





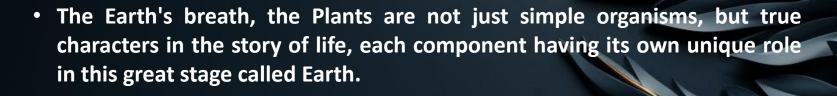


# INTRODUCTION WHY LEAF?

The LEAF project Learning about Biodiversity through Community Environmental Action - contributes to the environmental education of the community through its stages, which is a priority for today's society, not only for nature conservation but also for ensuring a sustainable future for mankind

Studying vegetation and biodiversity provides clues about the general state of the environment, leading to the identification of emerging problems.

Through this project, the Romanian team from "Mihai Eminescu" National High School, together with 5 other partner teams from Europe, had the opportunity to collaborate in the European Union's educational space, by promoting complex, punctual, and complex issues of protecting natural diversity and its climate resilience through conservation and support of ecosystems to adapt to environmental changes.



- With each leaf that shines in the sunlight, plants convert carbon dioxide into oxygen, giving humans and animals the gift of life through respiration. Plants are the Earth's breath. With every carbon-absorbing leaf, plants help maintain climate balance and play a crucial role in the fight against climate change.
- Plants are the refuge of life Plants create habitats for diverse fauna, providing shelter and food, forming an interdependent and dynamic ecosystem. Plants provide us with natural medicine. Many plants are true natural pharmacies, offering remedies for various ailments. With each herbal tea or tincture, nature gently nurtures us.



- Plants contribute to our cultural heritage
- Plants are often elements that intertwine with other cultural values in traditions and rituals, carrying with them stories and lessons from generation to generation.
- Plants are a feast for the eyes In parks and gardens, plants enrich the landscape with their shapes and colors, bringing a splash of beauty and tranquility to busy urban life.

#### Common activities in parks

Students often engage in a variety of activities in the parks, making the most of the open and free environment. Here are some common activities:

- Study and homework: Many students find parks to be a quiet setting to study or complete homework.
- Group projects: collaborative work often takes place in parks, where students can sit comfortably and brainstorm together.
- Sports and games: playing frisbee, soccer, basketball or volleyball are popular activities, especially in larger parks with open fields.
- Picnics: students often gather for picnics, enjoying food and conversation while relaxing outdoors.
- Walking and jogging: parks provide an excellent space for exercise, with walking paths and jogging trails

# Unique activities in the parks

- These types of activities not only provide a break from school routines, but also foster social connections and promote physical well-being, mental positivity. Such activities are related to:
- Art and creativity: students bring sketchbooks, paint or photographic equipment to capture the beauty of nature.
- Relaxing and socializing: simply hanging out with friends, chatting or listening to music is a common way to spend time.
- Events and festivals: parks often host student-organized events, cultural events or outdoor concerts, providing opportunities for community involvement.
- Volunteering: Many students participate in projects to green spaces or reorganize community services in local parks.
- Bird watching and nature exploration: Exploring the natural surroundings and observing wildlife are both educational and enjoyable activities.

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#### **LEAF** -Handbook

In our project - Learning about biodiversity through environmental action for the community - we set out to create an innovative approach to plant natural resources in the immediate environment, based on pedagogical principles.

The elements of local biodiversity have provided us with the support to build a unique and complex guide for teachers, concretized in a versatile didactic tool that includes: theoretical resources, our didactic experiences and working methods, examples of good practices.

## Proiect LEAF -**ERASMUS+**

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- Introduction and competence framework
- Climate change and urban biodiversity
- Protected natural areas
- Parks and urban forests
- Aquatic plant biodiversity
- Boosting teachers' skills for better communication and collaboration
- Cooperation and local community.





- The team analysed parks and gardens as part of European urban landscapes, in a context of planning for sustainable biodiversity and in relation to multifunctional land use.
- Analysis of parks and forests integrated into the urban landscapes of Suceava.
- Analysis of landscape evolution following the biodiversity of parks and gardens.
- Identification of European urban landscapes with parks and forests, from the perspective of the importance of species persistence influencing habitat quality, habitat quantity and configuration, and landscape permeability.

#### **Module 4 Table of Contents**

#### URBAN PARKS AND FORESTS

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- Forests and urban parks worldwide.
- 1.Practical aspects and solutions
- 2.Educational trips Eco photography
- 3. Articles based on field data





### Typology of parks

European parks can be classified according to their purpose, management and ecological characteristics. Here are some of the main types:

National Parks

These are large protected areas established to conserve natural landscapes and biodiversity. Examples include Abisko National Park in Sweden and Plitvice Lakes National Park in Croatia, known for its cascading lakes and diverse flora.

Regional and natural parks

These parks focus on regional biodiversity, cultural heritage and sustainable land use. They often include several protected areas and promote local traditions, for example the Vexin Regional Nature Park in France.

# History of parks in Europe

- The history of parks in Europe dates back centuries, with historical and socio-cultural factors influencing their evolution.
- Among the first parks were Roman gardens, followed by medieval hunting parks.
- In the Middle Ages, parks in Europe originally served as hunting grounds for the nobility. Various enclosed areas of land were set aside for hunting, often surrounded by walls or fences to ensure the exclusivity of hunting. These parks were typically located near castles or manor houses and were considered a symbol of wealth and social status.

https://piticuldegradina.blogspot.com/2018/07/gradiniromane.html

#### Renaissance gardens

- During the Renaissance, gardens became synonymous with parks in Europe.
- Influenced by Italian garden design, Renaissance gardens were characterized by geometric landscaping, symmetrical designs, various ornaments and water features such as fountains and ponds.
- They were designed to reflect human creativity and mastery of nature, often incorporating sculptures, French-style sculpted shrubs (topiary art) and geometric patterns.



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 A unique example of landscaping is the English gardens and parks: in the 18th century, the concept of landscape gardening gained popularity with the inspiration of the naturalistic style, landscape gardens aimed to create a harmonious blend of natural and man-made design elements. These parks produced spectacular landscapes, undulating lawns, winding paths with picturesque features such as lakes, bridges and ornamental buildings. English parks, like Hyde Park in London, have become accessible spaces for public recreation and socializing.

