

Greenopolis methodology: learning objectives, contents and approach

Monday 28/06/2021



Greenopolis: an educational e-book about Sustainable Development

Duration of the project: 2019 - 2021

Pic number: 2019-1-PL01-KA201-064753

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This ERASMUS + KA2 project gathers 5 partners from Poland, Portugal, Greece and Croatia:

- SPN (Poland): a public primary school that includes pre-school education, acting as a coordinator.
- Advancis (Portugal): a private company providing consulting and training services in Education and Human Development, with skills and ICT-based learning methodologies
- BOON (Portugal): a private company providing design and imaging services.
- The Center for Education and Entrepreneurship (Poland) is a non-governmental, non-profit organization founded in 2004 and works (is active) in the field of youth, collaborating with companies, universities, schools, businesses and educational institutions
- Dječji vrtić "Radost" is an Educational Organization with 9 relocated facilities in which there are 43 educational groups
- KPE Vamou is an Environmental Education Center located in Kefalas, Apokoronas, Chania, under the Ministry of Education in Greece and develops and implements activities of environmental education for teachers and students, working with schools.

INTRODUCTION

- The goal of the **Greenopolis Project** is to create an **e-book** to support Education for the Sustainable Development of children (3-6 years old) and to increase their interest in **STEM**, in formal, non-formal and informal environments.
- In addition to the e-book, the **Greenopolis Facilitator's Guide** was created for teachers / animators and parents. This Guide will help by empowering teachers to use the e-book and explore different learning opportunities for Sustainable Development.





The purpose of the project is to create conscious European citizens who are aware of the challenges of sustainability and are ready to act and contribute to sustainable European and global societies.

Below are defined, among others, **the idea of the e-book, the type, the plot, the topics** in relation to the learning requirements that were set in the initial phase of the project.

The overall learning approach is a high-level framework that establishes:

- ✧ which key competences will be targeted by the game [learning objectives]
- ✧ how will the game facilitate the learning of these key competences [learning delivery method]
- ✧ what settings are adequate for the use of the game [learning settings]
- ✧ what is the role of the educator in the game based learning process [role of the educator]
- ✧ what support is there for the game-based learning process [additional learning materials]
- ✧ how is the learning process going to be evaluated [evaluation]





EDUCATIONAL GOALS

The e-book promotes Knowledge, Skills and Attitudes on Sustainable Development, as defined in the Learning Framework developed under this project.

KNOWLEDGE

SKILLS

ATTITUDES

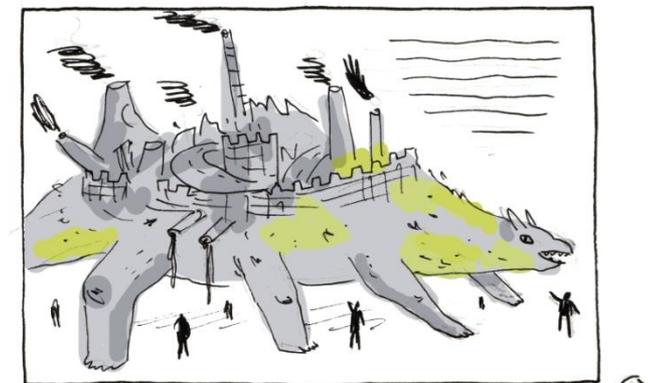
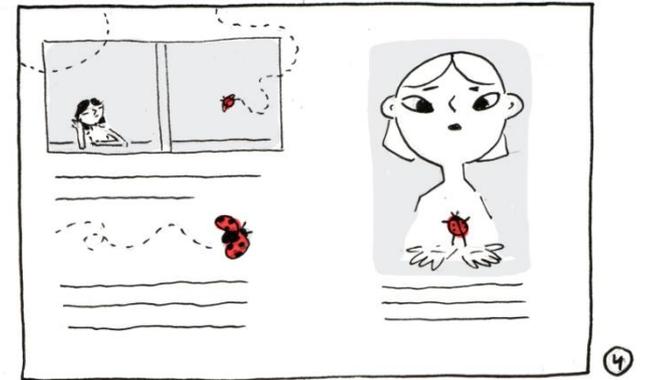


