DISCOVER NATURE

TOOLS FOR ENVIRONMENTAL EDUCATION

YEE!
YOUTH AND ENVIRONMENT EUROPE

Discover Nature

Tools for Environmental Education

June 2011

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COUNCIL OF EUROPE CONSEIL DE L'EUROPE

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Its purpose is to encourage co-operation among young people in Europe by providing financial support to such European youth activities which serve the promotion of peace, understanding and co-operation in a spirit of respect for the Council of Europe's fundamental values such as human rights, democracy, tolerance and solidarity.

Source: http://www.eyf.coe.int/fej/

Education and Culture DG

'Youth in Action' Programme

Youth in Action is a programme the European Commission has set up for young people.
It aims to inspire a sense of active European citizenship, solidarity and tolerance among young Europeans and to involve them in shaping the European Union's future. It promotes mobility within and beyond the EU's borders, non-formal learning and intercultural dialogue, and encourages the inclusion of all young people, regardless of their educational, social and cultural background.

Source: http://ec.europa.eu/youth

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PICTURES

In this booklet we used pictures from www.sxc.hu on pages 25, 48, and 50; from CEEV Živica on pages 42, 44 and 46; from The Wembworthy Centre on pages 54-56 and from the Youth Exchange 'Learning from each other'.

INTRODUCTION

Dear readers,

You are holding in your hands a unique booklet containing a set of methods of environmental education which have been tried and tested by many European organizations working in the field of youth, protection of nature and environmental education.
This booklet is a follow-up project of the Youth Exchange 'Learning from each other — methods of environmental education' where most of these methods were presented and collected. At the Youth Exchange there were organizations from 7 countries: Armenia (SYC), Czech Republic (Hnuti Brontosaurus and YEE), Finland (Luonto-Liitto), Latvia (Radi Vidi Pats), Macedonia (DEM), Portugal (H2O), and Ukraine (MELP).
The exchange took place in April 2011 in the Czech countryside. Four representatives from each of the above mentioned organizations shared the best practices they use in their work with children and youth and each day of the project was dedicated to one of them. During the project participants prepared many interactive presentations, practical workshops and games of environmental education, each time using the method 'learning by doing'.
This project is actually the third Youth Exchange that YEE has organized on the topic of environmental education. The first was: Learning from each other — methods of environmental education (Czech Republic — 2009). The second one was: Learning from each other — games from environmental education (Poland - 2010).
It is also YEE's second booklet connected with environmental education. In 2010, we published 'Games for Nature — Environmental education through the eyes of young people' which was a result of the above mentioned Youth Exchange in Poland. Whereas the 2010 publication was a collection of various environmental games, this new booklet comprises of a selection of different methods and tools that you can use in environmental education.
The booklet is divided into four chapters — actions for nature, creative methods, crafts and nature science. These methods are meant to be used just as a guide. You can adapt them to your way of working, the resources available, the surroundings and the people you work with. We believe that some reflection and conclusions can always be drawn out in order to go further in the environmental learning process and to help participants to develop their own opinions.

We hope that this booklet full of interesting and interactive methods will serve as a useful tool in your work with children and youth.
We hope you enjoy reading this booklet, and find lots of inspiration for your work for and in nature!

CONTENT

I

Actions for Nature

WORK CAMP WEEKEND

AIM: **To strengthen relationship between people and nature, environmental education and skills in manual work (learning by doing), to transfer know-how and also know-why, to motivate young people and encourage them to be actively involved in environmental and heritage protection.**

FOR WHOM:	**Youth over 15**
NUMBER OF PARTICIPANTS:	**Around 15**
LENGTH OF THE ACTIVITY:	**One weekend** from Friday evening to Sunday afternoon
PLACE:	**Both indoors and outdoors**

MATERIALS AND PREPARATIONS NEEDED:

For work:

- Clear knowledge about the work that will be done and the place.
- Safety instructions.
- Enough tools for everyone to take part in the work.
- Ask participants to bring working clothes and gloves.

For programme:

- Find a topic for your weekend and prepare a programme, with some activities, games and workshops based on it.
- Check if you have all materials needed for your workshop.

Practical arrangements:

- Provide clear instructions about the location and suggestions for environmentally friendly travel (it is best if the place is accessible by public transport).
- For accommodation ask participants to bring sleeping bags and mats and arrange a big room or some tents, depending on the weather and place.
- For food you can either ask participants to bring some of the ingredients needed for common cooking or ask them to pay a low participation fee. Food should be entirely vegetarian.

DESCRIPTION:

Start Friday evening with some games or discussion. Start working on Saturday early in the morning and continue until the afternoon. Organise the educational programme and workshops during the afternoon and evening. On Sunday morning continue either with work or with the educational programme. Schedule approximately equal time for work and for the educational programme as they are of equal importance.

Examples of a work camp weekend:

Work: Emphasize the usefulness of the work by explaining the reason why the work should be done and give some information about the background and history of the place. Work with the volunteers and use the method of 'learning by doing'. Always follow safety instructions while working. Possible examples of work:

- Rebuilding of an old church
- Straw bale construction

Educational programme:
There are many possibilities depending on the focus of your organization's work.

- Fantasy stories (games and treasure hunting to get to know the area) and workshop for making candles.
- Nutrition and vegetarian discussion with some reflection groups and games.
- Crafts, photography, etc.

Background and practicalities:
The most important point of this method is the personal example, your actions should be consistent with the ideas you spread.
Accommodation in a big room in an eco-center or school with vegetarian food.

CLEANING QUEST

AIM: **To make people aware of the garbage and waste situation in their city and to clean littered areas.**

FOR WHOM:	**Anybody can participate** However if children join the action make sure that there is always an adult with them.
NUMBER OF PARTICIPANTS:	**20—50**
LENGTH OF THE ACTIVITY:	**1 day**
PLACE:	**Outdoors, in the city**

MATERIALS AND PREPARATIONS NEEDED:

- Trash bags adapted to the different kind of wastes
- Gloves
- Costumes adapted to the quest (optional)
- Car for removing the garbage (optional)
- The treasure
- Bins for separated trash
- Promotion (social networks, website or others)
- Materials to make notice boards (stick, paper, cardboard, tape, markers, pens)

DESCRIPTION:

Clean the city and inform public about the actions.

