Albátross Trainer



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It is a great honor to welcome you to Albatross Foundation's outreach program. It doesn't take much to realize that environment represents the biggest challenge for us and future generations. I am happy that you have chosen to join the growing number of people today who recognize that actions need to be taken and step forward to get involved.

As a Green Trainer, you will learn about environmental issues and visit primary schools to share environmental knowledge with the students. We prepared resources, stories and games, to make this easy and enjoyable! With the help of this manual and our teaching materials, you will be able to spread simple and positive environmental messages.

In doing so, you will discover that you can influence the future of the children in a positive way. At the same time you will experience that environmental issues are sometimes a bit overwhelming. In movements like that just remember that we all are going through the same battle but doing something is much better than doing nothing. Every step counts.

I wish you a lot of great little moments that come when you will be seeing the results of your work and teaching. You have a unique opportunity to contribute to a greener China.

Good luck!

Ghislaine Bouillet-Cordonnier Founder, Albatross Foundation



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This package contains teaching modules which are designed for primary school students. Through these lessons, you will be able to instill a sense of value for our environment into the students.

Each teaching module is described in the lesson, which together with the Albatross book will guide you in the class. Furthermore, each module includes a set of PowerPoint slides which emphasizes your points.

Depending on the modules that you are plannign to teach, you need to print and prepare some materials and take them into the school. This is described in the lesson plan. But please don't print this whole document! It's designed to be read on the screen.

2. How to Manage a School Class

1. Prepare and practice

It is natural to be anxious before your first time as a school teacher. The secret is that knowledge reduces your anxiety. Before going to school, you should be clear about what you want to share with the children, and then rehearse the materials. The more you practice, the more control you will have in class. Once you have taught a few times, you will notice how you the process becomes second nature. With this confidence, you can channel any nervousness and begin to enjoy the challenge. Be creative, say it in your own words. If you forget what to say, the script will be on screen, so you'll be able to glance at it to remind yourself.

2. Connect with the audience

It's tempting to look at the screen as you're presenting (especially with all the fun animations!), but it's VERY important to face your audience. A good way to make sure you keep looking at the audience is, whenever you're standing still, make sure your feet are pointed at the audience. That way you can still glance at the screen but you will naturally turn back to the audience. Make eye contact with your listeners' faces. Make them feel involved!

3. Be energetic

Students make a good audience. If you give them energy, they'll bounce it back to you. If you don't feel energetic, pretend you do! Show them that you have passion for the subject. Keep in mind that students have a short attention span, so try to make your speech entertaining and varied. It helps remember the story and its messages.



4. Be aware of your body language

The way you stand, move, and articulate is picked up by the students very quickly. Getting it right can make you look very masterful and in control. In most classrooms and auditoriums, there will be a table or lectern. It is an anchor and a place of safety for the presenter, but can become a barrier between you and the audience, disengaging them. Instead, use the space which you have on stage, be dynamic in your movements. Utilize your hands to emphasize your message and make your talk lively.

5. Use your voice effectively

The school should provide a microphone for big classrooms, but either way, you should speak clearly and loudly. Talk to the people in the back row. Try to learn to moderate your speed and consciously speak slower than you normally would. There's no need to rush through the lesson. It will be the first time for students to hear it, so take your time. If you forget what you need to say, just pause or repeat something you've already said. They'll appreciate hearing it a second time. Vary your pitch to keep it interesting and emphasize key points.

6. Take charge

Keep in mind that you are the teacher, and that you have control over the class. In general, the students are very disciplined and well behaved. Some classes might even be too shy and quiet. Ask a lot of questions! Find ways to engage them! Pick 'volunteers' from the audience to get answers to your questions. However, if you don't get any good answers, don't keep asking around. Instead, move on to the next part. Keep the class fast-paced so that the students don't get bored.

7. Be equipped

When you go to schools to give a session, it is necessary to take a number of things to make sure that everything runs smoothly. Here is a list of equipment which you should take for each session: laptop, teaching materials on a USB drive, a bottle of drinking water, a watch, a camera, a slide pointer, paper footprints, feedback forms.

