

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute 2005 Volume V: Ecology and Biodiversity Conservation

Jane Goodall, Renowned Naturalist and Champion of Chimpanzees

Curriculum Unit 05.05.06 by Christine A. Elmore

How can the teacher of young children help them to understand the crucial role each person must come to play in repairing the health of our natural environment? Fostering such thinking at an early age will help children to become responsible inhabitants of the earth. This kind of education begins with an exploration of mankind's relationship to Nature. Later it can lead to a study of what actions are to be taken to work for the earth's renewal by conserving ecosystem processes and biodiversity. Most children are natural lovers of animals. They *devour* books on animals and how they live. We might consider this interest as a seed which can be nurtured. A lover of animals can grow into a responsible environmentalist.

This curriculum unit will begin with my students learning about the fascinating life and work of Jane Goodall, a tireless advocate of chimpanzees. I have chosen this renowned naturalist because I find her life's work to be particularly inspiring. I also think that her life, her love of animals from a very early age, her patient techniques of studying chimpanzees in the wild, and her groundbreaking discoveries about them will effectively engage the children's interest and, so, serve as a stimulating topic for them to read and to write about. They will learn about how this lover of animals became a great scientist. Her philosophy is really quite simple: As we learn to care about all species, we better appreciate the interconnection between all living beings.

Our focus in third grade is on literacy, helping students develop and strengthen their reading skills as well as their writing skills. My focus in this unit is on reading and writing informational texts. Indeed, this genre of nonfiction presents its own unique set of challenges which students must learn to master. We as teachers must provide them with the strategies that will help them to 'unlock' the knowledge found in such texts. This unit will be interdisciplinary in scope, incorporating reading, writing, science, poetry and art, and will, I believe, provide topics of high interest that will motivate even the most reluctant reader and writer.

Introduction

I am an instructional coach for literacy at Barnard Environmental Studies Magnet School, where the primary theme is environmental studies. The self-contained class of third-grade students to whom I will be teaching this unit are a heterogeneous group with varying abilities in the seven-to-ten age range and are primarily of African-American or Hispanic-American descent. Although I have designed this unit with them in mind, I am confident that it could easily be used by teachers of K-5, if not older.

Part of the third-grade reading curriculum involves immersing students in nonfiction reading and helping them appreciate and use the many features inherent in these texts. There is a natural progression from the teaching of reading nonfiction to that of writing it. I plan to focus on three types of writing in this unit: journal writing, writing descriptive observations and writing an informational text. I have used an excellent and very teacher-friendly resource book entitled *Nonfiction Writing: Procedures and Reports* by Lucy Calkins and Laurie Pessah to help structure my lessons on teaching young students to write informational texts or as they refer to them, 'all-about' books.

Unit Objectives

To learn about the life and work of Jane Goodall.

To use the techniques employed by wildlife scientists (observation, keeping a journal, timing specific animal behaviors) in studying animal behavior.

To learn about the specific features found in informational texts and use them when doing research and writing.

To approach nonfiction writing with the intention of teaching others what you know.

To learn about the various organizational structures to choose from when writing each sub-topic of the 'allabout' book on chimpanzees.

To learn the causes of chimpanzee endangerment.

To develop an ecological conscience and concern for all living things.

Strategies

To read grade-level appropriate biographies and view videos about the life and work of Jane Goodall.

To practice journal writing after reading samples written by Jane Goodall and watching the teacher model the writing of journal entries.

To practice the techniques of observation, timing, and charting animal behavior while viewing a video of chimps in the wild.

To learn how to read a nonfiction text and to use its many features (i.e., table of contexts, index, subheading, diagrams, pictures and captions, etc.) by participating in shared reading experiences using big books.

To work with a partner on gathering information in informational texts on chimpanzees. using a graphic organizer to help organize the information.

To learn about the 4 basic organizational structures (narrative writing, procedural text writing, diagrams and different-kinds-of-something writing) used when writing an 'all-about' book.