Propose through your network to clean the areas of the cities that are degraded. In order to be more appealing you can realize the action as a quest where people should take away the waste in the city (the quest can have a topic – for example a pirate quest, etc.). People should gather as much garbage as they can. The team which will gather the highest quantity of garbage will receive a map to find the treasure (all participants can receive gifts).

How to proceed with organizing the cleaning quest?

1. Find a territory to clean. It can be a park or an interesting area of the city from the environmental point of view. It should preferably be an area that many people visit.
2. Promote the quest to gather as many participants as possible. Do not hesitate to use lots of communication tools. At this point you should explain what the quest will be about and what the purpose of the action is.
3. Each group will create its own notice board saying that an area of the city has been cleaned. This part can be made only if the legislation allows you to put signs at the place where you did the action. So check this out beforehand.
4. The day of the quest starts by explaining the action to all participants. Present all the safety rules at this moment too (wear gloves, do not take risks by reaching into dangerous areas, be careful with glass).
5. Give the participants all the necessary materials; make sure that they all know which trash belongs to which bag.
6. Prepare the notice boards.
7. Now you can start with the quest. You should participate and assist all the participants if any kind of help is needed. Make sure that the waste is well separated.
8. Choose the winner and install the notice board indicating that the area has been cleaned.

9. Remove the gathered garbage and bring it to the correct city bins.
10. Give the map to the winners.
11. Ensure that the treasure is found, in order not to leave one extra piece of trash in the city.
12. In case you have gifts for everyone, distribute them at the end of the cleaning quest.

You can communicate about your action afterward by using Internet or any other method of communication (social networks, newspaper, radio, etc).

11
Creative Methods

FEEL NATURE

AIM: **To increase participants' sensibility towards nature by different exercises that use our basic senses (sight, taste, hearing, smell, touch) practised in the nature. Exercising the senses enhances our ability to observe nature around us and improves the relationship between people and nature. When it comes to environmental education the aims of the exercises are to make people more interested in nature and help them understand how they can better focus on nature and even discover new ways to see it. Furthermore, these practices give participants a holistic environmental experience.**

FOR WHOM:	**Everyone who wants to improve his/her relation with nature**
NUMBER OF PARTICIPANTS:	**Some of the activities should be done individually and some in pairs or small groups**
LENGTH OF THE ACTIVITY:	**Around 90 minutes**
PLACE:	**Outdoors, in nature**

MATERIALS AND PREPARATIONS NEEDED:

For 'Nature-CD':
- one pen for each participant
- cut some cardboard or carton box into rounded pieces (one for each participant), resembling CDs

For 'Blind game':
- scarfs or something to blindfold, one for every two participants

For 'Finding the opposites':
- colourful papers with written opposites: soft - hard, beautiful - ugly, thin – thick, familiar - unknown, pliable - stiff, rough - smooth

For 'Nature Art Exhibition':
- string or frames cut from cardboard

DESCRIPTION:

Finding a place in nature
Everyone finds his/her own place in nature (not too close to anyone else's place) where s/he can just sit or lie down. It can be anywhere: under a tree, on the grass, behind a rock. Ask participants to stay silent and listen and feel nature.

Making a nature CD
Afterwards, everyone is given an empty "CD". S/he should consider his/her place as the center of the CD. The task is to listen to nature carefully and to mark down (with words/symbols/pictures) on the cardboard CD what one hears around her/him. Afterwards it is good to 'listen to the CDs' in small groups, i.e. to share and discuss what people have heard and how they felt.

Finding opposites
Put the colourful papers with written opposites on the ground and ask participants to find pieces of nature that according to them fit with each pair of opposites listed on the pieces of paper. Then ask them to bring them and put them next to the colourful papers with opposites.
Afterwards you can discuss what people have found and how different these things can be depending on people's personal perceptions.

The blind game
Divide participants into pairs. One is the guide and one is blind person (eyes covered with a scarf). The guide leads the blind person to a tree (not the straightest way since the blindfolded person should not know where s/he is going) and the blind person

tries to 'get to know the tree' as well as possible (by touching and feeling it). Then the guide leads the blind person back to the starting point and the blind person should try to find her/his way back to the tree with their eyes open. They may switch the roles afterwards.

Nature Art Exhibition

Everyone is given a piece of string which s/he will use as a frame (or you can give them a frame already cut from a cardboard). The aim is to find an interesting object from nature and frame it with the string or a piece of cardboard (it can be anything from a beautiful stone to a beautiful flower or an interesting pattern on a tree trunk). Afterwards you can discuss what people have found.

SHARED INSPIRATION

AIM: **To create a connection between people and landscape, showing them that many things are hidden in the places we pass by and only by taking some time and feeling those places, will we find out how full of energy and magic they can be. This can build a stable link between people and nature and make grow their interest and awareness in environmental issues.**

FOR WHOM:	**Children over 8 and youth**
NUMBER OF PARTICIPANTS:	**From 4 to 7 participants**
LENGTH OF THE ACTIVITY:	**From 1 to 2 hours** (depending on the number of participants)
PLACE:	**Outdoors, in nature**

MATERIALS AND PREPARATIONS NEEDED:

- Envelopes
- Scissors
- Papers (white and coloured)
- Old newspapers and magazines
- Crayons, watercolors, tempera or similar
- Glue
- Strings
- Pens and pencils
- Bell, whistle or similar (to alert people when time is up)

Before starting the activity you need to prepare:

- Text (story, poem, extract of a book) you will read at the beginning.
- The envelopes with the message or picture (examples described below) outside and the instructions inside.
- Bags with the materials needed for some of the activities (put material inside the envelope if possible, for example if it is just paper and a pencil).

