THE EFFECTS OF A HUMANE EDUCATION CURRICULUM, IN Volving THE GREAT APE PROJECT, ON THE ATTITUDES OF FOURTH GRADE STUDENTS

BY

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Abstract

The Effects of a Humane Education Curriculum, Involving the Great Ape Project, On the Attitudes of Fourth Grade Students

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An experiment with a group of thirty-four fourth grade students in a private school was evaluated. A Humane Education unit of study, focusing on human and animal rights, was devised and facilitated by the teacher-researcher during class as part of the Social and Environmental Studies curriculum. This unit included the philosophies and perspectives of The Great Ape Project, an initiative that seeks to accord rights to apes. The experiment focused on changes in students' attitudes as a result of being exposed to the treatment (unit). Data was obtained through interviews, attitude scales, students' journals, teacher's journal, and written assignments.

Statistical analysis of the attitude scales confirmed the experimental hypothesis that the humane education curriculum changed the attitudes of the fourth grade students in this study. Also, this change was proven to be stable over time, and the students' journals, interviews, and written assignments support the statistical findings. This experiment design is the first to expose junior students to the ideas and philosophies of The Great Ape Project.
ACKNOWLEDGEMENTS

There is a list of people who I would like to thank who helped me throughout my thesis process. First, I would like to thank Professors David Selby and Derek Hodson for guiding me, offering me suggestions, and encouraging me. Their support and advice to me was invaluable.

I wish to thank Gilda Iron, the principal of the school where I conducted my study, whose support and acceptance of new curricular ideas are greatly appreciated. I want to thank Wendy Herman for being a great team player in terms of team teaching. Thank you to all of the parents who gave their children permission to participate in the study. A special thank you goes to the fourth grade students who participated in the study, found interest in the topic, and were eager to learn about human and animal rights and help bring about change to those beings who deserve rights.

Special thanks to my parents Stanley and Barbara Tweyman who always encourage me when it comes to my education. I also want to thank Tzvi Erez, my husband, who listens to my ideas and who encourages me in my mission toward helping non-human animals.
PURPOSE OF THE STUDY

The purpose of this Research is to add to the existing materials and information regarding Humane Education, and to expose the humane education community to The Great Ape Project (Cavalieri and Singer, 1993). Much of the research and development that have been made in Humane Education relate to exposing children to literature with animal characters, bringing animals into classrooms, and having children reflect on their lifestyles with regard to the materials they wear, the entertainment industries they support, and the foods they eat. None of the existing research includes The Great Ape Project, which is an initiative to recognize rights for primates. With the data provided in this study, educators will have a unit of study that focuses on attitudinal changes and newly defined awareness in their students with regard to recognition of rights for different species.

JUSTIFICATION OF THE STUDY

The subject of humane education is worthy of examination because its objective is to foster a sense of respect and love for plants, animals, people, and the environment, through learning programs that are activity based and that encourage critical thinking. The Great Ape Project (Cavalieri and Singer, 1993), which is one of the most recent developments in the animal rights movement, has not been incorporated into any existing humane education curriculum. Education about apes should not focus only on their ability to perform tricks and learn human-created sign language. What must be of interest to us, as is promoted in The Great Ape Project, is the apes' intrinsic value, their lives in their natural habitats, the possibility of their
potential extinction, and the ways in which our actions affect their lives (Cavalieri and Singer, 1993).
Research Questions and Hypothesis

Question: Will a Humane Education curriculum, involving The Great Ape Project, and focusing on human rights and apes’ rights, change fourth grade students’ attitudes toward the moral status of apes?

Hypothesis: The introduction of a fourth grade Humane Education learning program pertaining to the rights of humans and apes will cause a favourable change in students’ attitudes toward human and apes’ rights. Based on my reading of other experiments, for example, Zman (1993), I hypothesize that gender differences in humane attitudes toward apes will be non-significant.
DEFINITIONS OF TERMS

Change - A statistically significant difference in means between different sets of measurements taken either simultaneously or over time. Specifically, when two different groups are given the same test, we can determine statistically whether the difference in our results is significant. Moreover, we can test the same group at different times and determine whether the test results are significantly different using established statistical methods.

Community of equals – “The moral community within which we accept certain basic moral principles or rights as governing our relations with each other and enforceable at law” (Cavalieri and Singer, 1993, 4). The proponents of The Great Ape Project suggest that the community of equals includes humans, chimpanzees, gorillas, and orangutans.

Rights - ‘One is entitled to live and only to be killed or harmed in situations involving self-defense. One is entitled to live in the absence of torture and intentional pain, and imprisonment may only occur as a result of conviction for a crime or for reasons of protection and preservation of the species’ (The Great Ape Project, 1993, 4-5).

Attitude - Disposition and opinion toward an issue or event that can be expressed verbally, orally, physically, and/or in writing.

Apes - Apes include all members of the tail-less primate family that most resemble humans with hair-less hands, feet, and faces, long front limbs and short hind limbs. This category of species includes chimpanzees, gorillas, and orangutans.
BACKGROUND AND REVIEW OF RELATED LITERATURE

Those concerned about the extension of the moral community, then, must become educators, or at least patrons of education. Such education must begin in elementary schools—what child can resist being spellbound by stories of ape life in society? It must exploit the educational potential of television and film....And it must integrate the facts with the moral message, articulating and applying the new ethic for animals (Rollin, 1993, 216).

In 1868, George T. Angell founded the Massachusetts Society for the Protection of Cruelty Against Animals (SPCA). He is credited with adopting the term Humane Education and promoting the belief toward education "that preventative measures, applied particularly throughout childhood, would cause humans to be more humane and to respect the other animals sharing our homes, cities, and environment" (Arkow, undated, 1). Angell's beliefs and attitudes about caring for animals were adopted by the American Humane Education Society (AHES). The AHES asserts that when people acquire an ethics system with regard to animals, the ethics will be applied to relationships with other people, as well as toward the environment. Humane education focuses on "the human values of kindness, compassion, respect, responsibility, and justice" (Golden, 1993, 481). When children have developed respectful attitudes toward non-human animals, they will establish a base on which to develop their own system of ethics that will drive their behaviour toward people, animals, plants, and the environment.

In 1964, a survey on humane education called Humane Education in our Schools was conducted in the United States. Results suggest that in order to be humane, one must extend one's humaneness to all forms of life.
In other words, a humane person demonstrates kind behaviour toward people, animals, and all other beings that exist. Furthermore, in order for educators to promote and encourage humane attitudes, the teacher, as well as the learning environment, must promote respect for life attitudes. The message that all living creatures should be treated equally should be imparted in the curriculum that is delivered by the teacher. The teacher must serve as a role model when s/he imparts information in the learning experience. “Therefore, the concept of humanizing education and making the education experience more humane is an important aspect of humane education” (Westerlund, 1982, 74).

During the same year, the Humane Society of the United States began a comprehensive mission to introduce humane education curriculum into American schools. A study was conducted at The George Washington University to determine what humane education curriculum was being implemented in American schools. The purpose of the study was to promote an awareness, a need for, and the development and implementation of humane education (Westerlund, 1982, 74). The sample for the study, which came from six states and the District of Columbia, included approximately six hundred teachers, eight hundred eighth grade students, and fifty public school administrators.

Results from the study showed agreement amongst teachers and administrators on the need for and possibility of developing and implementing humane education programs in American schools. Other results included a consensus that, at the time, little was being done with regard to humane education; however, introduction and implementation of humane education programs would be possible. Finally, the survey indicated that varied methods and curriculum materials that incorporate humane education needed to be developed. In order to promote humane attitudes in students, various methods of instruction help to promote the desired humane attitudes (Westerlund, 1982, 75-76).
In the 1980's, *global environmental issues* became popular, and humane educators began to see similarities between their interests and those of the environmental movement. In 1988, the Humane Society of the United States renamed its educational division the National Association for Humane and Environmental Education (NAHEE) (Selby, 1995, 4). NAHEE creates, distributes, and sells a variety of humane education materials. For example, their publications *Kind News Primary* (NAHEE) and *Kind News Junior* (NAHEE) are newspapers for children that are published on an ongoing basis and focus on people’s actions, the unique characteristics of animals, and ideas for children with regard to saving animals and caring for the Earth.

A number of researchers have studied children's attitudes toward animals. For example, Eagles and Muffitt have stated that “attitude development in children is critical to their action as adults” (Eagles and Muffitt, 1990, 41). Urban students in grades six to eight at the Waterloo County Board of Education, in Ontario, Canada completed a questionnaire to identify their attitudes toward animals. The students responded to each question on a five point scale with responses ranging from “strongly disagree, disagree, don’t know, agree, and strongly agree” (Eagles and Muffitt, 1990, 42). In addition, the students were asked to answer yes or no to the following questions, “Do you have a pet at home? Do you go camping at least once a year? Do you read books or magazines about wildlife? Do you watch films or television programs on wildlife? Have you spent time in class talking about wildlife?” (Eagles and Muffitt, 1990, 42).