To work with a variety of sources (the internet, books, magazines and videos) to learn about chimpanzees and

the causes of their endangerment.

Meeting New Haven's Literacy and Science Standards

The New Haven school district's emphasis on literacy is targeted in all aspects of the unit. As students listen to and read about Jane Goodall and chimpanzees, they will be asked to demonstrate strategic reading skills before, during and after reading (Reading/ Literature content standard 1.0). They will also be asked to participate in a wide variety of writing experiences. (Writing content standard 2.0). Not only will they write down their thoughts and observations in a scientific journal, and fill in their observations of chimpanzee behavior on specific charts, but they will also write information books on chimps after researching them. By studying the features that chimps have that help them in their environments, students will be able to describe how they are adapted to obtain air, water, food, and protection in land habitats. I will teach my young students to use scientific inquiry, literacy and numeracy to create and communicate scientific knowledge through the observation studies they do and the 'all-about' books they write and share with others (all of which relates to Science content standard 3.2: Organisms can survive and reproduce only in environments that meet their basic needs).

The lessons in this unit will be introduced two to three times a week for a period of 45-60 minutes over a three-month period. My curriculum unit is divided into six sections:

- I. Jane Goodall: Wildlife Scientist
- II. Using Techniques That Wildlife Scientists Use
- III. The Features of Nonfiction
- IV. Writing An 'All-About Book
- V. Endangered Species: What's It All About?
- VI. Jane Goodall: Champion of Chimps

Section I Jane Goodall: Wildlife Scientist

Wildlife scientists, says Martin Kratt, the writer of the forward to Victoria Miles' book, *Wild Scientist: Amazing Encounters Between Animals and the People Who Study Them*, are "often found in remote regions living side by side with other wild speciesand they have great stories to tell" (Miles 2004). This very aptly describes Jane Goodall, who at the age of twenty-six, went to Africa to study the chimpanzees. For hours at a time on hilltop or treetop Jane would sit, observe and record their behavior. Gradually these primates got used to Jane's presence among them and often chose to interact with her. Jane indeed has been a prolific writer of both children and adult books on her very interesting experiences with the chimps at Gombe. The bibliography lists many of these books. Similar to the writings of other wildlife scientists, her stories do show us her "deep interest in animals, a commitment to understanding them, and a passion for their protection" (Miles 2004).

Snapshots In The Life of Jane Goodall

"It was very stuffy and hot where I crouched and the straw tickled my legs. There was hardly any light, either. Curriculum Unit 05.05.06 3 of 23 But I could see the bird on her nest of straw. She was about five feet away from me on the far side of the chicken house and she had no idea I was there" (Goodall 1988, p. 5).

Jane Goodall, in her 1988 book, *My Life With The Chimpanzees*, goes on to describe how she continued to stay very still and was soon rewarded for her efforts by witnessing the laying of an egg and the proud strutting of the hen afterwards. She was only 5 years old at the time but she would grow up and employ those same skills of slow and patient observation in watching the chimpanzees in the forests of Gombe in Tanzania. This henhouse experience was only one of many that Jane had as she grew up that exemplified her interest in animals. My students, as they immerse themselves in various biographies of Jane Goodall, including Paula Bryant Pratt's T *he Importance of Jane Goodall*, Elizabeth Ferber's *A Life With Animals: Jane Goodall*, Bette Birnbaum's *Jane Goodall and the Wild Chimpanzees*, and Jayne Pettit's *Jane Goodall: Pioneer Researcher*, will learn of her regular sessions during her childhood sitting up high in a tree in the garden outside London where she would watch birds and listen to their songs. Books like *the Story of Doctor Dolittle* and *The Jungle Book* as well as those about Tarzan captivated her. Jane became an avid reader of books about animals including, "stories of wolves, bears and wolverines in North American and Canada, jaguars, anacondas and sloths in South America, orangutans, Indian elephants, and tapirs in Asia" (Goodall 1988, p. 15).