DESCRIPTION:

Go with participants to a nice place in nature and sit all together in a circle. Create a pleasant atmosphere before starting the workshop, for example, by reading a poem or story related to landscape or nature conservation.

The envelopes with the message or picture will lie on the ground in the area (forest, field, etc.) with a piece of paper inside with the instructions for the activity and a bag with materials if needed. Each participant chooses one envelope and keeps it. Then they can go to any place they like or feel comfortable in (always close enough to hear thesignal announcing the end of the activity) and they have to open their envelope, and do the described activity.

The facilitator of this activity has to control the time and give the signal (or any other object which can make a similar noise) for the participants to know that time is over. Time for participants in each activity can go from 10 to 30 minutes, depending on their age (shorter time for small children) and on the number of activities you will do.

When you give the signal, participants have to come back to the meeting point where they found the envelops and leave them there again. Then they can take a new one and continue working on the activity the person before them had begun. Repeat this until everyone has worked on all the envelopes so that all the activities suggested have a contribution of everyone's art and feelings. In this way, the workshop is more dynamic: you do not have to work on just one thing for one hour by yourself but you have 10-30 minutes for each activity and still time to reflect and enjoy being in the outdoors too!

There can be different tasks and instructions on each paper, for example:

1. Picture of a **tree** (drawn on the outside of the envelope); Instructions written inside the envelope: Start (or continue) to write a **story or legend** about this mythological tree.
2. Word "**path**" (written on the outside of the envelope); Instructions written inside the envelope: Start (or continue) with some verses of a **poem** inspired by this word.
3. **Pieces of nature** (leaves, branches etc. stuck on the outside of the envelope); Instructions written inside the envelope: Start (or continue with) a **collage** with pieces of nature you find in the bag and around (remember not to harm nature!).
4. **Soil** (stick some soil on the outside of the envelope); Instructions written inside the envelope: Look for a nice piece of ground and start (or continue with) a **piece of land art** using natural materials.
5. **What does environmental education mean for you?** (or other statement related with nature, written on the outside of the envelope); Instructions written inside the envelope: Share your **ideas and feelings** so we can start a discussion.
6. **"Empty" landscape** (for example, just the horizon or skyline, drawn on the outside of the envelope); Instructions written inside the envelope: What would you like to find in **"your" landscape**? Draw those things (leave place for the rest of the participants to draw more things). Provide participants with a big piece of paper and some painting materials.
7. **Photo of a landscape** (from a magazine, stuck on the outside of the envelope); Instructions written inside the envelope: Start (or continue with) **a painting of the landscape you see around you**. Provide participants with a big piece of paper and some painting materials.

Once everyone has worked on the activities from all the envelopes, you sit all together in a circle again and read or show the results of the common work. Afterwards you can reflect on how the participants felt about working so close to nature.

PUPPET THEATRE

AIM: **To show children and youth how garbage can be used in an interesting way. This method motivates them to collect garbage using their imagination because there is the opportunity to use it in a creative and useful way. A reflection on recycling and especially on reusing waste can be done before or after the activity.**

FOR WHOM:	Children and youth
NUMBER OF PARTICIPANTS:	No limit
LENGTH OF THE ACTIVITY:	Around 1.5—2 hours
PLACE:	Outdoors or indoors

MATERIALS AND PREPARATIONS NEEDED:

Any type of garbage that does not endanger life or health of participants can be used — for example, paper, plastic bottles, boxes.

DESCRIPTION:

Divide participants into small groups (3-6 people per group) and the leader of the activity asks each of them to create a little puppet show (length of the show depends on the organizers).

You can give participants household garbage that you collected in advance or just let them find the materials (garbage) by themselves.

Participants are given time and space to prepare their puppets and their performances according to the topic of the show (45-60 minutes).

All the groups gather in order to watch performances. If this activity is part of an international project, groups can be made based on countries and participants may be asked to perform their play in their own language using simultaneous translations, subtitles or any other creative way to make the play understood by the rest of the team.

After the show the puppets can be kept or sorted for proper recycling.

MUSIC WITH NATURE

AIM: To show the participants that environmental messages can be transmitted in very different and creative ways.

FOR WHOM:	Children and youth
NUMBER OF PARTICIPANTS:	No limit
LENGTH OF THE ACTIVITY:	Around 1 hour
PLACE:	Preferably outdoors

MATERIALS AND PREPARATIONS NEEDED:

Natural objects/instruments

DESCRIPTION:

Divide participants into smaller groups (4-6 people) and ask them to prepare music using natural instruments.

The instructions may contain specification about what environmental topic to focus on (e.g. you can specify the topic or give some specific words to be used in the lyrics).
Time needed for preparations: 30-45 minutes.

Sharing of the results and discussion (15-20 minutes):
Each group is asked to perform the music live (just like a band performing at an Eco-festival!) or make a video of their song.

TREASURE MAP

AIM: **To think about how knowledge and information can be transmitted from one group to another and to discover the surroundings.**

FOR WHOM:	**Children and youth**
NUMBER OF PARTICIPANTS:	**From 10 to 20**
LENGTH OF THE ACTIVITY:	**From 30 to 45 minutes** (depending on the size of the area)
PLACE:	**Outdoors**

MATERIALS AND PREPARATIONS NEEDED:

- Paper
- Pencils
- Something to hide as treasure

DESCRIPTION:

Make each group discover the surrounding area, hide some 'treasure' there and make a map of it for the other groups to find the treasure.

Select a natural area, that you can divide in a way that each group will have its own zone to discover. Explain the activity to the participants and divide them into groups of 3 to 5 people each.

The groups have some time to discover the surroundings – it should be, approximately half of the time you are planning to use for this activity. When they get familiar with the area, they can hide the 'treasure'.

