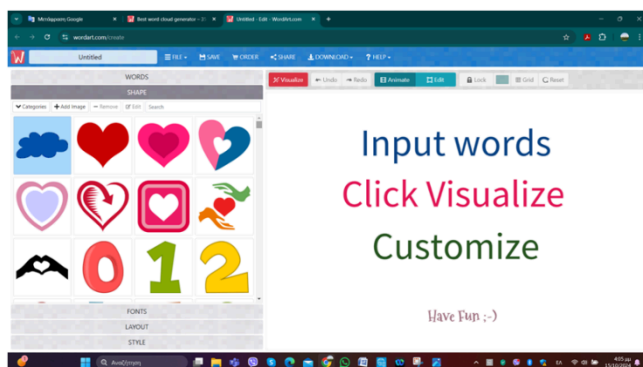
We name our creation

Step 2

From the WORDS option I add words either with Import [copy (ctrl+c)/paste (ctrl+v)] or with Add (incrementally new words). Words can be in UPPER, lower or capitalize. There is also the possibility (Options) to set Word Repetition, Word Size and Link Word with external links.

Step 3

From the SHAPES option we choose the shape that the composition of words we added will have. We can shape it with our own image to add to the collection (Add Image) or with our own text (Add text).



Step 4

From the FONTS option we choose a font (type, bold, italic) for the words we used.

Step 5

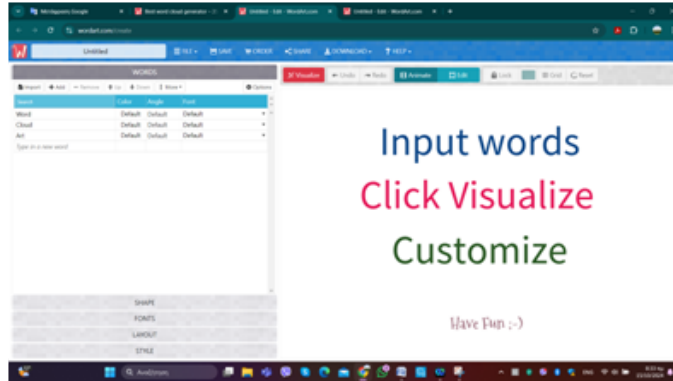
From the LAYOUT option we choose the way the words are displayed (horizontal, vertical, diagonal, random), but also the number of repetitions for each word.

Step 6

From the STYLE option I choose font colour, background colour or image, animation for the letters.

Step 7

Click on Visualize to see the result of our selections. With the Edit option we can change the size of as many words of the cloud-word as we wish. With the Print option we can print it or save it as a pdf.



Step 8

From the Menu options, we can save the changes (SAVE) or save it locally on our computer (DOWNLOAD) or share (SHARE) the created image.



EXTRA: We can also add emojis to my word cloud from the Menu - Emojis.

We click on the icon (emoji icon) we want to insert and copy its code (in the computer's memory). In the WORDS add area, I click on Type a new word and right click/paste (ctrl+v) in the box. I choose Visualize again to see the final format.

List of Suggested Environmental Topics:

- o Climate Change
- o Pollution (air, water, soil)
- o Renewable Energy
- o Biodiversity Loss
- o Deforestation

- o Ocean Conservation
- o Water Scarcity
- o Ecosystems and Sustainability
- o Waste Management and Recycling
- o Environmental Justice

Activity 2: Social media for Climate Change Communication

Objectives:

Participants will be able to:

- a.create content for communication about climate change on social media channels
- b.apply critical thinking when reading and using social media posts related to climate change
- c.create social media influence groups for posting about climate change.

Materials:

- Video projector and computer
- Chart paper
- Coloured markers and pens
- Sticky notes
- Tablets, Smartphones or laptops (optional)
- Internet access (optional, for research and digital resources)

Handout (title):

Social media platforms for climate change

Time: 60 minutes

Description of Activity:

2.1. Give a general introduction to **Social Media Tools for Climate Change Communication**, using the handout. Talk about important platforms, how we can use them, research and analyse data from.

2.2. Assign participants to three - to four - person small groups. Give each group a topic: to create a group in Facebook, Instagram, Twitter for climate communication. Give groups instructions on how to organize and create the group. Promote innovation and teamwork while groups complete their tasks. Ask each group to create and make 3-5 posts on relevant topics for climate change.

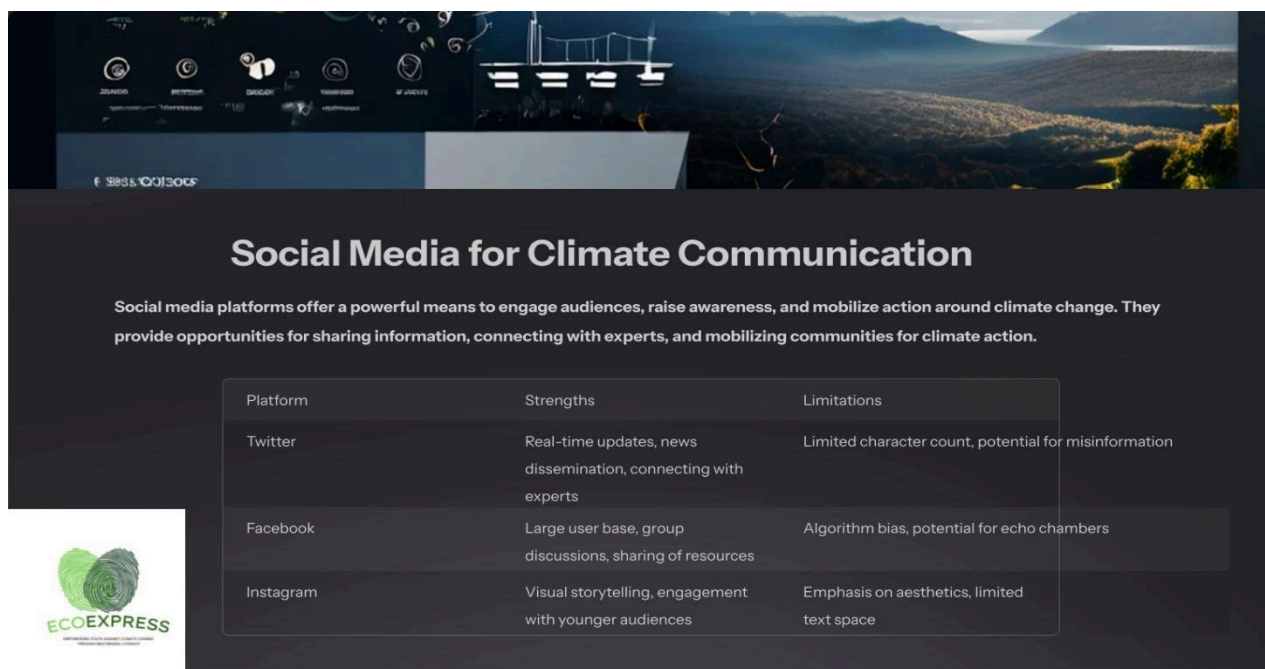
2.3. Start a conversation with participants about their social media learning experience on the climate change topic. Discuss about: useful information, accessibility, immediacy, interest, interaction, large audience.

2.4. Provide a summary of the most important lessons learned and stress the value of using several communication channels while tackling environmental issues like climate change.

Training material:

Handout (in full):

Social media platforms for climate change



The handout is titled "Social Media for Climate Communication" and features a background image of a forest landscape. It includes a table comparing three social media platforms: Twitter, Facebook, and Instagram. The table lists their strengths and limitations. Additionally, there is a logo for "ECOEXPRESS" in the bottom left corner.