Jane, on many of her nature walks as a child, wrote down what she saw, thus employing another important technique of the wildlife scientistkeeping a log or journal of one's observations and thoughts. One animal who taught Jane a lot about animal behavior was her dog, Rusty. She taught her canine pet many tricks and rewarded him, not with food but with exuberant praise. Through Rusty Jane learned that dogs can reason and plan. In her aforementioned book, Jane writes, "Rusty was the only dog I have every known who seemed to have a sense of justice. If he did something he *knew* was wrong (that is, something I had taught him was wrong), then he apologized the way dogs do, by rolling over on his back and grinning. But if I was cross about something that *he* thought was okay, then he sulked" (Goodall 1988, p. 23). What Jane learned from Rusty was that animals have feelings, minds, and, indeed, personalities.

Goodall approached her study of chimps with this same assumption and reported her findings describing how their minds worked. But her methods of reporting were ones that many professors and fellow students disapproved of. Unlike the ethologists (scientists who study animal behavior) in the 1960s, who assigned numbers to each animal they studied, Jane gave the chimps she observed names like David Greybeard, Fifi, William, Flo, Goliath, and Pom. Jane explains, "Once you have been close to chimps for awhile they're as easy to tell apart as your classmates. Their faces look different, and they have different characters" (Goodall 1988, p. 71). In her research Jane talked about their individual personalities and described David Greybeard as very cautious but determined, Goliath as exciteable and impetuous and William as very shy and timid"(Goodall 1988, p. 71). Especially shocking to the ethologists back then was Jane's ascribing emotions (like happiness, despair or grief) to the chimpanzees. This was unheard of and considered highly unscientific.

Jane, in fact held the view of a traditional naturalist and took a very personal approach in her study of and reporting upon the chimpanzees. Her notes took the form of narratives, that is, stories about individual chimps. Pratt (1997) described these new ethologists who so frowned upon Jane's work, as people who were much more scientifically oriented in their research. They viewed animals as subjects to be experimented upon in order to discover the mechanics of behavior. These ethologists insisted on taking an impersonal stance on the animals they studied in order to be viewed as the scientists they felt they were (not mere butterfly catchers) and to be taken more seriously.

Jane, on the other hand, had no great desire to be viewed as a scientist and just wanted to study the chimps.

When she would report on how the chimps used their minds, these scientists were affronted, maintaining that only human beings had minds. Scientific journals also rejected Goodall's approach but this did not deter her and she went on to make two breakthrough discoveries about chimps. Through her style of patient observation, Jane discovered that chimpanzees are omnivores and hunt for and eat meat as well as vegetables and fruit. Before this time it was believed that they were strictly vegetarians. A second groundbreaking finding that Jane observed was chimpanzees making and using tools when termite fishing. To reach termites in a hole, a chimp will stick a long piece of grass down the hole and eat them right off the leaf. If the grass bends, the chimp will strip the leaves off a twig (actually making a tool) and use it to procure the insects. This was a new finding and Jane wrote, in her previously mentioned book, "Before this observation, scientists had thought only humans could make tools. Later I would learn that chimpanzees use more objects as tools than any creature except for us" (Goodall1988, p. 68). As a result of these findings the National Geographic Society, upon the request of Dr. Louis Leakey, Jane's mentor and employer, agreed to fund her continued research.

Section II Using Techniques That Wildlife Scientists Use

We will begin our scientific study of chimpanzees using the ample supply of children's books about these primates (see bibliography) that I have amassed as well as a National Geographic video entitled *Among The Wild Chimps* which details two decades of Jane Goodall's work with the chimps at Gombe. This video also shows live footage of the chimps she writes about in action. Since we cannot go to Africa to study these animals, we will use these resources to help us learn about the animals that are very similar to man in many ways.