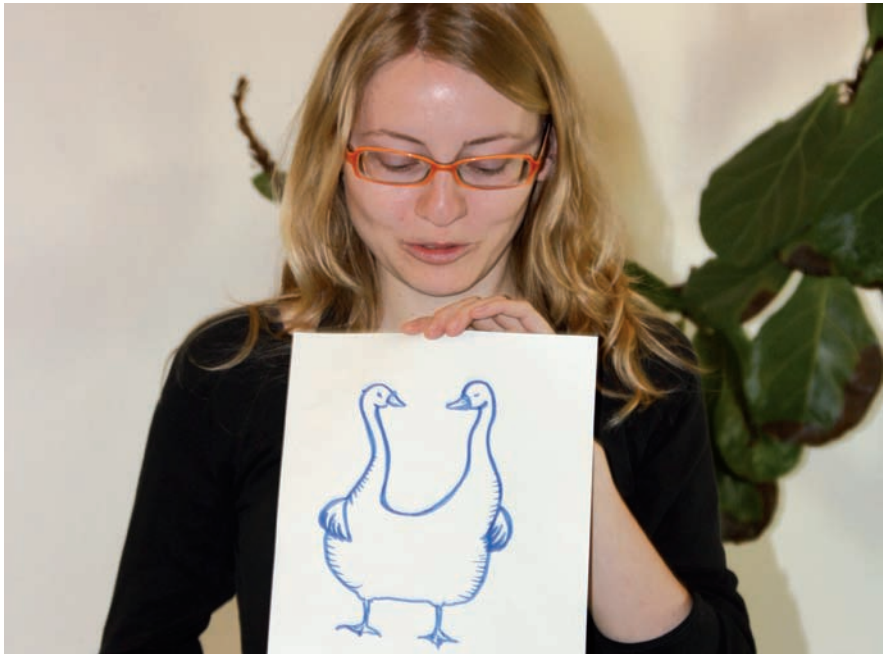
Afterwards, they should draw a map so that the other group will be able to find their way around the area and find the treasure.

After the activity it is advisable to open a discussion about the area they explored and also about the different aspects of each map, as each group might have drawn it in a different way and with many different kind of details. Remember, there are no good or bad maps, only different ones. This activity should point out that we all pay attention to different things. Knowing how to transmit the information in an understandable way to the others is very important.

GMO IN PICTURES

AIM: **To make participants think what could be our future with GMOs (genetically modified organisms). This activity can be useful for starting a discussion about genetically modified food. From the pictures that participants create you can get some insight into fears and false beliefs they may have.**

FOR WHOM:	Children and youth
NUMBER OF PARTICIPANTS:	For small or medium groups
LENGTH OF THE ACTIVITY:	From 20 to 30 minutes
PLACE:	Indoors or outdoors



MATERIALS AND PREPARATIONS NEEDED:

- Papers
- Pencils and/or crayons
- Be sure to read about and understand the topic of genetically modified food before beginning!

DESCRIPTION:

1. Start the discussion about GMOs through a presentation, picture exhibition, video, movie, etc. That will permit the topic to be introduced and understood by everyone.

2. Distribute papers and pencils and ask participants to draw how they see future with GMOs.

3. Sit together and ask each participant to present their drawing.

4. Start a debate from the pictures they have drawn and clarify any wrong concepts they may have about the topic.

III
Crafts

SOLAR OVEN

AIM: **To teach about renewable energies in a more practical way and to open a discussion about renewable energies.**

FOR WHOM:	**Youth over 15**
NUMBER OF PARTICIPANTS:	**Around 20**
LENGTH OF THE ACTIVITY:	**Around 2 hours**
PLACE:	**Building can be done outside or inside. Afterwards, oven should be left outdoors.**

MATERIALS AND PREPARATIONS NEEDED:

For each group:
- Cardboard box
- Cork sheet of 4 mm (for isolation)
- Aluminum foil
- Clingfilm
- Aluminum tray
- Glue
- Black ink (acrylic spray paint)
- Scissors / X-acto
- Duct tape

DESCRIPTION:

Renewable energy discussion (30 minutes)
Make a presentation followed by discussion about different kinds of renewable energies to give an introduction to the topic (show videos about renewable energies, situation and experience from different countries if it is an international project, etc.).

Introducing solar ovens (30 minutes)
Make a presentation about solar ovens and the methods used to make them.

- Explain what a solar oven is and why it is used.

For example: A solar oven is a device which uses sunlight as its energy source. Because no fuel is used and the running costs are zero, humanitarian organizations promote their use worldwide to help slow deforestation and desertification caused by using wood as fuel for cooking. Solar ovens are a way of outdoor cooking and are often used for reducing fuel consumption.

- How to make a solar oven?

Start the workshop with a theoretical part where you explain the process of making a solar oven step by step:

a. Cut the cardboard box's smaller flaps (closing parts) and one of the long flaps. Make a cut on the sides, going from where the remaining long flap touches the top of the box when you shut it, to the ¾ of the box at the bottom. Using duct tape, stick down the cut long flap at the top in a way that it closes the non-cut part of the box. Use more duct tape to seal the cover.

b. Place and glue the cork sheets inside the box (as isolation).

c. Place and glue the aluminium foil in a way that it covers the entire surface of the inside of the box. Also wrap the remaining flap with aluminum foil (use glue and tape) and tilt the lid to reflect sunlight into the oven.

d. Make a hole at the bottom of the front part so the cold air can get in and push the warm air to the top.
e. Place and stick the clingfilm over the oven (use tape).
f. Paint the exterior of the cardboard box with black paint (spray acrylic color).
g. The oven is ready to be used.

Building the oven (about 1 hour)
Divide participants into small groups of 3 or 4 people. Each group will make its own solar oven. Each group (or two groups) should be assisted by one experienced organizer in making the oven. This person will help and guide them with the construction.
In order not to use too many materials, you can make only one oven as an example, with a clear explanation of all the steps that should be followed.

BIRD FEEDERS AND FLOWERPOTS

AIM: **To teach children the skills they need to make useful items from recyclable materials and to show them that some materials do not need to become trash but can be reused in an interesting and practical way.**

FOR WHOM:	**Children from 8 to 13**
NUMBER OF PARTICIPANTS:	**Around 20 people** (divided into small groups)
LENGTH OF THE ACTIVITY:	**2 hours**
PLACE:	**Outdoors or indoors** (but you need to go outside to hang the bird feeders)

MATERIALS AND PREPARATIONS NEEDED:

- Plastic bottles
- Ropes (thick thread)
- Textile pieces
- Scissors (knives)
- Natural plants
- Wooden sticks
- Sand
- Soil

DESCRIPTION:

For both workshops the participants can work individually or in pairs.