Platform	Strengths	Limitations
Twitter	Real-time updates, news dissemination, connecting with experts	Limited character count, potential for misinformation
Facebook	Large user base, group discussions, sharing of resources	Algorithm bias, potential for echo chambers
Instagram	Visual storytelling, engagement with younger audiences	Emphasis on aesthetics, limited text space

Activity 3: Using the Plantin Digital Application

Objectives:

Participants will be able to:

- a. understand the importance of biodiversity.
- b. become familiar with the digital application Plantin.
- c. develop the plant identification and protection skills.

- c.promote the use of technology for environmental education.
- d.use modern technologies to enrich their knowledge and skills.

Materials:

1. Devices (Smartphones, Tablets, Laptops).
- 2.Plantin App (available on smartphones/tablets/PCs): <https://myplantin.com>
3. Internet Access (for research on environmental topics).
4. Pens, paper sheets.
- 5.Pots or Horticultural Boxes of various sizes with plants

Handout (title):

- PlantIn App description and instructions
- Survey on PlantIn use

Time: 80 Minutes

Description of Activity:

- 3.1. Introduce PlantIn App and its basic functions to the participants using the handout.
- 3.2. Invite participants into the school garden/nature trip/ home garden for the continuation of the workshop:
- 3.3.Use the app to identify plants and make nature observation.
 - In the **School Garden** participants can use the app to identify plants, record their growth and learn about their care.
 - During **Nature Trips** participants can recognize plants in their natural environment and learn about their ecology.
 - In **Home Gardens**: participants can use the app to create and maintain a nice home garden, promoting engagement with nature.
- 3.4 Invite participants to work in groups to create a digital archive of plants in their area and examples of use.
- 3.5. Discuss the importance of biodiversity and ways to protect it.
- 3.6. Workshop assessment: evaluate participants based on their active participation and ability to use the app using the survey in Handouts.

Training material:

Handout (in full):

PlantIn App description and instructions

☐ Utilising the Plantin Application in Everyday Life

The Plantin application can be used daily in the following ways:

- Identification and categorization of plants.
- Learning to care for and grow plants.
- Monitoring the health and growth of plants in the garden or balcony.
- Recording and sharing of data on the local flora.

☐ Plantin's Contribution to Saving Biodiversity

The Plantin app helps save biodiversity through:

- Provision of information on rare and endangered species.
- Information on best practices for plant protection.
- Strengthening the community of users interested in environmental conservation.
- Support scientific studies through data collection from users.

☐ Use of the App by Persons with Disabilities

The Plantin app can be used in teaching youth with disabilities with the following features:

- Voice Instructions: Provide voice instructions to identify and care for plants.
- Readable Text: Settings to improve text readability.
- Compatibility with Disabilities: Ability to integrate with other utilities and devices.
- Interactive Tools: Use of simple and understandable tools that facilitate interaction.

-Survey on PlantIn use:

1. How easy to use did you find the PLANTIN app?

-Very easy to use

-Handy

-Neither easy to use nor unwieldy

-Unmanageable

-Very unwieldy

2. How informative was the course content?

-Very informative

-Informative

-Neither informative nor uninformative

-Uninformative

-Very uninformative

3. How effectively do you think the PLANTIN app has helped you learn new things about biodiversity?

-Very effective

-Effectively

-Neither effective nor ineffective

-Ineffective

-Very ineffective

4. How satisfied are you with the functionality of the application (e.g. plant identifications, provision of information, user interface)?

- Very satisfied

-Satisfied

- Neither satisfied nor dissatisfied

- Not satisfied

- Very dissatisfied

5. How likely are you to recommend the PLANTIN app to someone else?

-Very likely

-Likely

- Neither likely nor unlikely
- Unlikely

Activity 4: Introduction to the iNaturalist App for Nature Exploration and Citizen Science

Objectives:

By the end of the session, participants will:

- understand how to use the iNaturalist app to identify and record plants, animals, and fungi.
- learn the role of citizen science in contributing to biodiversity research and conservation.
- be able to submit an observation using the iNaturalist app and engage with the global community of naturalists.

Materials:

- iNaturalist app: <https://www.inaturalist.org/>
- Projector and screen to display the iNaturalist app interface.
- Smartphones or tablets (participants' devices or provide some for use).
- Notebooks and pens (optional for taking notes).

Handout: (title)

- Overview of iNaturalist app features and how to get started

Time: 70 minutes

Description of Activity:

4.1.Introduce iNaturalist, emphasizing its role as a tool for nature exploration and citizen science. Present some examples of projects people stated on the app:

- <https://www.inaturalist.org/projects/bugs-in-flight>
- <https://www.inaturalist.org/projects/insects-southern-africa-identified-for-the-1st-time-on-inat-or-difficult-to-identify>
- <https://www.inaturalist.org/projects/cincinnati-nature-center-pollinator-garden>

4.2.Invite each participant to choose one of the species observed already in the app and research about it: <https://www.inaturalist.org/observations?view=species>.

4.3. Join participants into groups of 3-5 people and ask them to share interesting facts about the species they researched.

4.4. Ask participants to think about a project they would like to start using iNaturalist app, to make short description/poster of it on a sheet of paper or online and search for team members that would like to join their project or have common interests. Online search is also possible. Finally, participants should form teams around 5 projects. The new teams are asked to develop the projects and start them on the app.

4.5. Participants are invited to discuss about their projects.

Training material:

Handout (in full):

Overview of iNaturalist app features and how to get started.

iNaturalist is a powerful app and online platform that allows anyone to explore nature, document species, and contribute to scientific research. It serves as a tool for **nature exploration**, helping users identify plants, animals, and fungi through photos they upload, with the help of both AI and the global iNaturalist community.

Beyond personal use, iNaturalist plays a critical role in **citizen science** by enabling everyday people to share their observations, which are then used by researchers, conservationists, and policymakers to study biodiversity, track species populations, and monitor ecosystems. This collective data contributes to important environmental research, making every observation count toward understanding and protecting the natural world.

Step 1: Download the iNaturalist App

1. Go to the App Store:

- For iOS (iPhone/iPad): Open the App Store on your device.
- For Android: Open the Google Play Store on your device.

2. Search for "iNaturalist":

- Type "iNaturalist" into the search bar at the top of the store.
- Look for the iNaturalist app (with a green leaf icon).

3. Download the App:

- Tap the Download or Install button to get the app.
- Wait for the app to install on your device.

Step 2: Set Up Your iNaturalist Account

- Once the app is installed, tap the iNaturalist icon to open it. Sign Up for a New Account:
- On the welcome screen, tap "Sign Up"
- You can sign up using your email or log in using your Google or Facebook account.

Fill in Your Details:

- Enter your email address, create a username, and set a password. Agree to the terms and conditions, and tap "Sign Up".

Verify Your Email:

- You may need to verify your email address by clicking on a link sent to your inbox (check spam if you don't see it right away).

Step 3: Getting Familiar with the App

1. Allow Permissions:

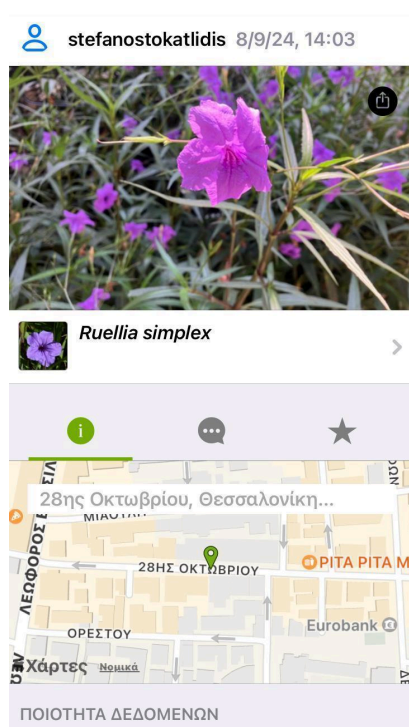
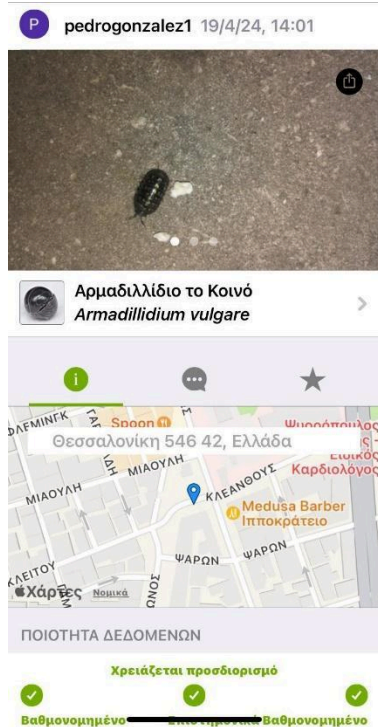
- The app will ask for permissions to access your camera and location. This is important for taking photos and recording the location of your observations.