In order to become a skillful observer, you must practice observing. In a unit entitled *Observer* found on the Jane Goodall Institute "Roots & Shoots" website are two activities I would like to modify and elaborate upon and use with my students. The first activity involves choosing an inanimate object and describing it, using your senses. Following this the student would then sketch it trying to include a lot of detail. I will use Valerie Worth's book, *More Small Poems* to help my students write a vivid description of the object they are viewing. In this book students can take their pick from such titles as Safety Pin, Earthworms, Hose, Flamingo and Mosquito, to name a few, and read them to their partners (The whole class will have been divided into partners at the onset of this unit). The beauty of the description in her poems is in their simplicity. The writer's deliberate word choice in describing, for example, a kitten's behavior with its dancing sidewise, landing in a croached position, arching its back, and keeping its ears back and eyes round, peaks the reader's ability to visualize as well as sharpens his sense of anticipation of what the kitten has sighted (which ends up being a piece of fluff). Additional activities would have students selecting an object from home or school and describing it in detail without mentioning what it is, thus leaving the rest of the class to figure out the object's identity, using the descriptive clues given.

The second type of observation will involve observing a pet at home or an animal found in one's background. As suggested in the Roots & Shoots unit aforementioned, my students will make their observations from at least three different perspectives (up close, looking down at, looking up at, a few feet away, etc.) and write down their observations from each of these stances. They will notice that they gain more information from taking different perspectives. I will remind them to keep their eyes and ears open and their bodies still just as Jane Goodall did.

From this simple note-taking we will move to journal writing. Two children's books that use the journal format that I will read to my students are *Moon Journal* by Karen M. Rogers and Diane Cox (featuring a child's daily observations and findings about the moon) and Ivy's Journal: A Trip to the Yucatan (featuring a child's daily writing of the sights she saw and the people she met while on a family trip to Mexico). Both are written in first person, include detailed descriptions and include diagrams, drawings and photographs. From there I will move on to our primary focus: chimps. Jane Goodall's book, The Chimpanzees I Love: Saving Their World And Ours, will provide the models for good descriptive writing of both animal habitat and behavior. Before reading excerpts from her book I will provide them with a simple checklist of aspects to look for in a wildlife scientist's journal which will include use of first person, descriptions of the animal's habitat, weather, time of day as well as descriptions of the animal itself in terms of its appearance, the behaviors it exhibits, both its behavior alone and, if possible, in interaction with other animals. In addition to this, the writer should include the feelings, reactions, wonderings and questions he/she has during the observation. As I read excerpts from Goodall's book I will ask students to listen for and note aspects from their checklists incorporated in Goodall's writing. Chapter 4, "A Day in the Forest" in the aforementioned book is especially rich in such description. What follows is one small excerpt: "An hour later they all move off together. Suddenly we hear the birdlike calls of read colobus monkeys above us in the canopy. The chimps are excited. They reach out and touch one another, their hair bristling. Then they start to climb and start to hunt." (Goodall 2001, p.51). Goodall's My Friends the Wild Chimpanzees, With Love, and The Chimpanzee Family Book are also excellent sources to use in teaching about descriptive writing in journals. I will spend time modeling the writing of journal entries on large chart paper imagining that I am Jane Goodall observing the chimps at Gombe. Students will then have a go at it. An important part of the writing experience is to share it with others and so partners will be given ample opportunities to share their journal entries with each other. I will also make it a practice to regularly read and respond to what they have written.

Students now need to practice observing chimps in the wild and we will have multi-viewings of the video mentioned earlier. Martin and Bateson (1986) offer some guidelines to follow when observing and recording animal behavior. I will simplify their suggestions to better suit my young learners. Initially, we will decide which chimps in this video to watch and when. We will use behavior sampling where "the observer watches the whole group of subjects and records each occurrence of a particular type of behavior, together with details of which individuals were involved" (Martin and Bateson 1986). In regard to recording rules we will use a check sheet that details which behaviors we observed and the frequency (measured in one minute intervals using a stopwatch) of occurrence. The procedures for this are laid out in Lesson Plan One. Three activities that chimps spend a lot of time doing are grooming, foraging for food and playing so we will especially focus on these while viewing the video and recording behavior.