Nevertheless, expect the unexpected. The more rural and poor the school is, the more you have to adapt to the circumstances. In poor schools, you can expect a lack of technical facilities, so be prepared to present without a PowerPoint.



The Green Trainer program has simple and enjoyable modules, designed for primary school students. It is not a curriculum which you must strictly adhere to, but rather a collection of games and resources which you can use to spend 1-2 hours in class. Feel free to mix and match the activities, and add your own ideas. Here is a suggested schedule:

#	ACTIVITY	DURATION
1	Personal Introduction	5 min
	Environmental Trivia Games (select one)	
2	1. Nature and Waste (works well with the soil or trees story)	10 min
	2. Water, Air and Energy (works well with the energy or water story)	10 min
3	Stories (select one)	
	1. Trees (tell this story first, it's a good starting point)	30min
	2. Energy (includes Carbon Game. Waste Challenge can be added at end)	35 min
	3. Soil	20 min
	4. Water	30 min
	Activities	
4	1. The Waste Challenge	25 min
	2. The Fish Game	10 min
	3. The Carbon Game	10 min
	TOTAL	60-90 min



4.1 Environmental Trivia Games

The Green Trainer Package includes two environmental trivia games. They test the students' knowledge on the topics of nature and waste, as well as on water, air and energy.

Playing one of these quizzes with the students is a great way to start off your lesson. They are very interactive, and encourages the children's participation, setting a positive atmosphere for the



rest of the lesson. You can choose to award each correct answer with a candy.

4.2 Stories

4.2.1 Trees

This lesson tells the true story of the environmental collapse that occurred on Easter Island and points to parallels in our world today. Easter Island's civilization collapsed after the island people cut down all the trees in order to build the statues that make the island famous. The removal of the trees led to a collapse of the entire ecosystem and its services of soil



retention and rainfall regulation, which depended on the trees. In this lesson, the students get to examine parallels within our own system and how our actions also create an impact on our environment. For further information on the history of Easter Island, go to http://www.mysteriousplaces.com/Easter_Island/html/story.html



Today we rely on energy for every aspect of our lives. However, our energy today is mostly derived from fossil fuels which will run out one day, generate harmful pollution and cause climate disruption. Global warming is a scientifically proven phenomenon and the consequences could be extreme, depending on how far we allow climate change to continue.



Fortunately, the world is waking up to the unsustainability built into our energy production. China is taking steps to install clean energy systems, and the cleantech sector is booming. But that will be nothing compared to the future growth in this sector. This story explains the causes and consequences of climate change, and raises awareness of the reasons to move towards clean energy. The story includes the carbon game. To see a detailed description of how to play this game in class, go to the chapter 3.3.3 in this manual.

4.2.3 Soil

Soil is one of the basic elements of life. It's all around us, but we rarely consider its role within the biosphere. We have gotten separated from soil through living in cities and landscapes where soil is covered with streets and building. In this lesson, we take a look at what soil is made of and what it does. The students learn how modern agriculture is endangering the health of soil and of humans, and how we can treat soil more consciously.



4.2.4 Water

Water is the most abundant substance on Earth's surface, but useable fresh water is becoming scarce. In this lesson, students will review the water cycle and identify the different ways that water is used in homes, agriculture and industry. They will learn what it means to "use water



up"; even though the water still exists, through dispersal and pollution, we can render fresh water no longer useable. Finally, students will learn about how industry, farms and individuals

can all find ways to save water. To engage the students, this lesson includes a visual demonstration with a bucket of water, cup and teaspoon to show the relative amounts of fresh and salty water on earth and a demonstration of how water is used up by pollution and dispersal. To help the students remember, at the end of the lesson, they will create collage posters of ways to save water that can be displayed in their classrooms.



4.3 Games

4.3.1 The Waste Challenge

Introduction

In our modern society, many products are available for us to buy. However, there is a problem with what happens to these products after we dispose of them. A way to diminish the negative effects of waste is recycling, which can also be done in schools. This game will show the students why recycling is important, how it works, and how they can implement it in their school.



