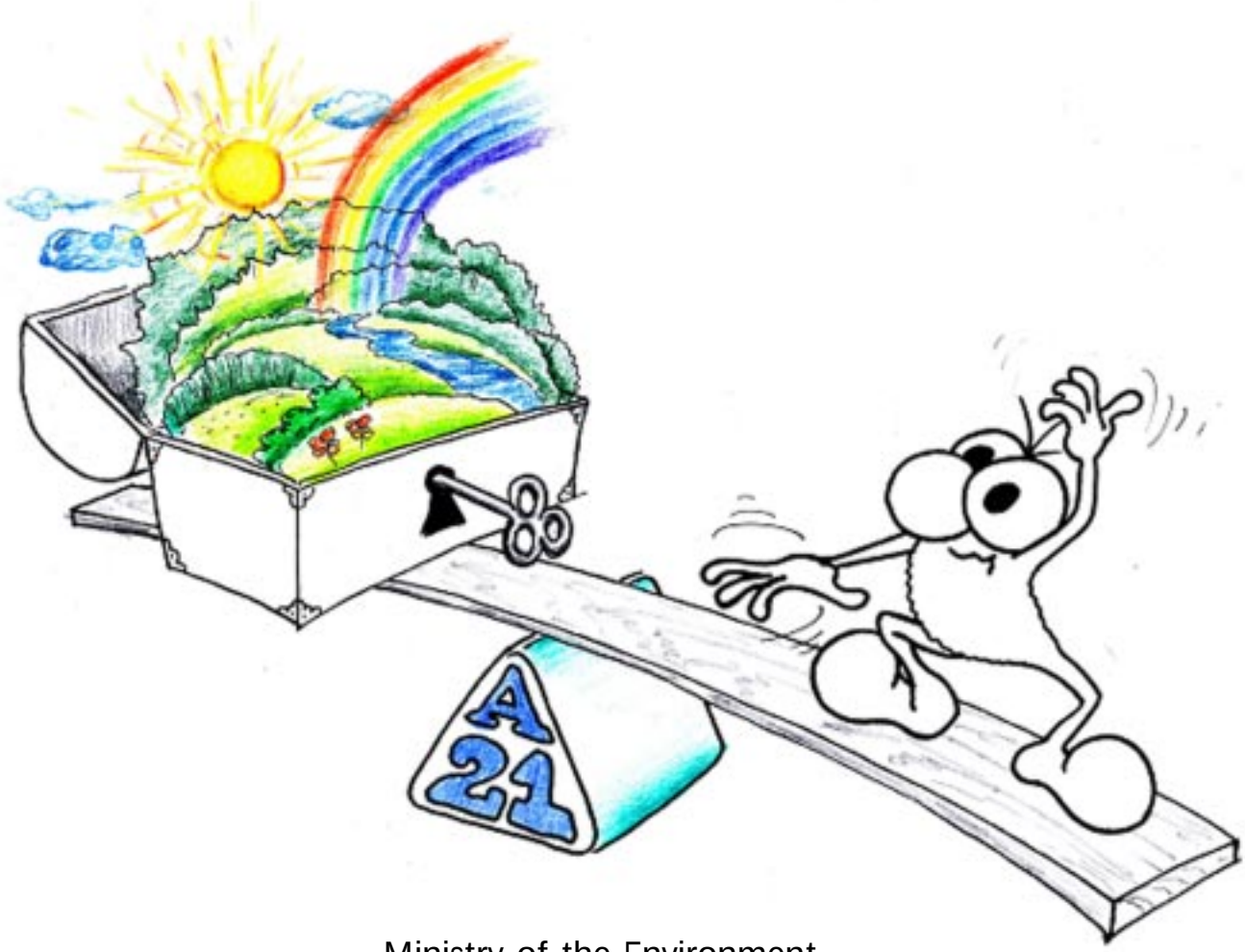
"Heritage Interpretation as a tool to promote sustainable development"

"Ranger Interpretation Handbook"

With Shared Principles: Heritage Interpreters promoting sustainable development and examples of "best practice".



Ministry of the Environment
Danish Forest and Nature Agency
Danish Outdoor Council
International Ranger Federation

Introduction

The modern world poses many problems not least of which is the use and often misuse of the world's ever decreasing natural resources. For many people the problems are not apparent while others feel that they, as individuals, cannot have any meaningful impact. Rangers, nature interpreters and those involved in environmental education are in a unique position through the use of natural or semi natural areas to illustrate ways in which we can all create a more sustainable future for the planet. Interpretation has for many years been providing good examples on how we connect with the natural world and how we can also affect it's equilibrium. This handbook with examples of "best practice" has grown out of a desire to share that knowledge and good practice in our efforts to promote a more caring approach to use of the planet's finite resources and to ensure a healthy future for our children.

11 "Shared Principles" for Heritage Interpreters promoting sustainable development are developed to increase understanding and implementation of sustainable development practices. The first principles apply to interpretation in general, while the second set refers to specific focus on the impact interpreters can have with sustainable development. The "Shared Principles" are prepared as a proposal for an international conference about sustainable development and heritage interpretation by the Danish Nature Interpretation Service in co-operation with the International Ranger Federation (IRF), International Union for the Conservation of Nature (IUCN) and Heritage Interpretation International(HII) and discussed, adapted and accepted at the International Ranger Federation's 4th World Congress in Australia, March 2003.

The "Shared Principles" are the basics of this handbook. It is our hope, that rangers worlwide are inspired to use the principles in their work and to try new techniques in order to get even further with their audiences along the road to a sustainable development

It is the intention to expand the examples of these pages and to create a truly worldwide handbook for practitioners as a tool in developing a sustainable future for all. It requires you to take the time to add your experience to the handbook ! Please fill in the Abstract/Case Study Form and send it to us – and we will add your case to the handbook on the web page.

Ole Christiansen
Vice Director
Danish Ministry of Environment
Forest- and Nature Agency

Jan Eriksen
Director
Danish Outdoor Council

Gordon Miller
Executive Director
International Ranger Federation

Contents

Shared Principles: Heritage Interpreters promoting sustainable development

The issue of sustainable development is gaining increased visibility in international forums, although the term is still not globally defined. Two definitions that reflect current discussions:

- Sustainable development or sustainability is "improving the quality of life while living within the carrying capacity of supporting ecosystems" (*World Conservation Strategy,* IUCN, 1980)
- Sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (*Our Common Future*, Oxford University Press, 1987).

The profession of heritage interpretation in protected areas is growing throughout the world and description of the profession continues to evolve. "Heritage" reflects that interpreters work in protected areas that care for both natural and cultural heritage resources. Recent definitions from professional organisations in the USA and in Australia:

- "Interpretation is a communication process that forges emotional and intellectual connections between the interests of the audience and the inherent meanings in the resource." (National Association for Interpretation [USA] web site: http://www.interpnet.org).
- "Interpretation is a means of communicating ideas and feelings which help people understand more about themselves and their environment." (Interpretation Australia web site: http://www.interpretationaustralia.asn.au)

Many working in the arena of global conservation and preservation see implementing sustainable development practices as key to meeting the needs of humans in this generation while also protecting limited resources for the future. Heritage interpreters working in protected areas have a special responsibility to provide their audiences with opportunities to learn and to implement sustainable development practices. Interpreters are often a main contact point for many visitors to natural and cultural protected areas, either through personal contact or through interpretive publications, exhibits or films. Therefore they influence the reputation of the organisation, the credibility of its work and its ability to build support for its work in the community. Interpreters can play a critical role in increasing sustainable development practices.

By being sensitive to the visitors and their interests, an interpreter can create powerful and memorable experiences. Professional interpreters provide an experience that provides multiple perspectives on answers to questions from the audience and provokes critical reflection on what is sustainable development. While many protected area sites will not have much development within their boundaries, the practice of sustainable development in surrounding communities will meet global needs and can greatly contribute to the goals of protected areas.

This set of shared principles provides heritage interpreters with standards for dealing with sustainable development issues. In addition, these principles may be of value in gaining organisational support, and could be used as a means of accreditation.

To increase understanding and implementation of sustainable development practices, a professional interpreter applies the following eleven principles. The first principles apply to all interpretation, while the second set refers to specific focus on the impact interpreters can have with sustainable development.

Practices the fundamentals of high quality interpretation:

1. Develops an in-depth knowledge of the natural or cultural protected area that is being interpreted and applies that knowledge to build a range of relevant messages/compelling stories.

2. Develops an in-depth knowledge of the audience. Recognises the perceptions, experience and knowledge of the audience members and develops the interpretive project with respect for a diversity of audiences, including those with cultural, age and gender differences.

3. Applies effective communication techniques: develops clear objectives, organises each program or product around a central relevant idea or ideas, plans for all aspects of the project and evaluates the success of the interpretive work.

4. Provides the audience members with multiple opportunities to find their own connections between the interpretive messages/interpretive experiences and their daily lives and motivations, thus providing the stimulation to reflect on their lifestyle.

5. Recognises that it is inspiration, passion and emotion that often drive action.

6. Uses specific local sites, applies practical hands-on and active methods and involves multiple senses.

Encourages and models sustainable development practices:

7. Incorporates sustainability principles throughout interpretive programs/projects and develops with audience members ideas for actions that are practical and realistic locally while considering broader or global impacts.

8. Plans all aspects of interpretative events in a way that demonstrate sustainable development principles.

9. Uses materials from suppliers who exhibit responsible actions that support sustainable development.

10. Strengthens the capacity of people to be involved in the decision making process about lifestyle and development.

11. Demonstrates an honest, ethical and clear approach to sustainability.

The principles are prepared as a proposal for an international conference about sustainable development and heritage interpretation by the Danish Nature Interpretation Service in co-operation with the International Ranger Federation, IUCN and Heritage Interpretation International. Discussed, adapted and accepted at the International Ranger Federation's 4th World Congress in Australia, March 2003.