Section III The Features of Nonfiction

To help students gain familiarity with the features of nonfiction texts, we will begin with the shared reading of nonfiction 'big books'. In a shared reading experience it is the teacher who takes the lead in talking about reading strategies one uses when reading the text, in leading the class in a whole group read-aloud of particular pages, in pointing out vocabulary that warrants further clarification, and in modeling a think-aloud where she as the reader thinks out loud as she attempts to make meaning from the text. It is also a time to demonstrate how to use various nonfiction features in the book like the table of contents, the index or the use

of captions. As students gain more confidence, individuals can be called up to demonstrate how to use a particular feature to get information. Nancy Boyles in her book, *Constructing Meaning* maintains that there are strategies that one can teach students to use to improve their comprehension of informational texts. They include connecting, picturing, wondering, figuring out and noticing. Along with these strategies come specific questions to elicit each strategy. Questions like:

What will I learn from this text?

What do I already know about this subject?

What are some questions this text will answer?

What are some clues (i.e., subheadings, bold print, side bars) that might help me?

What details do I notice in the diagrams, charts or pictures provided?

Will this text be easy or hard to read? (Boyles 2004)

Providing students with such strategy support before, during and after their reading can significantly improve their comprehension of the content. The goal is to teach the students to become active and engaged readers. Lesson Plan Two, using a big book, will show this procedure in greater detail. The bibliography also includes additional nonfiction big books ideal for this purpose.

Reading nonfiction requires a much different approach than reading fiction. Boyles warns that "readers who simply 'dive in' to informational text without a plan, without conscious consideration of what the task involves, are likely to have trouble comprehending the material" (Boyles 2004, p. 87). It is important to point out to the students that when reading informational texts, you don't read a book from cover to cover as you would a fiction text. Rather, you skim and search for sections of information relevant to your research. Using both the table of contents and the index aid this process. After laying the foundation for reading nonfiction texts, we will move on to the writing of informational texts or as Calkins and Pessah refer to them, 'all-about' books.

Section IV Writing An 'All-About' Book

We will begin information gathering to gain basic facts about chimpanzees and students, working with their partners, will be encouraged to use at least three sources from the variety of books and internet articles I will provide them with. Victoria Miles, in her previously mentioned book, presents a format which I plan to replicate. The first part of the reporting form is in table format.

Common name: Scientific name: Order: Suborder: Family: Genus: Species:

This table is followed by separate paragraphs briefly describing each of the following categories:

Size/weight

Description

Reproduction

Food

Approximate Lifespan

Status

Habitat

Range.

I will include enemies and ways they protect themselves in this section.

The next step in their research on chimps will be the writing of an informational text and I plan to use Calkins and Pessah's previously mentioned book to guide my instruction. The making of this informational book presupposes a thorough grounding in the features of nonfiction writing which the student has already received in the previous section of this unit.

One important challenge for children reading nonfiction is learning to categorize the information that they read (Calkins and Pessah 2003) .To facilitate the planning of this 'all-about' book, I will provide my students with the following organizer:

I. Decide on at least four sections (chapters) for your book. Choose from the following list:

Physical Description Habitat Food Enemies Communication Grooming Mothers and Babies Similarities to Man Weird Facts Causes of Chimp Endangerment II. Decide on the format you will use for each section. Choose from the following list: Straight narrative Pictures and captions

Diagrams

How-to list

Once the student decides on the sections, he/she can plan the table of contents pages. The next step is where the real research begins. It will now be the student's job to refer to the informational texts available to find out more about each subtopic chosen. With notepad in hand, the student will be asked to locate relevant information (using the book's table of contents, index, captions and pictures and diagrams) on his/her subtopic and to jot down notes. A mini-lesson on how to take notes will help facilitate this. (See Lesson Plan Three). The student will then decide how he/she will present the information for that chapter. Calkins and Pessah emphasize the importance of paper choice when writing and have suggested the following formats to serve specific purposes.