2. Explore the Interface:

- Home Screen: Shows your observations and updates from the iNaturalist community.
- Explore Tab: View observations made by other users near your location or worldwide.
- Observe Button: Use this to upload a new observation (photo) of a plant, animal, or fungi.
- Activity Feed: Shows updates, feedback, or identifications made by others on your submissions.

Step 4: Make Your First Observation

1. - On the main screen, tap the green "Observe" button (camera icon).
2. Take a Photo or Choose from Gallery: Choose to take a new photo using your camera or select an existing photo from your gallery.



3. Identify the Species: The app will suggest species based on your photo and location, but you can also manually search or add a species if you know it.

4. Add Location: The app should automatically add your location using GPS, but you can adjust it on the map if needed.

5. Submit Your Observation: Once you've added your species and location, tap "Submit" to upload your observation.

Step 5: Explore and Engage: 1 Explore Nearby Observations. Tap on the Explore tab to see what other naturalists have observed in your area or anywhere around the world.

2. Join or Create Projects: Explore or join specific iNaturalist projects that interest you, such as local biodiversity efforts or themed studies (e.g., birdwatching, plant identification).

Module 4: Multimodal Literacy Techniques

Activity 1 Visual method „Trimino“

Objectives:

Participants will be able to:

- a. Learn to use Trimino for Climate Change Education
- b. Participants will be able to create Trimino for Climate Change Education

Materials: paper, pens, slides, computer, internet.

Handouts (title):

Trimino dictionary, Trimino generator

Time: 60 min

Description of Activity:

Youth workers must understand the best ways participants learn through research. One of the popular theories, to this day, is the VARK model. This model identifies four types of learners: visual, auditory, kinaesthetic, and reading/writing.

Most people are a combination of these four styles, but more times than not, they have a predominant style of learning. Each of these styles has a complementary way of teaching. Now, let's see the characteristics each of these styles entails and how best to make use of them.

Visual learners are individuals who prefer to take in their information visually—be that with maps, graphs, diagrams, charts, and others. However, they don't necessarily respond well to photos or videos, rather needing their information using different visual aids such as patterns and shapes.

The best way to present to visual learners is by showing them the relationship between different ideas visually. For instance, when explaining a scientific process, it can be done by using a flow chart.

Trimino is similar to dominoes, only with triangular pieces. The aim of the learning game is to put together matching terms in such a way that, for example, a large triangle is created. You can use a generator with which such triminos can be created and printed:
<https://schule.paul-matthies.de/Trimino.php>

Trimino is a variant of the well-known domino game. In the variants available here, the game pieces must be placed next to each other so that the sides that meet each other fit together. Depending on the variant, a star, a triangle or a hexagon is created.

1.1. Open Trimino generator: <https://www.schule.at/tools-apps/details/trimino-generator> Select the desired trimino type (shape), as well as the font, font colour and corner colour.

1.2. Create a Trimino dictionary (1 handout) from pairs of terms. For Trimino Star you will need 12 pairs of terms, for Triangle - 9 pairs of terms, for Hexagon - 30 pairs of terms.

1.3. Create and download Trimino (Handout). You can then enter the pairs of terms. Once all the content for the Trimino has been entered, just click on “Create Trimino” and the finished document will be displayed. This can then be saved as a PDF and/or printed out.

1.4. Cut triangles. You can then laminate and cut out the triminos.

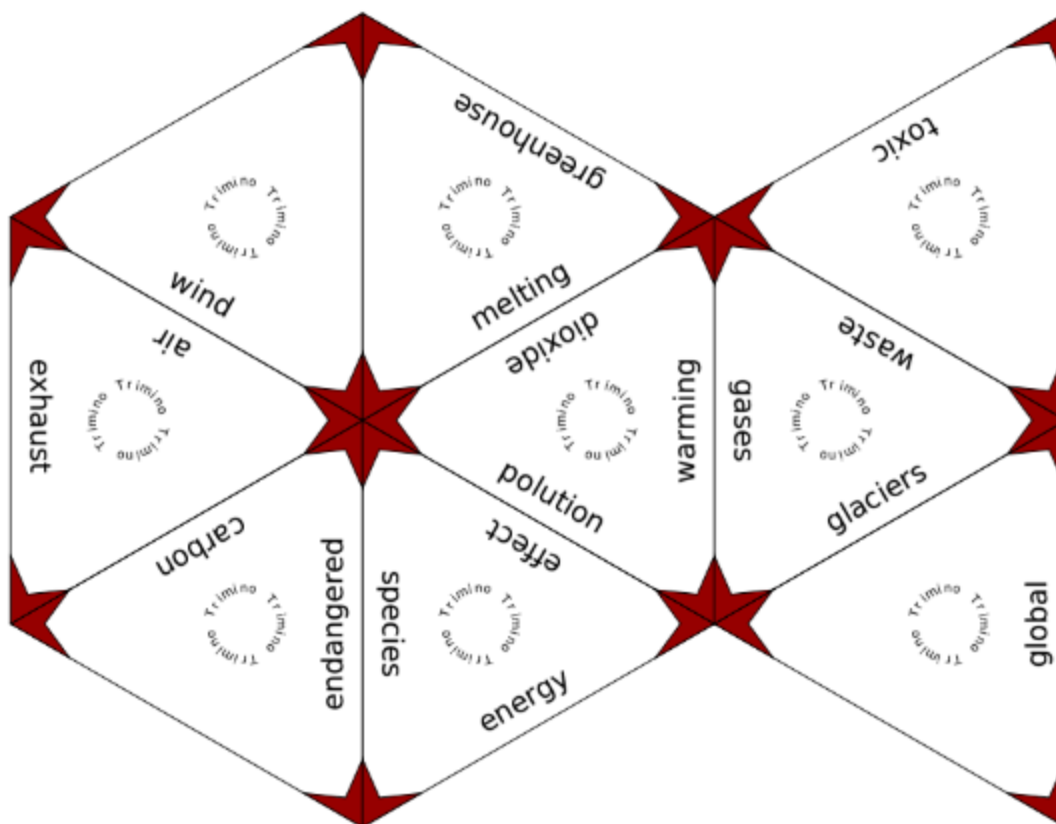
1.5. Participants can start puzzle.

Handout: –

1. Trimino dictionary:

1. global warming; 2. carbon dioxide; 3. air pollution; 4. endangered species; 5. exhaust gases; 6. wind energy; 7. greenhouse effect; 8. melting glaciers; 9. toxic waste.

2. Trimino generator: <https://www.schule.at/tools-apps/details/trimino-generator>



2. Activity - auditory method “Focus group (panel discussion) on Climate Change”

Objectives:

Participants will be able to:

- Learn to plan, organise and manage a group discussion dealing with climate change issues.
- Participants will be able to debate climate change issues with other participants; be able to manage a team work and group discussion.