Results of the survey indicate that significant differences in attitudes toward animals do not exist between boys and girls. Students who had a companion animal (pet) at home had humanistic and naturalistic attitudes. In the study, a humanistic attitude was defined as a “primary interest and strong affection for individual animals, primarily pets” (Eagles and Muffitt, 1990, 42). A humanistic attitude included the belief that animals have human-like qualities (Eagles and Muffitt, 1990, 42). A naturalistic attitude is defined as a
"primary interest and affection for wildlife and the outdoors" (Eagles and Muffitt, 1990, 42). The high rate of pet ownership among participants indicates that many urban children relate to animals as pets. They regard animals as companions and relate to animals with "feelings of affection and interest" (Eagles and Muffitt, 1990, 43). Specific mention was not made of children who do not have pets at home.

A majority of the participants in the study read books and magazines about wildlife, which indicates a desire to learn about the animals. The students who did not read about wildlife reported having utilitarian attitudes, that is, "primary concern for the practical and material value of animals or animal habitat" (Eagles and Muffitt, 1990, 43). Results indicate that many of the students have been involved in class discussions about wildlife.

A study conducted by Westervelt and Liweellyn (1985) found that the most common attitude of fifth and sixth grade American students was humanistic. The similarity in the results between the Canadian students and the American students suggests that nationality, at least within North America, is not a conclusive factor in determining attitudes toward animals. Variables such as culture and ethnicity were not studied.

In their studies, Kellert and Berry argue that gender is a crucial factor in understanding people's attitudes toward animals. Kellert and Berry have found that adult males score higher than adult females in their knowledge about animals. However, women expressed a "stronger emotional attachment" to animals, specifically toward pets. As well, females had more anthropomorphic feelings toward animals, specifically toward "large and aesthetically attractive species" (Kellert and Berry, 1987, 366). Females scored higher than males on issues relating to animal cruelty, and they expressed opposition to exploitation and dominance over animals, "laboratory experiments, rodeos, use of leghold traps, killing of nonendangered animals for fur, and hunting for recreational and meat-gathering purposes" (Kellert and Berry, 1987, 366). Males scored higher than females on issues relating
to "usurpation of wildlife habitat to yield increased material gains to human society" (Kellert and Berry, 1987, 366). Other results indicate that among males and females, those with higher education were more knowledgeable and had greater appreciation and greater protective attitudes toward animals. Kellert and Berry conclude that education appears to influence males' and females' knowledge and attitudes toward animals (Kellert and Berry, 1987, 367).

Some attempts have been made to integrate humane education into school curricula. One program called *Operation Outreach-U.S.A* is a literary based program that focuses on having students develop a respect for living beings (Golden, 1983, 481). The program has extended to approximately 61,000 kindergarten to sixth grade students across North America. The curriculum is designed to begin in kindergarten and follow students until the end of the sixth grade, when they will have accumulated a personal collection of fourteen animal stories and seven years of humane education integrated into their school curricula. *Operation Outreach-U.S.A* focuses on the need and care of wild and domestic animals, as well as on their relationships with people. "Activities are designed to impart factual information about pets, natural history of wildlife, and information on human impact on animals and the environment" (Golden, 1990, 481).

Primary grade activities in *Operation Outreach-U.S.A* are designed to bring about empathy by emphasizing the similarities and differences between people and animals. For example, students in the first grade might be exposed to appropriate pet care through role playing activities. Students then would participate in a shared reading of a storybook. Junior students would participate in debates and research activities, develop problem solving techniques, and discuss the consequences of decision making in order to develop their own "system of humane ethics" (Golden, 1993, 482).

School boards choose schools to participate in *Operation Outreach—U.S.A*. Teachers attend workshops where they learn how to incorporate a
humane education program into their curriculum and facilitate activities. The teachers receive lesson plans, slides, videos, books, and a poetry kit, as well as instructions on how to use the books effectively to strengthen literacy skills, develop compassion, and enhance self-esteem. "Teachers explore empathy building, problem solving, and role modeling as they relate to reducing violent, irresponsible and abusive behavior" (Golden, 1993, 482). Schools do not pay a fee to participate in Operation Outreach—U.S.A; funding comes from companies, foundations, and individuals.

Humane education has been incorporated in the Costa Rican public education system by the WSPA, the World Society for the Protection of Animals. The WSPA Costa Rican Humane Education Project "is the first major effort in the world to integrate a humane/environmental education curriculum directly into the public school system of a developing country" (Zuman, 1993, 475). The goal of the WSPA Costa Rican Humane Education project is to educate children in the necessity of protecting the planet and developing a respect for all living beings, beginning with animals and extending to all people.

The participating students learn the humane education curriculum "through active learning, such as observation, role playing and lively discussion" (Zuman, 1993, 475). The material is integrated into the various subjects in the primary school program. The teacher acts as a facilitator because s/he conveys knowledge, promotes discussion, and "encourages children to explore their beliefs about the proper care and respect of animals and their habitats through activities that engage them effectively, as well as cognitively" (Zuman, 1993, 477).

An example of an activity in the Costa Rican humane education program is a class field trip to a farm, where students are asked to observe how the animals, such as chickens in battery cages, are cared for and treated. The teacher then facilitates a discussion on the prevention of cruel handling and treatment of animals. The students are asked to illustrate an
alternative home for these animals. As well, students are asked to identify foods that come from the animals they observed at the farm. The teacher then facilitates a discussion on alternative sources of protein and other nutrients, and the students design a vegetarian menu (Zuman, 1993, 476). Students are encouraged to seek dietary alternatives by incorporating vegetarian foods that are common in Costa Rican culture.

The Costa Rican program was brought into effect in 1989. Teacher materials were developed, as well as material for students between grades one and three. The materials were taken from exemplary humane education curricula from various countries and were adapted to Costa Rican language (Spanish), culture, ecological, and educational realities. The material was tested in a small number of schools. Training occurs for a sample of “dedicated and enthusiastic teachers to promote an ethic of respect for all life among their students” (Zuman, 1993, 477). In 1991, approximately 2,500 students participated in the program, while teacher-training workshops continued. In 1992, the project extended to more than 250 classrooms, 12,000 students, between grades one and four.

Students who participated in the Costa Rican program took individually administered standardized tests to measure their humane and environmental attitudes before, as well as after the curriculum. The tests were analyzed and tabulated on a humane attitude scale. These tests were administered in March 1991, October 1991, as well as a delayed post-test in March 1992, after the children returned from a three month vacation. The major results show that after eight months with the new curriculum, the experimental sample showed a statistically significant increase in its humane attitude scale (from 79% to 86%). Students who were not exposed to the humane education program showed no significant increase in the humane attitude scale during the same period. Moreover, after a three month vacation, the students who studied the curriculum remained at the same attitude levels. Therefore, although education using the new curriculum stopped for three
months, the children did not revert to their previous attitudes toward animals, people, and the planet (Zuman, 1993).

Another approach to humane education is the introduction of animals into classrooms in order to increase students’ awareness of other forms of life, analyze biological differences, and teach responsibility. However, having a classroom pet/companion animal is not necessary in a humane education program, for a variety of reasons. First, students may regard a classroom pet as a part-time responsibility rather than as a permanent member needing continual care. Because teachers and students leave school at the end of each day and are absent during weekends and holidays, an animal may be neglected. In many schools, thermostat temperatures are lowered at night, as well as during weekends and holidays, thereby potentially causing stress and illness in an animal. If for some reason, a teacher gives away the animals, s/he may convey the message “that animals are a disposable commodity which may be cast aside when no longer needed or enjoyed” (Takagi, 1988). As a result, the needs of animals may be perceived as being unimportant, and animals are not regarded as thinking, feeling beings.

Jody Hodges, a sixth grade teacher in Texas, has developed a program that includes animals in the classroom. The school where she works specializes in caring for exotic animals, such as snakes, rats, and spiders. She began a program in which students carry out research on a certain exotic animal. Once a month, the students present their information, in the form of public speaking, to other students. “Carrying a boa constrictor draped over their shoulders, or dressed as rats and rabbits, they enter a strange new world—other schools” (Hodges, 1991, 23-24). During the presentations, the students inform their audience about the animals they have researched and refute any myths about the animal. The conclusion of the presentation involves a chance for the audience to touch, hold, and ask questions about the animals (Hodges, 1991, 24).
Other teachers present animals to their students. For example, James Scarnati presented live dark red earthworms to his class and emphasized that just like all other living beings, the earthworm deserves to be treated with dignity and respect. He asked the students what dignity and respect mean to them. "The ensuing discussion reinforces the expectation for treating animals and other living creatures in a humane manner" (Scarnati, 1994, 4). Students are not obligated to touch or handle the animals. Students who express fear are paired with a peer who will handle the earthworm and engage in cooperative learning. Also, Scarnati facilitates a discussion on anthropomorphism, "that is, having animals assume human characteristics, and why it is discouraged in science class" (Scarnati, 1994, 4). The outcome of Scarnati's lesson is to view and appreciate the living specimen.