Materials you need to bring

- Cardboard boxes (one per group of 5-10 students)
- Color pens or pencil crayons
- Sheets of colored paper
- Glue and tape
- Scissors
- Other decoration materials as available



Slide 2

We all want to have a beautiful living environment. And we enjoy many things which make our lives easier. But, do you think that the immediate environment shown in these pictures is beautiful?

Nature provides us with basic living condition, but it is not enough to sustain our modern lifestyles. Today, we are producing many things like



food, housing, water, electricity, furniture. But we also have to ask ourselves, what else are we getting with all our products? (get some guesses from students)

Slide 3

Piles of garbage and waste! Most people's attitude towards waste is negative, and they are not aware of the possibilities of doing good things with waste. Let us take a "trash challenge", to learn how to handle waste separation and recovery. In this way we can turn waste into a valuable resource!

Slide 4



How many of you do recycle waste in your daily life? How many people know how to recycle waste at home?

In fact, 70% of all waste could be recycled, but only less than 10% is actually being recycled. Many people have heard about the concept of recycling, but they don't put it into action, because they don't know how to apply it correctly.

Slide 5

Why should we recycle? Recycling conserves our valuable natural resources. All materials which we use, are drawn from natural resources, and if the

waste can be re-used, we will save a lot of these resources.



Recycling saves energy. Making new items costs a lot of energy. With, recycling, our waste can be re-transformed into products, which is more energy efficient.

Recycling saves clean air and clean water. When less resources are used through recycling, more water and air stays clean.

Recycling saves landfill space. With the capacity of human garbage rising, the demand for landfill space is increasing. The space we stay in is already very crowded, so finding enough space to put garbage is a serious challenge. Recycling prevents used products from ending in a landfill, and therefore saves space for everyone to live a more comfortable life.

Recycling can save money and create jobs. Recycling is a booming new industry, and there are a lot of business opportunities. In the near future, recycling could become a very prominent industry.

Slide 6

Here is how recycling works, it's a simple process:

- 1. Separate recyclables from non-recyclables
- 2. Collect recyclables in one place.
- 3. Arrange to send recyclables to a recycling center.

Slide 7

Which kind of waste is recyclable and which is not?

Recyclable: Paper, cardboard, metal, glass, plastic bottles and containers, batteries. Batteries contain toxic heavy metals and should NEVER be thrown away. Return batteries to your school's battery drop- off place.

Slide 8

Non-recyclable: Plastic bags, wrappers, dirty paper, tissue paper, more than one kind of material stuck together. There is one thing to add: these materials are non-recyclable with current methods, but in the future this may change, with the advent of more advanced recycling systems.

Slide 9

Instant Quiz! Let's see how much you have learned. (Hold up some everyday items (for example, a pen, a notebook, a water bottle) in front of the class and let them tell you if they think they are recyclable or not. Explain why).

Slide 10

In order to separate the waste, we simply divide it into two separate boxes.



Now, we are going to make our own garbage bins. You will be divided into several groups. Each group has 5-10 people (depending on class size) together to finish the task. We have two types of litter bins:

(Instruct some groups to make dustbins which are used for the collection of paper, cardboard,



newspapers, magazines and other paper trash. Instruct other groups to make dustbins for the collection of plastic, metal, glass and other garbage. Help them divide into groups and give each group their task, boxes, colored pens, paper, glue, scissors and other materials and tools for decorating litter bins. If the weather is good, the activities can take place outdoors.)

We only have to requests for you when designing your dustbins:

- 1. Clearly label what should go in it
- 2. Be creative make it pretty

(Give the students 15-20 minutes to decorate their dust bins. Afterwards, have one member of each group come to the front of the class and present/explain their design. Then you can vote have a jury to vote on the best design. See the picture below for reference).





4.3.2 The Fish Game

This is a fast-paced and fun game, which illustrates the consequences of overuse of natural resources in general, through the example of fishing. Students learn that sustainable management of common natural resources is necessary for the longterm benefit of society.