Materials: paper, pens, white board, audio record system/equipment (example – phone or other instruments).

Handout: (title) Questions for discussion

Time: 60 minutes

Description of Activity “Climate change trends: nature in the city”.

Auditory learners are individuals who learn better when they take in information in auditory form when it is heard or spoken. They are prone to sorting their ideas after speaking rather than thinking ideas through before. Since, to them, saying things out loud helps them understand the concept. If they are learning a second language or a new theory, auditory learners learn best when information is presented to them via strategies that involve talking, such as lectures and group discussions. They can benefit from repeating the lessons, utilising technology for recordings of the lectures, doing group activities that require classmates to explain ideas, etc.

1.1. Prepare the questions to be discussed (about 10 open questions should be prepared). But you can also use the questions from handout (in full).

1.2. Prepare a space for discussion, as shown in the picture below. A group of 10 - 16 people, can be more

1.3. The discussion is moderated by one moderator.

1.4. Discussions on issues prepared in advance. All participants express their views on each issue.

1.5. The discussion is followed by summary conclusions.

Training material: more about focus discussion can find here: <https://www.questionpro.com/blog/focus-group/#best> Online Focus Group Software: QuestionPro Communities; also focus discussion can be in online in TEAMS, Google meet, Discovery and other platforms.

Handout (in full): Only for discussion moderator.

Discussion moderator need list of questions, but can be also create questions during the discussion, depending on how the discussion is going.

1. Why is it important to create green spaces in urban community areas and how can this affect climate change?

2. How to bring urban communities together to work as a team to create green spaces?

3. Changing lifestyles of urban dwellers from consumer to creator, what is it?

4. What do we know about the urban food chain?
5. Growing organic food in the city - do we have the capacity to do so?
6. Differences between organic food and fast food, what are the implications and challenges for people living in cities?
7. Benefits of microorganisms for urban green space ecosystem, food quality, human health. Why is this important to know?
8. Factors affecting the sustainability of urban food chains?
9. My city's eco-system in 20 years. What is it like?
10. The challenges of reconciliation and adaptation to climate change. What are they and where are they leading?

3. Activity – “Creative Drama on Climate Change Prevention topic”

Objective:

Participants will be able to:

- a. Learning to use drama, improvisation and body language technique.
- b. Participants will be able to use the technique of creative drama; will be able to express thoughts with body movements; be able to use improvisation techniques to talk about Climate Change

Materials: Sufficient space, Scene, Measures for performance.

Handout: (title): Questions for discussions

Time: 60 minutes.

Description of Activity:

Kinaesthetic learners are individuals who prefer to learn by doing. They enjoy hands-on experience. They are usually more in touch with reality and more connected to it, which is why they require using tactile experience to understand something better. The best way to present new

information to a kinaesthetic learner is through personal experience, practice, examples, or simulations. For instance, they can remember an experiment by recreating it themselves

1. Teacher asks participants to sit in a circle.
2. Task for participants: create a story on Climate Change topic, where each participant says one word, logically related to the words spoken before it. Teacher can write words or remember all of them.

When all participants say their words and circle ends, the teacher repeats a story, created by participants. It can be just beginning of story, without end (depends on participants number),

3. Teacher divided participants into groups from 4 to 6 participants. Each group must perform this story and come up with an ending that reflects the theme of the workshop: Climate Change and its Prevention.
4. Participants vote for the best performance

5. Discussions

Training material:

Handout (in full):

Questions for discussions:

1. What action that affected climate change was in this story?
2. Whether all prevention measures achieve their goal?
3. Which preventive measure was the most appropriate?
4. What other preventive measures could be applied in this situation.

4 Activity - reading/writing method “Resolving an issue in the community”

Reading/writing learners consume information best when it’s in words, whether that’s by writing it down or reading it. To them, text is more powerful than any kind of visual or auditory

representation of an idea. These individuals usually perform very well on written assignments. There are different ways to get a reading/writing learner to engage and understand a certain lesson. For instance, it would be best to have them describe charts and diagrams by written statements, take written quizzes on the topics, or give them written assignments.

Objectives:

Participants will be able to:

- a.learn to define an ecological problem in writing by formulating a question and answers with community members working in team.
- b.ask written questions.
- c.learn to answer questions in writing.
- d.analyse the answers received and choose the most appropriate ones.
- e.justify their choices orally and in writing.

Materials: paper, pens or computer, internet.

Handout: (title): Find out what everyone in your community thinks about the environmental problem you are facing and how they propose to solve it

Time: 60 minutes.

Description of Activity “I want to know”.

1.1. Participants sit in a circle around a table. Each of them has a sheet of paper on which they write one question at the top.

1.2. After writing a question, all participants simultaneously hand their sheet of paper to the colleague on their right.

1.3. When you receive a new sheet containing a question from another participant, you are given 3 minutes to answer it with possible solutions to the problem behind the question. After 3 minutes, all participants again pass the sheet to the colleague on the right. This is repeated until the question sheets of all parts have gone round the circle and back to the person who wrote the question.

1.4. Each participant's sheet is followed by the answers or suggestions of all other participants. You must read them and choose the one you prefer. All participants should read the question

aloud, the answer they have chosen and comment on why this particular answer is the most acceptable.

1.5. After all participants have spoken, there may be a general discussion or further contributions on one or other of the issues that have been read out to the audience.

Training material: This method can be done face to face. It can also be done online in TEAMS, Discovery and other platforms.

Handout (in full): a sheet of paper for the participant in the exercise

“I want to know”.

Question:

.....
.....

1 answer

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.....

2 answer

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.....
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3 answer

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.....

.....|answer

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.....
.....
.....

References:

<https://www.citationmachine.net/apa>

Module 5: Developing Interactive Learning Resources

Activity 1. Climate Change Experiences

Objective: Reflect about your experience and perception related to Climate Change.

Participants will be able to reflect about their knowledge, skills and experience for developing training for Climate Change.

Materials: Objects (from participants).

Handout: (title)

Time: 40 min

Description of Activity:

1.1. 6 minutes

All of you locate 3 objects. The object can be metaphorical or physical (music: circus)

The first is something that represents, in your opinion, the most challenging issue related to Climate Change.

Questions: What is the most challenging issue related to Climate Change in the world? How do you feel about that?

How do you feel motivated?

The second is something that represents the solution for eliminating, reducing, mitigating this problem. It can be related to your participation in groups or community, actions taking by word leaders. You can choose who is taking actions.

Questions: What can you do or nowadays do in your community? What can be done/is being done from stakeholders, institutions?

The third is something that represents your individual contribution, your own actions, to mitigate Climate Change consequences. Questions:

What can you do as an individual? What is challenging for you in daily life? What are the difficulties that you experienced? How do you feel?

1.2. Total 24 minutes. 8 minutes per round x 3 rounds. Groups of 4 persons.

1.3. 10 minutes Round

Training material: -

Activity 2.Learning Experience Design

Objective: Learn to understand LxD

Participants will be able to integrate Learning Experience Design in Climate Change Education awareness and learning actions.

Materials: paper, pens, slides, computer, internet.

Handout: (title) **Learning Experience Design** (Original idea by Niels Floor)

Time: 80 min

Description of Activity:

2.1. Theory 15 minutes

2.2 Brainstorming for ideas and topics in next step, related to Climate Change. 20 minutes

2.3 Pitching and voting. 45 minutes

Handout

Padlet or Printed canvas and post-it

Training material

Experience

Everything we learn comes from experience, that's a fact.

An experience is any situation you encounter that takes an amount of time and leaves an impression. These experiences don't necessarily have to take place in an educational setting like a school. They can take place at home, outside, in the office or anywhere else.

Not every experience is as educational as the next. Some experiences can be straight out boring or annoying.