The Toronto Humane Society has developed humane education curricula that are made available to educators. The Friend for Life curriculum, which is geared toward primary students, focuses on the responsibilities involved in caring for companion animals. Friend for Life does not concentrate on animal rights; it focuses on animal welfare. The goal of the program is to help students recognize that kind acts are effective. "If as educators, we teach students that other animals have intrinsic value; that they have physical and emotional needs, and are capable of experiencing pain and suffering, we will assist children in developing respect for all animals and people" (Takagi, 1988, 3).

The lessons in Friend for Life focus on caring for companion animals, understanding animals' body language, safety for companion animals, animal over-population, the importance of spaying and neutering, and training companion animals. Other activities focus on the importance of allowing wild animals to live in their natural habitats, as well as understanding the differences between wild and domestic animals. The last two lessons in the curriculum concentrate on the idea that humans are animals, all humans are different from one another, and that all beings should be treated with respect.
The author of the curriculum states that by treating human and non-human animals kindly, we are respecting their rights. However, the program does not focus on the specific rights that animals have or should have.

The Toronto Humane Society's *Respect for Life* education kit emphasizes the needs and feelings shared by all living beings. The program focuses on the roles that people and animals play in hunting, the entertainment industry, and product testing. Students are encouraged to develop opinions, engage in discussions, and re-evaluate their views on the issues. "Once students have taken responsibility for their beliefs via their actions, they have truly taken ownership of their decisions" (Takagi and Sharpe, 1992, 2).

The lessons in the *Respect for Life* curriculum give students the opportunity to make decisions on issues that pertain to themselves as well as to non-human animals. Just as *Friend for Life* focuses on important issues in terms of companion animals, *Respect for Life* focuses on consequential issues in terms of all animals. Since the curriculum is geared to students in the junior and intermediate levels, some of the issues are controversial, such as the use of animals in the entertainment industry and the cosmetic and product testing industries, keeping animals in zoos, killing animals for sport, trapping animals and using their fur, and keeping animals in classrooms. The program contains background information for teachers and students, as well as activities, vocabulary lists, and blackline masters.

The American Humane Association has published teacher kits pertaining to humane education. *Pet Responsibility: Citizenship Lessons for Elementary Students* (1989) contains lessons that encourage students to seek solutions to problems that relate to domestic animals, both in the home and in the community. Decision-making activities about companion animals are included, as well as activities that encourage awareness of the responsibilities associated with having a companion animal. For example, one of the activities titled, "Invention for Pets" focuses on the role technology
plays in animals' lives. Students are asked to analyze current inventions in terms of how they might help animals. As well, students are given the opportunity to create an invention that could improve animals' lives (Boszik and Eckersley, et al, 1989, 7-9).

Be Kind to Animals Classroom Activities (Boszik and Fitzgerald, 1993) contains activities that involve creative writing: students are asked to complete story starters regarding domestic animals and create graphs based on animal over-population. The kit also encourages participation in visual arts activities that are accompanied by literature containing non-human animals as characters. The activities have students create, propose, and make decisions.

David Selby's Earthkind is a handbook for teachers that focuses on the history of humane education, as well as its aims and objectives. Selby argues that along with promoting respect for living beings and their environments, humane education fosters an interest in maintaining biological and cultural differences and a rejection of all forms of exploitation and oppression. Included, as well in humane education, are: "self-esteem building; a commitment to developing individual potential in its complimentary bodily, emotional, intellectual and spiritual dimensions" (Selby, 1995, 49). The learning process is to be seen as a journey where challenge, skepticism, and risk are necessary properties of a process that promotes individual development (Selby, 1995, 49).

Selby's book includes information and activities about companion animals, animals living in their natural environments, farm animals, animal experimentation, zoos, and the portrayal of animals by the media. The activities suggested in Earthkind focus on animals' intrinsic value, which compliments the animal rights perspective. Animals do not exist to serve humans, either as food, entertainers, and/or research subjects (Selby, 1995, 7). Selby quotes philosophers such as Peter Singer who argue that animals should be treated with equal consideration; they should not be treated the
same as other beings, but rather equally (Selby, 1995, 9). Non-human animals would not benefit from the right to vote or drive a car, but they will benefit from the right not to be killed and placed on display. The activities proposed in the book suggest that animals deserve equal respect with humans.

In any humane education program, a crucial vocabulary item to which students should be exposed is *speciesism*. *Speciesism*, which is comparable to racism and sexism, is defined as "a prejudice or attitude of bias in favor of the interests of members of one's own species and against those of members of other species" (Singer, 1990, 6). The term speciesism implies that animals exist for human use; animals do not possess rights, do not have intrinsic value, and do not deserve freedom from cruelty, abuse, and oppression. The purpose of introducing the term speciesism to students is to encourage the following thought: "If possessing a higher degree of intelligence does not entitle one human to use another for his or her own ends, how can it entitle humans to exploit non-humans for the same purpose?" (Singer, 1990, 6).

According to Singer, children possess an instinctive love for animals. Western society promotes the welfare of animals such as cats and dogs (companion animals). On the other hand, many children never are encouraged to question the material of their clothing, the foods they eat, and/or what is considered entertainment. Many of these children never are asked to question whether they think non-human animals have and/or deserve rights. Similarly, many children never are asked to question the reasons for animals' existence; do animals exist for humans to use and/or abuse, thereby granting them extrinsic value? On the other hand, do animals have intrinsic value whereby they deserve the right to live in peace, without human oppression and cruelty? As a result, many children receive conflicting attitudes toward non-human animals that are "carefully segregated so that the inherent contradiction between them rarely causes trouble" (Singer, 1990, 214). A child may love his/her dog and continue to eat animals, such
as cows, chickens, turkeys, and pigs that endure pain and torture in factory farms. Therefore, an effective humane education curriculum must promote "a unified attitude" (Singer, 1990, 214) toward all human and non-human animals that encompasses all aspects of our lives.

**The Great Ape Project**

In June 1995 and 1996, I attended the National Alliance for Animals (NAA) Conferences in Washington, DC. I sat in on lectures and seminars pertaining to humane education, speciesism in society, and the future of the animal rights movement. I was introduced to The Great Ape Project, which is a declaration that extends "the community of equals to include all great apes: human beings, chimpanzees, gorillas and orang-utans" (Cavalieri and Singer, 1993, 4). The community of equals allows us to accept certain moral standards of conduct that rule our relations with one another and which are enforceable by the law. The following principles are included in The Great Ape Project: The Right to Life, The Protection of Individual Liberty, and The Prohibition of Torture (Cavalieri and Singer, 1993, 4).

The Right to Life principle states that the lives of those beings who belong to the community of equals must be protected. "Members of the community of equals may not be killed except in very strictly defined circumstances, for example, self-defence" (Cavalieri and Singer, 1993, 4). The Protection of Individual Liberty principle states that members may not be imprisoned without legal reasoning. The detention/imprisonment of those beings who have not been convicted of a crime "should be allowed only where it can be shown to be for their own good, or necessary to protect the public from a member of the community who would clearly be a danger to others if at liberty" (Cavalieri and Singer, 1993, 4). Finally, The Prohibition of Torture clause argues that the intentional infliction of pain and/or injury on a
member of the community of equals “is regarded as torture, and is wrong” (Cavalieri and Singer, 1993, 4).

Presently, the only members of the community of equals are members of the species *Homo Sapiens*. The inclusion of non-human animals into the society of equals is a challenging task that brings the issue of rights into a new realm. The chimpanzee, the gorilla, and the orangutan are the chosen animals for the project because they are the closest relatives of *Homo Sapiens*. They have mental abilities, genetic makeup, and emotions “sufficient to justify inclusion within the community of equals” (Cavalieri and Singer, 1993, 5). After listening to and speaking with Jane Goodall and Peter Singer about the merits of *The Great Ape Project*, I became convinced of the importance of educating students on this topic.

The adherents of *The Great Ape Project* recognize that not all humans in the world enjoy rights that are similar to those that are being promoted for the great apes. There are those people who would argue that we should work harder at granting rights for all humans before we start thinking about the rights of non-human animals. However, the adherents of *The Great Ape Project* argue that denying rights to one species, specifically the great apes, will not help oppressed people overcome their struggles to obtain rights. Furthermore, it is unreasonable to suggest that the great apes wait until all humans around the world secure their rights if an opportunity arises to promote and further their cause. “That suggestion itself assumes that beings belonging to other species are of lesser moral significance than human beings” (Cavalieri and Singer, 1993, 6) and, therefore, is contrary to the fundamental beliefs of *The Great Ape Project*.