Abstract/Case Study Form

You are invited to submit an abstract to be included in this handbook, detailing examples of “best practice” concerning “Heritage Interpretation as a tool to promote sustainable development”

The case submitted, should give examples of best practice with regards to exploring the theme of sustainability. There is a limit of 2 pages to be included in the handbook.

Please include:

- Description
- Objectives
  (Approach. Methodology, issue or problem, concerns and advice, techniques to influence People’s attitude or practice for more sustainable behaviour)
- Context
- Target group
- Duration
- Partners
- Do ! (best practice)
- Do Not ! (worst practice)
  (How did it influence people in terms of sustainability? Evaluation method used. Code of conduct compliance)
- Presenter/Author (name, organisation, address)

Please mail the abstract to:

Arne Bondo-Andersen
National Forest and Nature Agency
Haraldsgade 53
DK 2100 Copenhagen Ø
Phone: (45) –39472055
Fax: (45) –39472095
Email: aba@sns.dk

Ponding

Objectives:

To identify and discuss
- Where the water for the students' homes comes from.
- What things affect water quality.
- What are the indicators of a healthy, aquatic environment (natural processes, plants and animals)
- How water is managed.
- Where the water for the camp ground comes from.
- What we can do to ensure healthy aquatic environments and, ultimatly, the sustainable use of water

Context

Australia is facing its worst drought in 100 years and it is inevitable that many towns and cities will suffer from enforced water restrictions. This field based activity, to be undertaken at Tidal River, will seek to underscore the issues surrounding water use. It may be possible to explore, for example, the way water is utilised, agriculturally, domestically, industrially, or recreationally.

Target Group

Students Years 4-12 (8-17 year olds), can be pitched at different levels to suit age group.

Description

Ponding Activity: How we use and manage water.
Students scoop aquatic organisms from Tidal River and study them under a microscope. In essence, the type and diversity of organisms collected offer an excellent indication of water quality.

Duration

1.5 hours

Partners

Local water authorities. Students can research their local water supply back at school.

Do!

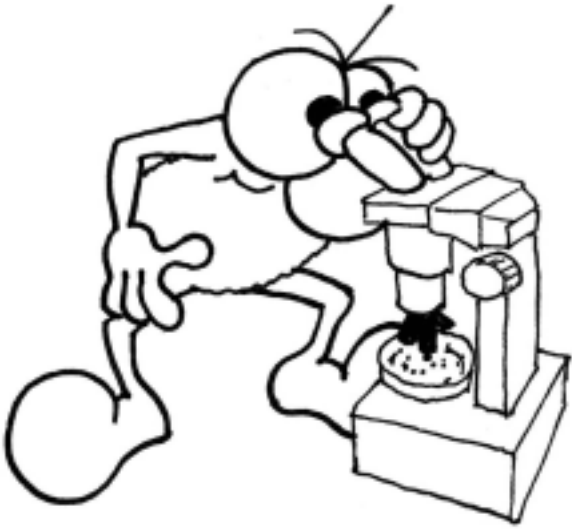
- Relate it to the student's home life and to their time at the Prom.
- Encourage discussion.
- Stress that all the creatures are living animals and should be handled with care.
- Remove rubbish from river and surrounding area.

Evaluation

The Students' level of awareness is the first good indicator of their ability to understand water use, conservation and protection. The activity can be further evaluated back at school with follow up sessions on water monitoring (ie. Estimating water use, water quality in local streams/rivers).

Presentor

Michelle Doherty, Ranger
Wilsons Promontory National Park
Victoria, Australia
mdoherty@parks.vic.gov.au



Catch a fish and interpret environmental problems!

Objectives

The aim of this activity is to explore the ecological impact of mans' relationship with the environment. Within the context of a hands-on-activitiy, we hope to provoke debate focused on the underlying causes of pollution in a local lake. It is vital that clear objectives are established to solve this problem and it is our aim to demonstrate how this may be achieved successfully through a number of workable strategies, for example, enforcing waste water-treatment, closing fisheries, biomanipulation and conservation .

Description

A few days before the arrival of the school class, fishing nets and fishing traps will be set in the lake. When the class arrives, children will be introduced to the programme of the day and they will learn about the landscape around the lake, the clear water and huge numbers of fish and birds, that could, until the early 1960's, be found in the lake. After this, the class will be divided into a number of groups. These groups will do different activities: Birds will be identified and counted, water insects will be caught and identified, clarity of water will be meassured as well as pH, oxygen, phosphate, and nitrate content. One group after another will sail on the lake in a rowing boat to empty fishing nets. Afterwards they will clear up the nets for another days fishing. The fish will be identified as various species, and the pupils will learn about their biology. These observations will be used in a discussion concerning the condition of the lake, the pollution and the attempts to solve the problems e.g. conservation of the lake and its surroundings. Local problems will be set in a national perspective: Pollution of the whole Skjern River system and Rinkjøbing Fiord and the coastal zones arround Denmark. Finally the fish will be cleaned and dissected (mainly perch and pike) and supply us with a tasty barbeque!

Context

The pupils will be working with a theme or subject, which is relevant to their curriculum. The activity will take place at a local lake, Lake Rørbæk, which has suffered from heavy pollution for the last 35 years due to the devastating effects of 3 fisheries. After the fisheries were brought to an end, waste water-cleaning was established, and for some 7-8 years the lake has been biomanipulated to change the fish fauna, altogether improving its ecology.

Target Group

Schoolchildren from 11 years of age and perhaps adults

Duration

4-5 hours depending on number of pupils and their age

Partners

Local schoolteachers, biologists

Evaluation

After a couple of days, the pupils now back in school, will have to fill out a questionnaire to show, whether they understood the session or not.

Presenter/

Author
Nature interpreter/ranger, teacher Torben Bøgeskov,
Nature Centre Koutrupgaard
Koutrupvej 17
DK 7160 Tørring
Denmark

Materials

Binoculars, spotting scope, field guides, rowing boat, fishing nets, fishing traps, water-insect nets, pH-meter, testsets for oxygen, phosphate and nitrate, knives, barbeque

Fisheries without whale by-catch

Objectives

The objective of this presentation is the provision of clear examples of the role rangers plays in managing a sustainable fishery.

To many people the ocean constitutes a hidden world. Even in Denmark, a country surrounded by the sea, common knowledge about life beneath the surface is limited.

Oceans contain a wealth of organisms, and modern fisheries have developed efficient nets and trawls to harvest this food resource. These efficient methods often have unwanted side effects such as bi- catch (organisms accidentally caught in nets) and environmental damage.
To develop sustainable fisheries it's important to find suitable, inspiring and interactive ways of informing the public about life in the seas and the problems engendered by our use of them. Educating the public in this way, gives them with an understanding of the dilemmas involved, and enables them to formulate their own opinions, and act accordingly.

In this presentation I will focus specifically on the bi-catch of whales. Each year approximately 5000-harbour porpoises become entangled in the bottom of Danish gill nets and drown. The problem is not unique to Denmark; however, we have worked to develop a system for registering harbour porpoise bi-catch, whilst fisheries and researchers are collaborating to find efficient measures to minimize the problem.

At the Fjord & Bælt, a harbour porpoise research institution and centre for marine education, we have several years of experience in educating the public about the bi-catch issue. How is sustainable fishing without by catch possible? How can we address the issue? What can the consumer do to affect fisheries? These are examples of topics we deal with.

Description

Through a mixture of activities we investigate the senses fish and harbour porpoises most commonly utilise (harbour porpoises can catch fish relying solely on the use of sonar).

Participants stand in a circle, hold a fishing net in their hands and are directed to mimic its' position on the seabed. In this way, different types of net may be presented. How do nets affect fish, other animals and the environment in general? A model of a porpoise is used to demonstrate how and why they end up in fishing nets and drown.

We also test and examine the suitability of different methods of reducing the bi-catch of harbour porpoises, for example acoustic devices. Indeed during the course of the activity, we may ask what ecological implications such methods pose.

Finally, with regards to equipment, the ranger's own underwater video and sound recordings are used as a starting point for discussion and dialogue about the underwater environment.

Context

This activity is suitable for tourists and citizens in general. The activity makes it possible to combine environmental, economical and social issues, essentially, where you buy your fish matters!!

Target group

Rangers and other nature interpreters.

Duration

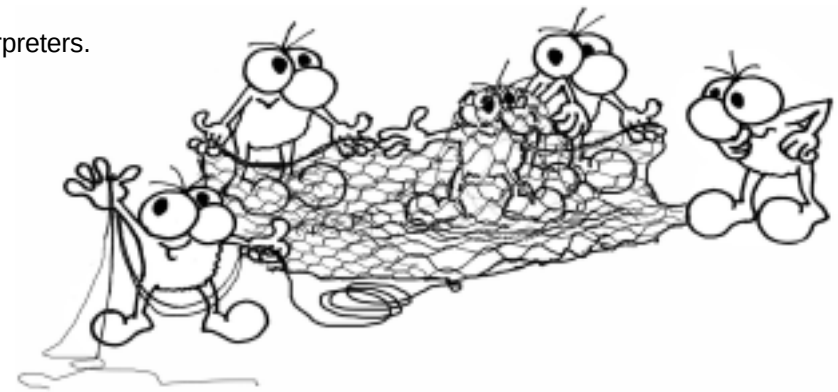
1-3 hours

Partners

Fishers and Fjord&Baelt

Presenter

Søren Larsen
Fjord&Bælt – go underwater
Margrethes Plads 1
5300 Kerteminde
Sorenlarsen@fjord-baelt.dk



How do we utilise a forest?

Objektives

The overall objective of this workshop is to explore the impact of human activity upon our forests. People seemingly fail to make a connection between the felling of trees, and the wooden objects with which they surround themselves at home and at work.

My objective for this exercise is to stimulate a debate focused on trees as a reproducible and almost CO2-neutral resource. We will also compare wood with different kinds of artificial material such as plastic and metal.

It is also important to consider wood as an entirely natural resource as opposed to artificial materials, many of which pose a threat to the environment, in terms of their production and use.