Materials you need to bring

- A crayon or a 3m rope, to mark the outline of a lake on the classroom floor
- 16 pieces of paper, cut into the shape of fish (see chapter 'Print/Prepare materials)
- 2 bags of candy

Preparation

Before the start of the class, take a good look around the classroom to find a suitable place to play this game. The place should be in front of the class, so that all kids can see what's happening. You need a space for the lake, and a space for the market, and in-between about 4 meters of empty space. Make sure that there are no obstacles or sharp edges, because the kids will be running around, and it will be quite hectic! The following picture shows the set up.



To manage the fish game, several people can get involved

- 1 person to draw or lay out the 'lake'
- 1 person to hand out candy at the 'market' (this should be an adult)





- 1 host to explain the rules and leads through the game

Game Script

Following is a script of the game, it goes with the PowerPoint slides called 'The Fish Game'. The text in the script is what you need to say, while the text in brackets is what you need to do.

Slide 1

Let's play fishermen! Here we have a lake (show the blue cloth), and what lives in a lake? - Fish!

(Throw 12 fish into the lake, one by one, while counting up the numbers)

Now we need some fishermen. Who wants to be a fisherman? (pick 3 kids from the class to be fishermen)

Slide 2

Here is how the game works: Each fishermen run to the lake, and grab a fish. They can only grab one fish at a time. With their fish, they run to the market, where they 'sell' the fish, and get a candy from the market people.

The fishermen have 10 seconds time to catch and sell as many fish as they can. Does everybody understand the rules? (Then, give the command to start the game! The fishermen will run around. In this time, count down the seconds from 10 to 0.)

One year is over! Now it's winter, and the fishermen cannot go to the lake anymore. All of them caught some fish! Let's take a look at the lake (go to the lake, then take out and publicly count the remaining number of fish in the lake for everyone to see).

There are X fish left in the lake! As I said, it's winter now, and each year in the winter, fish have babies! Each fish has one baby! (Drop additional fish in the lake to double the number of fish).

Now it's springtime, a new year begins. Our fishermen are looking forward to go back to the lake and catch more fish! Also, other people in the village have noticed that the fishing business is going very well, so 3 more people have decided to become fishermen! (Pick three more kids from the audience to become fishermen).

Let's start the new fishing season (Repeat the procedure as in the first round, counting down from 10 to 0 while the kids race to catch and sell fish... the game goes on in the same manner, doubling the number of remaining fish at the end of each round, and adding three fishermen for each new round. Usually, the lake will become empty in the third or fourth round).

What's that? No more fish in the lake? How could this happen?

What can we learn from this? (Send all fishermen back to the audience)



We have seen that, at first, everything was going well! Each of the fishermen caught a lot of fish, and got a lot of candy, and there were a lot of fish in the lake. But the number of fish in the lake became smaller, because the number of fish that was caught each year, was higher than the number of baby fish that were

born each year.

As a result, the fish population became smaller, and finally, the last fish was caught! This is called 'overfishing'. Even if the fishermen stop going to the lake now, the fish will not come back.

The fish in this game is just one example for the natural resources that we use every day. If we compete for natural resources and don't manage them properly, then there is nothing left in the end.

4.3.3 The Carbon Game

Climate Change and Carbon Emissions are hot topics in China and around the world. Through this game, students will learn where carbon emissions come from, and that carbon is emitted as a result of a lot of our daily activities. By trying to match activities with carbon emissions, students will learn to appreciate the consequences of a carbon-intensive lifestyle. Furthermore,



they are encouraged to look for ways to lower their carbon footprint.

Materials you need to bring

- Printed carbon scorecards, see chapter 'Print/prepare materials'. Bring one scorecard per group of 5 students.

- A bag of candies

Game Script

The PowerPoint slides of the Carbon Emission game contain a script which guides you through the introduction to the game. Additionally, here are some notes on the actually gameplay.



Split the students into groups of five. All volunteers should assist with that and hand out one scorecard to each group. Then announce, that the students will have 4 minutes of time to fill out the card. Their task is to match the activities with the CO2 emissions that are symbolized through the weights on the left side of the scorecard.

After 4 minutes, call one student from each group to come to the front of the class with their group's scorecard.