One of the reasons why the adherents of *The Great Ape Project* have chosen the great apes as the first animal to enter the community of equals is attributed to the fact that the great apes resemble humans. According to Jane Goodall,
...it so happens that chimpanzees, our closest living relatives in the animal kingdom, do show many human characteristics. Which, in view of the fact that our DNA differs from theirs by only just over 1 per cent, is hardly surprising. ...Chimpanzees, like humans, can learn by observation and imitation, which means that if a new adaptive pattern is 'invented' by a particular individual, it can be passed on to the next generation (Goodall, 1993, 12).

One of the contributors to The Great Ape Project, Raymond Corbey, asks, 'How far shall we extend the community of equals?' Is it being proposed that apes be accepted into the community of equals because they resemble humans? "Does respecting what is similar to ourselves rather than different from ourselves imply that we once again take our own, human nature and our allegedly unique dignity as the pivotal point of reference, as an absolute standard against which to measure everything else?" (Corbey, 1993, 135).

Corbey's questions suggest that if the promoters of The Great Ape Project suggest that apes are being proposed for acceptance into the community of equals due to their similarity to humans, then a form of anthropocentrism might be postulated (Corbey, 1993, 135). Welcoming the equality of other non-human animals, such as great apes, suggests the following: "being prepared to rear, kill and eat humans as well, or refraining from killing and eating equals altogether" (Corbey, 1993, 135). Since we are not prepared to accept the former of the two suggestions, Corbey suggests that perhaps apes, who are very similar to humans can help humans, "by playing the role of missing link between humans and animals" (Corbey, 1993, 135).

One of the students in my humane education experiment (1997) suggested that the adherents of The Great Ape Project might have chosen an animal to include into the community of equals that is not very similar to
humans. Since apes resemble humans, a non-human animal that is very different from humans should have been chosen first. She writes, "I think they should start with an animal that is not a thing like humans so they can do the hardest to the easiest" (Student 2, April 16, 1997). Corbey states that despite the great apes' similarities to humans, they do deserve as much respect as do humans. Such an achievement has not occurred due to "mechanisms that keep animals at arm's length and distort the way we spontaneously experience them" (Corbey, 1993, 136). Such mechanisms include factory farming to produce food made from non-human animals. Let us grant rights to apes for who they are and because of the respect they deserve, not necessarily because of their resemblance to human beings.

I accept Corbey's argument because I recognize that great apes are being exploited in the food, entertainment, and research industries. By granting them rights, I hope the respect they deserve will be secured. As an educator interested in the field of humane education, I have not encountered any curriculum materials that incorporate The Great Ape Project, although I have encountered material that suggests that non-human animals should be treated equally as humans. Consideration of the inclusion of a non-human species into the community of equals, as argued in The Great Ape Project, is a concept that should be incorporated into humane education curricula. Students need to understand the rights from which they benefit as humans, as well as the reasons why rights are denied to other people and other species. This suggests confronting students with the question, rather than presenting them with an approved point of view. With this knowledge and understanding, children can decide whether they want to support industries that profit from the imprisonment, torture, and exploitation of non-human animals.

By facilitating the unit on human and animal rights, the students have the opportunity to equate rights for human and non-human animals. My intention is to have students regard non-human animals as our equals, not as
our tools. “If a being suffers there can be no moral justification for refusing to take suffering into consideration. No matter what the nature of the being, the principle of equality requires that its suffering be counted equally with the like suffering....” (Singer, 1990, 8). All sentient beings should be treated with equal respect; we must avoid causing them pain and suffering. By writing and speaking about human and animal rights, students will come to see a link, based on equality between species; one that is worthy of investigation.
PROCEDURES

DESCRIPTION OF RESEARCH DESIGN

The research design used in the study is the experimental design, investigating a potential relationship between an intervention (unit of study) and an outcome (students' attitudes). The experiment determines whether a relationship exists between exposure to curriculum and students' attitudes. Will exposure to the curriculum have an impact on students' attitudes toward apes' rights? The study also contains elements of action research because, I am both the teacher and researcher. Action research includes three stages, all of which are present in the current study: “initiating action, such as adopting a text....Monitoring and adjusting action....and Evaluating action” by writing a report on the completed endeavour (Sagor, 1992, 8). In order to maintain anonymity, each student was assigned a number to use on all work that they submitted throughout the treatment. The students in the experiment group were assigned a number between one and seventeen. The students in the control group were assigned a number between one and seventeen followed by the letter A. Throughout this document, all references to the students’ contributions use the assigned number system.

DESCRIPTION OF SAMPLE

The study was conducted with the two fourth grade classes at a private school in an upper middle class suburb north of Toronto, Ontario. Each class has seventeen students; I teach one of the classes. The teacher of the second fourth grade class agreed to have me facilitate the unit with her
class. The sample included thirty-four students; nineteen girls and fifteen boys. All of the students' birthdays fall between January 1987 and December 1987, making them nine and ten years old during the study. The unit took approximately six weeks for each class, beginning with my fourth grade class, and took place between March 17, 1997, and June 23, 1997. The sample is a convenience sample because the subjects are students at the school where I teach; therefore, they were available to me. The target population, or the group to which I would like to generalize my results, is nine and ten year old North American children living in suburban settings. However, the group to which I am most able to generalize my results, is fourth grade Jewish students living in and around Toronto. These are children who are exposed to the media through television, movies, and books, and have been exposed to the use of animals in the entertainment industry.

All of the students in the sample are Jewish, either by birth or conversion. All staff, both Jewish and non-Jewish, must respect the laws and customs of Conservative Judaism, from an egalitarian perspective, while on school property. This factor is relevant for the study because all information that the students received concurred with views toward animals held within Conservative Judaism. As a result, the humane education curriculum was limited (upon the recommendation of the school principal) to the use of animals in the entertainment industry. I did not incorporate the use of animals for food and/or for product or medical testing, because different opinions, within the realm of Conservative Judaism, exist with regard to these issues. However, if students asked questions and/raised issues pertaining to using animals for food, using animals for medical research and/or product testing, I tried to answer the questions as objectively as possible. Therefore, I restricted the unit to the use of animals in the entertainment industry, as well as humanity's actions that are destroying ecosystems and causing animals to
become extinct. To my knowledge, these issues tend to be less controversial in Conservative Judaism.

**Description of Instruments**

I collected my data using three *subject complete* instruments: attitude scales, writing assignments, and journal writing. As well, I used three *researcher complete* instruments: interview schedules, anecdotal records, and journal writing (Fraenkel and Wallen, 1996, 120). As pre and post tests, the subjects completed attitude scales, that I created. The attitude scales focussed on the issues of both human and animal rights, specifically animal rights and welfare issues pertaining to apes. On a five-point scale, strongly agree, agree, not sure, disagree, and strongly disagree, the students were asked to circle the answer that best described their feelings of the content of the twenty statements (APPENDIX A).

The unit dealt with human rights, as well as animal rights issues, because I wanted the students to understand what their rights are in terms of their age, nationality, and ethnicity. Once they participated in lessons that involved their rights, I thought they would have a clearer understanding of the importance of rights. Furthermore, they would understand what denying rights to other species means in terms of equality between species. As the researcher, I compared the responses from the pre-tests and post-tests in order to gain a better understanding of any change in attitudes that occurred in the subjects, as a result of being exposed to the humane education curriculum.

I conducted informal interviews with small groups of subjects before, during, and at the end of the unit of study. I randomly chose six students from each class by picking numbers out of a hat and interviewing those
children with the corresponding numbers on the class lists. I asked the questions and recorded the subjects’ answers through audio recording. The questions included:

1. What do you think of when you hear the word *rights*?
2. Do you think that you have rights? If so, what do you think your rights are?
3. Do you think that people have different rights from you? If so, what do you think are their rights?
4. Do you think that animals have rights? If so, what rights do you think they have?
5. Have you ever been to a circus with animal performers? Please describe what the animals were doing.
6. Have you ever seen a movie and/or watched a television program with animals? Please describe what the animals were doing.
7. Do you think that animals enjoy being in circuses, movies, and television programs?
8. Do you think that animals who perform have a choice as to whether or not they will be actors? Please explain.

The benefit of conducting the interviews myself was that I could “…clarify any questions that are obscure and also ask the respondent[s] to expand on answers that are particularly important or revealing” (Fraenkel and Wallen, 1996, 121). My intention was to have the students discuss their opinions about rights, suffering, and how they feel, as well as what they know about the use of non-human animals in the entertainment industry.

I also used anecdotal records. I kept records of observed behaviours and comments made by the participants, throughout the unit. For example, if a student remarked, in a small group activity, that animals are unable to feel
pain, I would record this piece of information, noting the date and time. I tried to record just what I saw and heard from the subjects and “avoid evauative, interpretive, or overly generalized remarks” (Fraenkel and Wallen, 1996, 124). In other words, I tried to be specific, and I tried to avoid making generalizations, or being evaluative and interpretive.