KNOWLEDGE

- ✘ Understand the greenhouse effect as a natural phenomenon caused by an insulating layer of greenhouse gases
- ✘ Understand the current climate change as an anthropogenic phenomenon resulting from increased greenhouse gas emissions
- ✘ Know which human activities contribute most to climate change, environmental destruction and loss of biodiversity
- ✘ Know about strategies that help mitigate climate change and prevent environmental destruction

SKILLS

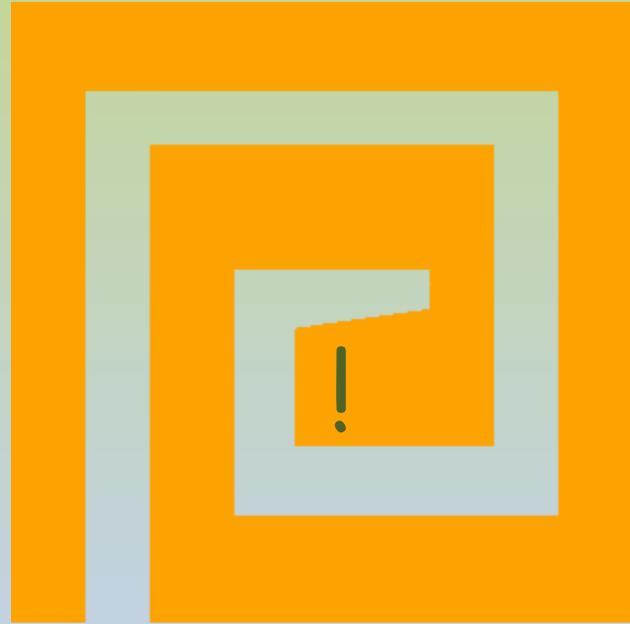
- ✧ Be able to explain ecosystem dynamics and the impact of climate change
- ✧ Be able to encourage others and collaborate with others in order to protect the climate and the environment
- ✧ Be able to understand their personal impact on climate change and environmental destruction
- ✧ Be able to recognize that the protection of the global climate and environment is an essential task for everyone and that we must re-evaluate our daily behaviours in the light of this



ATTITUDES



- ✘ Be motivated to evaluate whether their private and public activities are environmental and climate friendly and revise them when necessary
- ✘ Be inclined to act in favour of the environment and of people affected by climate change
- ✘ Be keen to promote and support climate and environmental friendly activities



The **Facilitator's Guide** will render additional support activities to complement the game.

LEARNING ENVIRONMENTS



SCHOOL/
EDUCATIONAL CENTRE -
TEACHERS HELP



HOME -
PARENTAL HELP

Older than 6
year old kids,
can study on
their own.



THE ROLE OF THE EDUCATOR

In the learning process proposed for the Greenopolis e-book, the teacher plays the role of the **narrator / facilitator / animator**:

- ✧ Facilitates (when needed) the interaction and communication between students
- ✧ Helps by consolidating the learning experience by promoting relevant activities utilizing the Facilitation's Guide
- ✧ May prepare his/her own learning material based to adapt to the specific need of his/her pupils/children
- ✧ Adjusts the language and level of requirements to approach each topic
- ✧ Facilitates access to material and research tools (books, internet, etc.)



Type of e-book

The concept and targets of the e-book

Features of the e-book

It is a fairy tale type of e-book, combined with **educational content on sustainable development issues.**

EBOOK TYPE: FAIRY TALE



CERTAIN ADVANTAGES OF THIS TYPE OF E-BOOK

Books narrate stories that motivate children to **develop their imagination, get to know themselves better and enrich their personalities**, while contributing to the development and maturation of their thinking.

In our daily life as we knew it until recently, children's time was divided between lessons, extracurricular activities requiring a lot of transportation within the day, with TV and tablets consuming most of their free time. Now we have the opportunity to **open a different window to their world**. The e-book, especially at this time, is a **wonderful activity** that will keep their interest while educating them at the same time.