Design

Similar to other creative professions the design process typically includes research, experimentation, ideation, conceptualization, prototyping, iteration and testing. It is not a step-by-step systematic process, but a creative process.

Learning

LX design is about learning and not so much about teaching, instruction or training.

The focus is where it should be: on the learner and the process that the learner goes through.

You definitely have to understand why and how people learn in order to be effective.

As designer, you want to design a learning experience that enables the learner to reach the desired learning outcome. But how do you do that? By making the experience human centered and goal oriented.

Human centered

Learning is a human and social process.

Putting the learner at the center of your design process is called human centered design.

This means you have to get to know and understand the people you design for and their motivation.

We all have wants, needs, hopes, fears and doubts. So a great learning experience has to connect on a personal level.

Goal oriented

It is primarily based on the goals of the learner.

This means you start with formulating the desired learning outcome and every next step in the design process, including the choice of your medium or technology, is geared towards the desired learning outcome.

LxD

Activity 3. Reflexion about our Interactive Learning Experiences in Climate Change

Objective: Reflexion about meaningful interactive training experiences

Participants will be able to integrate Learning Experience Design in Climate Change Education awareness and learning actions.

Materials: paper, pens, slides. Dixit cards, or printed photos, or magazine clippings (as you wish).

Handout: (title)

Time: 50 min

Description of Activity:

- 1.1. Self-reflexion. Questions are written in 5 papers in 5 different places (in the room, outdoors). Participants reflect about them one by one in chosen order. (10 minutes)

How do you describe your greatest learning experience related to Climate Change?

How do you describe your most terrific learning experience related to Climate Change?

How do you perceive your role in Climate Change activism?

What needs to happen to you (internally) to learn from an experience? To change your attitudes, behaviours, insights?

1.2. Choose a “Dixit Card” or “Photo” or “magazine clippings” that represents what you want to share with other about your reflexion. 10 minutes.

1.3. 2 minutes/participant Sharing. Share with others a bit about your professional context in a creative way. 30 minutes

Activity 4. Learning Experience Design Canva. Elements

Objective: Learn to understand and implement in practice LxD

Participants will be able to create Learning Experience Design Canva for Climate Change Education

Materials: LxD Canva, paper, pens, slides, computer, internet.

Handout: (title) Elements in Learning Experience Design Canva

Time: 70 min

Description of Activity:

1.1. 10 minutes: Explain the different elements

1.2. 60 minutes: Working in groups to plan a training activity (steps by step, in different sections, following the boxes. Not necessary to complete all boxes.

Handout: Elements

Training Material

LEARNING OUTCOME

The learning outcome describes the impact the learning experience has on the learner it's about what you gain from the experience and how it's relevant and meaningful having a clear and well formulated learning outcome will help guide your design process towards a good result

Learning Objectives

A learning objective is a specific goal that you need to reach in order to achieve the desired learning outcome

People

In the learning experience often these are primarily learners and teachers but also other stakeholders like colleagues family companies or schools you want to keep all different people in mind who have a direct or indirect influence on the learning experience once you've

Characteristics

Identified the different people that play a part in your learning experience it's time to get to know them understanding what motivates them what their views are and how you can help them achieve their goals is a vital part of the design process a learning

Location

Experience can take place in one or more locations the location you choose depends on different practicalities don't be afraid to think outside the box choosing a different location can have a surprising and energising effect on the learner an environment influences how we

Environment

Interact with each other and our surroundings you may choose a physical environment like a classroom or a virtual environment like an online platform also you want to look at it from a soul and cultural perspective to figure out how people will behave and how it enables or disables learning resources describes all that you have at your

Resources

To make your learning experience reality there are different types of resources like money time materials and technology but also people and their expertise the resources are always a means to an end first you think about what you want to achieve and then you choose the appropriate resource this includes all

Constraints- Limitations

limitations to the design the realization and the implementation of a learning experience constraints can be challenging but they can also really boost your creativity using creative solutions to deal with these limitations will only make your design better

Strategy

A strategy is a set of design guidelines

Activities

Activities are what you do to reach the learning objectives and achieve the desired learning outcome.

So don't limit yourself to what you already know and try to come up with truly original and memorable learning experiences

Process

The process describes the actual learning experience as it takes place over time a process can be short like a two-hour workshop or 1 year training course.

Elements (video):

LEARNING EXPERIENCE CANVAS.com SESSION

LEARNING OUTCOMES Behavior Insight Skill Knowledge		STRATEGY	ENVIRONMENT Physical Virtual Social Cultural		LOCATION
PEOPLE			CONSTRAINTS		
CHARACTERISTICS			RESOURCES		
ACTIVITIES			PROCESS		

CREATED BY NIELS FLOOR
CC BY-SA

Module 6: Incorporating Real-life Stories and Scenarios

Activity 1: Connecting with Real Stories

Objective:

Participants will be able to understand the real-life impacts of climate change on communities and reflect on how these stories influence their views on global warming.

Material:

Projector

Flipchart or whiteboard

Time:

30 minutes

Description of Activity:

1. Introduction (5 min): Present brief facts on global warming, focusing on how it impacts developing countries the most: Support video: <https://www.youtube.com/watch?v=-n4A0BssFd0>

Global warming is changing weather patterns all around the world, and it's often the developing countries that suffer the most.

- **For example, in Ethiopia**, droughts are becoming more frequent and severe. This makes it harder for farmers to grow crops and for communities to access clean water, leading to widespread hunger and hardship.
- **In Bangladesh**, the problem is the opposite. Due to global warming, floods have become more intense. Heavy rains and rising sea levels cause large areas to flood, destroying homes, contaminating drinking water, and forcing many people to leave their communities.
- **And even in the United States**, hurricanes are becoming more powerful and frequent. Warmer ocean waters fuel these storms, causing massive damage to homes, infrastructure, and entire cities.

Show the Participants images of real examples of natural disasters in these countries - handout

1. **Visualisation (10 min):** Show short videos or excerpts from documentaries depicting real-life climate change stories. (six short

films)<https://www.bbc.co.uk/mediaaction/our-work/climate-change-resilience/living-climate-change/bangladesh-heat>

2. **Group Discussion (15 min):** Ask participants to share how these stories affected their perception of global warming. Write key ideas on the flipchart.

Reflection: How do these real-life examples help us understand the global climate crisis?

Reflection: How do personal stories make the abstract idea of climate change more tangible?

Handout: Real images climate change

https://www.canva.com/design/DAGSRWoJDl8/orbnw4DPjPMNHhYT78Y1Qg/edit?utm_content=DAGSRWoJDl8&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton



Activity 2: Creating and Sharing a Climate Story

Objective:

Participants will be able to create and present short narratives based on real climate stories.

Material:

- Smartphones or tablets
- Google Docs or note-taking apps

Time:

60 minutes

Description of Activity:

1. Story Creation (30 min): In small groups, participants:

- Research online real-life stories of people affected by climate change (the facilitator can suggest for research in their communities, countries or around the world)

- Develop a short narrative focusing on:

- What are the causes of it?
- Life before and after the impact?
- One thing that could be done to mitigate/help?

2. Presentation (30 min): Each group shares their story with the group/class in a short oral presentation.

Reflection: How does researching and creating a story deepen your understanding of climate change?

Activity 3: Video Creation for Social Media

Objective:

Participants will be able to create short, videos for TikTok based on their climate story.

Material:

- Smartphones or tablets
- TikTok video app

Time:

90 minutes

Description of Activity:

1. Tutorial (10 min): Briefly show participants how to create TikTok videos, including key tips for storytelling and video editing.

A good story should have:

- Emotions (anger, hope, positive, negative)
- Clear message (be clear and simple in what you want to say)
- Short YouTube Tutorial on TikTok
<https://www.youtube.com/watch?v=5KQBpUEXHnc>

- TikTok example of campaign for sustainability
<https://www.tiktok.com/for-good/sustainability/>

Reflection: How does researching and creating a story deepen your understanding of climate change?