(images available in print form)

Throughout the writing of this all-about book I will be regularly conferring with each student as he/she goes through the process of writing each chapter. Upon completion of these books students will now be given the opportunity to teach their partner about their topics. Young students may feel overwhelmed with this prospect so Calkins and Pessah offer some useful guidelines for students to consider. They suggest that a student can teach others numbers that go with his/her topic (i.e, kinds of, weight, frequency of behaviors), names of things (i.e., places, people), weird facts (i.e., chimpanzees never sleep in the same 'nest' twice) and advice to tell readers (i.e., never have a chimpanzee as a pet) (Calkins and Pessah, 2003). Students will take great pride in being able to teach others about what they have learned and written about. From here students may opt to begin research on other endangered animals and begin the whole process again of writing informational texts.

Section V: Endangered Species: What's It All About?

"Species" says McClung (1997) "that can't change their ways to adapt to new and perhaps harmful conditions, whether caused by natural forces or by human activities, face extinction" (McClung 1997). Who are the animals that face possible extinction and why are two questions that we will explore in this section of the unit. As I read each of the following books aloud to the class, we will keep a list on large chart paper of both the animals and the causes of their endangerment that we can refer to.

The first book entitled *Growing Up: Against The Odds* by Bernard Stonehouse features a wide diversity of animals growing up in situations where survival is tenuous. The focus is on the young animals that lack both the size and strength to fight against natural dangers like harsh weather conditions and predators. Danger also comes in the form of human activity (i.e., poaching, deforestation). The author writes: "It is not surprising that, though millions of young animals come into the world each year, all but a very few die within the first few weeks of life" (Stonehouse 2000). Included in this book are some endangered species like the giant panda, maned wolf, orangutan and manatee.

The second book I will read aloud is Lynn M. Stone's *Endangered Animals* which provides a factual account in simplified language of the causes of animal endangerment, which animals are endangered and the ways we can help them. Of particular interest are the suggestions she makes that our students can follow to help such animals. They include:

Write to a government conservation office to find out which animals are endangered near your home.

Look for endangered animals when visiting local zoos.

Volunteer to work at a park or wildlife refuge.

Don't buy wild animals as pets.

Join a group that supports endangered animals.

The author ends her book with a sober reminder. "Remember, when an animal becomes extinct, a type of life on our planet is lost forever" (Stone 1984).

A good reference book that I will introduce to my students is Clint Twist's *Endangered Animals Dictionary: An A to Z of Threatened Species.* This book describes each animal and its habitat. It also rates the threat of extinction on a five-level scale: extinct, critically endangered, endangered, vulnerable and lower risk. This is an example of a book that I will not read cover to cover but just make reference to and show my students how to use. I will include in the examples I read the section on chimpanzees.

To introduce students to some of the causes of animal endangerment I will read Melvin Berger's *Animals in Danger*. He relates how animals are well-fitted to their environments and suffer greatly when they face habitat loss. Pollution and poaching also put many animals in danger. He includes mention of the giant pandas, orangutans, whooping cranes, African elephants and green sea turtles.

Following this general introduction to the subject of endangered species we will move to the specific causes of chimpanzee endangerment and for this we will refer back to Jane Goodall.

Section VI: Jane Goodall, Champion of Chimps

Jane Goodall has made it her life's work to study chimps and to speak out on their behalf. Tragically, they have become an endangered species. She writes in *The Chimpanzees I Love* : "One hundred years ago we think there were about two million chimpanzees in Africa; now there may be no more than 150,000. They are already extinct in four of the twenty-five countries where they once lived. There are more chimpanzees in the great Congo basin than anywhere elsebut that is where they are disappearing the fastest" (Goodall 2001, p. 66).

What are the causes of this huge decrease in the chimpanzee population? Jane addresses all four of these causes in her aforementioned book:

1) Deforestation

- 2) Wire cable snares
- 3) Smuggling efforts for the live animal trade

4) The bush meat trade

Let's take a closer look at each of these causes.