Description

The lecture starts with a brainstorm. The headline of this will be “How do we utilise a forest?” All statements will be put in to a mind map. The statements may refer to the walk in the wood, hunting, ecosystems, fire, wood production and so on. All statements are relevant.

After this we will look at the contrasting values of wood as a resource. This will be achieved by examining different qualities of wood and assessing the demands we set to achieve the end product.

After this, an outdoor exercise will be introduced. Each participant will produce a measuring stick, with which we will walk into a forest and measure the height of different trees. In so doing, the volume of each tree may be calculated. We do this by measuring the circumference at the bottom of the tree and define that halfway up to the top the circumference is the half of this size. The area is calculated utilising the formula: circumference = 2 ðr, then r = circumference/2ð.

From this, we may deduce the area of the tree as being, Area = ðr^2. Once this has been achieved, we can calculate the volume of the tree as this is extracted from the area of the mid length of the tree multiplied by its’ height.

By using the same method we calculate the length of the radius of a circle with an area of 100 square meters, take a piece of string of that length and reproduce the circle. In so doing, we can count the number of trees it encompasses and assess how many cubic meters of wood there are per 100 square meters.

If we say that the energy in each cubic meter of wood is the same as in one half-cubic meter of oil, then we can calculate how many houses can be heated from a hectare of wood.

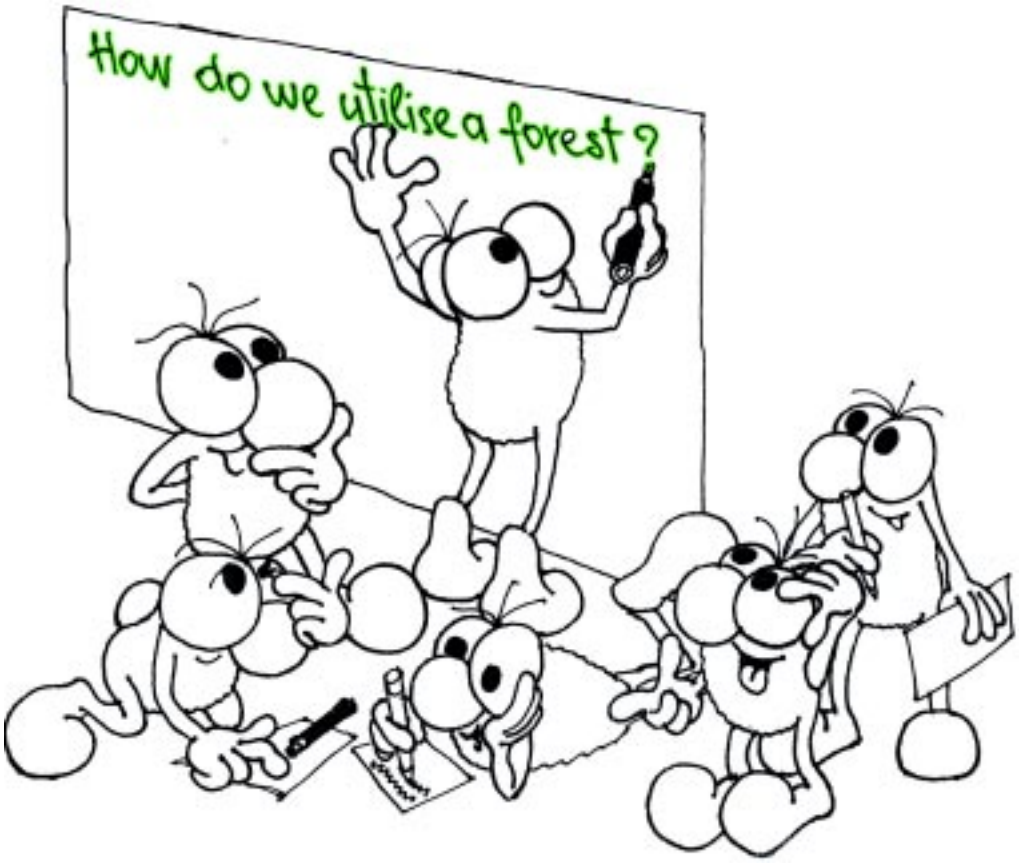
After this session, we will discuss how valuable wood is in comparison to artificial products such as oil. We will discus the value of using local resources as opposed to resources that have been transported from far away, and the merits of using biodegradable and recyclable materials as alternatives.

We will then compare the different equipment we have with us… who has the less fragile product on them? Who has the most sustainable product?

At the end of the session, we will hold an ‘open’ discussion, providing everyone with the opportunity to state his or her point of view. By sharing knowledge in this way, we can ensure that everyone benefits, and is equipped with the tools necessary to begin exploring this difficult subject from a number of perspectives.

Target group

School classes. Secondary up to gymnasium and high school.



Duration	Two hours or more. It is a good idea to continue working on the subject back at school. Here the students can trace the origins of all the wooden objects held in their classroom. They may also engage with a number of other environmental issues such as energy flow in their local society or how we deal with waste and so on.
Partners	It is a good idea to utilise the knowledge of a local forester, make a visit to a sawmill or another industry for whom wood is the necessary raw material in its production process.
Where and how	It is a good idea to start indoors with an introduction and take this opportunity to construct a measuring stick. After this participants must enter the forest and find an area well populated by trees. After this, depending on the weather, initiate a discussion inside or outdoors. If the weather is fine outdoors, it is a good idea to gather around a bonfire
Evaluation	The whole session can be evaluated by the participants through discussion and by assessing different aspects of the session with points.
Presenter	Stephan Springborg Danish Forest and Nature Agency Fægyden 1 DK 3500 Værløse Denmark Tlf. +45 44 35 00 45 E-mail: ssp@sns.dk
Materials	Flip chart plus marker pens, sticks, measuring tape, markers for wood, knives, paper and pencils. String with a length of 20 meters or more.

How far do we get with our nature interpretation?

Objectives

The objective of this activity is to engender a degree of self-reflection and debate, in essence, to establish exactly what we want to achieve through our work as rangers and what can we accomplish, through the utilisation of nature interpretation as an important educational tool. We must consider this in the context of our long-term goal. Ultimately, we hope to ensure that social attitudes and habits become far more conducive with the necessity for greater sustainability? Can we be sure to take this beyond entertainment, to alter the social conscience? I will use a model: 'The Ladder' as a point of departure for self-reflection. The concept of 'The Ladder' is described comprehensively in a handbook 'Tips & Tricks' by three Danish Rangers; Kari Hald, Eva Skytte and Bjoern Samuelsson.

Description

The Ladder' is introduced to participants as a kind of metaphorical model of our work as nature Interpreters. To illustrate the rungs on a ladder, participants are required to collect all kinds of natural artefacts from the forest, the beach or, if suitable, their immediate surroundings. If it is necessary to comb the beach, participants could perhaps collect; cockles, conchs, mussels, algae, seaweed, star fish and pebbles or, alternatively, trash left on the beach or washed up on the shore. Participants must then form or draw a ladder with 5 rungs, either on the ground or on a table. The activity leader must then place all the objects found during the first part of the exercise on the lowest rung of the ladder and invite the participants to look at and examine all the different things without telling them anything. This is the first step up 'The Ladder'. As nature interpreters, we let the participants have their own experiences without any explanations. Immediate and spontaneous positive experiences of nature, we believe, form the basis of our work as nature interpreters. The leader must let the participants sort the objects into groups displaying similar characteristics. For example, all conchs are placed together, all varieties of seaweed go together, and all pebbles and trash are grouped. This constitutes the next rung on the ladder, as we begin to impart and share our knowledge of nature, naming the objects, and exploring the different characteristics of systematic groups. On the next rung of 'The Ladder' the objects not only have names, but participants have begun to explore how each animal or plant lives and the role assigned to them in their particular ecosystem. Here it is hoped that participants start to understand how different things in nature depend both on each other, and on a stable ecosystem. To take the next step up 'The Ladder' we hope that the experiences and the information we elucidate, provides participants with a new understanding of the relationship between nature and environment. These are undoubtedly the three things that inform our attitudes towards nature: previous experiences, information and a sound understanding of relationships and how they work. To illustrate this rung on 'The Ladder' Leaders must encourage participants to look at the trash they found on the beach; does this have a have a role in nature? This is the difficult aspect of interpretation. We want participants to take a stand, to think proactively, by asking whether we can accept the presence of trash in nature. To reiterate the objective of this activity, we need to take this step to achieve our long-term goal; to influence social attitudes and behaviours toward greater sustainability. Attitudes form the basis of our daily actions and priorities.

Context

Workshops, meetings or courses with and for rangers and nature interpreters.

Target groups

Rangers and other nature interpreters.

