IZE CONference AT TAIPEI Zoo -- A GRAND SUCCESS

The Bi-Annual International Conference of the International Zoo Educator Association was held for the first time in Asia last year, 1 - 6 October 1998. The warm hospitality, efficient organisation and excellent arrangements made by the Taipei Zoo on this occasion were superb by any standard. The Zoo Director, his capable Education Director, and her team in the Education Department and from other departments of the zoo were appreciated by all attendees. Delegates were delighted with the conference bag which included an IZE "swatch" and a personal Chinese "chop" with the name of the delegate, in addition to more traditional conference items. An icebreaker and a elegant banquet gave delegates a taste of the high standard for the conference as well as new tastes of Taiwanese food.

The first day of the Conference was devoted to the presentation of papers on Education. Some of the highlights were Annette Berkowitz presentation on Preparing for the Future in which she set a tone for the remainder of the conference followed as did Stephen Wollard with his paper entitled Zoo Education in the Next Millennium: Education for Sustainability.

Other presentations about specific programmes in zoos in Taiwan, India, Mexico, Venezuela, Austria, Africa and USA completed a very full day of learning.

A fabulous field trip to Yang-Ming Mountain National Park and the Sun-Yi Aboriginal Culture Museum made the second day of the conference special and permitted participants to get to know one another.

Dr. Ulysses S. Seal, Chairman, CBSG began the third day sessions by discussing the important work of the Conservation Breeding Specialist Group linking work of zoos and field conservation with the latest scientific advances and relating the need for professional educators in conservation processes such as Population and Habitat Viability Assessment and Conservation Assessment and Management Plan.

Excellent presentations by delegates from Uganda, Netherlands, Australia, Kenya, Nepal, India, Taipei, and USA made up the rest of the day which was devoted to the theme Conservation and Communication.

The fourth day was devoted to a field trip to the Taipei Zoo where delegates saw the lush vegetation and modern enclosure designs of the Taipei Zoo with a special tour through the Education Department which is one of the largest and best in Asia and on a par with any in the world. Other highlights of the day were a meeting of the IZE Steering Committee with Dr. U. S. Seal to discuss how IZE and CBSG could link their activities productively. A short review of that meeting will be given later. Other group discussions were held in facilitated working groups to discuss issues raised in connection with the World Zoo Organisation and the World Zoo Conservation Strategy, e.g. promoting scientific literacy, creation of standards to guide the development of zoo education and interpretive programs, and developing a system to identify and replicate effective conservation education programmes to avoid duplication of effort.

The final day of the conference was themed "Cooperation!". Excellent presentations from the Congo, Philippines, Scotland, Brazil, Taiwan, Australia, USA and UK were given. In the latter part of the day a meeting was held of members of IZE to hear the President's Report and discuss issues of concern to the Association. Peggy Harvey, President of IZE, spoke for everyone when she thanked the organisers for providing the opportunity to meet in their country. Peggy Harvey reviewed the state of the association including progress in the regions with particular attention to the new regions created in the previous IZE meeting in Copenhagen.

A final elegant banquet provided an opportunity to say thank you and goodbye and to talk with friends missed during the other busy days of the conference. The next conference for the year 2000 is to be held in Guadalajara, Mexico. The following conference for 2002 is to take place in Vienna.

Review of Discussion on Linking CBG and IZE activities

A flip chart session was held in which the IZE Council met with Dr. U. S. Seal to brainstorm ideas for more effective collaboration and conservation activity between IZE and CBG. The following are some important points and suggestions to come out of that meeting.

- Support of local projects, example from Congo representative
- Communication difficulties in some parts of the world to be resolved by setting up email networks where possible.
- Resource bank to be constructed; people, skills, materials, etc. Possibility of CBG Briefing Book or Manual.
- Capacity building for IZE ref. CBG processes and tools. One day facilitation training possibly in Mexico in 2000.
The Conservation Breeding Specialist Group held its Annual Meeting in Japan in October 1998. In a CBSG meeting much of the work is done interactively, in working groups. This year, for the first time in some years, there was an Education Working Group.

This group was formed to discuss Zoo and Aquarium Education with particular reference to Japanese zoos and aquariums, their problems and potential.

Group members: Pradeep Banstola, APEC, Nepal; Masayoshi Gondo, Animal Science Hall of Kobe Oji Zoo; Noriko Hanazawa, Nihon Univ., Student; Osamu Ishida, Inokashira Zoo and Garden; Yasui Ishihara, Toyama, Municipal Family Park; Nobukazu Kobayashi, Yumenoshima Zoological park, Kawasaki City; Hideshi Mura, Tokyo Municipal Family Park; Yuko Murata, WWF Japan; Tetsu Nishikawa, Osaka Municipal Tennjo Zoological Garden; Yoshiro Takeda, Toyohashi Zoo & Botanical Park; Sally Walker, Convener; Keltie Iwamura, Interpreter and Facilitator; Kazuki Ueda, Interpreter, Facilitator and Recorder.

Objectives or problems for discussion selected by the group:

1. How to provide education to different generations and target audiences;

2. How to train zoo and aquarium personnel in charge of education in advanced educational skills;

3. How to develop a consensus among Japanese zoo personnel that education should be a priority objective of zoos and aquariums.

The group ascertained that the major obstacles to forwarding zoo and aquarium education in Japan could be attributed to a lack of agreement on the degree of its importance among zoological personnel themselves. The need for a dedicated education department and staff for every zoological institution open to the public was stressed by the group.

