

BEAGLE EXPLORES THE SOIL

EDUCATIONAL PICTURE BOOK
ERASMUS+ PROJECT BEAGLE



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BEAGLE educational picture book

Beagle explores the soil

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EU PROGRAMMES



beagle

Bioethical Education
and Attitude Guidance
for Living Environment

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Foreword

In your hands you're holding the result of the second intellectual output of the project BEAGLE – Bioethical Education and Attitude Guidance for Living Environment. Project gathers partners from Croatia, Slovenia, Italy, and Greece, under the umbrella of Erasmus+ platform, with a common goal of promoting bioethical education, developing critical thinking, and overall changing of attitude towards better understanding of our environment.

First thing one might notice opening this picture book, is that there are very little pictures! Our intention was to create a unique tool for the classroom – one that can serve both students and teachers alike. Thus, this book is not only a didactic tool with educational stories and accompanying questions for discussion, it's also a creative one! It's a canvas on which students can express themselves freely, and engage directly into creating a story.

That being said, there are few distinctive parts of this book, which require further explaining. **On the left pages**, you will find main story of the book with information relevant to the theme. Each short chapter is accompanied by series of bioethical questions, problems or tasks that can be used to lead a discussion. Questions can be used together in one class, or separately, in few sessions, depending on preferences and resources of the teacher.

As the left pages are dedicated to reading and listening, **right pages** are designed for verbal expression, critical thinking, collective discussion but also, more importantly, for artistic expression and creative tasks. Right pages are there to remind the students that they are important part of our environmental story! It is their task, if they wish, to accompany the main story with the illustrations, or complete the creative assignments of their choosing.

At the end of the book, in separate **methodological chapter**, teachers can find detailed explanations of tools and methods that may be helpful for using this book, in the class or in general.

Additional remark

Educational picture book "Beagle explores the soil" is designed as an interactive multipurpose didactical tool. The book is published online, easily downloadable in PDF formatting, and free for use.

Keeping in mind the environmental message we try to convey, it is worth mentioning that the complete book **does not have to be printed in order to be adequately used in the classroom!**

Stories and questions, for example, can be implemented with the help of the computer or projector. Creative tasks and assignments on the right pages, which were constructed to follow the main story, and strengthen the message behind it, can mainly be drawn, painted, or in other creative ways performed **on a plain scratch paper.**

For more info about the BEAGLE project and other open educational resources, visit:

www.beagleproject.eu



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What is the soil?

Soil is a part of nature.
It is a thin layer of material covering the planet Earth.

It is like a living being.
It is breathing, feeding, growing, developing, moving
and decaying.
It forms a caring living space for countless animals,
plants, microbes, etc.

Life without soil is not possible, at least not for a very
long time.

Most living beings depend on soil.
That includes a little dog Beagle and You too.

Question to start with

- What colors of the soil you know?

How is the soil formed?

The soil starts to form when the rock surface is slowly broken down.

It starts to transform because of the air, cold, living organisms and other substances. This process goes on and on until a fertile material - the soil is formed.

The soil consists of tiny minerals, organic materials, water, air, and living beings.

It takes a thousand years before a small amount, that is a very thin layer of the soil is formed.

And when it is formed it is delicate and easily gets damaged, washed or blown away by winds.



Questions for class:

- Can you imagine going for a walk with a little dog Beagle for a thousand years? How far could you get?
- Do you know any animals that live in the soil?

Use this page to draw at least one, if you wish.

What is the role of the soil on planet Earth?

The soil has a very important role for the entire ecosystem.

It is essential for the survival of most of the living beings on planet Earth.

The soil is fertile and nourishes life.

The little dog Beagle, plants, You and other living beings need the soil for producing food, getting nutrients, cleaning of the water and going to the toilet.



Questions for class:

- Do you think you can eat the soil (e.g. clay)?
- Why yes and why not?
- There is six types of soil:

CLAY, SAND, SILT, PEAT, CHALK, AND LOAM

Can you find all six in the grid bellow?