Deforestation

More and more trees in Africa are being felled to provide land for growing populations of people to grow their crops on and to build their homes on. Wood is also being used to make charcoal and firewood. Chimpanzees are thus losing their habitat and have to find other places to live. But where do they go? Jennifer Lindsey in her book *The Great Apes* warns that extinction of a species is not simply "an animal suddenly blipping out of existence...When a species loses its territory, food sources, and protection from new and mounting dangersincluding humansit dies off slowly and painfully, each generation becoming weaker and more vulnerable, until the last animal of its kind breathes its final breath" (Lindsey 2001, p. 121). On a larger scale, many animals, not just chimps, are losing their homes because of man. Robert M. McClung writes in his previously mentioned book, "As the number of people in the world increases, the results become even more marked. All over the world tropical rain forests fall under the ax and bulldozer. Mountain slopes are cleared for more croplands. Vital wildlife habitats everywhere, whole ecosystems and natural areas, are disappearing under the onslaught" (McClung 1997, p. 262).

Wire Cable Snares

Chimpanzees are often caught in the wire cable snares set by hunters for bushpigs and antelopes. They may be strong enough to break the wire but cannot get the noose off. As a result, some chimps die while others lose a hand or foot after much suffering.

The Live Animal Trade

To this day there still exist dealers who try to smuggle chimps out of Africa for the live animal trade. Preferring baby chimps that are easier to handle and 'cuter', the dealers will often shoot the mother and steal her babies which are sold to zoos, circuses or to individuals who keep them as pets. Not only are chimps sold for entertainment purposes, they are also sold to laboratories for medical research, where they often languish in insufferable conditions.

The Bush Meat Trade

In the great Congo basin chimps face the greatest threat from poachers who hunt them for food. What has expedited this threat are the roads made by logging companies that delve deep into the forests, making it exceedingly easy for hunters to access and shoot chimps and other animals like gorillas, bonobos, elephants and antelopes. The hunters take the meat and smoke it or load the fresh meat into trucks which they drive back to the towns to sell. Lindsey recounts in her book that "primatologists studying the effects of the bushmeat trade estimate that in one year hunters illegally kill and butcher more than two thousand gorillas and four thousand chimpanzeesten times the number of chimpanzees who live in Goodall's research area of Gombe Stream" (Lindsey 2001, p.127). Jane Goodall warns, "The trouble is that so many people living there prefer the taste of meat from the wild animals, and they will pay more for it than for that from domestic animals. If this trade (known as the 'bushmeat trade) cannot be stopped, there will soon be no animals left" (Goodall 2001, p. 66).

Jane Goodall has been tireless in her efforts to save the chimpanzees. To this day she is regularly on the road

giving lectures about the chimpanzees and other animals. She raises money so that the work in Gombe can continue. Students and journalists from all over the world come to spend time there and to learn about the chimps. In 1977, Jane established the Jane Goodall Institute for Wildlife Research which is based in the U.S. and raises money to help rescue and relocate chimps in Africa. She is also an advocate for chimpanzee rights in zoos and in laboratory testing and, as a result, the lives of chimps in both Europe and the U.S. have improved. Jane started ChimpanZoo which is a group of students, zoo keepers and volunteers who study chimp behavior in zoos. In addition to all of this, Goodall started a program for children called Roots & Shoots which helps them learn more about the natural world.

Jane Goodall firmly believes that each person matters and that each individual can make a difference in helping to 'save the earth'. It all starts with one's attitude toward nature. Do we view nature as simply something to exploit for our purposes or do we see the need to change our ways and share the earth with all living things? It is essential that we as teachers help our students to develop an ecological conscience in which we can see the interconnectedness we have with other living thingsplants as well as animals on this earth. It is up to us to ensure that chimpanzees (as well as all other endangered animals) do not become extinct. In her book, *Chimpanzees* Rebecca Stefoff, quotes Jane Goodall who said, "Chimpanzees at least some chimpanzeeswill survive if humans choose that they do so." The author continues, "If chimpanzees do not survive, human beings will be alone in a new way, having lost the closest link to their origins in the natural world" (Stefoff 2004, p. 104).