Bird feeders

1. Each pair takes one plastic bottle.
2. Cut two holes with knife (or scissors) in opposite sides of the bottle for the bird to enter and make two cuts just under for the wooden stick where birds can stand.
3. Fill in the bottle first with a layer of soil and then with a layer of sand over the soil.
4. Tie a wire around the top of the bottle.
5. The bird feeder is now ready and can be filled with grains for the birds and hanged on a tree.

Flowerpots

1. Each pair takes one plastic bottle of 2 liters.
2. Cut the top off the bottle (around 15 cm from the top).
3. Remove the lid and put a piece of textile through the hole.
4. Fill in the other part of the bottle about half way with water.
5. Put the part with the textile upside down inside the other part of the bottle with water and fill it with a layer of soil where you plant your flower.
6. The textile piece will absorb the water from the bottom part into the soil to the upper part of the flowerpot.

MESSAGE ON A T-SHIRT

AIM: **To use t-shirts both as a way to spread a message and as a way of supporting people that have been victims of, for instance, an environmental disaster.**

FOR WHOM:	Children over 12
NUMBER OF PARTICIPANTS:	Around 20
LENGTH OF THE ACTIVITY:	Around 2 hours
PLACE:	Outdoors or indoors

MATERIALS AND PREPARATIONS NEEDED:

- One uni-colour t-shirt for each group
- Varied colours and paint materials for textile

DESCRIPTION:

Introduction (30 minutes)
Introduce the topic of the workshop by making a presentation or opening a discussion about the topic or event you consider important or interesting. You can give participants detailed information or show images and videos so they can be more inspired. For example, you may want to talk to your young participants about a recent natural disaster.

Creative workshop (60 minutes)
Make clear the aim of the workshop — the message you want to spread with the t-shirt and who will wear them, e.g. support for victims of environmental disaster for whom t-shirts will be sent and which humanitarian organization will send them; or the young people themselves, who will wear them so as to raise awareness of the topic in their own community.
Divide participants into groups of 3 or 4 people and give each group one t-shirt and some textile painting materials.
Provide groups with a space where they can work and tell them how much time they have. Let them use all their imagination and creativity.

Sharing of results (30 minutes)
Each group is asked to present their t-shirt and its message. Open discussion about the workshop and the topic.

NATURAL COSMETICS

AIM: **To show people alternative and more interesting ways to get cosmetics and how to make cosmetics in a very simple and environmentally friendly way.**

FOR WHOM: **Youth and adults**

NUMBER OF PARTICIPANTS: **Around 10**

LENGTH OF THE ACTIVITY: **Approximately 1—1.5 hours**

The time depends on the recipe but usually it does not take more that 20 minutes to prepare one product. It is good to make 2 or 3 recipes during the workshop.

PLACE: **Outdoors or indoors**

MATERIALS AND PREPARATIONS NEEDED:

Many interesting recipes can be found on the Internet. We suggest using organic products, most of the ingredients are edible so you can just check what you have at home and what you can make with them.

For example:

Hand scrub
- 100 g bicarbonate of soda
- 100 g salt
- 100 g sugar
- organic olive oil (doesn't necessarily need to be organic, but it is always better)
- mandarin oil (or other aromatic oils)

Honey mask
- 2 spoons of honey
- 1 spoon of blue clay
- 2 drops of lavender oil

Bath balls with milk
- 100 g citric acid
- 250 g soda
- 50 g powder milk
- 30 ml almond oil
- water
- aromatic oils

Cream (for 50 ml)
- 50 ml coconut oil
- organic olive oil
- 2-3 drops of peppermint oil
- 2-3 drops of mandarin oil
- a few drops of extract from grapefruit seeds (this keeps the cream good for longer)

Fruit ferment mask
- 30 g of apple cut in small pieces
- 2 strawberries
- 2 big spoons of natural yoghurt
- 1 spoon of honey
- 2 spoons of blue clay

DESCRIPTION:

There is one leader who shows the others how to prepare the cosmetics, explains about the ingredients (their positive effects, etc.) and then lets the others try the product.
You can also let participants make the products by themselves (it depends on how many ingredients you have).

VEGGIE COOKING

AIM: **To show people how to make healthy and interesting food using no meat and using just a little electricity; to show and explain in practice that vegetarian food is healthy; to explain the positive sides of vegetarian food; to start a discussion about vegetarianism and how environmentally friendly it is to eat vegetarian food.**

FOR WHOM:	**Youth and adults**
NUMBER OF PARTICIPANTS:	**No limit**
LENGTH OF THE ACTIVITY:	**Around 1 hour**
PLACE:	**Outdoors** (but it can be also done indoors)

MATERIALS AND PREPARATIONS NEEDED:

Ingredients (for 25 people) for cold soup:
- 5 liters of kefir (or natural yoghurt)
- 4 kg of potatoes
- 4 fresh cucumbers
- 1 kg of beets
- basil, fresh herbs, salt, turmeric, cumin and ginger

DESCRIPTION:

This activity can be done just as a workshop or you can also organize it as a vegetarian party or as a gathering for sharing vegetarian recipes.

Start the activity with a discussion about vegetarian food. Ask vegetarians in the group about their experience with vegetarianism e.g. why they have become vegetarians, what the situation is in their countries, what positive effects they perceive on their health, etc. Explain positive effects of eating vegetarian food, why it is more healthy and environmentally friendly. Support your arguments with some concrete numbers, etc.

While discussing, you can start preparing the recipes (e.g. cold soup):
1. Boil the potatoes, peel beets and cucumbers, then grate beets and cucumbers.
2. Cut potatoes in small pieces, then you can put all ingredients together and mix them.
3. Add spices.
4. Food is ready. Bon appetit!