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 Nowadays, urban parks and public spaces are frequented: the growth of industrialization and urbanization in the 19th century led to the creation of public parks in European cities.

 These parks served as green spaces in urban areas, providing residents with diverse social functions and recreational opportunities, a place of relaxation, an oasis in a crowded and polluted urban environment. Examples include Tiergarten in Berlin, Bois de Boulogne in Paris and Vondelpark in Amsterdam. https://en.wikipedia.org/wiki/Tiergarten\_%28park%29

 Parks including UNESCO World Heritage sites: In recent decades, many European parks and gardens have gained recognition as UNESCO World Heritage sites.

 These sites are considered to be of outstanding universal value and have the role of protecting the functionality of ecosystems for the regeneration of resources and for future generations. Examples include the Versailles Gardens in France, the Royal Botanic Gardens at Kew, UK and the Wachau Cultural Landscape in Austria.



### Representative parks in Europe

Plitviče Lakes National Park

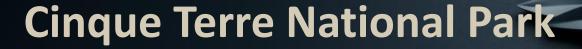
It is a famous national park located in Croatia. It is one of the oldest and largest national parks in the country and has been designated a UNESCO World Heritage Site. The park is renowned for its breathtaking natural beauty, pristine lakes, waterfalls and lush forests, and outstanding karst formations.





- It is a picturesque and popular national park located in the northwest region of the United Kingdom.
- The Lake District National Park offers a captivating mix of natural beauty, outdoor pursuits, cultural heritage and a tranquil lakeside setting. It is known for its stunning scenery, serene lakes, imposing mountains and charming villages.





- Located along the Italian Riviera, this park encompasses five colorful coastal villages and offers breathtaking views of the Mediterranean Sea.
- Cinque Terre National Park is a UNESCO World Heritage Site and a popular destination for its stunning coastal landscapes, vibrant villages and opportunities for outdoor activities. Whether you choose to hike along the trails, relax on the beaches or indulge in the local cuisine, Cinque Terre offers an unforgettable experience.
- Cinque Terre National Park is a picturesque national park located in the Liguria region of Italy. It is known for its rugged coastline, colorful cliff-top villages, terraced vineyards and scenic hiking trails.







Located near the border with the Czech Republic, this park features unique sandstone formations, gorges and the amazing Bastei Bridge.

The Saxon Switzerland National Park, also known as the Sächsische Schweiz National Park, is a picturesque national park located in eastern Germany, close to the Czech border.

It is famous for its unique geological formations on sandstone rocks, deep river valleys and stunning landscapes.



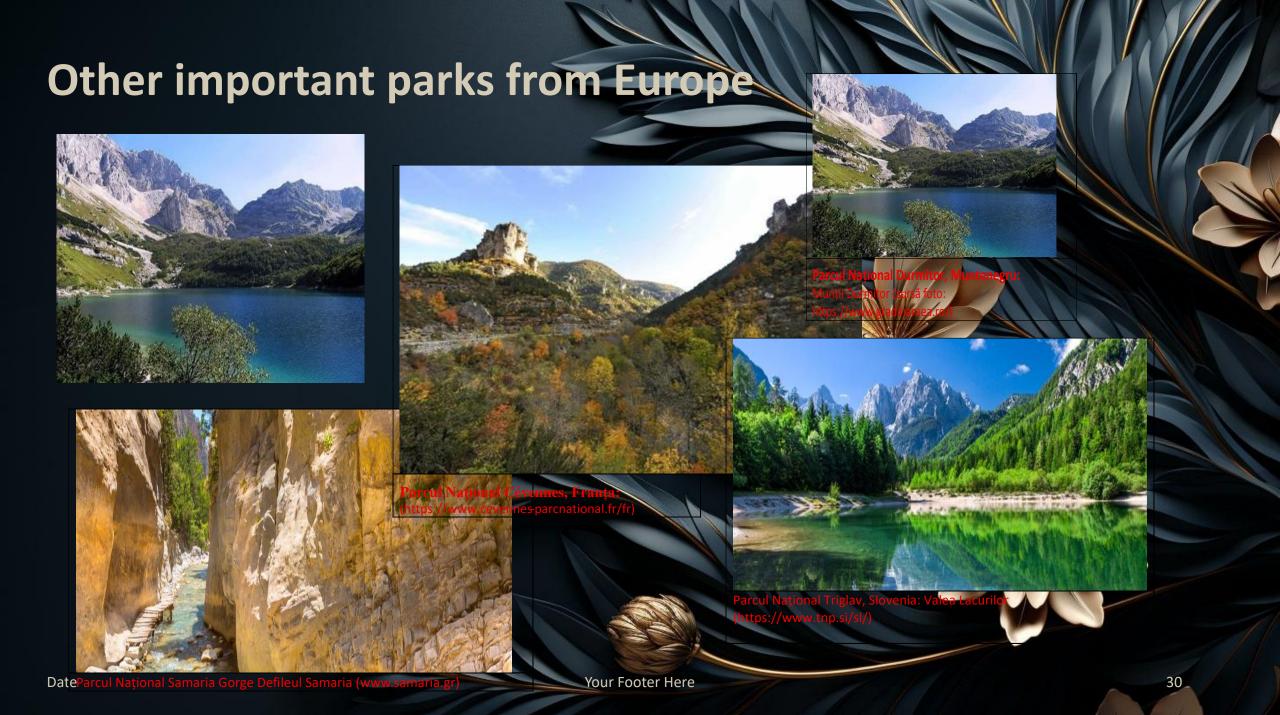


- It is a national park located in Croatia, known for its stunning waterfalls, picturesque landscapes and rich biodiversity. It is named after the River Krka, which flows through the park, creating a series of cascades and waterfalls and precipices over rugged terrain.
- The most famous and impressive waterfall in the park is the Skradinski Buk system, a series of cascades with a total drop of 46 meters. Other notable waterfalls are Roški Slap and Manojlovački Slap. These waterfalls create a picturesque landscape and offer excellent photo and sightseeing opportunities.