Finally, the students kept journals throughout the unit. Journal writing was not a new experience for the students in either of the two fourth grade classes. Both classes do journal writing on a regular basis. A journal is a notebook where the students have the opportunity to express in writing their feelings, beliefs, attitudes, fears, reflections, and so forth, without focusing on penmanship or sentence structure. As a teacher who reads students’ journals, I read and respond, without granting a letter or numeric value to the written material. However, during the course of the unit, I asked the students to respond, in their journals, to certain questions and to comment on the following statement, *Apes and people should be treated with equal respect*. The purpose of these exercises was be to provide me with background information about each student’s lifestyle and attitudes toward animals. At the beginning of the treatment, students were told that their work would be incorporated into my university project.
DESCRIPTION OF INTERVENTION

LESSON NUMBER ONE

The lesson began with a large group brainstorming activity in which students were asked to share what the word \textit{rights} meant to them. All words, terms, and phrases were placed on chart paper. The students then engaged in a small group activity called \textit{Recalling Injustice} (Pike and Selby, 1988, 149-150) where Person A is asked to tell a partner, Person B, about a time when s/he felt that s/he was treated unfairly. Person B then recalls his/her story to Person A. Once Persons A and B have shared their stories, the students return to their group of four to six students. “The students are asked to take on the story or stories of their partner as their own and retell them, in turn, to the group using the ‘I’ first person form” (Pike and Selby, 1988, 149-150). We then brainstormed how it felt to tell somebody else’s story as if it were one’s own. The students were asked to comment on the activity in their journals and to state whether they think rights are important, and why.

LESSON NUMBER TWO

We differentiated between the words \textit{rights}, \textit{responsibilities}, and \textit{privileges}. The words were placed on chart paper and other words and/or terms that the students thought were related to the three words were written under the word. For example, under \textit{responsibilities} the word homework was written because a student commented that it is his responsibility to complete his homework. Furthermore, the students were given the interview assignment where they were asked to interview an adult about their childhood and focus on the rights, responsibilities, and privileges they may have had (APPENDIX C). In their journals, the students were asked to write
their comments on the differences between rights, responsibilities, and privileges.

**Lesson Number Three**

Every student was given a copy of the *Canadian Charter of Rights and Freedoms* (1981) and a few minutes to glance over it. We then read aloud some of the freedoms that I thought were pertinent to the students. For example, all Canadians have “the freedom of thought, belief, opinion and expression....” “Every citizen of Canada has the right to enter, remain in and leave Canada.” “Any person charged with an offence has the right (a) to be informed without unreasonable delay of the specific offence; (b) to be tried within a reasonable time;...(d) to be presumed innocent until proven guilty according to the law....” (1981). I allowed time for discussion, questions, and comparisons to other countries. At the end of the lesson, the students were asked to write, in their journals, any rights and/or freedoms that that they thought should be added to the Charter.

**Lesson Number Four**

This lesson began with an activity called *Starting to Think about Rights* (Pike and Selby, 1988, 150-151). In groups of four, students read and discussed the statements as listed in APPENDIX D. On a sheet of paper, the students were asked to draw a Venn Diagram, with the words Agree on one of the outside circles, Disagree on the other outside circle, and Not Sure placed on the overlapping part of the two circles. Through discussion, the students decided in which component of the overlapping circles they wanted to place each of the statements, writing the emboldened word of the statement in the agreed upon place. The students then discussed how they would rewrite the statements that were in the Not Sure and Disagree sections so that they would fit appropriately into the Agree section. In their journals, the students were asked to comment on their feelings about the activity.
Lesson Number Five

I introduced the students to a picture story book titled *A Country Far Away* (1988), written by Nigel Gray and illustrated by Philippe Dupasquier. The book talks about the lives of two boys; one who lives in a Western society and one who lives in a developing country. Despite cultural and lifestyle differences, both boys do household chores, go to school, and play sports. Before I read the book to the students, I asked them to pay particular attention to the illustrations and try to answer the question, “Which of the boys in the story lives in the country far away?” After I read the book aloud, we discussed the story and spoke about which of the characters lives in the far away country. In their journals, the students were asked to comment on the story and answer the following question, “Do you think that it is possible for two people to live lives that are so different, yet so similar? Please explain.”

Lesson Number Six

The students were divided into groups of four and were asked to create posters dealing with rights, freedom, anti-racism, and so forth. They were encouraged to use their creativity and fill their poster paper with illustrations, words, and phrases. The purpose of the lesson was to see whether the students would include human and non-human animals in the realm of rights. Each group had the opportunity to present their poster to the large group and answer questions posed by the other students. In their journals, the students were asked to comment on the activity.

Lesson Number Seven

This lesson involved a pre-test writing assignment. Each student was asked to comment, in his/her journal, on the following statement: *Humans and apes should be treated with equal respect.* The students were asked to
write their thoughts on the statement, by agreeing, disagreeing, or being uncertain, and explaining why they felt the way they did.

**Lesson Number Eight**

This lesson involved a modified version of *Animal and Human Characteristics* (Selby, 1995, 113). The students were divided into pairs, and each student had twelve slips of paper and a list of twelve characteristics (APPENDIX E). One student wrote a brief description of how non-human animals manifest each of the twelve characteristics. The partner wrote a description of how humans demonstrate the same characteristics. A large group discussion followed where we placed the strips of paper on one of two pieces of chart paper; one titled NON-HUMAN ANIMALS and the other titled HUMANS. The purpose of the activity was to help students understand whether they thought human and non-human animals have similar emotional, physical, and cognitive experiences. As well, we discussed whether the students thought that any differences between human and non-human animals was justification for denying animals rights. The charts remained on the wall for the remainder of the unit. In their journals, the students were asked to comment on the activity, as well as what they learned about human and non-human animals.

**Lesson Number Nine**

A guest speaker, by the name of Leslie Bisgould visited the class. Ms. Bisgould is an animal rights lawyer who focuses on animal welfare issues. Her message to the students was not that they were required to change their lives drastically, but rather, that it is important to think about what goes on behind the scenes at zoos, circuses, and so forth. The students were asked to think about how the animals got to the place at which they are performing and or being on display. She answered the students’ questions and talked about what it is like being a lawyer who focuses on animal welfare issues.
Many of her clients include people facing evictions from their apartments, because of their animal companion, such as a dog. After Ms. Bisgould's visit, the students were asked to comment, in their journals, on her visit.

**Lesson Number Ten**

The students were grouped in pairs for the *Life of Confinement* (Selby, 1995, 244) activity, in which they were asked to imagine what they thought their life would be like if they were confined to their bedroom for an undefined period of time. The students were told that they would be provided with food and water, and that they would be kept in a clean environment. They were asked "to think of things that give their life its quality and whether their needs would be satisfied if confined for a long time in such a minimal space" (Selby, 1995, 244). Person A was asked to describe to Person B what s/he imagined, both the positive and negative aspects. Person B then described what s/he imagined. In the large group, the students brainstormed emotions and discussed what they thought their life of confinement would be like. The purpose of this activity is to help students "empathise with captive animals" (Selby, 1995, 244). In their journals, the students were asked to comment on whether they would want to be confined to their bedrooms for an indefinite period of time, why or why not.

**Lesson Number Eleven**

I showed the students the video called *Serving Time*, by the Canadian Broadcasting Corporation (Suzuki, 1990). The film focuses on animals' lives in zoos, both negative and positive aspects. I answered the students' questions both during and after viewing the film. In their journals, the students were asked to comment on the video and give their opinions of it.
LESSON NUMBER TWELVE

To begin this lesson, I wrote the word speciesism on the board. I asked the students what the word means and/or what they thought it means. We compared the term to racism, ageism, and sexism. We wrote a class definition of speciesism and gave specific examples of speciesism, racism, ageism, and sexism. In their journals, the students were asked to comment on the terms that were discussed in class and how they think those prejudices can harm others.

LESSON NUMBER THIRTEEN

Each student was given a copy of a newspaper article from The Globe and Mail titled, Danish couple take look at life inside zoo (1996). The article is about a man and woman who were on exhibit, amongst other primates, at the Copenhagen zoo. We read the article aloud and had a follow up discussion. In their journals, the students were asked to comment on the article and write about whether or not they would like to be on display, and to include the reasons why.

LESSON NUMBER FOURTEEN

During this lesson, the students were assigned a major research project to be completed in their own time. The students were encouraged to go to the school library, as well as public libraries, in order to conduct their research. Also, they were told that they could use computer sources, such as computer encyclopedia programs and/or the Internet. The students had the opportunity to choose from four research topics. They could research one of three women who dedicated their lives to working with and saving primates: Dian Fosse, Jane Goodall, or Birute Galdikas. The students were
asked to research the women's lives and comment on whether they (the students) would like to be like the woman whom they chose to research. In other words, would they like to have a career like the woman they researched? The fourth choice involved researching apes and describing their opinion of The Great Ape Project. Up to this point in the unit, The Great Ape Project had not been discussed in class, but would be before the research project was due. Each student was given a handout with research guidelines, such as: include a bibliography, do not plagiarize from sources, edit work before submitting it, and so forth (APPENDIX F).