Lessons

Lesson Plan One

Objective : To observe chimpanzees in the wild on a video tape and to time and record occurrences of specific behaviors exhibited.

Materials : clipboards, pencils, premade check sheets (a modified version of check sheet shown on p.76 of *Measuring Behavior*), stopwatches, *Among the Wild Chimpanzees* video tape.

Procedure : 1. Students will have viewed the video tape at least twice before this lesson to gain an overall familiarity with it.

2. Students will work in pairs, one with a stopwatch and the other with the check sheet on a clipboard. Pairs of students will be responsible for observing individual chimps (identified on the video). The behavior will be listed on the check sheet (i.e., grooming, foraging, eating, playing) and the timer will use the stopwatch to actually time the specific behavior in one-minute intervals which he/she will pass on to the recorder to write down.

3. A couple of viewings may be necessary in order to verify observations.

4. Following this, pairs of students will share their data with the larger group and a discussion will center around such questions as:

Which behaviors did the chimps spend longer periods of time on? Why?

Did some chimps dominate over others?

Was there a difference in the results for males and females? For younger and older chimps?

Lesson Plan Two

Objective : To explore the features of nonfiction through the use of a nonfiction big book.

Materials : the big book entitled *Beavers,* chart paper, markers, nonfiction books.

Procedure : 1. Lead the class through a walk-through of the book, looking at illustrations, noting headings, terms, format of the book.

2. Following this initial overview, ask the following questions:

What will I learn from this book?

What do I already know about this subject?

Student responses can be put on a KWL chart and displayed in the class.

3. Ask the students to formulate questions that they think the text might answer. Record them on chart paper. Select questions and refer to the index to see if any related topics are listed there. Demonstrate how to use the index to locate specific information.

4. As nonfiction books are not simply read from cover to cover like fiction books are, turn to the table of contents page and ask a student to choose a chapter to interests him/her. Then ask the class to list topics that they think might be covered in this chapter and list them on chart paper to refer to later. A

5. As we read the chapter we will note the use of captions, headings, labels and pictures included and discuss how these features help us to better the content. After reading the chapter we will refer back to the chart and check off any of the proposed topics that we actually covered in this section of the book. This would be a good time to mention that when doing research one may well have to use a number of sources to locate answers to their questions.

6. Move next to the glossary and point out its abc format and inclusion of terms important to the content. Discuss how one can make good use of this feature.

7. Allow students now to select their own nonfiction books and peruse them, noting the same (or additional) features found. Give them an opportunity to use some of the features to gain information to research questions they have formulated.

Lesson Plan Three

Objective : To practice taking notes from nonfiction texts.

Materials : the big book entitled Beavers, chart paper, markers, note-taking chart, nonfiction books, pencils.

Procedure : 1. Display a chart with several columns drawn, each having a different heading. One possibility would be: physical characteristics, habitat, food, ways to protect itself. The column format will confine the

students to writing brief notes, words and phrases instead of long lines of narrative.

2. Using a page from *Beavers*, demonstrate how to write notes from the given text. For example:

All mammals have hair or fur on their bodies. Mammals also feed their babies milk from their own bodies. (p.6)

can be written in note form as:

mammals-have fur or hair, feed milk to babies

Write these notes in the column headed physical characteristics.

3. Continue taking notes from this book with the students' assistance. Emphasize the brief format that notes take. Explain the purpose of note-taking: We use notes as important ideas to include in our writing about the subject of our research. It is a real skill to be able to rephrase important concepts rather than simply copying down verbatim what we read.

4. Distribute copies of the note-taking chart to each student and allow them to select a nonfiction book on chimps to take notes from. Monitor their efforts.

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