Slide 6

Reveal the correct answers in a dramatic fashion! Send the group representatives with the wrong answers back to their seat. The winners a candy for each team member.

Slide 7

Discuss the results with the students. Why is the car less efficient than the bus? What is a carbon footprint? What can each of us to do reduce their personal carbon footprint?







✤ 此处的CO2的排量根据中国平均水平计算得出







家庭一天的碳排放量

如今,我们使用的大部分能源来自燃烧煤。燃烧煤能我们提供生活中80%的电量。汽车、拖拉机使用汽油和柴油,我们的食物和热水所需的能源来自天然气。燃烧 这些能源,都会产生引起温室效应的气体二氧化碳。猜猜看下面每项活动各会产生多少二氧化碳?这将让你了解该从何处入手减少碳排放量。





6. Green Resources

Being a green trainer, are most likely interested in learning about environmental issues, and the big pictures on a more advanced level. Knowing more makes you a better trainer, too! We want to share with you our favourite environmental books, movies, and information sources from China and abroad. We start with links where you can watch the most mind-blowing environmental films and continue with books and web resources. Take your pick!

Movies

Movies are a great way to learn a lot about the environment in a very short time, and they are also very enjoyable to watch. All but the first are available in DVD stores, but you can preview them in China by searching for the titles on <u>Youku</u> or <u>Tudou</u>.



<u>Home</u> is a powerful and visually stunning story of our home planet. Combining aerial footage from 54 countries around the world, this movie tells the tale of earth like you've never experienced it before. You are in for a treat with this one, and it also packs a very strong message.



<u>An Inconvenient Truth</u> is perhaps the most important environmental film of all time. No other source has educated the public on the facts of global warming as former US vice president Al Gore did in this film. If you haven't seen it yet, we urge you to take out your calendar now, and mark off 2 hours this week to watch this.



<u>The Age of Stupid</u> is a story of the present told by a historian from a devastated future. It shows the personal stories of people whose lives have been impacted by our unsustainable system. In telling these stories, it strings together a narrative of the the events leading up to devastated future from when the stories are shown. It takes a very personal look at the big issues and provides not only awareness but also point of intervention.



<u>DIRT! the Movie</u> is simply a movie about dirt. The real change lies in our notion of what dirt is. The movie teaches us: "When humans arrived 2 million years ago, everything changed for dirt. And from that moment on, the fate of dirt and humans has been intimately linked." But more than the film and the lessons that it teaches, DIRT the Movie is a call to action.



The 11th Hour is sometimes considered to be the sequel to "An Inconvenient



Truth". Narrated by actor Leonardo Dicaprio, this movie gathers some of the top environmental scientists and activists to share their views on our current environmental crisis and and give us a glimpse of what solutions are possible.



State of the Planet Series is naturalist David Attenborough's personal study of the impact that humans are having on the natural world and the future of life on Earth. The 3-part series investigates the main causes of damage to the planet and how we can help to prevent them.

Books



<u>Cradle to Cradle: Remaking the Way we Make Things</u> – William McDonough and Michael Braungart – *Cradle to Cradle* presents a manifesto calling for a new industrial revolution, one that would render both traditional manufacturing and traditional environmentalism obsolete.

<u>It's all Connected</u> – Benjamin Wheeler, Gilda Wheeler and Wendy Church – This the ultimate resource for teaching about global issues and sustainability in our ever changing and complex world. It can be used as a stand-alone text for a global issues course or as a supplemental text for other classes, including social studies, science, environmental studies, and ESL. *It's All Connected* provides a thorough overview of global issues, as well as in-depth explorations of particular topics, debates, and solutions.



<u>Earth Matters</u> – David de Rothschild – This attention-grabbing, easy-to-read book is full of spectacular color photographs, web resources, and easy ways to start making a difference today. David de Rothschild also introduces his plan to sail across the Pacific on a boat made from 12,000 plastic bottles.