Some of the specific problems were discussed. The existing interaction with school teachers by zoo personnel is not sufficient and a closer teamwork between zoo teachers and school teachers is much required. The potential effectiveness of zoos and aquaria for education is not acknowledged and, thus, has not been designated in the course of study by the Ministry of Education. Moreover there are few practical training systems in zoos and aquaria for school teachers. Finally, education is a profession and zoo education a specialised subject within the field of education, requiring special skills and training for zoo personnel in charge of education at zoological institutions. At present the facilities and training for developing these specialised skills for educating zoo and aquarium audiences is insufficient both for educators and for animal husbandry personnel who could provide educational input to visitors.

Scheme for problem solution:
For improvement and enrichment of educational activities in zoos and aquariums under various conditions, it is necessary to communicate the advantages or benefits of educational activities in zoos and aquariums to decision makers charged with management of each institution and to the general public. The following are some benefits of zoo and aquarium education. Some of these "benefits" are actually necessities in today's modern world.

Benefits of Zoo and Aquarium Education

1. Education can be fun, or sufficiently enjoyable in order to attract the attention of visitors, stimulate their intellectual curiosity and satisfy their recreational needs simultaneously.

2. Accurate information can be provided so that a high quality education experience is available to the public.

3. High quality educational programs attract visitors and will result in more zoo and aquarium enthusiasts and repeat visits.

4. Zoo and aquarium education is useful for individual development, e.g. to improve one's knowledge and ability and to arouse one's interest and observation skills.

5. Conservation education can be prioritised by zoos and aquariums and carried out with maximum effectiveness with living animals as conservation ambassadors.

6. Effective conservation and environmental education can be structured with the objective of changing visitor attitudes and behaviour toward animals and environment.

Specific actions to be taken:

1. The Report of this Working Group should be disseminated widely to decision makers in zoos and aquariums in Japan as well as policy makers in government.

2. A Report to the Ministry of Education reflecting the necessity of educational activities in zoos and aquariums and of programming them into the course of study (particularly for elementary education) should be submitted.

3. A system for training personnel in charge of education in zoos and aquariums should be undertaken.

4. Research on visitors' attitudes and effectiveness of educational techniques (Pedago-psychological research) in zoos and aquariums should be taken up.

5. The necessity of providing facilities in the form of a building and equipment for education should be stressed.

6. A data base of educational software for zoos and aquariums should be compiled.

7. The setting up of an Educational Planning and Management committee in each zoological institution should be encouraged.

8. An increase in budget allocation for the education programme should be given.

Note: The Japanese Zoo Educator Association is 20 years old and 120 person strong. It is the only Zoo Educator Association in Asia. This association and is combined expertise can be availed by the Japanese Zoo Community to help address some of the problems.
ZOO ED NEWS AND IDEAS FROM ALL OVER ASIA

PAKISTAN

Visitors to zoos come and see beautiful animals and now, more than before, beautiful enclosures also. In many zoos they may also get informative signage to read and colourful brochures. But few visitors get to know anything at all about the behind the scenes activities involved in captive wildlife management.

Our personal experience has been that many visitors, especially children (who are naturally more curious) want to know how we feed our animals, what we feed our animals, what the night quarters are like and so on. So with our tigers, we started a guided tour of the tigers night quarters. We charge a nominal Rs. 5.00 per person and the visitor is told that this payment is going directly to the tigers management. So they do not mind "contribute" to feeding the tigers.

Our tour of the night quarters takes place while the tigers are out in their day enclosures. So there is no disturbance to the animals. At the entrance to the night quarters we have placed the transportation cages in which the tigers were sent to us by the Pingtung Center, Taiwan. The tour starts with our guide (the tiger keeper) introducing the transport cage to the visitors. Why it is a certain size and strength; why it has holes in the side walls; why it has pull out trays in the floor and so on. Then the visitors are taken into the night quarters and several explanations are made. For example, the operation of the drop gates through which the tigers enter and exit the night quarters; the water troughs which can be filled and emptied from the service corridor; the need for daily cleaning and hygiene; the reason why rough wooden planks are fixed vertically to the walls about a meter above the ground level, etc. Finally the visitors are taken into the adjacent "management" room where the daily feed is prepared and weighed and where the daily management records are kept. Here we also have the annual medical check up reports framed and hanging on the wall and visitors are explained the different medical tests which are carried out. Also here the guide gives a quick demonstration of how oral medicines are administered to the tigers in meat pockets.

Though not many visitors take up our tour, all visitors without exception who have taken the tour so far have been fascinated by the management procedures. Many questions are asked and many misconceptions are cleared. Based on our experience, I believe that such tours serve the education purpose very effectively and visitors who make the effort to take the tour come away a lot more informed.

Zohore Ali Shariff, Director, Jungle Kingdom
Islamabad, Pakistan

VIETNAM

Ecology -- More or Less

- Fewer earthworms → poor harvest → low yield of food
- Fewer hard-wing insects → more caterpillars → more plants/crops damaged
- Fewer spiders → more insects → more diseases
- Fewer lizards → more crocodiles → more viruses in food
- Fewer butterflies → less pollination → less fruit
- Fewer frogs → more quantity of insecticide used → less lifespan for humans
- Fewer snakes → more rats/mice → more crops damage
- Fewer bugs → more rats/mice → less food
- Fewer hares → more insects → more disadvantages
- Fewer owls → more rats/mice → more damages
- Fewer fish → more mosquitoes → more danger of malaria
- Increased human population → decreased forest cover → more problems

Coex, Saigon

NEPAL

World Environment Day 1998 was celebrated as the "Year of the Tiger" to promote conservation awareness on the dwindling status of the tiger species in the world. The program was jointly organized by the King Mahendra Trust for Nature Conservation/Central Zoo and the WWF-Nepal Program on June 5, 1998. A variety of activities such as Tiger Artwork, Tiger Information Art Posters and Baagh Chali Competition were organized beforehand. Environment Parade, Exhibition and Award Distribution Ceremony were organized on June 5th, 1998.