Duration

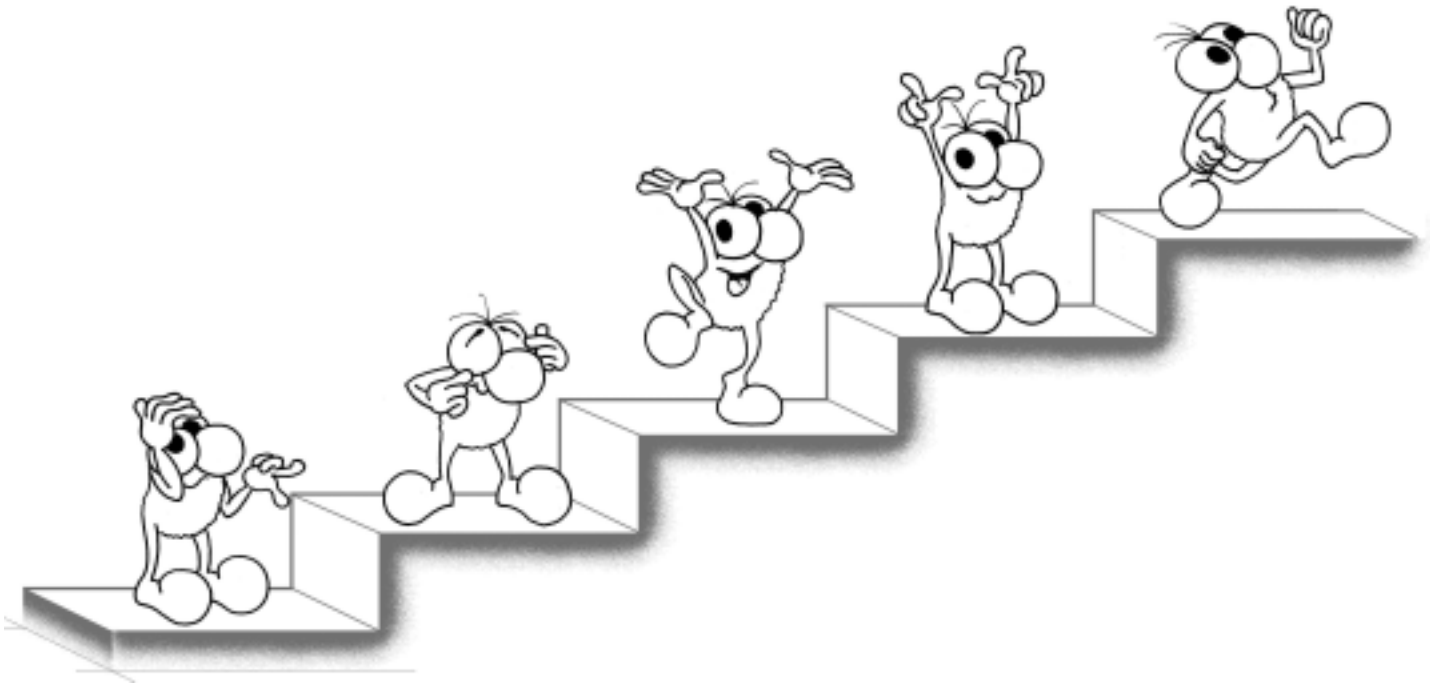
1 hour

Presenter

Kari Hald Ranger at Praestoe Fjord
Strandegaard
St. Elmuevej 2
4640 Fakse

Materials

The Ladder' drawn or constructed out of string on the ground A variety of objects collected form a natural habitat.



Do!	As an easily translatable concept, 'The Ladder' can be used 'literally' as an activity for kids. The first activity, interaction with nature, should mainly consist of participants utilising their own experience. Proceeding activities, however, should encourage participants to actively seek out information, for example, discovering the names of things. Finally, the exercise should give participants an understanding of how, like the mutually dependent rungs of a ladder, plants and animal depend upon each other.
Do Not!	Don't start with explanations. Let participants look and examine objects on the first rung of the ladder without interfering.

Comments from Workshop *(to be added)*

An old suitcase reveals the history of a coastal landscape

Objectives

The aim of this activity is to focus on manmade changes in a coastal landscape. The majority of children are under the impression that nature is static and that they have no influence on the use of their local landscape. The activity aims at raising students awareness in terms of present exploitation of the landscape and help them make up their own minds about the future use of the landscape. Eventually the students hopefully get involved in the debate about the management of their local landscape and environment. The activity is supposed to bring up some of the following issues for discussion:

What is the present state of the exploitation of the landscape and plans for the future?
Why do we use non-biodegradable materials?

How does changes in the exploitation of the landscape affect local biodiversity?

Description

Introduction to the coastal landscape of the 1940s. The group of students are introduced to an old suitcase. Without further introduction they start to go through its contents (e.g. old fishing nets, shells and dried seaweed and old pictures showing activities at the coast). The students choose themselves what to examine and everyone participate in discussing the identity and use of each object. Jointly the group decide when and where the objects are collected. Examination of the present landscape. The students are charged with the task of packing a new suitcase to be send 60 years ahead in time. The contents of this suitcase should represent the present state and use of the coastal landscape. Groups of students examine the area and collect items for their year 2003 suitcase. The groups may collect information on e.g. who owns the area and who uses it, on the local flora and fauna or on the kind of fishery and its effect on the environment. The Nature Interpreter provides the students with equipment for field surveys and sources of information.

Changes in the coastal landscape. In the end the groups present their results. In plenum it is discussed what the difference between the collections in the two suitcases reveal about changes in human exploitation of the landscape during the past 60 years. The knowledge and interests of the students determine which subjects to discuss. Plastic bottles washed up on the shore lead to a discussion on non-biodegradeable waste. Old fishing yarn is compared with new and themes like overfishing and fish stocks are debated. Examination of the local flora and fauna reveals information on changes in biodiversity and so on. In conclusion the students discuss if they wish to change the way the area is used at present, if they were to decide.

Context

This activity is suitable for school classes working in an area that is affected by natural as well as cultural influence. The activity is meant as part of a process. Often the activity is followed by an organised debate about conflicting interests in the area. Small groups of students then represent an interest that they should defend (e.g. fishermen, ornithologists, hunters, bathers).

Target groups

School classes from secondary schools to high schools (age 11-17).

Duration

1 hour for examining and discussing the contents of the old suitcase.
3 hours for research in the field and the collection of items for the new suitcase.
1 hour for presentation of results and discussion in plenum.

Partners

The teacher of the class. Local administrators and users of the area if possible.

Presenter

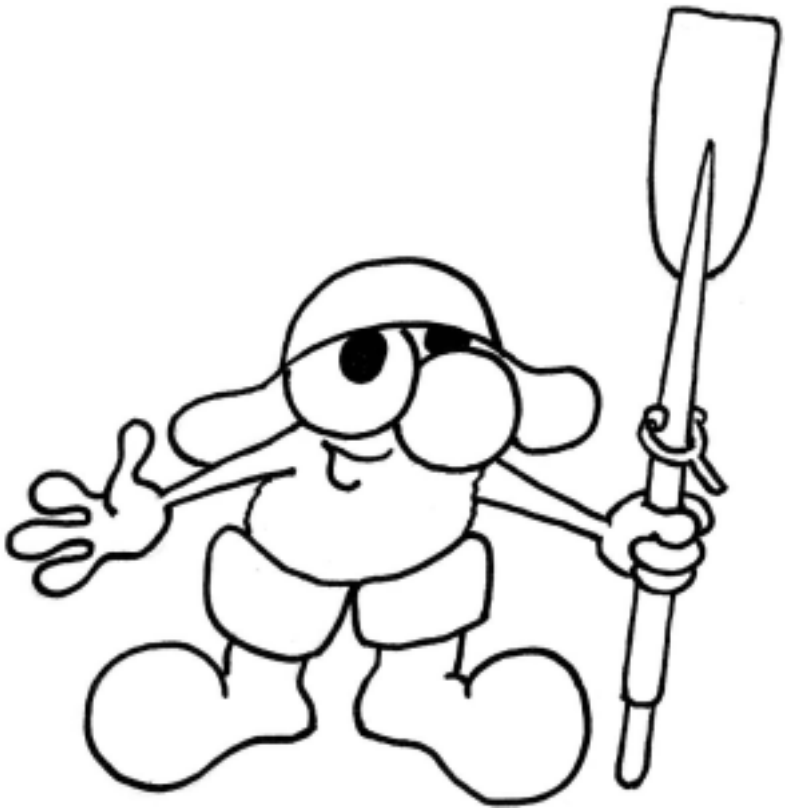
Dorte Nielsen
Marine Environmental School
The Municipality of Copenhagen.
Islands Brygge 37
DK-2300 Copenhagen S
Denmark

Do!	The activity can be adapted to any environment you desire. It is important, though, to use original objects from the time and area in question. Old local folks and certain second hand shops often hold pictures and objects of interest. Museums of local history may have written reports on everyday life in the area.
Do Not!	The activity should not be the only input the students get to the complex question of sustainable development. The activity only raises awareness and hopefully enables the students to make up their minds on future exploitation of the landscape. It doesn't give any advice for action.
Materials	An old and a new suitcase. Objects from the coast e.g. a skull of a common porpoise, seashells, dried seaweed, eggs, drawings of waders, an old newspaper, old pictures of activities such as hunting, small huts made of seaweed and extensive grassing by cattle. Equipment for field studies, interviews and so on.

Comments from workshop

The activity works well and can easily be adapted to other habitats and locations.

The program is quite time consuming. In order to make the program available to a number of groups the activities can be presented at teachers training courses so the teachers can run the program themselves. The nature interpreter then provides the suitcase with objects and the equipment for field studies.



A Permaculture Garden

Objectives

To teach a system that is designed to provide shelter, energy and food, in essence, a system that covers our basic needs in a sustainable way.

To help and guide both young and old park visitors to see how we can change some of our habits and, at the same time, to show that we as rangers care about the earth we live on.

Teaching humans in a holistic environment encourages them to take an active part in lessons focused upon sustainability. We may consider subjects removed from the context of their home environment. Children learn by example and have the most amazing questions and answers that we as adults can only learn from.

In practise, permaculture is a system in which children and adults can adopt ideas that may impact upon their homes, work, food production, resource needs and attitudes.

Each one of us can make small or big changes on a regular basis. In so doing we are provided with the opportunity to enhance our lives with the knowledge that as individual human beings we are becoming more sustainable.

Description

By implementing a permaculture garden within the park or reserve premises, we as rangers or nature interpreters, are able to provide a positive and workable example of an energy efficient food garden.

Within the whole design an area needs to be put aside for wildlife. This is very important in today's society as eco-systems have collapsed in many places, but by restoring these systems and giving live examples this will prove to be a positive outcome.

Context

The Foster Primary School's Permaculture garden (just outside the Prom) is an excellent example of how a garden can provide food for our needs, have positive energy flows, caring for the environment, water ecology, looking at resources, micro-climates and restoring eco-systems. This garden proves to each one of us that this system will work in a very small area or in a much larger expanse. This garden is an inspiration to all age groups and is available for the larger community to take lessons from.

Target groups

All groups within the community can benefit from a permaculture garden. But lets start with school children, where an example of sustainable food production in a small area can be implemented; and where lessons are very powerful.