THE FOCUS OF THE E-BOOK



The main idea of the e-book is to present to the reader - listener problems related to sustainable development and he / she to follow the steps to resolve them.

The main characters are a little girl, Eliza, a ladybug and a good-hearted monster! A monster that people use, to achieve their irrational "developmental" goals. The world is losing all color! The Environment is suffering!

The lives of humans and all creatures have become unbearable!

Until, one day, colorless like any other, a little red ladybug informs Eliza about the cause of all the problems that have arisen on the planet and are the result of unsustainable human behavior. The green monster that has also lost its colour due to reckless human decisions, can give a solution to the problems. So all three begin their quest, trying to solve the huge environmental problems and return nature to balance. And, as in all optimistic fairy tales, in the end they succeed!

BASIC TOPICS OF THE E-BOOK

HOW WERE THE MAIN TOPICS OF THE FAIRY TALE CHOSEN?

FOCUS ON THE CONSEQUENCES OF NON SUSTAINBLE BEHAVIOUR

4 important topics were selected: food supplies, animal habitats / lifestyles, health and biodiversity, active citizens

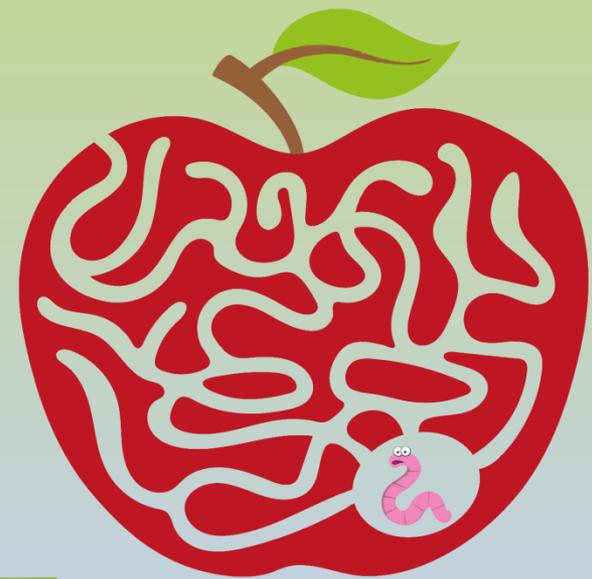
- ❖ They seemed easier and more accessible to the children
- ❖ They encourage discussion on complex issues and at the same time send a clear message about the consequences of unsustainable behavior and the need for action.



TOPIC

Food supplies

Pertaining subjects

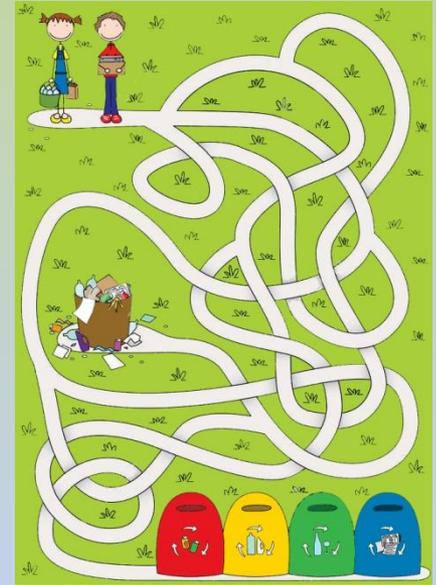


- Climate change - drought and flood cycles, etc.
- Deforestation
- Reasons why the soil is depleted
- Unsustainable agricultural practices
- Use of pesticides
- How to minimize the depletion of soil fertility
- Organic crops
- Importance of biodiversity and crop rotation

TOPIC

Habitats/ Ways of life

Pertaining subjects



- Global warming
- How can we minimize the negative effects of human actions
- Recycling, reuse and responsible consumption
- The importance of forests in preventing soil erosion and rainwater collection

Topic

Health



Pertaining subjects

- Sources of air pollution
- How pollution affects human and animal health
- How can we minimize the negative effects of human actions on air quality
- Renewable energy sources versus fossil fuel energy sources.
- The importance of forests for the improvement of air quality
- Environmental citizenship

Topic

Biodiversity / Active Citizen

Pertaining subjects



- The importance of biodiversity
- Endangered species
- Endangered ecosystems
- How can we minimize the negative effects of human actions
- The active role that people can play in promoting sustainable behavior
- Earth, the largest of all ecosystems!