In October the Central Zoo hosted a Photo Exhibition of Amphibians and Reptiles of Nepal along with the King Mahendra Trust and the Amphibian Reptile Conservation, Nepal (ARCO) based in Germany. Books entitled "Adventures of a Nepalese Frog" and "Contribution to the Herpetology of South Asia" describing two new species of amphibians were released.

Central Zoo is very education oriented with a Friends of the Zoo, Wildlife Resource Library, Zoo Slide Show, Guided Tour, Keeper Talks, Cultural Storytelling, Animal Fact Sheets, Zoo Treasure Walk, Animal Activity Book, Conservation Games, Zoo Patrol Volunteer programme, and Zoo Outreach Programmes to schools, clubs, etc. This Information was taken from their newsletter, November 1998, a quarterly publication.

INDONESIA

This letter is to inform about the educational efforts in Bandung Zoological Garden. We just set up a "Public Education Section" at the end of this year, with two staff involved and included in Animal Department. Before, it is named "Information Center" that include in General Affair Department.

Up to now, we have not had a special program for education, we just give any information asked or needed by visitors and students, both general information or information regarding animals and their management. We also provide assistance and guiding for students, specially university students, who takes place any research at the Zoo.

We organized some activities, such as painting, singing, poetry competition, etc. for school children in special events (Hari Lingkungan Hidup, Hari Cinta Persis dan Satria Nasional, Hari Bumi, etc.) at least once a year. For this special events we generally collaborate with schools and volunteers. Our budget for education is about US $ 1004 per year, but we don't have sponsored educational activities by business or clubs, etc.

To develop and improve the new Public Education Section in Bandung Zoo, we welcome suggestions from ARNIZE members throughout Asia.

Drh. Yunita Ramdan, Animal Department, Bandung

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HONG KONG

Ocean Park Education Section was established in 1992. Since its inception, the objective of the Education Section is to provide education programs for the local community and the Park’s visitors in order to arouse participants’ awareness on the wildlife science education and conservation of wildlife and their habitats. In the past six years, more than 150,000 local students joined our school programs which had tour on whales and sea lions, on fishes, on sea Birds, on butterflies, on plants and an outreach programme on oceans.

The in-park tours are guided visits which last for about 2 hours; 40-45 students can be entertained for each tour. The outreach program is designed for younger students (aged 6-9) which lasts for one hour and 15 minutes. The theme focuses on marine conservation. Students join conservation games and observe specimens of marine organisms. Up to 100 students can be entertained each time. We charge the schools which covers the cost of the programmes. There is also a Junior Secondary School Education Programme Biodiversity and Conservation at Ocean park. Through different kinds of activities, students are made aware of the importance of ecosystems and environmental protection for both human and other wildlife.

Other Educational Opportunities offered are Teachers’ seminar and day tour special visits upon request by conservation oriented organisations and Mobile Stage Vehicle Section Fun Express for sick or underprivileged persons, e.g., hospitalised children, mentally retarded, and aged people.

Jane Li, Education Manager

Kadavur Farm and Botanic Garden: The Education Department formed links with local primary and secondary schools as a result of increased frequency of guided school visits and training workshops for secondary school teachers. New education posters were produced and the Department continued to be active in the HK Environmental Education Group.

The Department has formed a set of guidelines and application forms for school visits and distributed to all schools in Hong Kong via the HK government education department. Also two informative leaflets were produced illustrating some of the major conservation themes at KFBG (Raptor Sanctuary and Orchid Haven). Directional signs were erected and a teacher’s pack was under preparation, both to ensure that tourists get the most from their visit.

INDIA

Centre for Environmental Education - CEE is directly involved in Environment Education in schools. A number of materials for both children and teachers are developed and field tested. We are indirectly involved in zoo education also. We are currently working on a Teachers’ manual which looks at how teachers can use zoos as a valuable teaching - learning opportunity. This network would help us in knowing other zoo educators and their activities.

Ambika Ajoydual, Children's Media Unit, Centre for Environmental Education, Ahmedabad

Indore Zoo, Indore: Wildlife Week-96 at Indore Zoo was celebrated with the assistance and co-ordination of five Institutions, namely Indore zoo, Forest department, an Environmental NGO, the Lions Club of Indore and a Youth Hostel. The Mayor inaugurated the week by releasing a bunch of pigeons, enjoining with a slogan of Wildlife painted on a thermocol sheet. Paintings, photography and essay competitions were organised for the students.

A ‘Rally’ marched through the popular streets of Indore joined by the zoo animals, employees, students of various school, elected public representatives and important officials of government departments and the co-ordination institution. Various Posters banners were displayed in the procession and slogans regarding Wildlife protection were announced through the audio arrangements. The rally feature was beautifully covered by the local T.V. channel and the media. An exhibition was launched in the zoo showing the object of zoo, importance of wildlife in nature and to develop awareness among the public. A painting competition for handi-

capped persons were also arranged in this week, which was highly appreciated by the public.