IV
Nature Science

WATER POLLUTION AS A GLOBAL ISSUE

AIM: **To make participants understand the connection between their consumption habits and water pollution in the "producer" countries. They will realize that pollution in faraway countries also concerns them as pollution and water scarcity are a global issue, not just a local one. The emphasis is on the textile industry and water pollution.**

FOR WHOM:	**Children over 12**
NUMBER OF PARTICIPANTS:	**3—25**
LENGTH OF THE ACTIVITY:	**45—60 minutes**
PLACE:	**Indoors or outdoors**

MATERIALS AND PREPARATIONS NEEDED:

Paper, pen, map of the world, post-it notes, blackboard/flipchart, 2 transparent plastic bottles of the same size, 1 larger transparent container (jug, large jar, larger bottle, etc.), water, small samples of the following: cooking oil, vinegar, food coloring, bio-degradable liquid soap, dirt (soil).

It is necessary to prepare beforehand the two bottles filled ¾ with water and the big container filled ¼ with water. Also have the small samples in small containers ready. On the containers there will be labels: transportation, whitening chemicals, textile colors, pesticides, erosion.

DESCRIPTION:

Introduction

Give the students a few minutes to brainstorm and write down all the material things they need for everyday life.

- After some time ask students to read some of the things on the list. Write down different ideas and if one thing or similar products appear more than once write down only the category they belong to. Let every student mention a few things; try to make the list as diverse as possible. *Make sure the word "clothes" or anything from that category comes up.*
- Ask the students to identify which of the products on the list require water for their production. *Water is necessary for any production, so the class should come to the conclusion, that all products need water to be produced.*
- Ask the students to identify, which of the products (as well as the materials they are made of) are produced locally - within their country or region. *Here it is necessary to stress that almost all products may be produced in our region, but very few actually are produced here.*
- Ask the students to look at the labels on their clothes and indicate on the map the country of origin. *If European countries come up, it is necessary to explain that this means that probably not all production was done here but only the last few steps of it. In particular, the cotton was grown, processed and turned into fabric further away.*
- After all the students have done this you should have a map with labels mostly in the countries of Asia.

Realization

- Now tell the students that you are going to look at the example of clothes and how it affects water in the region where it is produced. Divide the students into 2 groups in the ratio approximately 20%: 80% *(this division roughly represents the ratio of people who use a majority of Earth's resources and the ones with poor and unsatisfactory living standard)*. In this activity the smaller group will represent the consumers in Europe and the larger group will represent the producers from Asia.
- Let the 2 groups sit at desks facing each other with the big jar/container in the middle, between the two groups. Give each group one of the smaller bottles.

Explain that the big container represents the water of our planet, while the smaller bottles represent water of Europe and Asia respectively. Tell the smaller group of students that they are themselves the people of Europe and the smaller bottle of water in front of them represents all the water of Europe. Tell the larger group that they are the people of Asia and the smaller bottle of water in front of them is all the water they have.

- Ask the students to think of what needs to be done in order to get for example a pair of jeans: What is the first step? Encourage the students to go to the very beginning of the jeans — the material it is made of — how did that originate? Lead the students from one step of the process to the other talking about consequences and giving them the samples that will be put in the water:

1. **Planting cotton**: large plantations of cotton need to be created — this is often the cause of erosion. Let the students of the producer country choose the correct sample — soil — and throw it into "their" water. Mix it so that the water becomes dirty.
2. **Using pesticides to increase the growth of crops**: large monocultures are more prone to pests and therefore they need to be sprayed. Let the students of the producer country choose the correct sample — soap for pesticides — and let them put it in "their" water. Mix it well.
3. **Bleaching chemicals need to be used to make the fibers white**: this is done with the help of aggressive chemicals and often without strict health or environmental guidelines. Let the students of the producer country choose the correct sample — vinegar for acids — and let them put it in "their" water.
4. **Dyeing the fabric**: in order to have nice colorful clothes they need to be dyed with colors, which often contain toxic chemicals. Let the students of the producer country choose the correct sample — food coloring for textile dyes — and let them put it in "their" water.
5. **Transportation of fabric or ready made clothes to the consumers**: this requires transportation in the form of petrol. Let the students of the producer country choose the correct sample — oil — and let them put it in "their" water.

Ask the consumer group what needs to be done on their side — transportation is necessary also to the consumer countries so encourage students to choose the sample of oil and put some in their water too.

Reflection

Now that the clothes have reached the consumers, try to evaluate with the students the process.

- What does the consumer group water look like?
- What does the producer group water look like?
- How do they feel about their quality of water, considering that this is all they have?
- How do they feel about the other group's water?
- Is there a chance to somehow clean the water?
- Which elements can be removed?

After a short discussion, talk a little about the water cycle on Earth — tell them that the water we have here is the same water that the dinosaurs used to drink, because there is no other or new water entering or leaving the cycle. Also tell them that water does not respect the borders of countries and it flows into oceans which then take it to different continents. There is no "African water" or "European water", there is just water. Then take the bottles that represented "their water" and pour all the water into the large container in the middle. This represents the flow of water across continents and oceans, thus the pollution affecting everyone. Again try to evaluate the process:

- How do the students — both groups — feel now?
- Who is responsible for this situation?
- What can be done differently?
- How can we affect this? What are the alternatives?

If there is enough time the students may watch a short part of the documentary "100% cotton — Made in India" which describes the entire process of textile production.