<u>Our Choice: A Plan to Solve the Climate Crisis</u> – Al Gore – Nobel Peace Prizer Winner Al Gore matches clear explanations and commentary with superb diagrams and striking photographs from around the world to document the dramatic impacts of human industry and climate change. The former US VP turns away from blaming and pointing fingers, instead focusing on the clean energy solutions available to us.



<u>Natural Capitalism</u> – Paul Hawken – *In Natural Capitalism*, three top strategists (Paul Hawken and Amory and Hunter Lovins) show how leading-edge companies are practicing "a new type of industrialism" that is more efficient and profitable while saving the environment and creating jobs.

<u>Mid Course Correction: Toward a Sustainable Enterprise</u> – Ray Anderson – The founder of Interface, Inc., recounts his awakening to the importance of environmental issues and outlines the steps his petroleum-dependent carpet company is taking in its quest to become a sustainable enterprise — one that will never have to take another drop of oil from the Earth.



Deep Economy: The Wealth of Communities and the Durable Future – Bill

Mckibben – Challenging the prevailing wisdom that the goal of economies should be unlimited growth, McKibben argues that the world doesn't have enough natural resources to sustain endless economic expansion. Drawing the phrase "deep economy" from the expression "deep ecology," a term environmentalists use to signify new ways of thinking about the environment,

he explores and suggests new economic ideas.

<u>The Sustainability Advantage</u> – Bob Willard – In an era when corporations are under increasing pressure to be stewards of the environment and society as they pursue profits, business expert Bob Willard provides a practical benefit-by-benefit guide for assessing all three areas as a win/win/win proposition. Written in the pragmatic language of business leaders, this book is the first to present compelling and quantitative bottom-line evidence of the profitability of social and environmental initiatives.

<u>The Natural Step Story</u> – Karl-Henrik Robèrt – Few organizations have been as influential as The Natural Step in empowering and inspiring people to design a more sustainable world. In The Natural Step Story, Dr. Karl-Henrik Robèrt describes first-hand the evolution of the Natural Step framework comprised of four system conditions essential for the maintenance of life on Earth,



together with a robust methodology for how to apply them strategically.

Hot Flat and Crowded – Thomas Friedman – The author takes a look at two of the biggest challenges we face today: America's surprising loss of focus and national purpose since 9/11; and the global environmental crisis. In this groundbreaking account of where we stand now, he shows us how the solutions to these two big problems are linked–how we can restore the world and revive

America at the same time. Although the book focuses on America, the solutions he presents are applicable around the world.



<u>China Dialogue</u> A fully bilingual site (including translation of comments into Chinese/English), China Dialogue provides an excellent platform for open discussion between China and the rest of the world on environmental topics. Their articles on China's environment are some of the best-researched and most well informed you'll find anywhere.

<u>The Story of Stuff</u> From its extraction through sale, use and disposal, all the stuff in our lives affects communities at home and abroad, yet most of this is hidden from view. The Story of Stuff is a 20-minute, fast-paced, fact-filled look at the underside of our production and consumption patterns. The Story of Stuff exposes the connections between a huge number of environmental and social issues, and calls us together to create a more sustainable



and just world. It just may change the way you look at all the stuff in your life forever.

<u>350.org</u> is a global grassroots movement dedicated to solving the climate crisis. It operates via online campaigns, grassroots organizing, and mass public actions which are led from the bottom up by thousands of volunteer organizers in over 188 countries. 350 means climate safety. To preserve our planet, scientists tell us we must reduce the amount of CO2 in the atmosphere from its current level of 392 parts per million to below 350 ppm. But 350 is more than a number—it's a symbol of where we need to head as a planet.

<u>Worldchanging</u> is a nonprofit media organization headquartered in Seattle, WA, that comprises a global network of independent journalists, designers and thinkers. This is one of our all-time favorite environmental websites, covering the most exciting news in new environmental technologies, designs and concepts.

<u>Greenbiz</u> is the leading resource on how to align environmental responsibility with business success.



<u>Inhabitat</u> is a weblog devoted to the future of design, tracking the innovations in technology, practices and materials that are pushing architecture and home design towards a smarter and more sustainable future.

<u>TreeHugger</u> is the leading media outlet dedicated to driving sustainability mainstream.