### **Analysis worksheet**

For each park, a worksheet - observation worksheet - can be made, which aims to analyze the features of the park in a structured way. Teacher-guided students can use the data for various activities-

Localization

Valuable natural and man-made elements of uniqueness

Comparisons

Identification of bio-geographical features

Statistical analysis of values etc.

FISA DE LUCRU PARCURI IN EUROPA Fauna sălbatică și biodiversitatea: Trasee de drumetie si promenade: Situri culturale si istorice: Accesibilitate si facilităti pentru vizitatori





• In the first stage of practical activities we collaborated with I Gh. Sbierea — Bucovina Library to provide the students with the resources that form the scientific basis.

 We established together with the students a study program that focused on the analysis of theoretical terms, the analysis of the evolution of the city in time and its spatial dynamics, the characteristics of green spaces, etc.

 The resources were provided by the library and studied in the equipped spaces.



#### **ERASMUS** +

course -Nisa Environmental Stewardship:

**How to Reconne** 

In order to optimize the process of the project, I participated in a training course, an ERASMUS+ mobility type course organized by Europass Teacher Academy in March 2023, entitled - Environmental Stewardship: How to Reconnect With Nature.

 The course provided models for analyzing urban biodiversity, techniques for reconnecting with nature in the environment, activity plans with students aimed at reconnecting them to understanding the environment and protecting it.

• The techniques in the course as well as the digital applications presented were used in practical activities with students in urban parks.

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#### **Laboratory activity**

• Together with the students we used the WE-LAB kit to carry out various observations and experiments. We used lenses and microscopy equipment for students to analyze biological materials taken from the field.

 Pollen particles were analyzed which provided information about the bee life in the city of Suceava.