2. Video Creation (60 min): Each group produces a 30-60 second video based on their story of exercise 2 using the TikTok editor. Use tags to upload the videos #climatejustice #climatechange

3. Each group share their videos in the big group (10 min)

Reflection questions for the group:

-How was the process of doing the videos?

-Do they feel that they are adding something to the climate change fight?

Activity 4: Final Reflection and Discussion

Objective:

Participants will be able to reflect on the impact of their storytelling and videos as tools for climate action.

Material:

Projector

Flipchart for discussion points

Time:

50 minutes

Description of Activity:

Video Review (20 min): Replay selected TikTok videos created by the participants and encourage comments. Discuss the effectiveness of their messages and how they contributed to raising awareness.

Group Discussion (20 min): Reflect on the overall process and the role of storytelling in climate action.

Reflection Questions:

Which stories or videos had the most impact on you?

How effective do you think social media, such as TikTok, is in raising awareness of climate change?

What challenges did you face in creating your video, and how did you overcome them?

Closing Thought:

Encourage participants to continue advocating for climate action, using their creative abilities and social media as platforms for raising awareness.

Further Learning:

- T-kit 13: Sustainability and youth work - <https://pip-eu.coe.int/en/web/youth-partnership/t-kit-13-sustainability-and-youth-work>
- <https://commonslibrary.org/topic/digital-campaigning/>
- Explore additional resources from environmental organizations like Greenpeace or WWF

Module 7: Eco-Social Approach to Climate Education

Activity 1_ Exploring Interconnectedness and Creating a Climate Change Mitigation Project

Objective:

Participants will explore how ecological and social systems are connected and collaborate to design a citizen science project focused on climate change mitigation, using a simple and clear approach.

Total Time:

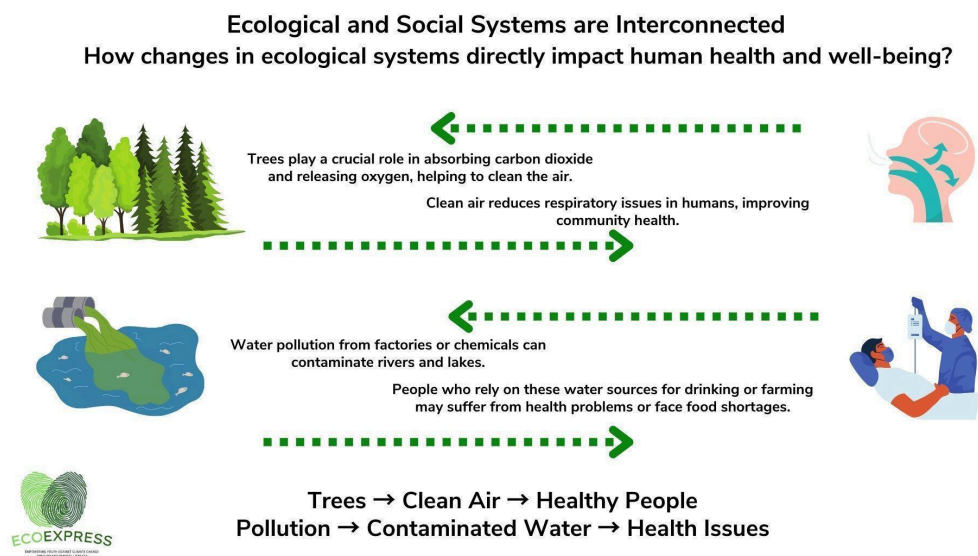
Part 1: Exploring the Interconnectedness of Ecological and Social Systems

Time: 40 minutes

Materials: Paper, Pens, Slides, Laptop/projector

Handouts: Overview of Eco-Social Systems

(https://www.canva.com/design/DAGSQJTnibw/LINE3qlf4MCkQkzNAq6ceQ/edit?utm_content=DAGSQJTnibw&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)



Description of Activity:**1.Introduction and Simple Discussion (10 minutes)**

The facilitator gives a simple explanation of how ecological and social systems are connected. Use an example like “how trees help clean the air and keep people healthy” or “how pollution affects the water and the people who drink it.” The facilitator uses a diagram to make the explanation clear.

2.Group Discussion and Real-Life Examples (20 minutes)

Participants are split into small groups. Each group gets a simple case study, like "too much trash in parks" or "rivers getting polluted." The groups will discuss:

- How the problem affects both nature and people.
- Why fixing it helps both.

Each group creates a simple drawing or list to show what they discussed.

3.Group Presentations and Wrap-Up (15 minutes)

Each group presents their example to the class. The facilitator leads a short discussion, asking the class how understanding this connection helps us take better action against climate change.

Activity 2. Introduction of the citizen science concept**Objective:**

Participants will become familiar with the concept of citizen science related to the climate change topic.

Material: paper, pens, coloured pens, laptop, video projector, slides

Handout: (title)

Citizen science presentation

List of citizen science projects on climate change

Time: 50 minutes

Description of Activity:

- 1.Participants are invited to brainstorm about the importance of climate change in all areas of life for warm up.
- 2.They are introduced to the concept of citizen science by the trainer. They are invited to ask questions.
- 3.Then each participant is provided with a link to an example of a citizen science project, that the participant performs the web quest carefully, so that to gather as much information as possible on that project, then to make a short description and a one-page visual presentation of the project. According to circumstances, the trainer will decide if they will make paper presentations or digital ones.

Training material:

- Citizen science presentation
- Examples of climate change citizen science projects

Handout (in full):

Citizen science presentation

Citizen Science's mission is to nurture collaboration between the governments and the public to advance inclusive participation in scientific discovery and research. In citizen science, the public participates voluntarily in the scientific process, addressing real-world problems.

Citizen Science has the potential to bring together science, policy makers, and society as a whole in an impactful way. Through citizen science, all people can participate in many stages of the scientific process, from the design of the research question, to data collection and volunteer mapping, data interpretation and analysis, and to publication and dissemination of results.

According to the European Citizen Science Association, the ten principles of Citizen science, as they have been established in 2015 in London are:

- 1. Citizen science projects actively involve citizens in scientific endeavour that generates new knowledge or understanding. Citizens may act as contributors, collaborators, or as project leader and have a meaningful role in the project.**
- 2. Citizen science projects have a genuine science outcome.** For example, answering a research question or informing conservation action, management decisions or environmental policy.
- 3. Both the professional scientists and the citizen scientists benefit from taking part.** Benefits may include the publication of research outputs, learning opportunities, personal

enjoyment, social benefits, satisfaction through contributing to scientific evidence e.g. to address local, national and international issues, and through that, the potential to influence policy.

4. Citizen scientists may, if they wish, participate in multiple stages of the scientific process.

This may include developing the research question, designing the method, gathering and analysing data, and communicating the results.

5. Citizen scientists receive feedback from the project. For example, how their data are being used and what the research, policy or societal outcomes are.

6. Citizen science is considered a research approach like any other, with limitations and biases that should be considered and controlled for. However, unlike traditional research approaches, citizen science provides opportunity for greater public engagement and democratisation of science.

7. Citizen science project data and meta-data are made publicly available and where possible; results are published in an open access format. Data sharing may occur during or after the project, unless there are security or privacy concerns that prevent this. **8. Citizen scientists are acknowledged in project results and publications.**

9. Citizen science programmes are evaluated for their scientific output, data quality, participant experience and wider societal or policy impact.

10. The leaders of citizen science projects take into consideration legal and ethical issues surrounding copyright, intellectual property, data sharing agreements, confidentiality, attribution, and the environmental impact of any activities.