INFO BOX:

At present, more than 60% of exported clothes are manufactured in developing countries.
Asia is the major world supplier today, producing more than 32% of the world's clothing exports.
Conventionally-grown cotton uses more pesticides than any other single crop, and includes some of the most hazardous pesticides on the market.
Even though only 2.4% of the world's total arable land is used for growing cotton, this crop accounts for about 24% ($1,776 million) of the insecticides sold worldwide.
As many as 2000 chemicals are used in the textile industry – from dyes, to transfer agents, optical brighteners, equalizers, de-foamers, bleaches, detergents etc.
Water, a finite resource that is quickly becoming scarce, is used at every step of the process, both to convey the chemicals and to wash them out. The water becomes full of chemicals and is then expelled as waste water, which in turn pollutes the environment.
Source: www.oecotextiles.com

ECOSYSTEMS

AIM: **To simulate the life cycle in nature and teach children about it.**

FOR WHOM: **Children over 12**

NUMBER OF PARTICIPANTS: **Ideally 3 teams**
(with at least 5 people per team)

LENGTH OF THE ACTIVITY: **90 minutes: 3×20 min**
(to represent 3 years) + 3×10 min (breaks, counting)

PLACE: **Outdoors, in nature**

MATERIALS AND PREPARATIONS NEEDED:

- 1 table with seasons for each team (to download from www.yeenet.eu, section Publications)
- 1 table for counting points for each team or only for the organizers (to download from www.yeenet.eu, section Publications)
- 1 table with explanation of the system for counting points (to download from www.yeenet.eu, section Publications)
- Pencil for each team
- Cards with pictures of animals
- 1 map of locations of the animals (for each team or one to be displayed in some central point)
- Stopwatch

Before the game starts, firstly prepare small cards with animals – 200 cards of each producer, 100 cards of each consumer, 50 cards of each predator.

Tip: Try to be creative when producing the cards. They can have different colours. Or instead of cards you can use, for example, real nuts for nuts, piece of green string for frog, button for squirrel, etc.

Place each animal in a different place in the surroundings. Draw a map and mark the locations of animals on it.

Tip: You can put the producers closer to the starting point and predators further away. If you want to make the game more challenging you can put predators closer and producers further away.

DESCRIPTION:

Introduction
This games simulates a life cycle in nature throughout the year, during three years (1 year = 20 minutes). Each team tries to collect enough producers and consumers to feed as many predators as possible. Each year (20 minutes) has four seasons (5 minutes) and during each season different animals live – as written in the table with seasons (e.g. in the spring 1 card with dace means 3 daces at the end of the year, but a card with a nut is meaningless).

Tip: Each season should be somehow defined and distinguished, e.g. by a card hanging on a tree, by playing different songs, etc.

Game
Divide people into three teams. Each team chooses its leader. Leader stays on the starting point, s/he writes down the animals that were brought by her/his team and sends people for animals that are needed.

Tip: For each year teams can chose another leader.

Rules of the game:
There are three food chains in this game (they do not affect each other) - producer - consumer - predator:
- alga - daphnia - dace - pike
- nut - squirrel - marten
- mosquito - frog - stork

At the end of the year animals need to feed themselves: predator needs two consumers to survive, consumer needs two producers to survive (1 stork - 2 frogs - 4 mosquitoes; 1 pike - 2 daces - 4 daphnia - 8 alga).
At the end of each year, each team has to have at least one predator from each chain.
Unfed animals die, unused producers and fed consumers can be transferred to the next year (but you have to feed them again).
Each person can carry only one card at a time.

At the end of each year do the following calculation:
- Firstly count all animals gathered during the year.
- Count points - teams get points only for fed predators (pike - 4 points; stork and marten - 3 points).
- Write down animals (unused producers, fed consumers) transferred to the next year.

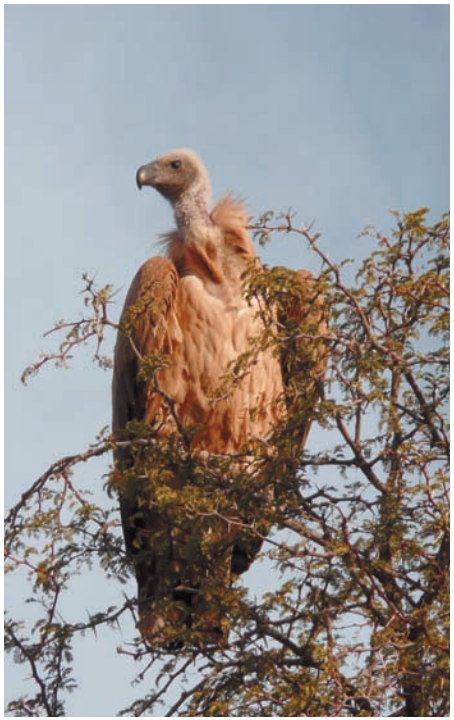
Reflection
After the game is over and the counting is done, try to reflect about the process and the game - what was the strategy of each team and did it work?

After a short discussion, talk a little more about the life cycle in nature and the importance of each stage in the cycle.

PYRAMID

AIM: **To build a food chain pyramid and have a discussion about the importance of green plants (producers) for the good functioning of ecosystems.**

FOR WHOM:	**Children over 8**
NUMBER OF PARTICIPANTS:	**At least 6**
LENGTH OF THE ACTIVITY:	**15—20 minutes**
PLACE:	**Indoors or outdoors**



MATERIALS AND PREPARATIONS NEEDED:

Paper, pen

DESCRIPTION:

1. Give each participant a piece of paper and ask them to write on it the name of a plant or animal that lives in the area, without showing it to the others. Try not to make any suggestions about the need for a variety of plants and animals.
2. Tell them that they will have to make a human pyramid like they may have done in gym class at school. Then ask the following questions:
   - "What is the base of our pyramid?", "Where does all of our energy and nutrients ultimately come from?" (Sun and soil). We will use the earth as our base to represent our connection to it.
   - "Whom do sun and soil give their energy to?" (The green plants). All the participants who wrote down a plant name kneel down on all fours as the first level of the pyramid.
   - "What is the name of the animals that eat plants?" (Herbivores: deer, rabbits, squirrels, mice, some insects, etc.), "How are the animals which eat both plants and animals called?" (Omnivores: bears, opossum, racoons, etc.), "Who has written a name of an herbivore or omnivore?". The ones who have written the name of an herbivore or omnivore go to the second level of the pyramid. They should stand behind the plants for now.
   - "Who eats these animals?" (Carnivores or predators). Animals such as wolves, hawks, fish and some insects are carnivores and will be the top level of our pyramid. Ask them to stand behind the herbivores and omnivores for now.
3. At the end ask:
   - "Can we make a pyramid as we are now?". If the answer is yes, give it a shot - IF IT IS SAFE TO TRY. But you'll probably have far too many carnivores and not enough green plants. It's a lot more fun to be a wolf than a blade of grass.
   - Challenge participants to rearrange themselves so that they can make a stable pyramid. It's best to have more people as plants and less as carnivores. In terms of biomass, this is how nature arranges itself.
   - When the pyramid is built, pretend to pull out one of the plants. What will happen?
   - Emphasize that green plants provide the foundation for any natural community. If we affect this foundation, we will affect all the levels above it, including humans.
4. Discuss with the group their observations/findings. Why are many plants necessary in the food chain? Can there be only one type of plant, or do we need a variety?