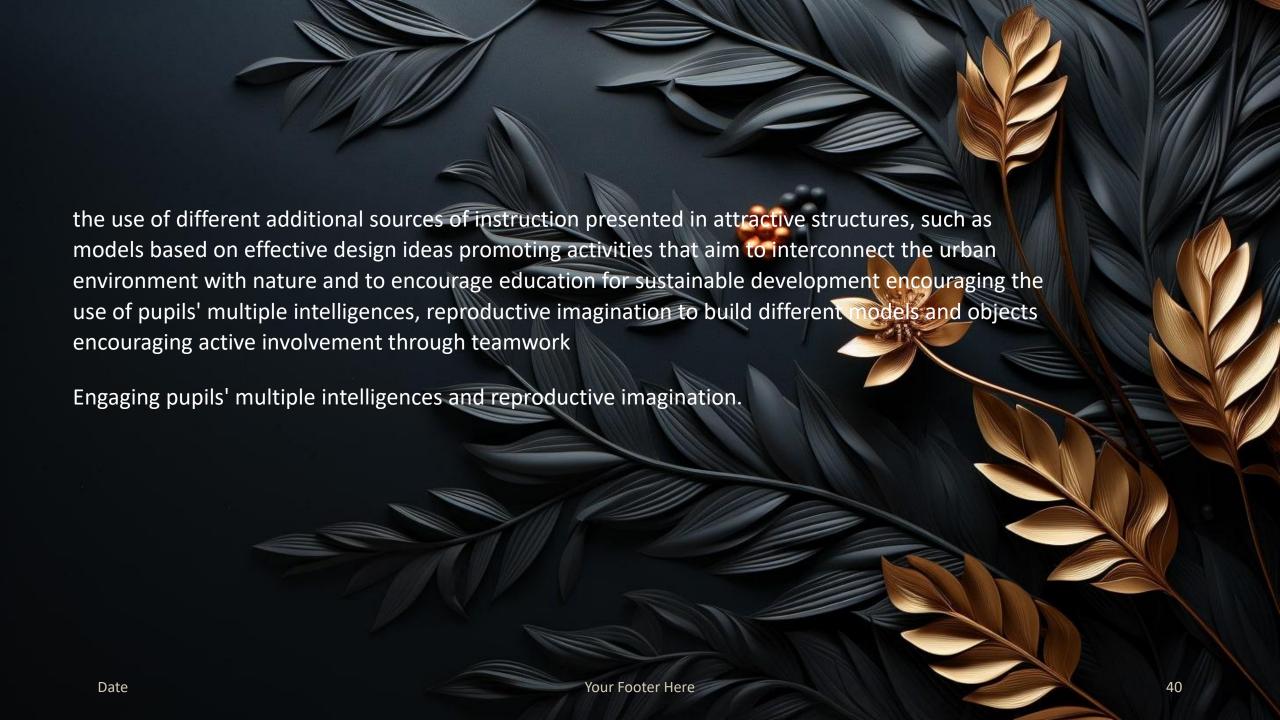


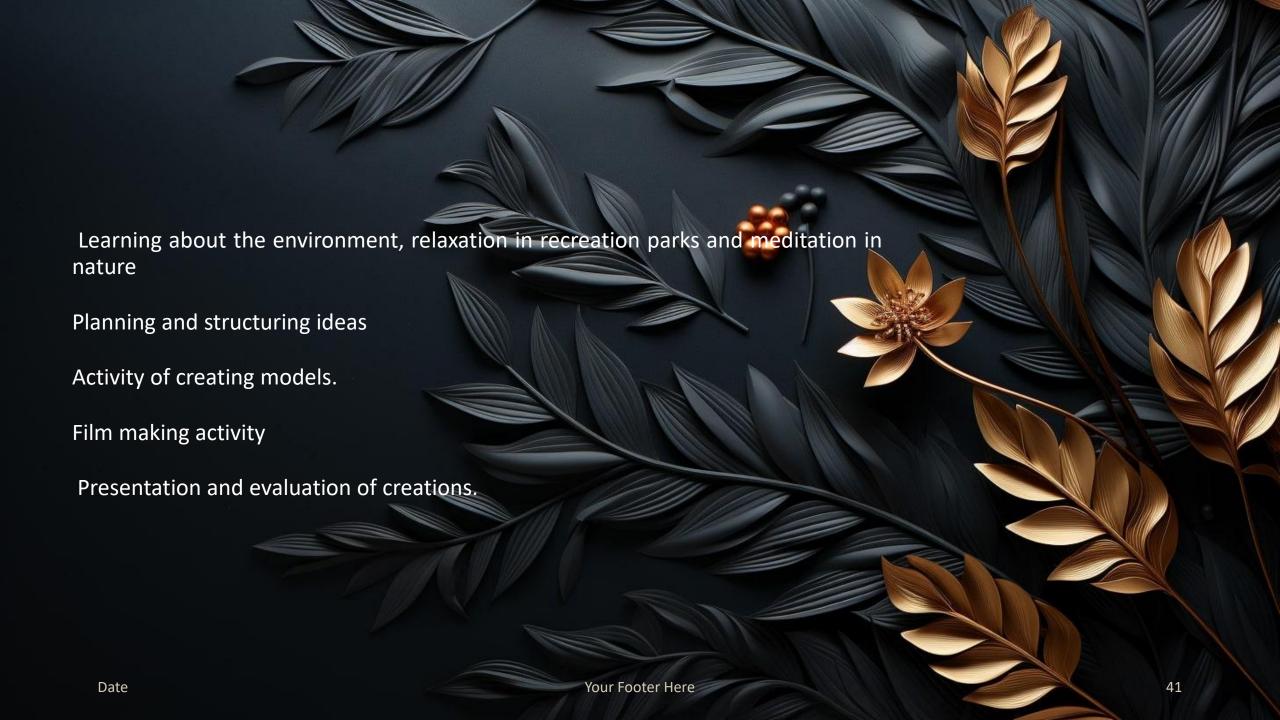


#### **Activities**

- Target group: students 17-18 years old
- Duration: 5 weeks
- Objective: to develop an attractive learning model for students, which enhances positive attitudes towards education, knowledge and society;
- We set and achieved the following objectives:
- Stimulating the transition from a descriptive and encyclopedic geography to a functional, operational and applied geography, open to creativity and interdisciplinarity through the use of attractive structures based on different sources of instruction such as models, movies.
- creation and development of pupils' digital competences through the use of information technologies for the
  interpretation and expression of personal ideas. responsible involvement of individual pupils in addressing respect for
  natural and human diversity.
- use of different additional sources of instruction presented in attractive structures, such as models based on effective design of ideas for understanding and explaining illustrated reality.







The project involves a number of work stages aimed at stimulating interest in observing local biodiversity, carrying out activities with students in which they have to use the natural environment as a learning space.

To realize this project the teacher should consider the following aspects:

- Working with concrete and relevant learning situations with visible purpose.
- Including individual, team work and understanding biodiversity through group activities
- To create activities linked to concrete, real situations.
- Support group interaction
- Students will have to relate, communicate, pass on information or knowledge, use different tools and materials together.
- The chosen environment should support the learning process.
- Activities will include sensory experiences. Guided activities make the pupils "forced" to feel the wind, temperature, pollution, taste tree bark, etc.

#### Work stages

Stage 1– Individual practical activities

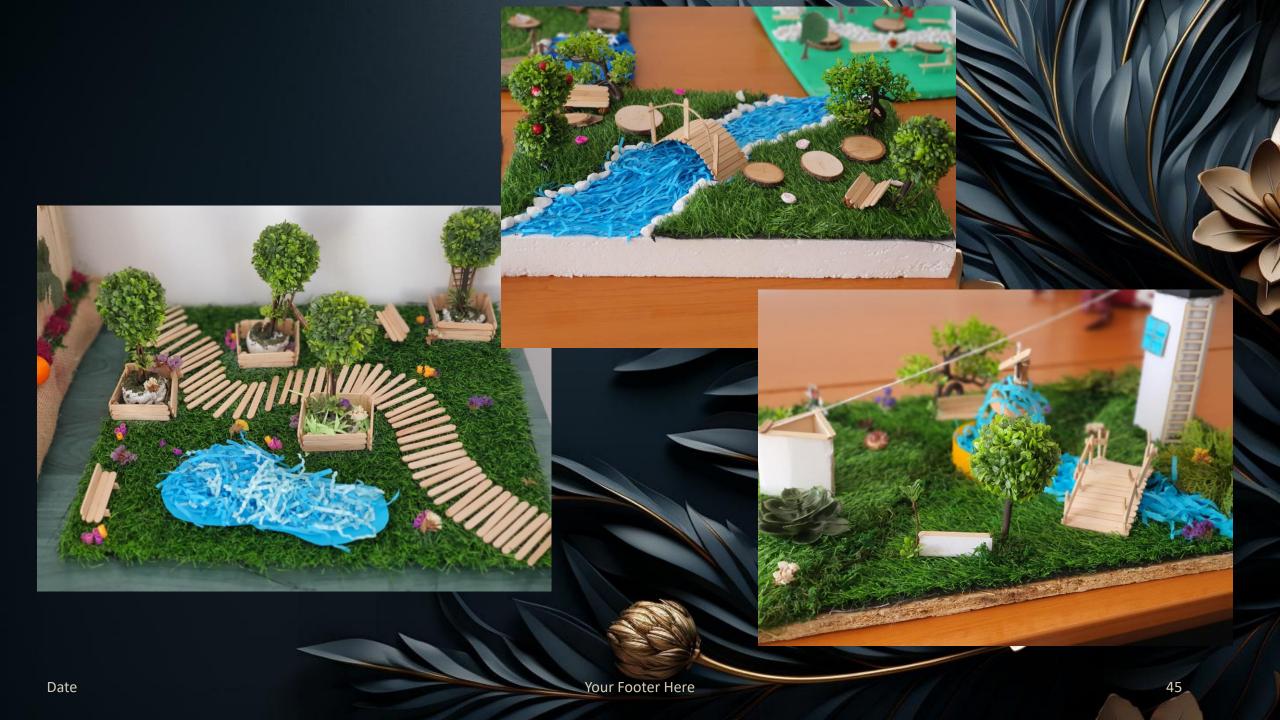
The students observe the areas and parks they have decided to study during the week-long field applications. They follow a predetermined route in the park. They make personal observations on elements that they will represent symbolically in models.