S.K. Modi, Indore Zoo

Sri Venkateswara Zoological Park, Vizianagaram: All educational institutions in the town and all secondary schools in the district are invited to the zoo at their convenience. At the entrance of the Zoo a talk will be given by the Curator or Forest Range Officer, about the objectives and role of Zoo. Important of Wild Life animal displays; conceptual plan, Do's and Don'ts inside the zoo and the need and people of co-operation in conservation programmes. They are taken around the zoo by a guide. They are provided with one patrol kit, one Zoo brochure, one poster, one set of animal cards, one paper bag and one ABC colouring book. After visiting the enclosures they will be taken to visitor centre where Non timber forest products, animal products, skins, pelts and scats, pug marks traced with plaster of Paris, herbarium of Zoo flora, photographs of Zoo fauna are displayed. Wild life film will be projected. Children are learning and understanding more about wild life in this type of guided visit.

One set of 5 Animal cards is prepared in which differences between two similar animals like tiger and tortoise, African elephant and Asian elephant, Crocodile and Alligator and interesting animal behaviour is briefly explained. Animal cards, posters, snake folders, ABC colouring books are sold at nominal rates to the children as free distribution is not having desired effect.

Director, Sri Venkateswara Zoological Park, Tirupati.

SINGAPORE

Singapore Zoo celebrated their 25th Anniversary in 1998 and the Education Department was much involved in designing attractive thematic graphics for the occasions. A series of beautifully created animal t-shirts, brochures, cards, book marks, hats, etc. were used for the various occasions, including a special behind the scenes zoo tour, Launch of a special 40 page comic book, theatre carnival and opening of the new Fragile Forest exhibit in November.

Jurong Bird Park created a wonderful indoor playroom with a theme of eggs and nests of various birds which was full of delights for young children. A giant weaver bird’s nest could be entered for a feeling of how it is to be a weaver chick, a hatching display with live chicks, a large display of different types and sizes of eggs and other creative and fun games and interactive exhibits made this a carnival of educational delights. The Jurong Bird Park also agreed to organise a meeting of all the educators in Singapore associated with an animal or nature oriented facility and they have sent out the first mailing for this.

MALAYSIA

Zoo Negara Malaysia has a new Education Officer, Ms. Andora Fredericks who took charge in October. This lucky zoo has posted for four educators which they will fill when the renovate their large education building.

Zoo Melaka, Malaysia now has an Education Officer, that is Me. Azril Hanal Bin Abdul Karim. His address and also Andora's can be found in the Directory of ARNIZE members in this issue.

SEAZA

The South East Asian Zoological Association had a Strategic futures Search December 1-3. Among other decisions was to create an Education Subcommittee. Dr. Suzanne Gendron, Director of Zoological Operations and Education was asked to head this committee. Suzanne is a Member of IZE and ARNIZE.

Editor’s note: The names of the members and addresses of the zoos listed in these various articles can be found in the Directory of Members.
JAZAE
JAPANESE ASSOCIATION OF ZOO AND AQUARIUM EDUCATORS

Educational activities in Japanese Zoos such as Summer School had become popular since the latter half of 1965. At that time, individual staff of Zoos, Aquariums and Museum curators individually were exchanging their ideas and views about their educational activities.

As increasing numbers of people who were interested in education at zoos and aquariums, a demand arose for a venue for gathering to discuss problems, exchange idea and views, and to establish a close professional relationship among each other as educators. Therefore, the first meeting of the Japanese Association of Zoo and Aquarium Educators was held in 1975. The JAZAE has been meeting regularly twice a year for the last 24 years.

JAZAE is open to anyone who has interest in zoo and aquarium education. Associate members are not only Zoo and Aquarium educators but also museum curators, school teachers, students, etc. This year is the 24th anniversary of our group. We had the 39th meeting at Ueno Zoological Garden in June.

JAZAE Membership fee structure
Entrance fee : 1,000/- yen
Annual fee for individual: 1,000/- yen.
Annual fee for organization: 5,000/- yen.

JAZAE Secretariat:
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E-mail: iczoo@sys.co.jl
Contributed by Ms. Koiko Tanaka, Saltama Children Zoo

Related conferences
PR & Marketing in Zoos -- There will be a conference on PR & Marketing in Zoos taking place in Holland from the 3rd to the 6th June 1999. Full details not yet available. Contact Henning Jullin, Director of Aalborg Zoo on saa-zoo@post4.tel.dk

Fourth International Enrichment Conference, 29th August-3rd September 1999, Edinburgh, Scotland. The Shape of Enrichment, Inc is pleased to announce a grant of $1,000 U.S. to be used towards expenses to attend. Details are now available from the Shape of Enrichment website: http://www.enrichment.org

European Zoo Educators (EZE) Conference, Safari Beeke Bergen; Hilvarentek, The Netherlands, 16 - 20 September 1999. Contact: Chis Peters; IZE-Regional Representative for Europe/Middle-East e-mail: Rob.Bertensez@inter.nl.net

The 7th Annual Conference of the International Association of Avian Trainers and Educators, February 12-15 1999, Sitka, Alaska, USA. Contact: Kevin Hills, Columbus Zoo, 9990 Riverside Drive, Box 400, Powell, Ohio, USA, 43065. Phone (614) 645-0358 Email: khills@colisoo.org


BOTANIC GARDENS EDUCATION CONGRESS IN ASIA

Zoos don't have to (and should not) limit their educational efforts to animals. Plants are an equal partner in nature and the ecosystem. A number of zoos are located in Botanic Gardens or have botanic gardens in or adjacent to them.