Q	E	T	Z	I	P	A	C
G	C	H	A	L	K	Y	H
B	M	W	R	Z	S	C	A
S	F	H	D	E	I	R	L
E	P	E	P	H	L	N	K
N	E	Y	J	Q	T	A	S
S	A	N	D	Q	R	A	S
S	T	L	O	A	M	R	A
Q	E	T	Z	C	L	A	Y



How are people destroying the soil?

The soil can maintain and renew itself. But if we use it too much, it becomes irreversibly degraded.

Causes of soil degradation are both natural and man-made.

The activities of human beings are the most dangerous for the soil.

Here are just two way in which we are destroying the soil.

When people are building new shopping malls, houses, factories, motorways, etc. they are destroying a lot of soil.

When people are dropping empty bottles, cans, plastic bags, they are covering and mixing the soil with litter.

Questions for class:

- Can little dogs also destroy the soil?

They are often round and about and cannot stop digging!

- **Think and discuss about the ways little dogs and other animals affect the soil in positive and negative ways!**



How can You protect the soil?

The soil is a natural resource for us, humans. We need it for food and many other things as you have learned.

You and the little dog Beagle can become protectors of the soil. Your job would be caring for the soil, the ground where you would be playing, walking, running, cycling. This includes not dropping any trash or better, if you see any trash, you pick it up and put them into a trash bin. You might save the planet Earth a thousand years needed to form new soil.

Here is another mission for You and Beagle as protectors of the soil.

Every time you can, you go to the nearest meadow or grass field and lay down on it, smell it, touch the soil and say thanks to the soil.

You can say "Thank you dear soil for caring for me, my family, plants and all the living beings in the world."

Questions for class:

Beagle can carry a big bottle in its mouth.

- Do you think you can teach Beagle to find some trash and bring it back to you?

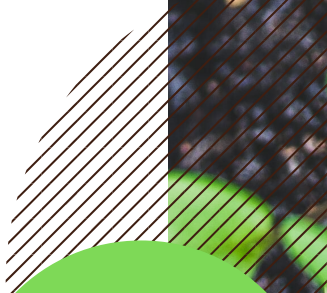
On the picture bellow, someone left 6 empty water bottles. With the help of your Beagle, find them all.





Can you imagine the planet Earth without the soil? How would it look like?

In these two blank pages, draw a picture of the Earth without soil, as you imagine it!





Methodological chapter

The methodological basis for conducting workshops, classes or lectures using this picture book is derived from the educational material **On the soil degradation** developed as a part of the Erasmus+ project BEAGLE (Bioethical Education and Attitude Guidance for Living Environment).

Together with the methodology described below, all the materials can be found on the project web-site: www.projectbeagle.eu

On the soil degradation

Introductory note:

This workshop can be done with wide range of age groups. Make sure that bioethical topic, number of participants, time and level of discussion are adopted to the group age.

- **Age range:** 8-14 years old
- **Time:** 60-90 minutes
- **Group:** up to 25 participants (whole class)
- **Materials and tools:**
 - black or white board,
 - several sheets of (eco)paper,
 - pencils, markers,
 - different materials, wrapping papers from candies and chocolates (newspaper, coloured paper, metal parts, wooden parts, other waste products etc.)

- **Educational methods:** experiential critical thinking, embodied critical thinking, holistic education, experiential learning

- **Key learning points:**

This activity encourages students to:

- think about their relationship with soil,
- understand the importance of soil for human life and life on Earth in general,
- understand the processes that affect the soil and impact of people on the soil,
- re-establish their connection with the soil/nature,
- think creatively,
- focus on their senses, sensations, and emotions.





Step by step - how to do it?

The workshop has three activities. Each activity can be done individually, depending on time available and content you want to present to students or children. Some contents included in the activities are optional. You can use it in a way that suits you best for your aims or needs. You can adapt the approach and steps described, for example, if you work with younger children they can use drawing instead of writing. Some parts of the content can be reduced or rephrased so that you focus on just a few key points that the students will be able to comprehend and remember.