Examples of climate change citizen science projects:

Naturethon: https://eu-citizen.science/project/532
Urban ReLeaf: https://eu-citizen.science/project/486
Amai!: https://eu-citizen.science/project/274
CitSci4All: https://eu-citizen.science/project/426
Agora: https://eu-citizen.science/project/432
Aurora: https://eu-citizen.science/project/358
Impetus: https://eu-citizen.science/project/349
StepChange: https://eu-citizen.science/project/278

SvinnKollen: https://eu-citizen.science/project/163
SOCIO-BEE: https://eu-citizen.science/project/344
FLOODUP: https://eu-citizen.science/project/173
Orchid Observers: https://eu-citizen.science/project/1
Cricket Tales: https://eu-citizen.science/project/116
Schools and Satellites: https://eu-citizen.science/project/117
GrowApp: https://eu-citizen.science/project/69
OpenTeck: https://eu-citizen.science/project/254

Further learning:

<https://eu-citizen.science/>

file:///C:/Users/user/Downloads/ECSA_Ten_Principles_of_CS_English.pdf

<https://eu-citizen.science/projects?keywords=climate%20change>

<https://zenodo.org/records/5127534#.YR98rkBCRhE>

<https://www.citizenscience.gov/#>

Activity 3. "Climate change Citizen science" Human Library Catalogue

Objective:

Participants will become familiar with climate change citizen science projects.

Material: paper, pens, coloured pens, laptop, video projector, slides

Handout: (title) "Climate change Citizen science" Human Library Catalogue
-Reader `s assessment

Time: 50 minutes

Description of Activity:

1.Participants are invited to play the Human Library game: a librarian is chosen among the participants, a library catalogue "Climate change Citizen science" is created by putting together presentations of all participants. The catalogue may be digital or on paper.

2.Participants are split into two groups, the group of Living Books and the group of library readers.

3.One by one, library readers will study the Human Library Catalogue and will choose 3 climate change citizen science projects they want to find out about. The librarian will direct them to the available Living Book they had chosen. Each Living Book will give a presentation of the climate change citizen project in 3 minutes, maximum 5 minutes, questions included. Readers will provide short feedback and will go to” read” the next project.

4.After 20 minutes participants change turns, the readers become Living Books and vice versa. They will continue the game following the same rules. The trainer supervises the game to take place in optimal conditions.

5.When the last round finishes, the trainer initiates a discussion about the activity. He/she may use the following questions:

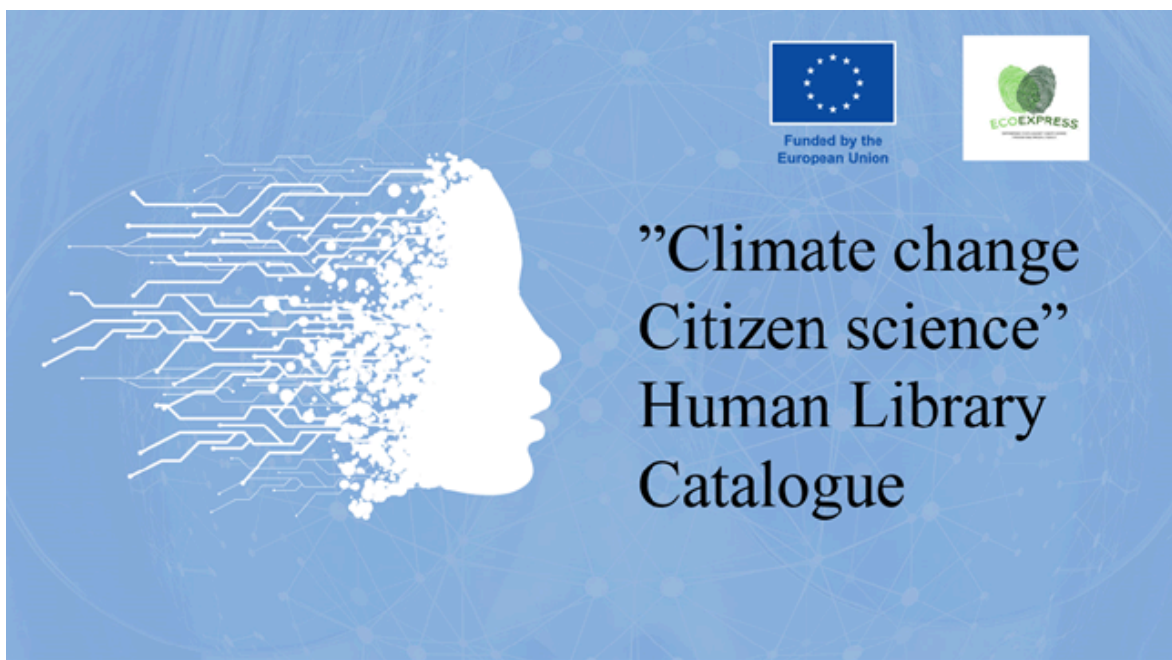
- How much have you enjoyed the activity?
- How useful was the activity?
- What was the main challenge?
- What was the most important benefit of the activity?

Training material:

- Human Library Catalogue

Handout (in full):

Human Library Catalogue



 Funded by the European Union	
Climate change citizen science project	
Name of the project:	Short description:
.....	
.....	
.....	
.....	
.....	



Climate change citizen science project



Feedback for the Living Book:

Name of the reader:

- 1..... Feedback:
- 2..... Feedback:
- 3..... Feedback:
- 4..... Feedback:
- 5..... Feedback:

Activity 4: Designing a Simple Citizen Science Project

Time: 40 minutes

Materials:

- Flipcharts
- Markers
- Paper
- Pens
- Laptop/projector

Description of Activity:

1.Refresh the concept of Citizen Science (10 minutes)

The facilitator refresh the idea of citizen science in a simple way: "It's when regular people help with science projects to protect the environment." Show easy examples like "counting birds in the park" or "measuring how much trash is on the beach."

2.Group Work: Project Design (40 minutes)

In the same groups, participants use the **Citizen Science Project Template** to design their own

project to help fight climate change. The project should be simple and clear. Each group fills in the template with these points:

- **Project Title:** Give your project a short, catchy name.
- **Problem You Want to Solve:** What problem will your project focus on? (e.g., trash in parks, not enough trees)
- **What You Will Do:** What actions will you take to fix the problem? (e.g., plant trees, pick up trash)
- **How You Will Involve the Community:** How will you get other people to help? (e.g., ask friends, make posters)
- **What Results Do You Expect:** What do you hope will happen? (e.g., cleaner parks, more trees)
- **Why Is This Important:** Why does your project help both the environment and the community? (e.g., it helps nature and makes the town nicer)

3. Presentation of Projects (15 minutes)

Each group presents their project to the class. Presentations should be simple, explaining:

- The problem they want to solve.
- What actions they will take.
- Why it helps both nature and people.

4. Feedback and Reflection (10 minutes)

The facilitator leads a short reflection, asking questions like:

- How does this project help fight climate change?
- How can we involve more people in simple ways like this?

Handout: Citizen Science Project Template link for edition:

https://www.canva.com/design/DAGRsLP1188/Sx6XUrABsNIxSPnRonv6Vg/edit?utm_content=DAGRsLP1188&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton



CITIZEN SCIENCE PROJECT TEMPLATE



1. PROJECT TITLE:

WHAT IS THE NAME OF YOUR PROJECT? MAKE IT SHORT AND CATCHY!

2. PROBLEM YOU WANT TO SOLVE:

WHAT ISSUE RELATED TO CLIMATE CHANGE ARE YOU FOCUSING ON?

(e.g., too much trash in the park, air pollution, not enough trees, etc.)