Therefore the news that the 4th International Congress on Education in Botanic Gardens will be held in Asia next year 9-13 November 1999 at Thiruvananthapuram is of great interest to members of ARNIZE.

The Congress is jointly sponsored by the Botanic Gardens Conservation International, Kew Gardens, UK and the Tropical Botanic Garden Research Institute, Trivandrum, India. BGCI, recognising the global trends toward developing a sustainable future is developing educational guidelines on Education for Sustainability in Botanic Gardens.

This Congress is appropriate for any type of environmental educator in any institution, particularly botanic gardens, zoos, plant science institutions, museums, national parks, nature reserves.

The programme has four major themes:
1. Beyond the Limits: Rural and Community Outreach
2. Development Education and Environmental Ethics
3. Teaching our Traditions: Indigenous Plants and Ethnobotany
4. New Trends in Science Education

The Congress format will include plenary sessions, workshops, round-table discussions, posters and an educational fair.

For an invitation and a circular write to Botanic Gardens Education Congress

TBGRI - Tropical Botanic Gardens Research Institute
Pacha-Palode, Thiruvananthapuram, India
FAX 91 471 431178

ZOO EDUCATION COMMITTEE FORMED IN CENTRAL ZOO AUTHORITY OF INDIA

A special Subcommittee on Zoo Education has been set up with members from expert NGO’s, zoo directors and representatives from related government Ministries. The main functions of the sub-committee are 1. to formulate draft guidelines for basic education programmes for different categories of zoos; 2. to set up a mechanism for the regular training of zoo directors, educators, and persons responsible for zoo education; 3. to develop zoo/conservation oriented subject matter for national curricula for different levels of students; 4. to develop material for zoo education; 5. to conduct workshops involving policy makers, zoo personnel, school teachers, and general public. It is hoped that a Zoo Educator Training Course with all southern Asian zoos as invitees would be approved by this sub-committee.

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INDIA
ABC and XYZ of Educational Ideas

A survey conducted by ARNIZE

We have put together 157 basic zoo education tricks, techniques and themes. This list formed the basis of a survey we are conducting for all people who become members of ARNIZE. The survey is to find out which of these ideas Asian Zoos have tried, if it has worked well in their zoo and, finally, if they would like to have some more information or material about how to carry these ideas.

We have asked zoos in USA, UK, Europe and Australia to contribute any kind of materials they can spare to build up a collection which can be referred for this project. For every one of these 157 ideas, we want at least one good write up or article with some illustrations. With this "zoo ed bank" we can then send a xerox copy to people in ARNIZE who request instructions or suggestions for specific techniques or projects.

Zoo education is a creative and continuing subject. We have the whole of the natural world with which to create excitement and enthusiasm for wild animals, forests, oceans and all the natural environment.

There are probably hundreds of educational techniques used in zoos. Every country and culture has different ones. In some zoos in India it has been found that some techniques used in western countries are not appropriate for our zoos. We want to find out what techniques of the standard list work in Asian zoos. We also want to find out if you do things in your zoo that perhaps are not common elsewhere, or are new ideas.

In the survey, we ask
- if you have used the techniques or topics listed for education in your zoo,
- if you tried and the technique was "successful"
- if you had problems or it was not appreciated
- if you use volunteers for a particular activity
- if you are particularly interested in the idea (trying it for the first time or just improving what you do) and would like
- if you can contribute a write up of the idea yourself

Due to the cost of postage we have not sent the survey to all Asian Zoos but only the people who responded to our initial request for members. If you are reading this and are interested in the survey, please send your green form or a request letter and we will send you the form.

If you are reading this and can simply send a write up or printed material on any of these techniques for the information bank, we welcome your input.

Using numbers to illustrate animal issues and concepts makes 158 ideas, not 157! We left this out of the list! Probably there are 1058 ideas. What are yours?