ADDITIONAL MATERIAL

Teachers have at their disposal a Facilitator's Guide with suggestions for using the e-book and additional exercises and activities that can complement the e-book experience.

The goals are:

- encouraging children to develop and explore their creativity, to experiment with new materials, to develop tactile skills, stimulating curiosity, imagination and innovative ideas
- the development of fine motor skills
- the development of accuracy and regularity at work
- the adoption of and compliance with the rules of the game
- the familiarisation of children with the acceptance of defeat
- the development of cooperation between children
- encouraging children to identify cause-and-effect relationships through observation, practical verification and conclusions, and to acquire a basic knowledge of the laws of nature
- the acquisition of basic knowledge on the problems of environmental pollution (how pollution is created, how waste is disposed of, waste management, recycling and reuse of waste, the role of experts)
- the development of attitudes about the importance of every living thing and their interdependence
- the development of ecological sensitivity in children in relation to physical problems in the narrower and wider environment of the kindergarten
- the acquisition of knowledge about nature conservation.



Our motto:

"Think globally, act locally"

The images in the templates of the pages in the Facilitator's guide indicate the **type of activity** that takes place, as shown by the following images:

	Crafts with the help of the teacher
	Games and Experiments
	Activities in the Maze
	Colouring Pattern Activities.

The order of the worksheets in the Facilitator's Guide is just a suggestion that does not prevent each teacher from taking a different approach, depending on the level of the class.



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Snake or other structures out of bottle caps

OBJECTIVES:

- Encouragement of children to use waste material
- Encouragement of innovation
- Encouraging children to develop and research their own creativity, experimenting with new materials, developing tactile abilities, encouraging curiosity, imagination.

MATERIALS:

- ✓ Plastic caps
- ✓ Thread or fishing line
- ✓ Awl

DESCRIPTION:

1. Collect various plastic bottle caps
2. Pierce them
3. Run through them thread or fishing line
4. Decorate as you want.



Facilitator's guide



Separation of waste

OBJECTIVES:

- Introducing children with the concept of recycling and waste classification
- Development environmentally acceptable behavior
- Acquisition of knowledge about nature conservation.

MATERIALS:

- ✓ Waste containers
- ✓ Waste: recycled and non-recycled

DESCRIPTION:

1. Offer children various waste (recycled and non-recycled)
2. Prepare containers for various types of waste
3. Divide children in non-competitive play teams.





INTERACTIVE EBOOK ON
SUSTAINABLE DEVELOPMENT

greenopolis.erasmus.site

A relevant brochure was created to promote the e-book

WHAT

Greenopolis is a project to develop a new learning approach to Sustainable Development Education of pre-school children.

From September 2019 to August 2021, the project is going to create and make freely available an interactive story – the Greenopolis eBook – and learning support materials for educators – the Greenopolis Facilitator's Guide.

Join us in an effort to grow the awareness and knowledge of our youngest citizens about Sustainable Development and the importance of adopting a Sustainable Lifestyle.

HOW



Ebook



Facilitator's
Guide



Pilot Testing



Final Events

WHO

The project is joint initiative gathering the Szkoła Podstawowa im. ks. Jana Twardowskiego w Nowej Wsi (Poland) – as coordinator – the Centrum Wspierania Edukacji i Przedsiębiorczości (Poland), Advancis (Portugal), Boon (Portugal), the DV Radost (Croatia) and the Environmental Education Centre of Vámos (Greece).



Boon



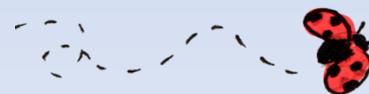
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Greenopolis

Have Fun!!!!
Thank you!



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πρόγραμμα «Erasmus+»
της Ευρωπαϊκής Ένωσης