Partners

Schools, institutions, community groups, farmers.

Source of information:
"Permaculture" by Bill Mollison.
"Permaculture in a nutshell" by Patrick Whitefield".

"Permaculture" author:
Juneen, Wilson Promentionary National Park, Victoria, Australia

Play your part in the nature game, everybody – awareness and sustainability!

EVERY PERSON in the world, big or small, MAKES LOTS OF CHOICES – EVERY PERSON CONTRIBUTES TO THE ENVIRONMENT.

PLAY YOUR PART, MAKE YOUR CHOICE, ENJOY YOUR LIFE or – MERELY SURVIVE, BUY YOUR FOOD, TRANSPORT YOURSELF AND GROW YOUR GARDENS AND FIELDS – BUT CONTRIBUTE WITH AWARENESS and SUSTAINABILITY!!!

Objectives

The Problem With Sustainability:

All people in the world – except for the rich - are forced to act according to their means. By commercials and normal human greed, they all want to have as easy a life as possible and climb the welfare ladder.

For those people, who live in the towns – 80% – see nature as being for pleasure and short visits.

Knowledge about nature is accessible to everyone – **but the knowledge is a bit inconvenient** – if your religion takes all responsibility away from you or – if you have a big desire for more welfare as for instance a better education for your children or – if you...

Rio + 10. *The statesmen said it in Johannesburg: "We want sustainable Nature".*

We know that each species extinguished by human activity cause a loss of great importance – a loss of possibilities.

Statesmen asked their populations to help. Agenda 21 must be implemented in all rules and decisions. Locals are forming Agenda 21 groups. The EU in EUROPE formulates a lot of rules to ensure sustainable nature.

BUT THE "WORLDS ECONOMY" – THE LOBBYISM of farmers, industry, chemist, GMO scientist, the church etc. – and THE STATESMEN DO NOT WORK seriously FOR THIS AIM.

INVESTMENTS ARE FOCUSED ON THE BOTTOM LINE AND SELDOM WORK TO ACHIEVE THEIR TARGET, TO HELP MAKE NATURE SUSTAINBLE

Approach

Methodological concerns and advice*:*
Give adults or childrens a wonderful time in nature – introduce them to new places, show them hidden aspects of their neighborhood. Create awareness of the needs of nature.

How to influence the way people practice sustainability?
Appeal to their senses by evoking strong visual memories. Get them to recall the landscapes of their childhood, and ask them to imagine how this landscape will appear in the next 5 – 10, years. Encourage them to formulate their own opinions about the way in which the landscape is treated by its' guardians, dependents and by society as a whole. How can we inspire collective responsibility and ensure that our environment is not descimated. Participants come to recognise that if the landscape was reduced to a monoculture, the incentive to visit it, to appreciate it, would diminish.

The discussion must be directed towards Agenda 21 and the obligation of everyone to act in a sustainable way.

Description	Our usual (DN) NGO excursion into the countryside is undertaken in our own municipality. This is a fantastic opportunity to visit lots of ancient historical sites, including, rows of stone-fences and burial grounds from the Bronze Age and Stone Age. In addition to this, we also conduct visits to a variety of fields and wooded areas, listen to birdsong and familiarise ourselves with wild and domestic animals. The theme of the excursion could be: dispense with the familiar! And explore concealed aspects your municipality, visit a farm with deer, or listen to the nightingale's song. To create a space for inspiration, to strengthen or create public awareness about sustainability and Agenda 21 – (each persons own responsibility) - we take a break, have something to drink, and I asked participants to close their eyes and try to imagine how the landscape looked perhaps, 800 years ago or 200 years ago and.... ....How the birds, the plants and the human beings lived at that time. I tell them that I have some objects that I would like to share with them. I show them an array of A4 posters. These posters are both pictorial and diagrammatic, depicting farmland in Denmark in 1200, 1600, 1800 and 2000, fields from the USA to Australia, and the global population increase. I ask them to describe a future landscapes with crops and animals. We talk about how many people lived in Denmark during the various periods of history illustrated in the posters. I ask them to examine the pictures closely and consider to what extent waterholes, forests and trees have disappeared. I explain that surprisingly, only 35 crops are responsible for providing 90% of the worlds food resource, and we talk about how this globally impacts the agricultural landscape and the migrating and domesticated birds. We talk about the future and how the landscape will look like in 2010. We consider whether it will be reminiscent of the mass production wheat district of the USA or if we can achieve a sense of equilibrium between the agricultural and the unadulterated landscape. We talk about private land such as gardens and forests – who decides if there will be room for birds and animals in these places? Debates surrounding the use of fertilizers, pesticides and GMO are introduced to the group. Can we live without this stuff? What does it do to the field and the birds? I supply them with a folder complete with symbols to demonstrate what happens in an organic and a conventional farm. **Question: What does a nesting bird need**? I ask the group to separate into smaller teams to consider what is necessary for a bird such as a lark or a mammal like a kangaroo. What constitutes a sustainable environment for those animals? I try to encourage people to take the initiative and consider what action they could take to protect their own piece of land, where they buy food, and how they lobby politicians to ensure that environmental issues are debated in Parliament.
Context	Daily life and what is said over and over: live in a sustainable way! – Change the criteria for agricultural subsidies – contribute to pressure groups in order to save the rainforest etc.
Target groups	Everyone in the world – mostly grown up people and their politicians - 'the decision makers'
Duration	One hour in the middle of an excursion of approximately 3 hours
Partners	Expert guides and if possible a landowner.

Evaluation	We are opening channels of communication, which will flow out into the local community and beyond. In many ways our approach is tantamount to practicing a religion. Our aim is to 'enlighten and create awareness. This message will not be spread if we do not act according to specific code of conduct, if we do not devote ourselves to a sustainable lifestyle.
Presenter/ author	DN- local NGO group in the municipality – represented by Tove Binzer, (prosecutor in daily life) Hjortemarksvej 4 DK 4330 Tove.Binzer@wanadoo.dk
Do...	**what your heart tells you to do, and enjoy your tiny contribution to the world's survival.**
Do not...	**underestimate the knowledge and the bad conscious and despair about the real status of the environment, which the people in the group undoubtedly have already**
Materials required	Storytelling and imagination are enough to create awareness, but it is easier if you have pictures /posters to demonstrate both the differences between industrial farming and organic farming, stone gardens and old English gardens, and increasing populations, world wide trade and economics Apples, organic sweets and water are excellent treats for the break

Comments from Conference group

- It is a brilliant idea to situate people in a nice place, pause and ask them to flash back and to imagine the future for the place.
- It is a good idea to bring some drawings to illustrate the changing face of the landscape over time.
- It is a good idea to ask people to volunteer their opinions with regards to what must be done and how they can contribute on a personal level.
- It is a good idea to provide a global perspective on a nice walk in the landscape.
- It is a good idea, in the pause, to give people an organic, sustainable drink and ask them to bring their own mug.

Do:
- Announce that the participants have to bring their own mug
- Insist that they appoint with their "key note ranger" a landowner, an expert on birds, flowers, or historical sites.
- Explain that you want to address the participants in a one-hour pause.
- Ask your "key note ranger" to prepare for " agenda 21" questions from the participants.

Do not:
- Bring too many materials.
- Act like a priest!
- Forget that participants bring their own opinions to the sustainability debate.

“Play your part in the nature game”

– School children, local awareness and sustainability

Objectives

Problem of sustainability:
People are generally not aware of things happening in their own environment, they seemingly fail to see how things are connected and, ultimately, they think they can make no difference anyway.

Approach

Methodological concerns and advice:
This tried and tested method specially formulated for children, emphasises the enjoyment, which may be gleaned from managing discussions, getting influence, and KNOWING things!

How influence on people’s practice for sustainability:
Catch youngsters while we can – raise awareness of their surroundings – and make the point – knowing things is cool and useful!

Description

A school class working with a nature theme, for instance the local forest or the local river is introduced to the subject “Conflicts of interest” in nature. We discuss, how it is always good to be able to discuss and to convince others of your own opinions, and how important knowledge is, when you want to make your opinion cogently. In advance we have chosen a realistic, or even a real case, concerning the local environment. This must be a case that is not too complicated, or far removed from everyday life for the children – driving a mountain bike in the forest, polluting, damming or pipelining the river.

After dispensing with personal interests, the children are divided into four groups, with possible conflicting interests. Concerning the forest it could be foresters, nature freaks, bikers and horse riders. Along the lake it could be fishermen, municipality-people, nature freaks and canoe folks. During a “footrace” with questions in the forest or along the lake, the groups of children can earn free “argument points” for the discussion later around the fire. Questions deal with facts about the forest or lake, general ecology, economy connected to the nature area, interests, visions etc. The discussion is run like a game, “roll playing” (Dungeons and dragons with no swords – except children-tongues!). And the game master is busy counting points. After this bound discussion, a free round or more is run, and the winner is found. Prices are e.g. candy – and a better understanding of some of the mechanisms controlling development of our surroundings.

Context

The children are working with a relevant nature theme in their home school, or at the nature school.

Target group

Schoolchildren, from 11 years of age.

Duration

One school day, preferably as a part of a longer period working with a nature theme.

Partners

Schoolteachers.

Evaluation

No evaluation used so far – except for contented teachers – and a good feeling.

Presenter/ Author

Nature interpreter and biologist Dorrit Hansen
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Do!	Be happy and committed. Praise good thoughts and ideas.
Do not!	Hesitate to show your own experience, doubt, opinion or whatever.

Materials and resources required	Icons for the groups – for instance hats. A fireplace, if you have one, paper, pencils, questions, maps, route in forest or elsewhere, for instance apples to explain conflicts of interest (3 apples, 4 children!), knife (the solution!).

"You need to touch animals"

Objectives

Children and young people generally have very few experiences with living animals. Since more than 80% of Denmark's population live in cities or suburban areas, their daily experiences of nature are sporadic and the natural world is considered to be far away.