**Lesson Number Fifteen**

During this lesson, the students were introduced to the book titled, The Great Ape Project (1993). I showed the book to the students and told them that although they were not expected to read the book, I would introduce them to the major ideas behind it. The Great Ape Project identifies three main rights that its supporters hope will be recognized as belonging to apes.

1. *The Right to Life*—the right not be killed, except in cases of self-defense

2. *The Protection of Individual Liberty*—the right not be imprisoned unless one is proven guilty of a crime, or for reasons of protection

3. *The Prohibition of Torture*—the right not to have harm caused unto oneself

The students were asked to copy these points into their notebooks. As well, the term *community of equals* was defined as the realm of equality to which humans belong and to which the supporters of The Great Ape Project hope all primates will one day belong. I assured the students that they were not required to agree with or believe in any or all of the ideas behind The Great Ape Project. I left time for discussion and answered any of the
questions that the students may have had. In their journals, the students were asked to write about their opinions of The Great Ape Project.

**Lesson Number Sixteen**

The students watched a video from *The Life and Times* (Starowicz and Gallus, 1996) series on Birute Galdikas. Although the video primarily focuses on the life of Dr. Galdikas, mention is made of Dian Fosse and Jane Goodall. I chose to show this video to the students because Dr. Galdikas is a Canadian who was honoured with the Order of Canada, and because prior to the unit, none of the students had heard of her. In the video, Dr. Galdikas speaks of her commitment and experiences trying to save primates, as well as the hardships that resulted for her personal and family life. In their journals, the students were asked comment on the video, specifically on the life of Dr. Galdikas.

**Lesson Number Seventeen**

I asked the question, “What do you think a Declaration of Rights is?” I gave students the opportunity to share their opinions. In groups of four or five, the students were asked to create A Declaration of Rights for All Species. They were asked to include all elements that they thought were important. Each group had the opportunity to present their Declaration to the large group.

**Lesson Number Eighteen**

This lesson involved a post-test writing assignment. Each student was asked to comment, in his/her journal, on the following statement: *Humans and apes should be treated with equal respect.* The students were asked to write their thoughts on the statement, by agreeing, disagreeing, or being uncertain, and explaining why they feel the way they did.
EXPLANATION OF THE PROCEDURES FOLLOWED

The study was conducted as an experiment, where the humane education curriculum that focused on human and apes' rights served as the independent variable, also known as the experimental or treatment variable. The dependent variable, or criterion or outcome variable, refers to the students' attitudes toward apes' rights (Fraenkel and Wallen, 1996, 263). In order to test the Reliability of the attitude scale used in this experiment, I used the Test-retest method. The scale was administered to a class of fourth grade students from another campus of the school. After three weeks, the same attitude scale was given to exactly the same group. To establish reliability, I determined that a relationship exists between the two sets of tests (Fraenkel and Wallen, 1996, 160-162). I expected that the attitude variable would be stable over this time period, therefore, making it a worthwhile variable to study. There was no statistically significant difference between the two sets of test results.

Before being exposed to the treatment, which is the curriculum, both classes, Class A and Class B, completed the attitude scale shown in APPENDIX A. Next, Class A, which is my fourth grade class, studied the humane education material with me, just as they would study any Social and Environmental Studies unit (see APPENDIX B for a complete time line of the experiment). Each lesson included a focus activity to spark the students' interests, a process that included independent, small, and/or large group activities, and closure, which was a time for presentation, reflection, and discussion. Each lesson occupied thirty to forty minute periods three to four times per week (a few lessons spilled over to the following day). The unit spanned approximately six weeks for each class. While Class A was exposed to the humane education curriculum, Class B was exposed to a Science unit that introduced them to the Scientific Method, with the teacher of Class B.
Once the unit was complete, Class A and Class B completed the same attitude scale they had completed as a pre-test. Therefore, Class B, which had not been exposed to the treatment, acted as the control group. In the following six weeks, Class A studied Scientific Method with the other fourth grade teacher, and Class B was exposed to the treatment with me. At the end of the six weeks, both classes completed the attitude scale again, which at this point, acted as a post-test. Responses from both groups on the pre and post tests were compared.

In order to collect data from the participating students, I, as the researcher, selected and designed the instruments. To establish validation, the attitude scales were reviewed by the school principal, two university professors, and my thesis supervisors (Lam, 1996, 3). Furthermore, I decided upon the conditions, under which the instruments were administered, namely, the classroom (Fraenkel and Wallen, 1996, 115). The data was collected by me in the classroom where most of the lessons were facilitated; this is the classroom where I conduct my fourth grade class on a daily basis. The school is structured so that the students have General Studies, for half of the school day, and Religious Studies for the latter part of the day. The data was collected during the General Studies portion of the school day, throughout the experiment. On Mondays, Tuesdays, Thursdays, and Fridays, lessons were facilitated in the mornings, and on Wednesdays, the lessons took place in the afternoons.
DESCRIPTION AND JUSTIFICATION OF THE STATISTICAL TECHNIQUES AND OTHER METHODS OF ANALYSIS USED

To test the Null Hypothesis ($H_0$), the data has been analyzed as follows. A test score to every attitude scale has been calculated for the two groups, independently, for all tests (six sets). A standard conversion method was used to mark the attitude surveys on a percentage basis, wherein if a student responded to all statements on the test indicating complete disagreement with issues pertaining to rights, s/he receives a 0% mark. On the other hand, should a student indicate complete agreement with the issues of rights, s/he receives a mark of 100%. A t-test for independent means has been used to determine whether there is a significant difference between the treatment and control groups (independent groups), and a t-test for correlational means has been used to test whether there is a significant difference within the groups before and after the experimental manipulation. Moreover, I looked for any differences in terms of how boys and girls responded within each group, before and after the experimental manipulation, using the interviews and journals.

With an alpha, $\alpha=0.05$, the t-test determines whether there is a significant difference between the means of the experimental group before and after the experimental manipulation. The t-test also determines if the same difference exists in the control group. The t-test reexamines the control group once they have been exposed to the independent variable (humane lessons), to tell us whether there has been a significant change in the control group's attitudes. I am able to determine if the experimental group retained their attitudes even though time has passed since exposure to the independent variable. Either the null hypothesis will be accepted or rejected, at which point, I will accept the alternate hypothesis, or $H_1$. 
The small group interviews, discussions, and journal entries were used to support or reject the statistical findings of the experiment. Should I determine that after the experimental manipulation the children verbalize more humane attitudes toward primates, the interviews should strengthen the statistical findings. The extent and quality of the change in the subjects can be qualitatively analyzed further by reviewing their personal journals on the subject.

**Internal Validity Limitations**

One of the potential threats to internal validity is the selection bias, also known as subject characteristics threat (Fraenkel and Wallen, 1996, 243). Since the sample was not randomly assigned, certain differences among the subjects may have posed as threats to the results, such as intelligence, vocabulary, and reading ability. Furthermore, even though all of the students come from similar ethnic backgrounds, they may be exposed to different views about animal rights from parents, media, and peers outside the classroom. In order to minimize the subject characteristic threat, I encouraged both groups of students to discuss (in class) information regarding animal rights and related issues to which they have been exposed outside of the treatment situation. Such discussions took place during large group activities and after viewing films.

Since the sample is small and all the students come from similar ethnic backgrounds, the results obtained are not representative of the general population of nine and ten year old children. However, other teachers in other schools, both public and private, could use the unit that I have created for the study, in order to test a change in their students' attitudes. Teachers could compare their results with the results that I have obtained, and they could look for similarities and differences in results.
The subjects were required to study the humane education material that constituted the experiment as part of their fourth grade Social and Environmental Studies curriculum. However, parents were asked to complete a permission form giving them the choice of having their children's results be a part of the analysis (APPENDIX G). There was the potential threat that, during the experiment, parents would not want their children's results to be counted as part of the data. Having subjects withdraw, or having them be withdrawn by parents, during the study is known as the mortality threat (Fraenkel and Wallen, 1996, 243). Losing subjects can introduce a bias because it is possible that the subjects who withdraw from the study would have responded differently from the students who remain. For example, it is possible that parents who withdraw their children may have exposed their children to views about animals that would have altered their children's results significantly. Furthermore, participants who would have withdrawn from the study could not be replaced because the sample includes all of the fourth grade students at the private school; these are the students that are available to me. Fortunately, I received permission from all the students' parents to participate in the study, and nobody withdrew or was withdrawn during the course of the treatment.

I do not think that the location of the treatment posed a threat to the students in Class A (the experimental group) because they received the treatment in their own classroom by their teacher. However, location threat may have occurred with the students in Class B (the control group) because they were exposed to the material in a room that is not their regular classroom. Since their classroom is better equipped for a unit on Scientific Method where science experiments were being conducted (because it has a sink), the other fourth grade teacher requested that she be able to facilitate the unit on Scientific Method to my fourth grade class in her classroom. Fortunately, the treatment room was not completely foreign to the students from Class B, because they had visited the room on various occasions.
throughout the school year, for events such as grade activities and movies. Furthermore, the students in Class B are familiar with me as a teacher because I am their teacher for physical education.