DISCOVER FROGS

AIM:	**To make children discover the world of frogs in an interactive and playful way (through different games).**
FOR WHOM:	**Children**
NUMBER OF PARTICIPANTS:	**Around 15**
LENGTH OF THE ACTIVITY:	**Around 60 minutes**
PLACE:	**Outdoors**

MATERIALS AND PREPARATIONS NEEDED:

- Printed work sheets (to download from www.yeenet.eu, section Publications)
- Scarf

DESCRIPTION:

Give to each child a work sheet with black-and-white pictures of the most common frogs (sheet 1). While children colour it, you can tell them some facts about these frogs - where they live (sheet 2), what they eat, how we can recognize them (adults or eggs), etc.

After this part, you can play some games connected with frogs with children. You can also divide children into groups, give each group materials about one frog and after 15 minutes each group will explain to others what they found out about their frog.

Games:

Guess which voice matches with frog?
You can download recording of frog voices at YEE's website (www.yeenet.eu, section Publications).

Safety barriers
This is a game that simulates frogs and barriers. The barriers prevent the frogs from following certain routes. Divide children into two groups. The bigger group will form a circle - children should stand close to each other leaving just one 'exit' in the circle. Other children (2-5) will stay in the middle of the circle and will represent frogs - they have scarf over their eyes, jump and squawk and try to find a way out of the circle. 'Frogs' cannot talk to each other so they cannot tell the other frogs how to find a way out. After this game it is necessary to explain children, why there are barriers around routes and how frogs can safely get to their pond.

Frog race
Each child folds a paper frog and colours it (printed work sheet 3). Then everybody goes through a prepared way - there can be a slalom between 'trees', 'creeping under the route' (prepare some barriers that children have to go under) and final jump to the pond. The quickest one is the winner.

Afterwards, it is advisable to devote some time to a reflection and explanation of the knowledge gained through the games.

In the spring time you can go out with children and implement the new knowledge in practice - it is very easy to find eggs or tadpoles in a pond, where you can catch them and study. Or you can listen to frogs singing!
Another great opportunity can be to contact the protectors of nature and go with children to see them at work when they carry frogs which have fallen into bags near barriers across routes - you can see many species of adult frogs.

FOREST SCHOOL

AIM: To encourage learning about the natural environment through positive outdoor experiences in the forest.

FOR WHOM:	For any ages, but it can mainly target children of primary school age (5-12 years old)
NUMBER OF PARTICIPANTS:	From 5 to 15
LENGTH OF THE ACTIVITY:	From 2 hours to a day
PLACE:	Outdoors, in the forest

MATERIALS AND PREPARATIONS NEEDED:

A range of outdoor equipment, depending on the activities:
- Lighting equipment
- Wood tools such as saw or axe
- Craft materials
- Safety kit
- Kettle, pans, spoons and knives

DESCRIPTION:

Forest school refers to a wide range of practical forest-based activities and workshops which inspire individuals to learn about and experience the natural environment.
A Forest School Leader is a trainer or teacher with a recognised qualification in Forest School Leadership, able to deliver such sessions.
Activities can include:
- Firelighting and bushcraft skills
- Woodland management activities (felling trees, making footpaths, clearing bushes)
- Woodland crafts – making things from wood
- Cooking and eating food over a fire
- Storytelling and learning about forest legends
- Study and identification of ecology, trees, plants, animals

Forest School focuses on the life-skills that participants learn when undertaking the activities listed above. By participating in engaging, motivating and achievable tasks in a woodland environment each participant has an opportunity to develop intrinsic motivation, as well as sound emotional and social skills.

Forest Schools have demonstrated success with children of all ages who visit the same local woodland on a regular basis and who through play, have the opportunity to learn about the natural environment, how to handle risks and most importantly to use their own initiative to solve problems and co-operate with others. Children use full sized tools, play, and learn the boundaries of safe behaviour. Children learn both physical and social skills, develop their confidence, self-esteem and become self motivated.

Forest Schools aim to develop:
- Self Awareness
- Self Regulation
- Intrinsic motivation
- Empathy
- Good social communication skills
- Independence
- A positive mental attitude, self-esteem and confidence

For more information see:
http://www.forestschools.com/index.php
http://www.forestschoolwales.org.uk/

This publication was created by Youth and Environment Europe.

Youth and Environment Europe (YEE) is an umbrella organization uniting European environmental youth non-governmental organizations. Since its foundation in 1983, YEE has been a platform for many organizations that study nature and are active in the field of environmental protection.

The aim of YEE is to provide a platform where these organizations can cooperate and to encourage youth to be involved in environmental protection. YEE creates an opportunity to contact other European organizations, to exchange experiences, ideas and to work together.

Find out more about YEE at **www.yeenet.eu.**

The aim of **Youth and Environment Europe** is to organize and encourage all activities that can increase the knowledge, understanding and appreciation of nature and the awareness of environmental problems among young people in Europe. We hope that this booklet full of interesting and interactive methods of environmental education will serve as a useful tool in your work with children and youth.

Enjoy reading our booklet. We hope that it provides you with inspiration for your work in nature!