Today, children get most of their nature and animal experiences in front of the television. There are only very few places in Denmark where children have the opportunity of direct contact with living animals. Copenhagen Zoo is one of those places.

Unfortunately experiences with animals and for that matter with nature have low priority. We are all dependent on our nature and we use its products every day. However, most people have very little knowledge of animal and plant life, or about how all organisms are mutually dependent upon each other and how humans are dependent on nature. Children who never have any experience with nature and animals will, as adults, rarely become involved in local and global environmental problems

However, children are naturally curious, observant and thoughtful if you just give them the possibility of experiencing nature, animals and plants. Animals especially, are a fantastic pedagogical tool that will attract their full attention. Therefore animals can be used for promoting sustainable development.

Description

It is very important that you organise your nature and environment education according to the children's ages, to their understanding of the outside world and to their cognitive learning level.

Children between the ages of 2 and 5 years must have positive experiences both with animals and with nature. They must be allowed to use their bodies and all their senses. They frequently personify the animals and they often give them names.

Children from 6 to 11 years often feel a kind of responsibility towards the subject. They are motivated to learn about nature and animals, but only if they are in the company of interested adults. Children at this age are not able to take care of animals on their own. The responsibility of ensuring that the animals are well looked after must be with the adults. However, children love to experiment. They find it exciting to cut open a fish or a bird and to find the heart, lungs and brain.

Children, who are older than 11 years, need activities that make them aware of nature and the environment. At this age, they are able to work with abstract subjects such as animals and the environment. They can now think in an ecological way and are able to build up a global understanding of how the world functions. It is important to have discussions that put the environment into perspective. A lot of woodland educationalists lack the ability to deal with this age group. These children do not listen and they think that they are self-sufficient, but is it important to "catch" them where they are and in such a way that the discussion becomes relevant and real for them. Otherwise you will lose them later on.

The sequences described cover the natural development of children's acknowledgement of the natural world and the environment. If they are not allowed to experience nature at all levels during their adolescence, children will, later on in life, have difficulties engaging with natural and environmental topics, both locally and globally. In other words: a lot of children do not develop their understanding of nature. They remain at the kindergarten level (2-5 years), where everything about animals and nature is personified. If deprived in this way, children build up an anthropomorphical attitude and will often dislike all natural things and have no environmental understanding what so ever. Natural science becomes uninteresting and worthless for their quality of life. The young people will not choose to go outside into the environment. You will then find an increasing gap between natural science and humanism.

Context	In summer 2002, Copenhagen Zoo obtained the Environment Certificate based on the ISO 14001 standard and a European Certificate of EMAS 2 standard. These acknowledgements guarantee that we measure environmental factors and that our purpose is to reduce the negative environmental parameters. In future, Copenhagen Zoo will become greener and more sustainable for the pleasure of the animals, the employees, the visitors and, not least, the environment. The environment certificates are helpful when working towards a more sustainable development.
Target groups	Children between the ages of 2 and 5 years – Children aged 6 to 11years – Children aged 12 years and upward.
Duration	1 day – but, if possible, longer.
Partners	A visit to the Zoo is most profitable if it is not an isolated incident, but is combined with educational activities, either in green areas in the vicinity e.g. Parks and playgrounds or inside in the biology classroom. The visit to the Zoo could also be followed up by contacting environmental interpreters, nature schools, farmers, green guides etc.
Author	Ulla Didriksen, Head of Education, Biologist, Cand Scient Copenhagen Zoo Denmark Phone: + 45 72 200 200 Fax + 45 72 200 219 e-mail: ud@zoo.dk

Hands in ducks

Objectives

In Denmark, eight of ten people live in the cities or suburban areas, as a result, first hand and direct experiences of nature are very limited. To hold, study, pluck, dissect, cook and eat a duck shot in its' natural habitat, is a new experience for most people. This programme has its roots in a traditional Danish dish: oven cooked duck, commonly eaten around autumn and Christmas. Further, it leans on the traditional hunting of dappling ducks. Ducks (Mallards) are common all over Denmark. See description for progress. This program depends on a lot of practical work from the participants. Stimulating the senses is an integral aspect of the exercise. An important part of this new nature experience is in handling the duck carcass, smelling it and tasting the cooked meat. Often the student's first reaction is a combination of disgust and curiosity. Students are very interested in how the duck has been shot and in most instances, search for the bullet holes. This often accompanies a desire to know if the bird has suffered and if so was this suffering 'justified'. What follows is a discussion on the following themes: Hunting ethics. Animal welfare. Wild ducks versus farmed ducks in meat production. "Who provides us with meat?" What are the ethics of killing animals for our consumption? The cost of meat/ consumer rights. Our place in nature/ the food chain. Other themes might be: "What makes a bird a bird?" "Morphology and function" Animal protection & nature management Preparation of food & hygienic conditions. The main objective of the exercise is to demonstrate that man is part of nature.

Description

The class is divided into small groups, consisting of four people in each.

1. Introduction
After a brief discussion over the topic "what makes a bird a bird?" each group is provided with a duck. At this point, the nature interpreter begins to probe each group, with questions regarding the carcass they have before them. In this way, we can initiate discussion about the 'form and function' of the duck e.g.: Different types of feathers Adaptation of the beak Webbed feet Cloaca.

2. Plucking
All groups must now pluck their duck. Neck, head and wings are cut off and disposed of along with the down and feathers.

3. Burning, dissection and preparation for the oven
To get rid of the last tiny downs the ducks are burned over open fire (a heavy iron pot lit with denatured alcohol). This is done outside the house as well as the dissection, where guts are removed (open the ducks belly). Then the ducks are washed in running water and stuffed with apples and dry plums (traditional Danish way of cooking dusks). The preparation of sauce and other side dishes, covering the table and cleaning (feathers and downs all over…) is done while the ducks are cooking in the oven.

4. Eating
Time budget: introduction 30 min., plucking 1 hour, burning, dissection and preparation for the oven 30 min., cooking time 1½ hour, eating and doing the dishes 1 hour.

Context

The activity can include field studies in which ducks are watched in their natural environment. A visit to an industrial animal production plant may also be added.

Target group

Public school classes, 6th grade.

Duration

4-5 hours

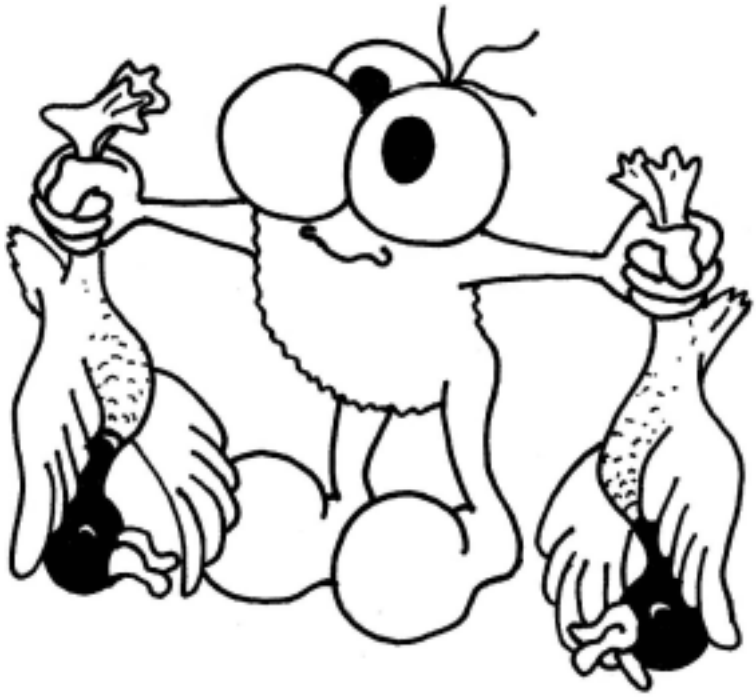
Partners

Home Economics Teachers.

Where and how	At a public school or at the nature school. During duck hunting season: autumn to Christmas.
Materials	Dead ducks (Mallards), kitchen utensils for cooking and a kitchen.
Do!	This activity is suitable for school children taking home economics classes. Chickens, pheasants, rabbits etc. can be used instead of ducks. Using different animals at the same time can lead to many points for discussions. Using small animals is an advantage given opportunities to actively involve almost all participants.
Do not!	Be sure that no participants are forced to carry out a dissection, or eat meat.
Presenter	Jacob Jensen, Ranger Co-ordinator The Danish Outdoor Council Scandiagade 13 DK-2450 Copenhagen SV Denmark Email: nvl@friluftsraadet.dk

Comments from workshop

Participants mentioned that this activity couldn't be done in the UK, because of "animal rights groups". Other participants stressed that this could only be done by written permission from parents, due to vetinary restrictions. In Australia several animal species are regarded as pests, such as rabbits that are trapped regularly. This could easily be built into an activity similar to the one with ducks. In this way it would be possible to examine the issues surrounding various forms of pest control and their effects on the environment. Do we know anything about the influence this activity may exert on participants? Do we create vegetarians? It is not my impression that this exercise distances the participants from animals or meat. In fact the "holistic approach" tends to dispense with the disgusting or scary elements.