3. WHAT ACTIONS WILL YOUR GROUP TAKE TO SOLVE THIS PROBLEM?

(e.g., plant trees, collect trash, measure air quality, talk to the community)

4. HOW YOU WILL INVOLVE THE COMMUNITY:
HOW CAN OTHERS HELP OR JOIN YOUR PROJECT?

(e.g., invite friends, create posters, ask people to collect data with you)

5. WHAT RESULTS DO YOU EXPECT:

WHAT CHANGES DO YOU HOPE TO SEE AFTER YOUR PROJECT?

(e.g., cleaner spaces, more trees, better air quality)

6. WHY IS THIS IMPORTANT FOR THE ENVIRONMENT AND THE COMMUNITY?:

HOW DOES YOUR PROJECT HELP BOTH NATURE AND THE PEOPLE AROUND YOU?

(e.g., helps plants and animals, keeps people healthy, makes our town nicer)

Evaluation
Pre and post test

Module 1

1.What does multimodal literacy involve?

- A. The capacity to just read and write text
- B. The utilisation of several communication modalities, such as text, visual, audio, and spatial elements
- C. Reading and comprehending only digital texts
- D. Producing solely visual art

2.One of the following is the main reason for climate change?

- A. Increasing volcanic activity
- B. Variations in solar radiation
- C. Deforestation and fossil fuel combustion
- D. Currents in the ocean

3.Which type of multimodal content is more effective in engaging learners and providing immersive content about climate change?

- A. Printed books
- B. Videos
- C. Newspaper articles
- D. Audio recordings

Module 2

1.Which of the causes of climate change is consuming half of all electricity?

- A. Consuming too much
- B. Powering buildings

C. Manufacturing goods

2.Global warming with 1.2°C has the following severe consequences:

A. Eruption of volcanoes

B. Earthquakes

C. More severe storms

3. Climate change mitigation and adaptation involves:

A. reducing climate change and adapting to life in a changing climate

B. adapting to life in a changing climate

C. reducing climate change

Module 3

1.What is biodiversity?

A. the variety of plant and animal life in the world or in a particular habitat

B. the study of organisms and their interactions with the environment

C. the genetic variation within a species

2.Which of the following is a major threat to biodiversity?

A. sustainable farming practices

B. habitat destruction

C. natural selection

3.Which biome has the highest biodiversity on Earth?

A. desert

B. tundra

C. rainforest

Module 4

1. Why do youth workers need to understand the different learning styles of young people?

- A. to achieve better learning conditions, better understanding and higher learning outcomes
- B. to create better working conditions for youth workers
- C. to increase the professional competences of youth workers

2. If you had to work with hearing impaired youth, what methods would you use?

- A. visual, auditory, kinaesthetic,
- B. visual, kinaesthetic, reading/writing
- C. auditory, kinaesthetic, reading/writing

3. What are the main steps of preparing for a group discussion (all answers are correct)?

- A. prepare questions to be discussed during the discussion.
- B. prepare the place where the participants of the group discussion will talk (all participants must sit in a circle so that they can see each other, the number of participants in the group is limited, so there must be as many seats as there are participants, etc.).
- C. all answers are correct

Module 5

1. What is the goal of Design in Learning Experience Design?

- A.to generate a creative process that includes research, experimentation, ideation, conceptualization, prototyping, iteration and testing
- B.to create a very smart training experience focussed on persons
- C.to increase the professional competences of youth workers and trainers.

2.What is a Learning Objective?

- A. a tool that guides your educational process towards a good result.
- B. a specific goal that you need to reach in order to achieve the desired learning outcome.
- C. the experience that you gain and how it's relevant and meaningful.

3. Who is the target group in the learning experience?

- A. having in mind young people and communities.
- B. having in mind learners and trainers.
- C. all answers are correct.

Module 6

1. What is the primary focus of using real-life stories in climate change education?

- A. to provide scientific data only
- B. to evoke emotional connections and awareness about the human impact of climate change
- C. to entertain participants without serious discussions

2. Which of the following is a key impact of climate change on developing countries?

- A. improved agricultural productivity
- B. reduced risks from natural disasters
- C. increased vulnerability to extreme weather events and rising sea levels

3. What is the main goal of creating TikTok videos in the context of climate change education?

- A. to create content that entertains and distracts viewers
- B. to share personal stories in an engaging way, raising awareness about climate change
- C. to gain followers and likes without focusing on climate-related issues

Module 7

1. What is the primary purpose of a citizen science project?

- A. to involve only professional scientists in research
- B. to engage the public in scientific research and data collection
- C. to sell scientific data to companies

2. Which of the following is an example of an action in a climate change citizen science project?

- A. watching a documentary about climate change
- B. counting birds in your neighbourhood and submitting the data
- C. writing an essay about climate change

3. What is one benefit of participating in climate change citizen science projects?

- A. it increases pollution
- B. it allows citizens to ignore scientific data
- C. it helps raise awareness and gather data on climate change

Correct answers

Module 1

1.Answer: B. using a variety of communication channels, such as text, images, sounds, and spatial aspects

2.Answer: C. fossil fuel combustion and deforestation

3.Answer: B. videos

Module 2

1.Answer: B. powering buildings

2. Answer: C. more severe storms

3.Answer: A. reducing climate change and adapting to life in a changing climate

Module 3

1. **Answer:** A. the variety of plant and animal life in the world or in a particular habitat.

2. **Answer:** B. habitat destruction.

3. **Answer:** C. rainforest.

4. **Answer:** C. a species that is at risk of extinction.

5. **Answer:** C. zebra Mussel in the Great Lakes.

Module 4

1. **Answers:** A. to achieve better learning conditions, better understanding and higher learning outcomes.

2. **Answers:** B. visual, kinaesthetic, reading/writing.

3. **Answers:** C. all answers are correct.

Module 5

1. **Answer:** A. to generate a creative process that includes research, experimentation, ideation, conceptualization, prototyping, iteration and testing.
2. **Answer:** B. a specific goal that you need to reach in order to achieve the desired learning outcome.
3. **Answer:** C. all answers are correct.

Module 6

1. **Answer:** B to evoke emotional connections and awareness about the human impact of climate change.
2. **Answer:** B reduced risks from natural disasters.
3. **Answer:** B to share personal stories in an engaging way, raising awareness about climate change.

Module 7

1. **Answer:** C. to engage the public in scientific research and data collection
2. **Answer:** B. counting birds in your neighbourhood and submitting the data
3. **Answer:** C. it helps raise awareness and gather data on climate change

Participant feedback form

1. What partner country are you from?

Romania
Lithuania
Turkey
Spain
Cyprus
Portugal

2. How would you rate the relevance of the topics covered in the Training Program to current climate change issues?

Not relevant at all
Moderately relevant
Extremely relevant

3. Does the Training Program address a diverse range of climate change topics that resonate with your youth?

Yes
No
Partially

4. Do you perceive the training content effectively combines digital skills, multimodal literacy and climate change education

Yes
No
Partially

5. Do you believe that the training is comprehensive and relevant to your needs?

Yes
No

Partially

6. Do you express that the training enhances your confidence in delivering climate change education?

Yes

No

Partially

7. Do you believe the Program will positively impact the following skills in your youth? (Select all that apply.)

	Yes	No
a. Teamwork and collaboration		
b. Problem-solving skills		
c. Creativity and innovation		
d. Communication skills		
e. Teamwork and collaboration		
f. Problem-solving skills		
g. Creativity and innovation		
h. Communication skills		

8. To what extent do you feel the Program could improve the effectiveness of your daily work in addressing climate change issues?

- Not at all effective
- Slightly effective
- Very effective

9. Will you be able to adapt the Program to suit the specific needs of your youth?

- No
- Yes

10. How would you rate your overall experience with the Training Program?

- Dissatisfied
- Neutral
- Satisfied

11. Would you recommend the Training Program to other youth workers?

- No
- Yes

12. Is there anything else you would like to share about your experience with the Training Program or any suggestions for improvement?

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