Another potential bias is data collector bias. There is the possibility that I, the teacher and data collector, "may unconsciously distort the data in such a way as to make certain outcomes (such as support for the hypothesis) more likely" (Fraenkel and Wallen, 1996, 246). This bias is based on the supposition that I have a vested interest in the outcome. Ideally, the researcher should be unaware of the hypothesis, as in a double blind experiment. However, a positive element with regard to the situation is that I was the only data collector throughout the whole study, thereby eliminating the potential threat of having many data collectors analyze information differently. Furthermore, before the students completed the attitude scales, they were reminded to answer honestly and record their feelings and beliefs because there are no right or wrong answers.

Another threat may have occurred as a result of the testing process. It is possible that a change in the students' attitudes may have been a result of the actual exercise or practice of writing the test, in the form of the pre-test and post-test. Specifically, by the end of the experiment, the students in Classes A and B completed the attitude scale three times. The repetition of completing the test may account for any change in attitude, simply because of the practice of writing the test and/or because the students may have discussed and thought about their responses to the test outside of treatment classes.

History threats happen when "one or more unanticipated, and unplanned for, events...occur during the course of a study which can affect the responses of the subjects" (Fraenkel and Wallen, 1996, 246). This was a potential threat at any time of the experiment. For example, illness and resulting absences by the researcher and/or the students cannot be anticipated. A number of students, in both groups, were absent during
certain lessons, and therefore, missed discussions, activities, and assignments. One student from the experiment group and two students from the control group were absent for the final interview. The teacher/researcher was present for all of the lessons, pre and post tests, and interviews for both groups.

Fortunately, the study spanned three months in total, thereby lessening the chance of the maturation threat affecting the results. Maturation threat is a change in the subjects during the treatment that is a result of the passing of time and not necessarily as a result of exposure to the treatment. Maturation threat tends to occur in studies that take place over a number of years (Fraenkel and Wallen, 1996, 248).

Since the unit was facilitated in a manner that is similar to other units that the students have studied, the attitude of subjects threat is not likely to have affected the study. In previous units, the students have completed questionnaires, viewed films, and written in journals; these are the exercises that they did in the humane education unit. In other words, the treatment acted as a “regular part of instruction” (Fraenkel and Wallen, 1996, 249). Furthermore, since the control group received the treatment after the experimental period, they did not "become demoralized or resentful" of the treatment group (Fraenkel and Wallen, 1996, 248-249).

Classes A and B have students with a range of abilities and academic levels. Therefore, the regression threat was controlled because it generally occurs in situations involving subjects that score “extremely low or high in its pre-intervention performance” (Fraenkel and Wallen, 1996, 249). As mentioned earlier, the subjects were selected for the study because they were convenient and accessible to the researcher, not necessarily because of their abilities. Furthermore, the implementer threat was controlled because all of the participants received the same treatment by the same teacher. In the experiment, I was not testing two different types of implementation methods, such as lecture based versus activity based
learning. Instead, I was testing the effects of the same material and teaching techniques on two groups of students.

Since the students were given time to complete the pre and post tests during class time, I do not think that there was a problem having the students complete the attitude scales. The instructions on the tests are clear and explicit, for example, where to circle the answer and where students should write their assigned number (for anonymity). Furthermore, the material in the unit was intended to be relevant and interesting to the students. Many children love animals and are exposed to animals in their daily lives, either with a family pet and/or in the media. The material was intended to be of interest to the students.
The test-retest surveys were completed on February 20, 1997, and March 20, 1997, respectively. A fourth grade class at one of the other campuses of the private school completed them. They were administered by the General Studies teacher and were returned through inter-campus mail. The students who completed the surveys come from similar ethnic and socio-economic backgrounds to the children in the experimental and control groups. Twenty-three students completed the test survey and twenty-seven students completed the retest survey. The average scores and the median between the two tests were almost identical, indicating that the dependent variable does not change significantly over time and is worthwhile to study.

**Statistical Findings on Attitude Scales**

**Experimental Group – Before and After the Treatment**

The experimental group was given a pre-test before the humane education unit, and a post-test after the unit, to measure their attitudes toward rights and animal welfare. A t-test was performed to determine statistically if there is a significant difference between the means on these tests.

The null hypothesis is $H_0$: there is no significant difference in attitudes before and after the unit. The alternate hypothesis is $H_1$: there is a significant difference in attitudes before and after the unit.

On the pre-test, the variance ($s^2$) is 39.3497, and the standard deviation (SD) equals 6.2729, with $n=17$. On the post-test after the treatment, the variance ($s^2$) is 50.0977, and the standard deviation (SD) equals to 7.0780, with $n=16$. With 31 degrees of freedom, and $\alpha=0.05$, the null hypothesis ($H_0$) is rejected if $t>2.042$ or $t<-2.042$, and the null hypothesis
(H₀) is accepted if \(-2.042 \leq t \leq 2.042\). By using the formula for the t-statistic, \(t=3.290\). Therefore, since \(t\) is greater than 2.042, the null hypothesis is rejected, and the alternate hypothesis, \(H₁\), accepted. That is, there is a statistically significant difference between the means on the pre-test and the post-test. These findings show that the unit changed the attitudes of the students in the experimental group.

**Control Group – Before & After the Treatment**

The Control group was given a pre-test before the humane education unit was administered to the experimental group, and a post-test after the unit was administered to the experimental group. The test was identical for the control and experimental groups, geared to measure their attitudes toward rights and animal welfare. A t-test was performed to determine statistically if there is a significant difference between means on these two tests.

The null hypothesis is \(H₀\): There is no significant difference in attitudes before and after the unit. The alternate hypothesis is \(H₁\): There is a significant difference in attitudes before and after the unit.

On the pre-test, the variance \((s^2)\) is 86.7647, and the standard deviation (SD) equals 9.3148, with \(n=17\). On the post-test, the variance \((s^2)\) is 34.0556, and the standard deviation (SD) equals to 5.8357, with \(n=15\). With 30 degrees of freedom, and \(\alpha=0.05\), the null hypothesis \((H₀)\) is rejected if \(t>2.042\) or \(t<-2.042\), and the null hypothesis \((H₀)\) is accepted if \(-2.042 \leq t \leq 2.042\). By using the formula for the t-statistic, \(t=1.3927\). Therefore, since \(t\) is smaller than 2.042, the null hypothesis, which states that there is no significant difference between the two test scores in the control group is accepted. That is, the attitudes of the students in the control group did not change while the experimental group was given the treatment. Such findings support the notion that the change in the experimental group is a real one.
**Control Group – After the Treatment**

The control group was given another test, directly after receiving the humane education curriculum. This test was compared to the one before the unit was administered to this group. A t-test was performed to determine statistically if there is a significant difference between means on these two tests.

The null hypothesis is $H_0$: There is no significant difference in attitudes before and after the unit. The alternate hypothesis is $H_1$: There is a significant difference in attitudes before and after the unit.

On the pre-test, the standard deviation (SD) equals 5.8357, with $n=15$. On the post-test after the treatment, the standard deviation (SD) equals to 5.4748, with $n=16$. With 29 degrees of freedom, and $\alpha=0.05$, the null hypothesis ($H_0$) is rejected if $t>2.045$ or $t<-2.045$, and the null hypothesis ($H_0$) is accepted if $2.045 \leq t \leq 2.045$. By using the formula for the t-statistic, $t=-3.3476$. Therefore, since $t$ is smaller than -2.042, the null hypothesis is rejected, and the alternate hypothesis, $H_1$, which states that there is a statistically significant difference between the pre-test and the post-test is accepted. That is, the unit changed the attitudes of the students in this group. This is the second time the unit of study changed students' attitudes toward rights and animal welfare, even though it was taught to a different class.

**Experimental Group – After Treatment to Control Group**

The Experimental group was given a post-test after the humane education unit was administered to the control group, but not to the experimental group which had already been given the treatment a few weeks earlier. A t-test was performed to determine statistically if there is a significant difference between means on the test that immediately followed the experimental group treatment, and the same test administered weeks after the unit.
The null hypothesis is $H_0$: There is no significant difference in attitudes between the two tests. The alternate hypothesis is $H_1$: There is a significant difference in attitudes between the two tests.

On the first test, the standard deviation (SD) equals 7.0780, with $n=16$. On the second test, the standard deviation (SD) equals to 7.5674, with $n=16$. With 30 degrees of freedom, and $\alpha=0.05$, the null hypothesis ($H_0$) is rejected if $t>2.042$ or $t<-2.042$, and the null hypothesis ($H_0$) is accepted if $-2.042 \leq t \leq 2.042$. By using the formula for the t-statistic, $t=0.0926$. Therefore, since $t$ is smaller than 2.042, the null hypothesis, which states that there is no significant difference between the two test scores in the experimental group, is accepted. This is a powerful result, because it demonstrates that the attitude change of the students that occurred after the unit remained consistent over time, and did not revert back to the previous attitudes regarding rights and animal welfare. This could mean, possibly, that the attitude changes exhibited by this group could be long lasting.