Love it to death

Objectives

We make evisceration because we want to create an awareness of the fundamental connection between our lifestyle and impact on nature. We have to understand that we are a small part of a very big Ecosystem. There are two essential points to remember: In the cycle of nature, we cannot avoid the fact that organisms kill – we eat each other When we are use animals, in nature preservation**,** for hunting or farming, we have to so in a sustainable way. Certainly when kill animals, we must ensure that it is done in a properly. An example: Animal welfare is also a matter of cost - we cannot expect low prices in animal produce and high welfare in animal farming. As consumers, we also have a responsibility or willingness to pay the farmer the right price. In this way, he has the opportunity to produce with minimum environmental cost and without animal suffering

Description

The deer to be eviscerated has been shot during the morning, and placed in a clearing away from public footpaths. A positive relationship to the dead deer should be established. Therefore, I often ask the audience to touch the animal. We can ascertain that it has a soft and attractive coat, that it is still warm, and that it has beautiful green eyes. This first meeting often strengthens a child's moral opinion of hunting as being deeply unjust. What right do humans have to govern over the life and death of others? The dead deer now gives rise to a debate on the necessity of killing, either as part of nature's own food chain – which we are a part of – or as part of a population plan to ensure the National Park is not overrun with deer. Older students readily make a quick calculation of population growth, finding the number of deer would double within 3 to 4 years if not controlled. There is also a discussion on the manner in which the deer died. Was this an acceptable method? The actual evisceration occurs in an undramatic and calm manner. The event "talks" to many senses, especially when the stomach is exposed, and the smell of guts spreads in the air, or when the pelvis is "broken" with a crack. All have the chance to feel the tongue, windpipe, heart, and liver, which can be ground breaking actions for many. During this atmosphere of intense sensory stimulation, and typically after I have emptied the deer of blood, we have a discussion about venison as human food, our requirement for meat, and animal ethics in Danish agriculture. I trace a box of 2 by 2 metres on the ground, and invite the audience into the world of an industrial pig farm. If the members of the audience weigh less than 20 kg, 20 such "human pigs" are allowed in the box. If they weigh 40 to 50 kg, there can be about 10 "human pigs" in the box. This usually leads to a discussion of the conditions farm animals live under, and that there are alternatives. We, as consumers, help determine the conditions under which farm animals are required to live. In the Western World food is not just food; it is also an experience. For the critical consumer, there is great satisfaction in knowing the history of food.

Context

When a teacher or institution rings to request an evisceration, they are asked in what context it should be performed. We try to adjust the event so that it fits in with teaching at the school. We have written material that can be used for discussion before and after the event. This material can be found on our website. Items for classes to work with before or after a evisceration: Anatomy What do we eat There do our food com from Nature administration Nature preservation Biological knowledge about our various deer populations There lies great teaching potential in the whole discussion of life and death and the ethics related to these subjects. Our right to govern over other organisms. Which rules and norms should our food production follow? If we wish to move our agriculture towards more self-sustainable practices, how should we achieve this?

Target group

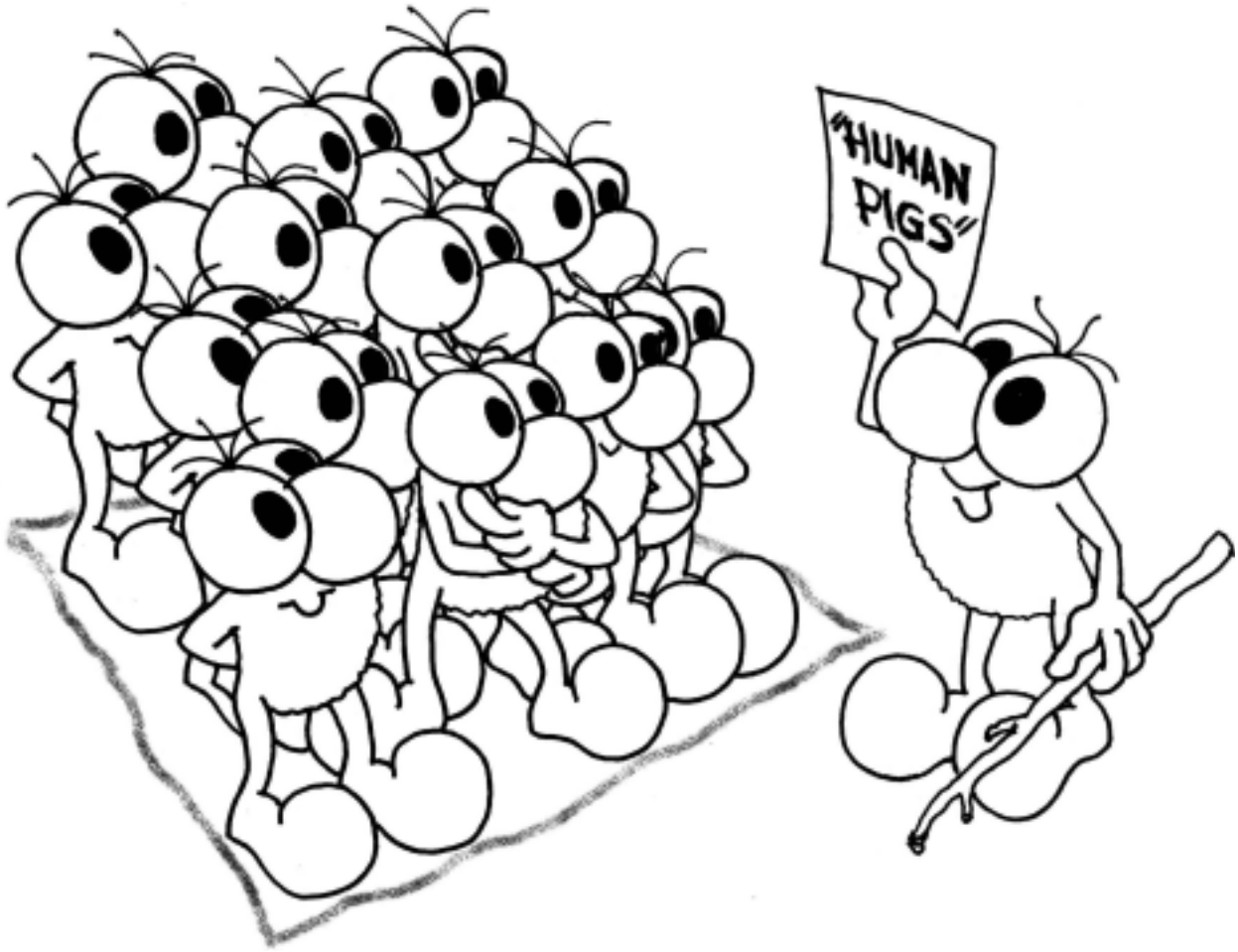
Groups from kindergarten, school classes, High school and public groups

Duration

Around 2 hours

Partners

The teacher from classes



Presenter	Jes Aagaard Danish Forest and Nature Agency Dyrehaven 6 2930 Klampenborg Denmark phone: (0045) 9739 9710 Mail: jaa@sns.dk
Do!	Always have a very careful conversation with the teacher. Make sure that they will prepare the children before the visit, so the children know what they can expect. Do always take your time, and give ordains time to ask question. Make sure that your knife is sharp
Do not!	Do not force any to look a an evisceration. If someone is feeling bad, let them have a break. Be careful, then your are handling female, they can have a premature offspring in the stomach.
Material	A dead deer, sharp knife,

Comments from workshop	Positive feedback

Urban-ecological presentation as activating inspiration

Objectives

A house is a cornerstone of all human activity, and as such is closely related to the original meaning of the term ecology – "the science of housekeeping". The house is also the focal point we can all relate to. It is not merely an alienated mundane concept. It is, in one form or another, ever-present, and from here it is but one small step to understanding that the choices we make "indoors" have far-reaching consequences, especially our day-to-day chores and activities.

In ancient Greece, Socrates maintained that ethically based dialogue is only possible when our thoughts and actions are in harmony. Appreciation of this is at the core of all efforts to encourage sustainable development. The message is enhanced by its content being practised in its environment.

Description

The Ecological Inspiration House is uniquely positioned to demonstrate solutions to the problems facing us, which each and every one of us in fact can do something about. Our point of departure is in the power of good example. The next stage is the direct dialogue which enables us to correct any misunderstandings on the spot, to inspire and to show action-oriented ways forward so that nobody is left feeling abandoned or frustrated.

Context

The Ecological Inspiration House presents numerous urban-ecological initiatives promoting the decentralised solution within the areas of; Wholesome Energy, Water, Ventilation, Refuse and choice of Materials. The House does not claim to be a complete healthy ecological solution for building construction; rather, it is a source of inspiration. Our aim is to enthuse and provoke our visitors to reflection and practical imitation. Free entrance. Guided tours from 100 – 400 US dollars.

Presenter, author

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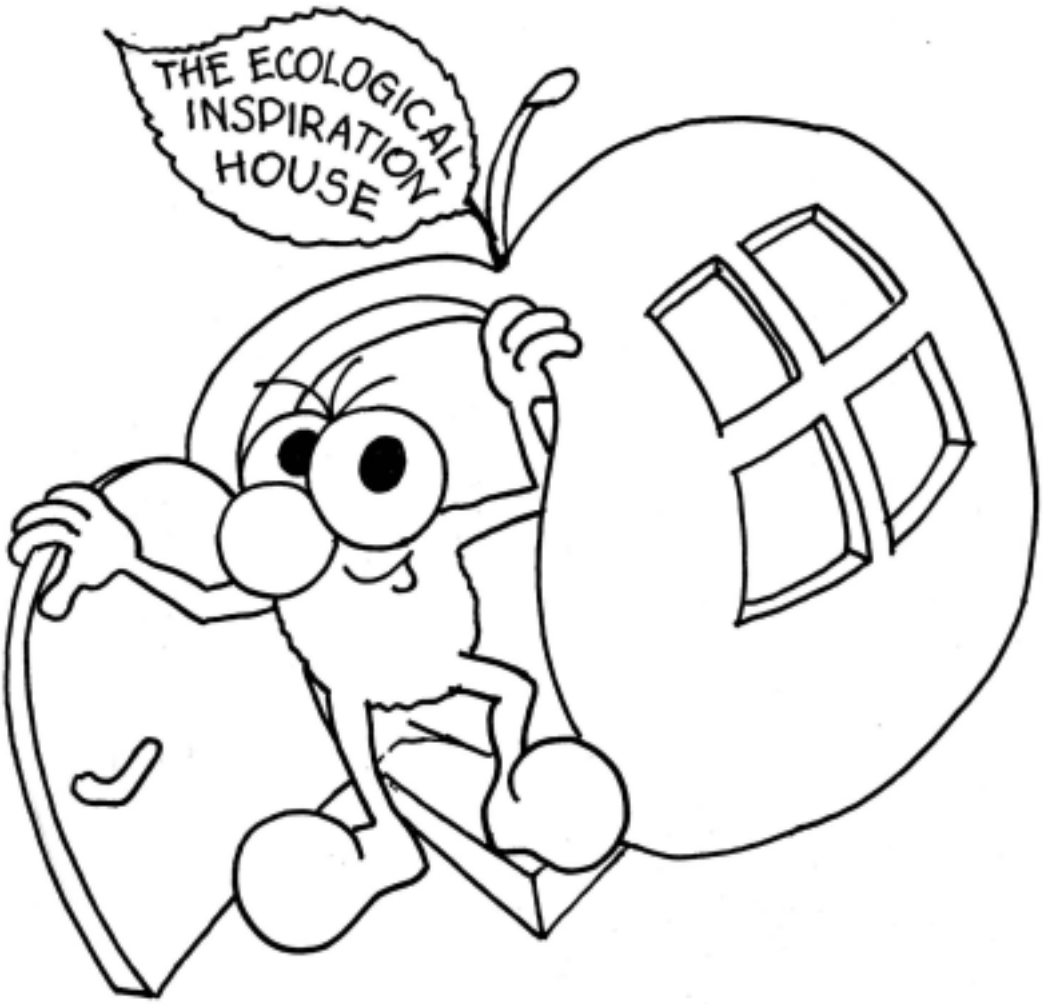
Comments from the Conference Workshop