ABC colouring books or posters
Animal size game — how tall are you — outline of animals of different heights convenient for kids to stand against and compare their height
Animal adaptation — how animals adapt to different habitats and climates
Animal adaptation
Animal behaviour
Animal classification
Animal feeding times (keepers feeding)
Animal handling programmes
Animal safari on zoo premises
Animal shows in which animals do tricks
Animal shows in which the natural behaviour of animals is demonstrated
Animal skin — touch display for texture of different types
Animal voices
Apron or coat designed worn by educator or volunteer (with artifacts in pockets, etc.)
Arctic
Attitudes of Zoo visitors — survey in your zoo
Audio commentary in zoo train
Audio visual theatre
Audio-visual tools at the enclosure
Behind the scenes tour
Biodiversity
Biology class
Birthday party for zoo animal
Bookshops in the zoo and sale of selected souvenirs
Botanical collection — plants
Brochures
Camp over weekend
Children's zoo
Classroom facilities (with artifacts) or like a "teaching lab"
Colouration, stripes and spots as animal camouflage
Colouring books featuring animals of your zoo (or otherwise
Communication skills training
Computers as an interactive education exhibit
Computers, as in compact disk animal programmes, etc.
Computers, as in Web surfing
Conservation "success stories" — animals bred in zoos and released to the wild
Conservation — as an educational theme
Conservation — specific problems in your country as a educational theme
Costumes
Desert
Design a zoo — activity sheet
Design of animal enclosure as educational device — habitat, behaviour
Design of visitor area around the enclosure — immersion, waysides
Discovery lab
Display techniques
Domestic animal display
Ecology
Educational packets
Egg-hatching display
Environmental Education in Zoo Education—pollution,
Environmental enrichment for showing animal behaviour
Environmental games through play
Evaluation of your educational devices and activities
Events—(Forestry Day, Wildlife Week, Animal Welfare Day) for special
programmes
Evolution and development of zoos. Chronology of keeping wild animals
Exhibit design for education
Exhibition of diverse special effects (prepared plant and animal materials,
inorganic components, models, artificial products, and so on) in glass
cases, permanent mini-exhibitions)
Face painting
Farmyard zoo
Field trips
Footprint game—compare size of visitor's feet with animal feet cutouts
Front end evaluation—(evaluation of educational exhibit in "Draft" before
doing it
Guidebook
Guides; guided tour
Hand lettering a zoo label
Handicapped visitors—Special educational opportunities for (blind, deaf)
Handicrafts for small groups
High tech—electronic methods
History of zoos in general or of your zoo
Illegal use of animal parts for medicine
Immersion—creating the feeling of being in a forest or desert
Information booths
Interactive exhibits
Interdependence of living things
Invertebrate displays
Keeper talks
Low tech methods
Map of Zoo
Mask-making
Media as educational tool
Mirror—"world's ugliest animal"
Monorail or Zoo train—illustrations on and in
Multimedia
Myths and legends, traditional "stories"
Natural history trails or "nature trail"
Newsletter
Night tour of zoo for special audience
No feeding policy—education about
Nursery—baby animals on display in special room
Oceans
Origami and other paper crafts
Outreach programmes—visits to schools, civic groups, hospital, jail,
other
Overnight camping at or near zoo
Packets of seeds, sand, other items as educational device
Painting and drawing competition
Parades or "march" or "Zoo Run"
Partnership programmes—cooperative educational programmes with zoos
and nature reserves in other parts of the world used as educational
technique
Peek-a-boo interactive signs and models
Petting zoo
Photo competition and display
Photo opportunities to pose with cardboard cut out
Photo opportunities to pose with live animal
Photo opportunities with live animal
Playground with animal related toys, e.g. swing ladder to teach about
gibbons; spider-web jungle gym etc.
Poetry
Posters
Prehistoric animals
Professional letters of zoo labels
Public relations/coping with media
Pug marks or animal footprints imbedded in concrete to lead to next
animal enclosure

Puppets
Radio programme, regular
Research in zoos— as education tool
Role of zoos— as education tool
School's programmes
Schools' curriculum — linking zoo education with
Signs (labels) directed at young children
Signs directed at adults
Slide shows
Special event programmes
(wildlife week, animal welfare week, forestry day, etc.)
Species specific programmes—endangered species in your zoo
Staff presentations (vet, curators, etc.)
Stationary guides—volunteers posted at one place in the zoo to talk to
visitors
Stickers
Talking to people
Tape recorded commentaries with rented tape recorders
Target audiences—different types of materials for different audiences
Tattoos for kids
Teacher training in the schools—as outreach or by sending packets and
kits
Teacher training in the zoo; teachers workshops
Television programme, regular
Temporary special exhibitions
Theatre
Touch tables
Tropical rainforest
T-shirts
Tunnel exhibits for children to crawl through a space and pop up in a
plastic bubble right by the animals
Visitor behaviour—does it form part of your education programme
Visitor mis-behaviour—does it need special educational response
Visitors with special needs
Visitors' survey of general visitor profile
Volunteers for outreach programmes
Volunteers in zoos
Website / Internet
Workbooks
Worksheets for school children
World Zoo Conservation Strategy—use in educational boards and
literature
Zoo animal diets— as educational subject matter
Zoo bag—props in a bag to show visitors or a guided school group
Zoo education master plan
Zoo mobile
Zoo Patrol—kids helping to stop teasing and feeding in the zoo
Zoo Personnel— as educational subject matter— "Who's who in the zoo"
Zoo school
Zoo signs/texts
Zoology class
Zoolemics—children competing against animal speeds and feats

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Teacher training workshops in the zoo

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Asia -- Newsletter of the Asian Regional Network of I.Z.E. - Volume 2, Issue 1, March 1999
Conservation Game on Tropical Rain Forest  
An Ideal-ZooEd-Idee from Ocean Park, Hong Kong

Teaching activities with organised school groups in the zoo are idea for educating effectively because you have live animals there to underscore the importance of the concepts. The theme of a Tropical Rainforest is ideal for Asia as so many Asian countries have their own tropical rainforest ecosystems and are affected directly by the condition of even neighboring countries' rainforests.

The ideal number of students for this game is 20-22. It was designed for students from 9 to 12 years old.

The objectives are to help students understand that human's activities is the most serious threat to tropical rain forests and the animals found there and to encourage students to establish environmentally friendly life style.

It is more useful if their previous knowledge includes functions of plants in the ecosystem, food chains and food webs and locations of tropical rain forests in the world.