Stage 2 – Practical group activities

They move on to teamwork, based on real observations they build a plan for an imaginary park, starting from the real one they have studied. Experiences must be followed by class work, abstract conceptualizations, so that what has been experienced becomes knowledge.

The students make models of imaginary parks inspired by what they have observed.

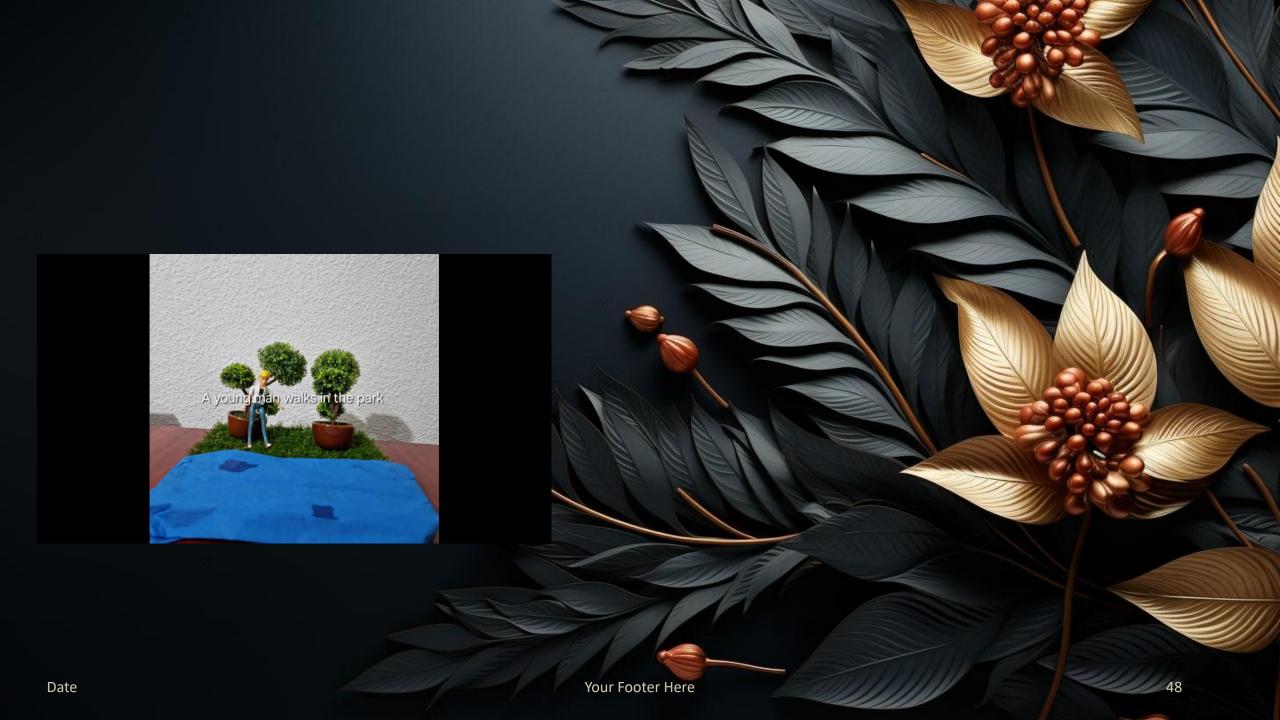


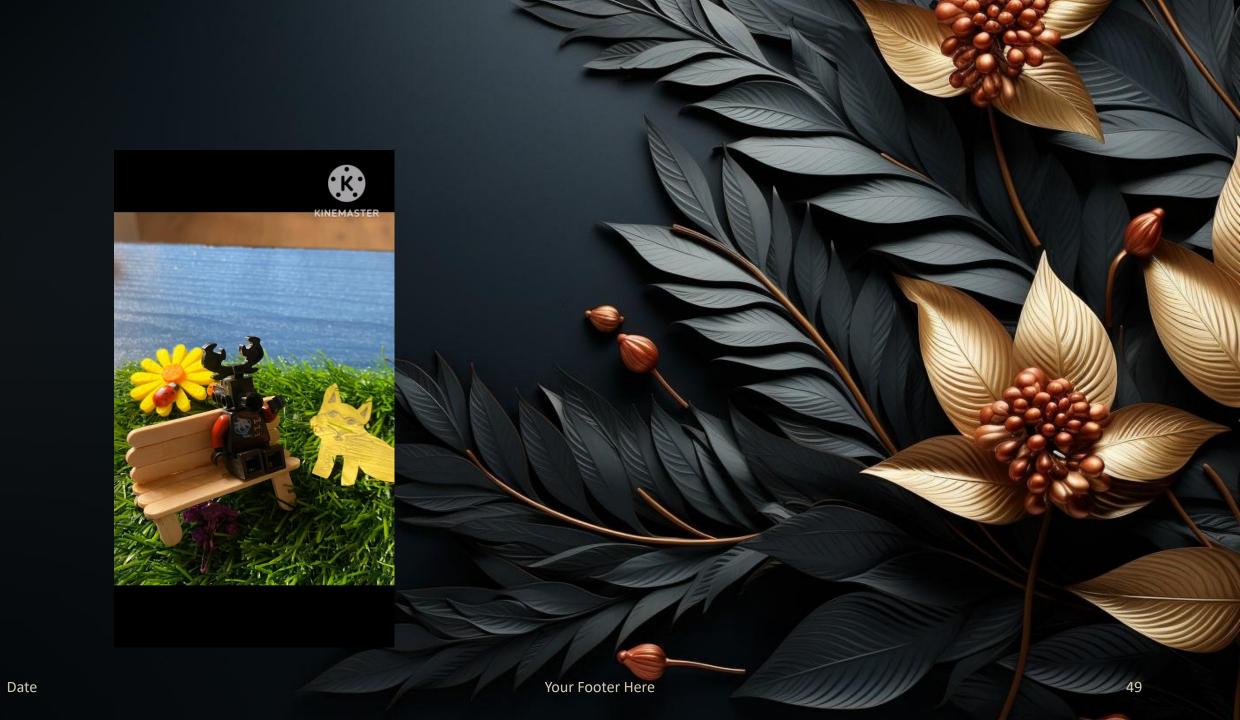


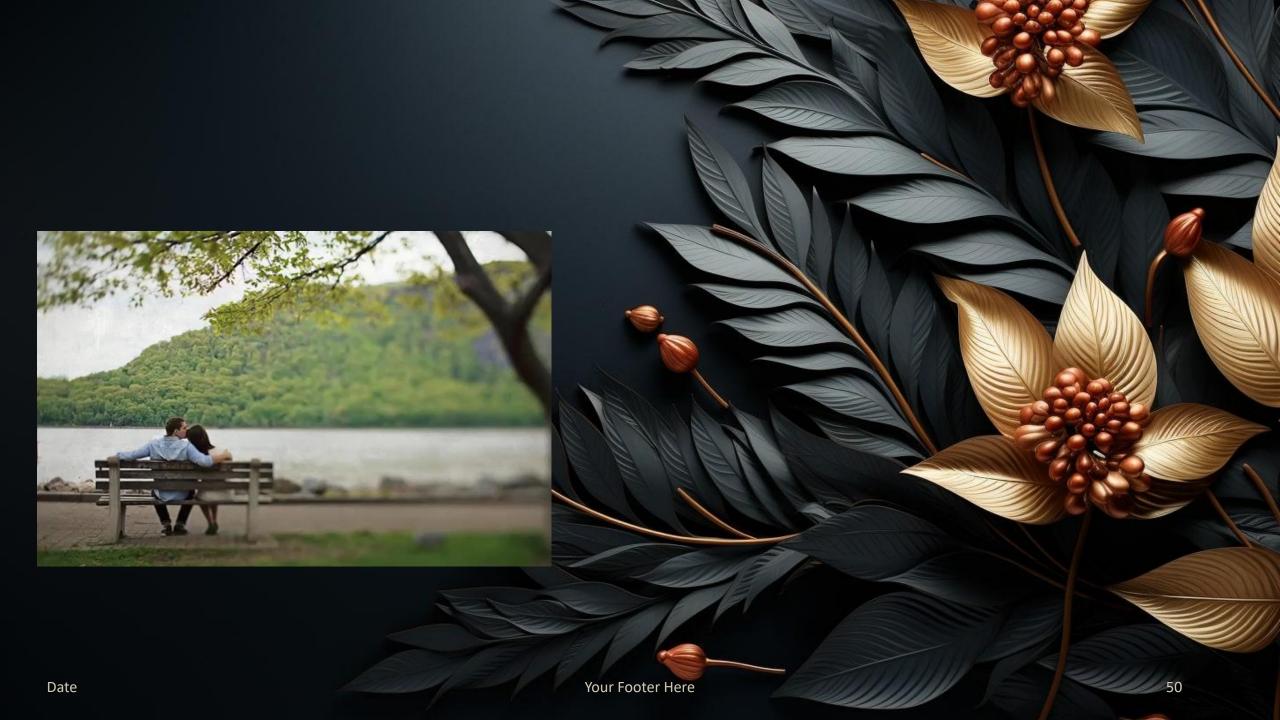


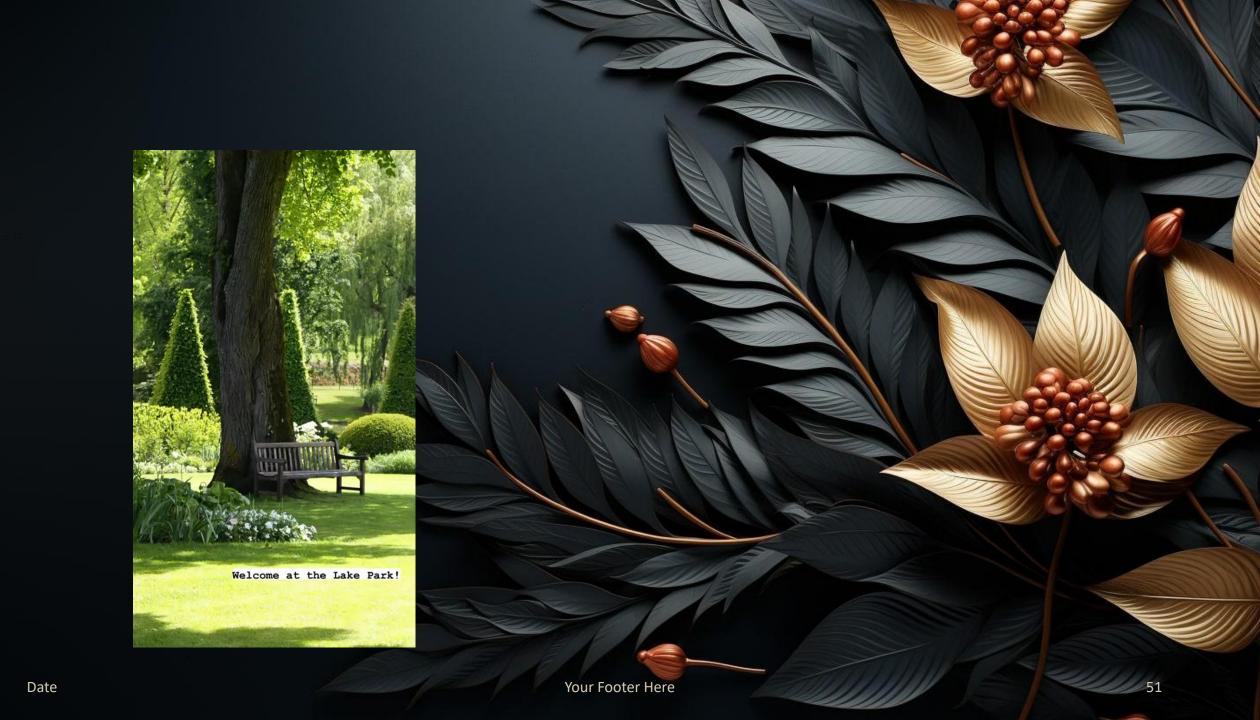
# **Videos**

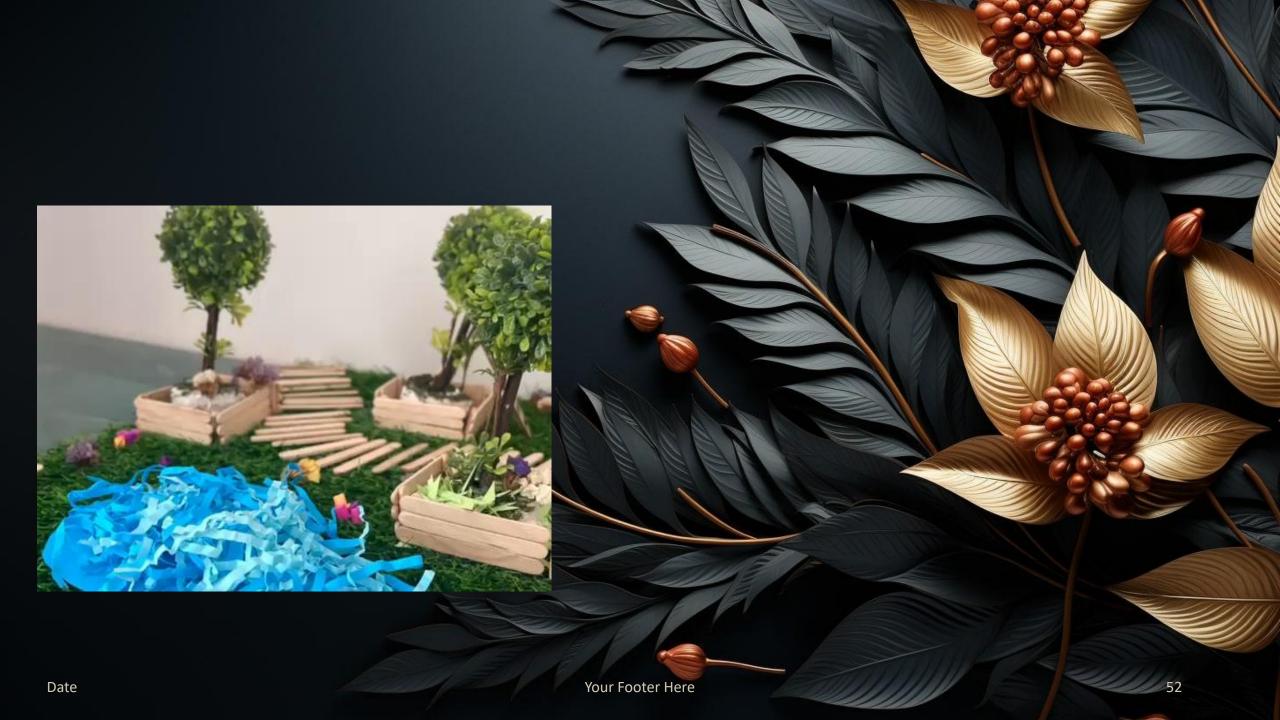












The activity among the trees





#### **Work stages**

The students move to the desired park where they will carry out relaxation exercises and reconnect with the environment.

Tools - Vittoz method, Restoring Attention technique and concept map

The Vittoz Method is a psychotherapeutic technique developed by Dr. Roger Vittoz in the early 20th century, used to restore mental and emotional balance. It is based on the idea that many mental disorders, such as anxiety and stress, stem from a dysregulation of the function of attention control and present awareness

Stages - Attention control: The method is based on improving conscious control of attention, offering techniques to help focus on the present.