"It is our duty to lead by best example and make all practical and logical attempts to reduce our impacts on the environment …" "We should share the values of sustainability and practise them"!

Sustainability is an abstract concept for most people. They may think, "What do that mean, why is it important"? Lots of work is required to raise the profile of sustainable living in communities. To ensure some of this is happening, it is essential that we, as rangers or nature interpreters, in our work and surroundings strive to live up to the ideals of sustainable living.

The need to put "sustainability" in a positive way – not having to do without things, but seeing how you can live better (and cheaper?) with less, and help the world at the same time – is important.

Today's modern society produces all kind of unnecessary pests that undermine a sustainable future. As Rangers or Nature Interpreters we should try to avoid all of them in the same matter we seek to keep certain animals and plant life, which is not native in our parks, down to a minimum!



Comments from the Conference Workshop
(fortsat)

The key is to know precisely how to practise and to keep in mind that we must improve our self constantly by creating new ideas and solutions on the way.

Obtain inspiring ideas and examples from different parts of the world.

Comments about administration
Need to identify appropriate/sustainable materials, appliances and practice. Make information easy and available. Continue to recycle in a visible matter, and at the same time activating park guests. Use double side when copying. Sell "carry bags" with park logo.

Comments about catering
Fresh, organic and "local" food as fair as possible. Demand will drive down costs. Ask nutritionists to suggest a healthy and interesting menu. Avoid fast foods, high fat and sugar. Outside caterers (on tours) must also comply. Try to cut down on "boxed" juices, and plastic wraps for field lunches. Maybe even a policy on "no plastics". Recycling when possible, ex. to compost all food scraps. Wash dishes rather than disposable. Wash towels and bed linens only once pr. Visit (min. 3 days).

Comments about displays
Publicise and promote sustainable materials and suppliers.

Pictures or descriptions of ordinary people doing visionary things - quotes from people living sustainable, “I ride my bike to school and enjoy seeing and hearing the birds” etc.

One of the largest paper waster in our parks is pamphlets – such as all the park brochures. Most of this is picked up and thrown away without use. Have one copy displayed and inform all that if they are really interested in a copy they may get one from the office or go on the web. Inform the visitor surely about the reasons why the park has chosen to act in that matter.

Comments about buildings
Always try to create the decentralised solution. Use alternative energy - solar/wind. Use passive solar principles, natural light, local materials and again, minimise resource/energy use. Reduce heating or air-conditioning – ex. new and effective “natural ventilation” systems.

Comments about rangers
”Do what you say, and say what you do”! Needs to “live the values” – minimise recourse and energy use. Ex. Use minimum water (rainwater supply), ride to work/public transport/walk etc., composting toilets, recycled products, timber homes. Avoid chemicals (old methods are effective).

Ask questions early in the process – is this the optimal solution? – can we do better?

Remember to make use of media, Internet/homepage, network, sponsorships, fundraising etc.

Teach our guests well!!!! Ex: promote growing own food in a permaculture system.

Throw a wetland banquet!

Description	A guided walk in the NP Donau-Auen (Danube wetlands) just in your mind – put on stage through an interactive dinner- show
Objective	The influence for people's practice for sustainability will be in many ways: First there is the important message of the National Park (or any other protected area) and the value of its different habitats which need to be transported to as many people as possible. Secondly this program is perfectly adapted to address decision makers and business groups in particular as well as potential mental supporters or even prospective sponsors which has a tremendous multiplier effect as well. Furthermore the program gives ideal opportunities for the protected area to participate in regional development and to cooperate with partners in local business. Last but not least the idea of the Wetland Banquet is a sustainable program by itself because it gets support from the restaurants as well as a fee from the guest.
Context	Guided imagery was the chosen interpretive method for realising this new project. It transports people to distant places or times. Instead being somewhere in the National Park, the imagination runs wild while leaning back in a comfortable chair at the dinner-table. Involved through several activities between the courses – the whole menu is harmonized with the seasons itself – each guest experiences a performance of its own.
Target Group	Participants of opening ceremonies, workshops and conferences; mostly business people from the middle and upper management class, opinion leaders and political functionaries.
Duration	Depending on the number of courses of the menu it takes between 2-3 hours (including dinner)
Partners	High quality hotels/restaurants with an excellent service which are located in the region of the Protected Area and host congress tourists respectively provide seminar facilities for company-meetings and their workshops.
Evaluation	Spontaneously oral and/or written feedback into a visitor's book
Comments	« A unique experience! « , « Very stimulating ! « , « You touched all my senses ! »; "Your very vivid presentation gave me the feeling that I was really in the field!"
Do!	1) Harmonize the menu according to the changing seasons with the chef 2) Brief the team of your restaurant into your program! 3) Provide natural decoration of your protected area on the dinner-table
Do not!	1) …forget to interact with your guests. Let them participate! 2) …tell stories without demonstration objects! 3) … talk while your guests are eating!

Presenter/ Author

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US National Park Service and sustainability

Description

This is an overview of how the US National Park Service (NPS) is dealing with issues of sustainability, through our interpretive and educational programs. In the Pacific West Region of the NPS, we were fortunate to have a regional director who was a strong advocate for sustainable efforts in all aspects of NPS efforts. John Reynolds vision "It is not the job of the NPS to convince others to be more sustainable, to preach a way of living. I think it is the job of the NPS to act in the most sustainable way possible and let others know what it is doing in accurate, factual and interesting ways." His attention encouraged park managers to examine work habits and educational efforts. Three park examples illustrate the success of this focus.

1) In Golden Gate National Recreation Area, located in the San Francisco area of California, the park took advantage of a highly visible project to involve the surrounding urban community. Through the work of the park's non-profit partner, Golden Gate National Parks Conservancy, over $32 million was raised to remove debris of an abandoned military site and restore the natural habitat. As part of that effort one of the buildings was restored and put to use as a restaurant, bookstore and interpretive centre.

2) In the rural area of eastern Washington, at Whitman Mission National Historic Site, the park used their existing resources to experiment with small actions then expanded to park-wide actions. For example, they not only replaced all their lights with lower-energy bulbs, but also installed motion sensors so lights go off when the room is not occupied. For this small site, where off-season visitation can be sporadic, this has resulted in tremendous energy savings.
3) The challenges of life on an island encouraged the staff at Haleakala National Park in Hawaii to work with partners in their sustainability work. By collaborating with the local electric company, the part was able to retrofit all their lights and receive a substantial rebate in their costs. In addition they worked with the partner to develop news stories about the project, giving both park and electric company good publicity.

Objectives

Approach. Methodology, issue or problem, concerns and advice, techniques to influence People's attitude or practice for more sustainable behaviour)

1) In Golden Gate, the park involved the community in determining best ways to use the existing building. The end result was a building that incorporated the original architecture, used displays to show the original use of the site and the restoration process and is used daily by hundreds of visitors. The park management fully embraces sustainability concepts and applied that to the food being served in the restaurant. Visitors can get nutritious and interesting meals that are prepared from organic and locally grown produce. The park also incorporates the restored area in the educational programs conducted throughout the year. One example is "Here's the Dirt": After classroom preparation, the students visit the park's native plant nursery, experiencing learning stations that cover different elements of the nursery's growth cycle, such as seed cleaning, sowing seeds, transplanting seedlings, composting, tending a demonstration garden or nursery maintenance.

The children see the link between their food and the natural world. The program emphasizes "science in action" and gives children a positive tool for their future, as well as giving them ideas for what they can contribute.

2) At Whitman Mission the park uses their on-going energy work as examples when working with school groups. They publicize their efforts through use of the Green Seal logo, a regional recognition project, through newspaper articles, and local exhibits. They encourage visitors to participate in their recycling program and to learn more about how they can do the same at home.

3) At Haleakala the interpretive and education staff go beyond park boundaries in spreading the word about sustainable efforts. The local community is interested in what the park is doing and is eager to learn ways to apply new ideas to their own homes. Through the use of news reports and being featured in electric company advertising, the local community gains a new understanding of the role of the park. As their public information officer Jennifer Talken-Spaulding says, “On the most isolated major island group in the world, saving energy and planning for sustainability make good partnerships – and a promising future.”

Do!

What is the National Park Service learning from these efforts and other regional and national programs on sustainability? The biggest lesson is that our programs must be multi-disciplinary. By involving the maintenance crews, the resource managers and the interpretive/education staff, the overall understanding of what is possible grows quickly and the communication to the public is a common message. We’re also finding new partners that can help us extend our efforts while contributing to their efforts. The NPS has a long and rich tradition of working with partnerships, but we’re finding more are willing to join us in sustainable efforts.

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