You need -- ideally --
- a magnetic white board to be painted in green colour (BUT you could use any surface to which you can stick or pin paper items.
- 2 dimensional trees found in tropical rainforest (in three different heights) with magnetic tapes at back (or a way to tape or pin them to your board). Should represent different layers. Suggested heights.
  Emergent Layer (60m in height)
  Upper & Lower Canopy (40-50m)
  Ground Layer
- 2 dimensional animals found in tropical rain forests with magnetic tapes (or a substitute) at back

Setting -- Students are arranged to sit facing the white board in U-shape as below:

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  The white board showing a tropical rainforest

  Students around the white board.
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Activity
The interpreter (zoo educator) relates that tropical rain forests form the 'green belt' of the earth, in which more than 50% of the world's animal and plant species can be found. Trees of different height form continuous canopies of different heights. When describing this, the educator can ask a student to come and pin the tree groups on the board.

To help students imagine the height of each canopy layer, they are asked to compare the height of their home, i.e. imagine living on Emergent Layer is similar as living on 30th floor of a building! Thus a tropical rain forest is established on the white board.

Adding Animals:
Get illustrations of animals from the rainforest of your own region if possible. The zoo educator introduces the names of the animals, then distributes the animals to students, who are asked to find the homes for the animals by sticking them onto the suitable layers.

Tropical Rain Forest after students stuck animals and plants on it.

Impact of human activities on the ecosystem of a tropical rain forest:
Students are asked why the area of tropical rain forests have been decreasing so that they list the threats or human's activities associated with decline. As students mention each destructive activity, a tree and the animal(s) living in it are taken down from the tropical rain forest (white board) so that students experience how tropical rain forests are destroyed by human activities.

To end the class on a positive note, students are asked to suggest environmentally-friendly life style to save the tropical rain forest and tree is 're-planted' for each suggestion given. As more ideas are learned and, more people practise the life style, the tropical rain forest is re-established more rapidly. Students should be left with the idea that although the area of tropical rain forest is decreasing rapidly, if human beings eliminate destructive activities and practise environmentally friendly life style, the tropical rain forest and its ecosystem can recover.

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ZOO SCHOOLS / SCHOOL ZOOS
Schools on zoo grounds

The information on this page all came from an AZA (American Zoo Association) email list serve on Zoo Education in answer to a question about any school buildings or grounds or a program in which a year-long school curriculum is integrated with a zoo institution. Many zoo directors in Asia have been fascinated with the concept of "zoo school".

A zoo educator thinking of starting a zoo school in her zoo asked for information from zoos which had run Zoo Schools in their varied form. The responses are interesting and have been given below. If people are interested in more information please write to us or the concerned zoos. For information on how to get on the education list serve you can email <Bruce Carr, BCarr@AZA.org> or Ms Lisa Herschel <LHerschel@AZA.org>.

1) Trevor Zoo, USA
In our very own unique situation, the Trevor Zoo is the only zoo in the U.S. which is on school grounds rather than the school on zoo grounds as you requested. The Trevor Zoo is an integral part of Millbrook School, an independent, 9-12th grade, boarding and day school in the Hudson Valley region of New York. At Trevor Zoo (AZA accredited since 1989), over 40 students participate in the daily care and feeding of our zoo animals as part of the school's community service program. Each year, several students also take on leadership roles as "zoo curators" who oversee and help care of different sections of the zoo. About 6 students work in an afternoon program called "Zoo Squad", an alternative to traditional sports choices such as soccer and field hockey. These students help with exhibit design and display, grounds work, and zoo maintenance projects.

Academically, students can undertake a year-long study of animals and zoo-related topics in three zoo electives: Conservation Biology, Animal Behavior, and Zoo Science. Biology and advanced biology classes also make use of the zoo in their courses. Senior students at Millbrook School have conducted year-long Independent Study Projects on the behavior of our Japanese Macaque colony. Additionally, the Trevor Zoo has offered internships to recent college graduates who are interested in pursuing animal studies. Over the years, we have been pleased to help launch the veterinary and conservation careers of many of our students and interns. Jane Meigs, Trevor Zoo <trevorzoo@vh.net>

2) San Diego Wild Animal Park
We just opened four classrooms on grounds this past September fourth and fifth graders from the school located next door attend class here during the traditional school year. Their school had a growing student population and no space to grow, so we allowed them to construct the classrooms on site. We partner on many projects with the teachers and classes, including construction of a butterfly farm next to the classrooms; and an upcoming straw bale house for a seed banking project. We are currently administering a survey on what the students know about conservation and how they feel about it; we will re-survey them again in June to obtain (hopefully) some valuable data. Delilah Bollo, San Diego Wild Animal Park

3) Cincinnati Zoo
We have a full time high school on grounds -- Zoo Academy. 11th and 12th grade only. They have to do 9th and 10th at a nearby local school. Diane Silvey, Cincinnati Zoo

4) Folsom Children's Zoo
I believe the only 2 full-time programs at the school high level right now are Folsom Children Zoo program and the Los Angeles Zoo/N. Hollywood High Zoo Magnet. I attended the LAZ school back in its first graduating class. They have permanent buildings in the LA Zoo parking lot and use the zoo as a daily science supplement in the curriculum. Other courses go into the zoo frequently for such things as writing papers in English classes and naming animals in foreign language courses. The LA Zoo Magnet coordinator is Ms. Linda Gill.