- Body awareness: Stimulation of sensory perceptions: The Vittoz method uses sensory perceptions (touch, sight, hearing, etc.) to train the mind to focus on immediate experiences, thus helping the person to develop the capacity to be present.

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- Brain training: Vittoz believes that through simple attention and awareness exercises, the brain can be retrained to regain control over thinking. These exercises include, for example, focusing on everyday activities such as slow, mindful writing to stimulate voluntary attention.
- Exercises and techniques used in the Vittoz method:
- Sensory exercises: the person is encouraged to focus on their senses, to touch objects with full attention, to focus on surrounding sounds or hand movements, all of which are done with the aim of anchoring the mind in the present.
- Mindful writing: This involves writing letters or words with increased attention, concentrating on the movement of the hand, the writing instrument and the sensations produced by the act of writing.

# Restoring focus worksheet

#### FISA INSTRUMENT DE LUCRU

RESTAURAREA ATENTIEI de (Attention Restoration Theory - ART) este o teorie dezvoltată de Stephen și Rachel Kaplan în anii 1980 și se referă la modul în care interacțiunea cu mediile naturale poate ajuta la refacerea capacității noastre de a ne concentra și a ne restabili atenția. Aceasta este utilizată adesea în domenii precum psihologia mediului și designul peisajelor pentru a înțelege cum mediile naturale sau construite influentează sănătatea mentală si performanta cognitivă.

Aceasta metoda de lucru poate fi aplicata si in cadrul lectiei PRINTRE COPACI

Elementele principale ale teoriei restaurării atenției:

Atenția dirijată: Acesta este tipul de atenție pe care o utilizăm în activitățile zilnice ce necesită efort mental. Atenția dirijată se poate epuiza atunci când este folosită prea mult timp, ducând la oboseală mentală.

Oboseala atenției: Când ne suprasolicităm atenția dirijată, apar simptome de oboseală mentală, cum ar fi dificultatea de concentrare, iritabilitate și performanță redusă în sarcini ce necesită atenție susținută.

Restaurarea atenției: Kaplan sugerează că mediile naturale pot contribui la restaurarea atenției epuizate, oferind un spațiu în care mintea se poate odihni și refocaliza. Mediul natural activează un alt tip de atenție, numit "atenție involuntară", care este ușor de captat și nu necesită un efort mental intens. Acesta metoda a fost aplicata cu elevii in etapa a doua al lectiei proiect Printre Copaci cu rezultate foarte bune privind reconectarea cu natura.