Additional note:

For the purposes of this publication, **only the first activity (mindfulness practice) will be explained**. The rest of the workshop can be found, as well as all other educational materials, on the project web-site:

www.projectbeagle.eu

Activity 1

Start the workshop by giving each student a bigger piece (eco)paper (A3) and on the floor put some crayons. Then invite each student to draw his or her own perfect environment/land/place. You can ask questions such as:

- **Where would they live if there were no limits?**
- **Where they can feel peaceful and happy?**

They should be as detailed as possible. Let them draw for about 15 minutes. When they finish with drawing, they should put it away, where they can find it later and use it again in the following activities.

Activity 1 - continued

What is soil and why is it important?

Continue with short introduction about the soil:

Irina Kim, biointensive practitioner and teacher from Uzbekistan says that “the soil is a living organism. Like all other living organisms, she breathes, feeds, grows, develops, and moves. Nature gave her external and internal spiritual beauty. This must be understood by first seeing, then feeling, understanding, and above all, falling in love with her.” Soil is a natural body, a living organism on the surface of the earth's crust or like World wild life organisation (WWF) puts it the soil is a thin and “fragile skin that protects all life on Earth. It is comprised of countless species that create a dynamic and complex ecosystem and is among the most precious resources to humans.” As a living organism, soil has an important role throughout the entire ecosystem, as it allows life together with air and water. Without this live organism, life on Earth is not possible and that is why human life depends on the soil. (Vovk Korže, 2015).

After introduction:

Give students some time to think and write down on paper (A4) some first thoughts about soil, e.g. by instructing them to finish the following two sentences “**The soil is...**” and “**The soil is important for...**” After they finish with writing, invite them to share their thoughts with the group. Write on the board all their thoughts. Some points for discussion could be:

Continued on next page.



The soil is:

- essential resource for life on Earth,
- living space,
- natural resource,
- material,
- space,
- residence,
- restroom (WC).

The soil is important for:

- food production,
- growing plants,
- agriculture and forestry,
- natural and cultural archives,
- settlements and traffic surfaces,
- water supply and water purification,
- regulation of heat, water and energy,
- storage, cleaning, balancing.

What is soil degradation?

Shorty emphasize the main things that you have discussed given the points above. Then introduce the students some further facts about the soil. You can use the content below.

As we can see, soil has many functions and roles. One of the main ones is fertility of the soil. Fertility is soil's most essential characteristic. The soil can maintain itself, but if demands for its use are too big it can become irreversibly degraded. The fact that "half of the topsoil on the planet has been lost in the last 150 years (WWF)", is worrying. And the fact that it takes a very long time for the creation of new soil, only a few centimetres of new soil is created in thousands of years, we can understand that the soil is very valuable and given that we do not have any other substance available for the same use, it is an irreplaceable natural resource.

What makes soil fertile? "The soil is a living organism that must be fed and nurtured to keep it feeding us." That means that it has enough of good nutrients, minerals, water and air. But this is not the case in many areas all around the world, because the soil in those areas is not nurtured properly and thus the natural wealth is destroyed.

The rest of the workshop can be found, as well as all other educational materials, on the project web-site:

www.projectbeagle.eu



Good practices to explore

The European Commission (2019) has drawn up guidelines and good practices for limiting, mitigating and replacing soil sealing due to the large losses and build-up on fertile soil in Europe.

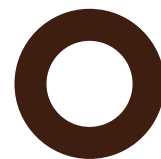
In the Seventh Environmental Action Program, which entered into force on 17 January 2014, the EU recognizes that soil degradation is a serious challenge. The program obliges the EU and the Member States to increase efforts to reduce soil erosion and increase soil organic matter content, to remediation of contaminated soil and to sustainable use and better soil protection.

You can find the guidelines on link below:

ec.europa.eu/environment/soil/sealing_guidelines.htm

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BEAGLE partners:

Association for supporting of informal education,
critical thinking and philosophy in practice
"Petit philosophy"
(Zadar, Croatia)

STePS
(Bologna, Italy)

Association Internet Now!
(Athens, Greece)

University of Ljubljana - Faculty of Theology
(Ljubljana, Slovenia)

University of Split - Centre for Integrative Bioethics
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