5) Kansas City Zoo
The Kansas City Zoo has a school program with elementary and middle school kids, which is considered a Zoo Academy. The school is located across the street from Swope Park, and the students visit the Zoo once a week. This used to be a magnet school, but with the ending of the bond issue that supported it, the program has become a special opportunity for certain children in the school. They learn math, science, social studies, writing and even English (for the ESL students) by referring to the animals, or other situations in the Zoo. For more information, you may contact Carla Colete, Education Curator in KC. 816-971-5700

Nicole Manta <hgbroco4@xmission.com>

Colleges with Zoo Programmes

- Pensacola Jr. College using "The ZOO" in Gulf Breeze.
- Friends University using the Sedgwick County Zoo
- Santa Fe Jr College in Gainstown using their own Santa Fe Teaching Zoo
- Moorpark Jr. College in CA using their own America's Teaching Zoo
- Pike's Peak Jr. College in CO using Cheyenne Mountain Zoo
- Canisius College using the Buffalo Zoo

Zoo School
Who drives ARNIZE?

The organisation which is helping to network ARNIZE is the Zoo Outreach Organisation or Z.O.O. ZOO is a Positive, Constructive, Practical, Scientific, Sensible and Sensitive Conservation, Education, Research and Animal Welfare Society in India.

Z.O.O. is a communications service to fill the gaps in information and to provide a link between different agencies and institutions that have comparable and compatible interests with Indian zoos, e.g., wildlife agencies, conservation and welfare NGO’s, universities, educational institutions. It is like a “Friends of the Zoo” for Indian Zoos. Z.O.O. supplies zoos with up-to-date technical materials which are not so easy to obtain in India due to foreign currency inequities and import obstacles.

ZOO does many things but one of its major activities is to promote zoo education and development, produce educational materials for zoos with low budgets and guide zoos with better facilities to direct them towards educating more people by outreach activities.

ZOO is the organisation promoting ARNIZE at this time because the Asian Regional Representative for I.Z.E., is Sally Walker, the Founder and Secretary of ARNIZE. In the year 2000, new Regional Representatives will be elected and another IZE member and Institution will take over this job.

Current members should be thinking about this as they might want to stand for election in 2000.

To contact ARNIZE write to

ARNIZE
Zoo Outreach Organisation
Box 1693, Peelamedu
Coimbatore, 641 004 T.N. India
Ph: 91 422 563 159 or 91 422 561 087
Fax: 91 422 563 269
email: zooechi@vsnl.com

Websites:
ZOO - http://www.geocities.com/rainforest/vines/6883
ARNIZE - http://members.tripod.com/~SallyWalker

Who sponsors ARNIZE?

The Columbus Zoo Conservation Fund has kindly given a grant to cover the initiation of ARNIZE, initial correspondence for sponsorship, fundraising for future projects, the ARNIZE Newsletter and duplication and circulation of one issue the IZE Newsletter.

Columbus Zoo sponsors practical field conservation in tropical countries all over the world as well as endangered species research in other countries, with a special interest in education. Some of the education projects sponsored include Adopt-a-School and Teacher Training in Peru; Training for teachers in Madagascar; School supplies for a school at Laonjancheng, China; development of a poster for the buffer zone of Noahuale-Ndoki National Park, Mexican Wolf, Coral Reef, Primates and Sea Turtle teaching “suitcases” and educational materials for Budongo Forest.

The ARNIZE Networking project is the only project addressed specifically to zoos in countries of the developing world.

Thanks to you, Columbus Zoo.

The Top Twenty

Amy Ploughman

Editor’s Note: When educating about conservation and environmental issues, the hardest things to do is to get zoo visitors to change their attitudes and behaviour.
We paint a bleak picture and get their attention but it is crucial to end on an upbeat note and give people very precise and “do-able” suggestions for what they can do to change the situation. Here is a good list from the Palgioto Zoo Palgioto Zoo News, 36: (7) 1998.

What to do?

At home:
1. Recycle waste - use bottle, can paper and plastic banks where available but don’t make a special car journey to get them
2. Re-use envelopes, carrier bags etc. and use re-usable containers for food instead of disposable bags and coverings
3. Buy recycled products whenever possible
4. Save electricity - turn off lights and appliances when not needed, only boil as much water in the kettle as you need and use low energy light bulbs
5. Install loft insulation (at least 6 inches) and fit draft excluders on windows and doors
6. Save water by never letting taps drip and turning the tap off while you clean your teeth
7. Most sewage is discharged into the sea untreated so avoid throwing anything down the toilet and do not use chlorine bleach

When shopping:
1. Buy local produce whenever possible - it uses less fuel
2. If you buy charcoal for barbecues, it should not come from endangered forests
3. When buying wood try and find out if it has come from sustainable forests

When travelling:
1. Reduce car use - walk or cycle whenever possible, take it in turns to give lifts with friends or use public transport
2. Slow down - driving at slower speeds uses less fuel so produces less pollution
3. Buying a new car? - consider a more fuel efficient one with up to date emission reducers

In the garden:
1. Install a water container to collect rainwater for watering the garden
2. Encourage wildlife by planting wild flowers, building nest boxes, ponds or even a bird box
3. Try biological pest control instead of chemical pesticides

On holiday:
1. Do not pick or dig up wild plants
2. Don’t buy animal or plant souvenirs, they may be endangered species. It is illegal to buy anything made from spotted cat fur, ivory, tortoise shell, coral, rare shells or many reptile skins
3. Trade in many orchids and cacti is also forbidden
4. Do not leave any rubbish in the countryside
5. Check if there are sensitive areas you should avoid before taking part in water sports or outdoor activities such as sailing and mountain biking.