Caracteristicile mediilor care favorizează restaurarea atentiei:

Îndepărtarea (Being Away): Parcurile orașului Suceava sunt un mediu care oferă o evadare de la presiunile și rutina cotidiană poate contribui la restaurarea atenției. Nu trebuie să fie o distanță fizică mare, dar să creeze senzatia de desprindere de mediul stresant.

Extensivitatea (Extent): Mediul trebuie să ofere suficientă complexitate și interes pentru a menține atenția involuntară activată. Mediile naturale cu peisaje vaste și variate oferă un sentiment de explorare și de "a fi parte din ceva mai mare".

Fascinația (Fascination): Aceasta implică atracția naturală pe care o au unele aspecte ale mediului asupra atenției noastre, fără a solicita efortul atenției dirijate. Peisajele naturale, cum ar fi râurile, pădurile și cerul, au un efect fascinant, care permite minții să se relaxeze.

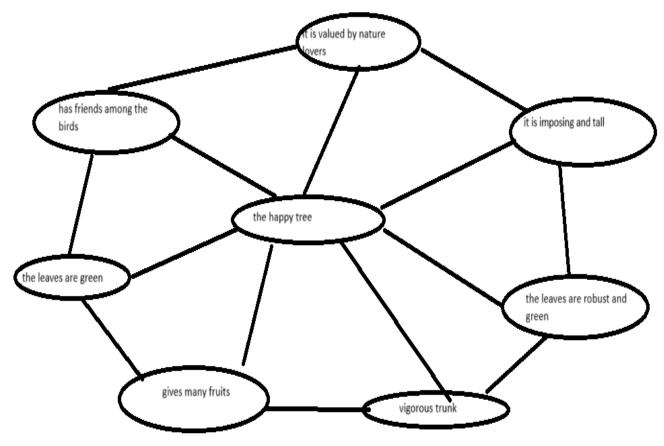
## Creation stage Concept map

After reconnecting with nature and relaxation exercises.

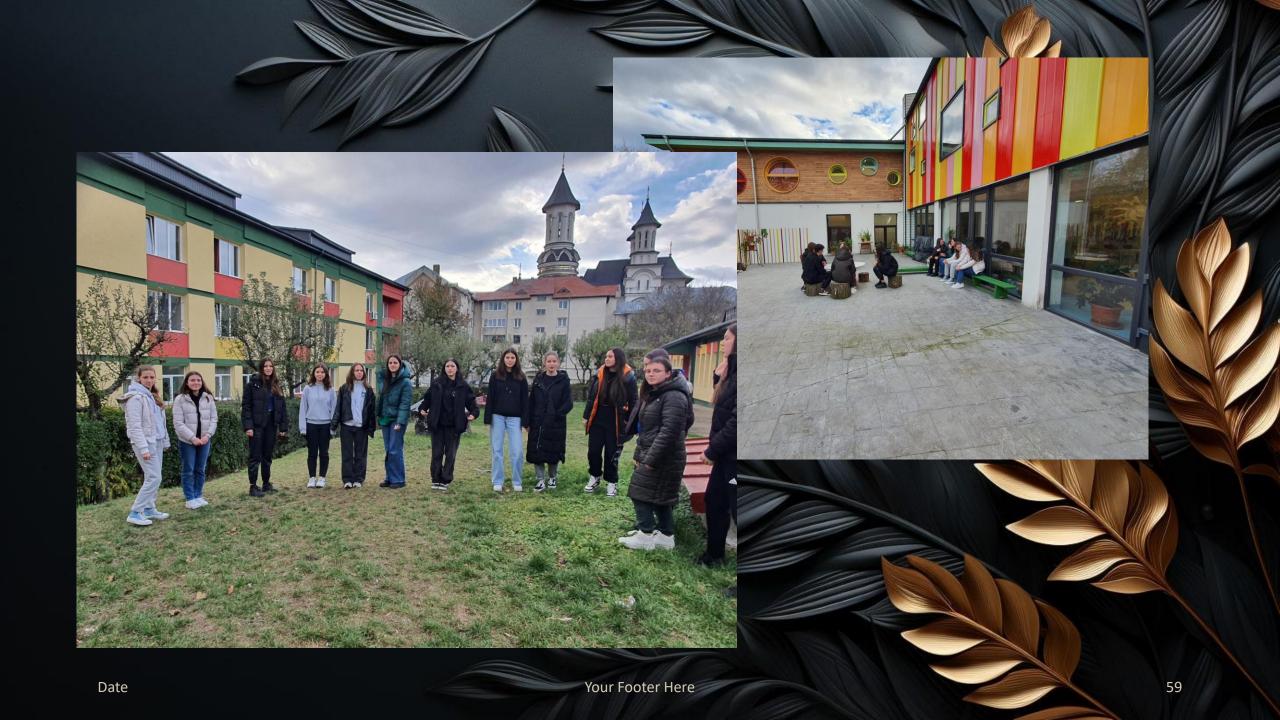
Students receive a concept map worksheet.

Filled with positive energy they can complete the concept map starting from a central term. In this case the student has chosen the concept of the *Happy Tree*.

AMONG THE TREES CONCEPTUAL MAP







## **Effects of the Vittoz method**

Reducing anxiety and stress: By training the mind to be aware of the present and of its own body, the Vittoz method helps to reduce mental agitation and manage negative thoughts.

Improved concentration: Vittoz exercises help develop a more stable and controlled attention, which can improve concentration in daily activities.

Restoring mental balance: The method can be useful for those experiencing mild to moderate mental disorders by helping them regain control over their thoughts and emotions.



As part of these activities, the students created boards and posters based the on importance of protecting parks and the environment.



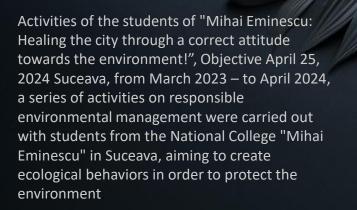




# Paper butterflies activity

In one of the sessions held in the park, students chose to draw attention to the importance and necessity of conserving urban butterfly habitats.





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