Qualitative Research: Interviews and Journals

The interviews were conducted during the thirty-minute lunch recess periods. The six students and I sat on the floor or around a table with the audio cassette player recording the sessions. I asked the questions, and the students were invited to share their thoughts and feelings about them. In order to obtain a random sample, the students were chosen for the interview by having their number drawn from a hat. From the experimental group, three girls and three boys were interviewed. From the control group, five girls and one boy were interviewed. The interviews were conducted three times; before the experimental group was exposed to the treatment, after the experimental group was exposed to the treatment, and after the control group was exposed to the treatment. During the final interviews, one boy from the
experimental group was absent from the interview, and two girls from the control group were absent.

The interviews provided an opportunity for small groups of students to discuss the issues of human and animal rights. Although the students were able to hear what the others were saying, the interviews were a time for the students to share their opinions, listen to peers, and discuss the issues. I tracked shifts in opinions, listened to the debates that took place, as well as articulation of thoughts, issues, and terms that were introduced to the students during the course of the treatment.

Having the students in the experimental group write in their journals proved to be important in understanding any changes in attitudes, beliefs, and feelings toward human and animals rights. I was able to track any changes in their thinking as we progressed through the unit. In their journals, the students were able to express their ideas in written form without having to share them with peers. I read all of the journal entries; however, the students were never evaluated with a numeric or letter grade. At times, I wrote comments to the students; at other times, I just read their entries.

During the initial interviews, students stated that when they hear the word rights, they think of being free, being able to do what they want, and being allowed to go to the washroom and get a drink when they want. One boy in the experimental group and one girl in the control group stated that a right is something that one is allowed to do. However, if one is not given permission by one's parents, one does not have the right to carry out the act.

Once the experimental group was exposed to the unit and were asked, in the interview, what they think of when they hear the word rights, they incorporated terms and ideas to which they were exposed during the treatment, for example, freedom, animals and people having many of the same rights, and equality. On the other hand, the students in the control group responded similarly to their initial responses (they had not yet been exposed to the treatment). However, once the control group was exposed to
the unit and was asked the same question, they also, incorporated terms and concepts to which they had been exposed during the unit into their responses. In addition, one girl acknowledged that we are “lucky” to have the rights that we have, because not all people have many rights.

Before being exposed to the unit, both groups acknowledged, in the interviews, that their rights include going to school and camp, playing with friends, doing sports, liking certain colours, and eating. The one male student in the control group mentioned that he has the right to go to the washroom, get a drink, and play outside; however, if he gets into trouble, he loses his right to go outside. After being exposed to the unit, the students in both groups included that they have the right to live in peace, to live according to laws, to have a family, to obey laws, to go to school, and not to be taken away from their families.

From the start of the unit, all of the students acknowledged in their journals the importance of human rights and the freedom to act. Their initial responses corresponded with the initial responses in the interviews. For example, Student 13 wrote:

I think that rights are very important, because people won’t start lying, and they will just be themselves. Not only that, but people also have the freedom of deciding what they are going to do in their lives, which is very important. Although, some rights are very bad. Being yourself is okay, but being your bad self isn't okay. Like if you start to smoke, that will begin to be a habit which then will be part of yourself. That will be the bad part of you. Same with drugs; just because people have the right to be themselves, they should not be the bad part of themselves.

(Student 13, March 17, 1997).
Other students, both male and female, acknowledged the importance of rights for humans as well as for other beings. For example,

I feel that rights are a good thing. I think that people, creatures, and animals should have rights. Even if you are weird, different, strange, or something like that, I think you should still have rights. If I could make the rules, I would say that you could do what you want, but not something bad! (Student 5, March 17, 1997).

Unfortunately, I do not think that the journal writing of the control group emphasized their feelings and opinions as extensively as the journals of the experimental group. The reason may be in part because the students in the control group were not familiar with what I expect from their writing. In other words, their classroom teacher probably had set different expectations for their writing, and those are the expectations to which they are accustomed. Many of the students, in the control group, both male and female, recalled what they did in the lesson and activity. In other words, they did not always add their own insights and answer questions such as why and how. For example, Student 6A wrote, “Today we learned about rights, responsibilities, and privileges, and it was very interesting because other people shared their feelings and said what they had to say” (Students 6A, May 15, 1997). Student 6A has not expressed why listening to people share their feelings is interesting and why what they had to say is important.

After reading a number of the journals from the students in the control group, I emphasized to them that they were not being asked to tell me what occurred during the lesson because, as the teacher, I was there and knew what had taken place. Instead, I wanted to read about their feelings, opinions, and insights regarding what they had learned and how they were affected by it.

Having the students comment, in their journals, on the statement, *Humans and apes should be treated with equal respect*, both at the
beginning and at the end of the unit, gave me the opportunity to understand their interpretations of the term *equal respect*. From the first time they commented on the statement, many of the students in both groups, both male and female, agreed that humans and apes should be treated with equal respect. However, many of the students used the words *equal* and *same* interchangeably. For example, Student 14 wrote,

Yes, I think that humans and apes should be treated with the same respect because I think that everyone and everything should be treated with the same respect, but apes don’t get equal respect because people don’t really care about animals, so they kill them. I don’t think that the people who kill animals know what equal respect is. I wish that one day someone would explain it to them (Student 14, March 27, 1997).

The majority of the students in Class B, male and female, had responses similar to those of the students in the experimental group. For example, Student 6A wrote the following,

Humans and animals should be treated the same because we are not so different from apes because they need a home and we need a home. We need food, and they need food. They need a clean environment, and we need a clean environment. It may seem that we have more power but not really (Student 6A, May 26, 1997).

After being asked, in the interview, whether they think that people have different rights than they have, many of the students acknowledged that adults have more rights than children. The students explained that adults have the right to go to sleep when they want, and they have the right to tell children what to do. After being exposed to the unit, the students in the experimental group discussed issues to which they were exposed during the unit. For example, one female student mentioned that in Singapore people receive a harsh punishment if they throw gum on the ground, whereas in
Canada, people do not get punished (as severely) for that act. Therefore, people in Canada (most likely) have the right to chew gum, whereas this is unclear in Singapore. Another female student mentioned that parents and people over the age of eighteen are given the right to vote, but children are not allowed to vote. Another female student asserted that in Afghanistan women are forbidden from showing their faces in public, whereas in Canada women have the right to show their faces. After exposure to the unit, only the male student in the control group included that adults have the right to vote in elections.

Two of the students in the experimental group, one male and one female, wrote in their journals (during the first of the two writing assignments on the statement) that apes and humans should not be treated with equal respect. Student 8 wrote that he disagrees with the statement because,

...apes are animals and humans are humans. If there was an earthquake and if you were holding on to a piece of grass and so was the ape and you were both just about to fall but you had a chance to climb on the ape, would you do it or would you fall? I would do it (Student 8, March 27, 1997).

Student 2 gave thought, reasoning, and explanations in her initial response to the statement, *Humans and apes should be treated with equal respect:*

I think that apes deserve respect and I also think humans deserve respect, but I think that humans deserve a little more because apes don’t understand what we are saying but humans do. Apes have feelings, so I think they will understand if we hurt, yell, point at them, but they don’t understand what we are truly saying....I think equal respect is that apes should be treated like me, but I think that they shouldn’t be treated exactly like me because I am different than an ape, so I think we should be treated a bit differently (Student 2, March 27, 1997).
One male student, in the experimental group disagreed with the statement because, according to him, apes should be treated with more respect than humans. He writes, "I think apes should be treated with more respect [than humans] because apes can be extinct, but humans cannot because there are so many humans and so little apes.... (Student 15, March 27, 1997).

Some of the students in the experimental and control groups, both males and females, justified equality for apes because of their similarity to humans. For example,

I think that humans are no different from apes except that apes have a different home, a different shape, and they look different, but other than that, apes are no different from humans. They should be treated with equal respect and should not get kicked out their environment. I don't think people would like it if apes kicked them out of their houses (Student 4A, May 26, 1997).

One male student in the control group acknowledged God in his justification for equality between humans and apes. He writes that humans and apes should be treated with equal respect because, "we are both living things and we have a lot of similarities, for example, we are both living things and God made both humans and apes...." (Student 2A, May 26, 1997).

After reading the responses of two female students in the experimental group, I questioned whether the unit would have an affect on their attitudes. Their responses were similar to where I hoped students' responses would be at the end of the unit. For example, Student 9 wrote,

Yes, I think humans and apes should be treated with equal respect because apes are like us, they have homes, brains, feelings, and they have the right to have their homes stand tall and not to be cut down for stuff like
toothpicks, wooden shoes, even paper. Apes aren't born to starve or to be slaughtered. Humans have homes, it's not everyday our homes are being torn down or that we are being slaughtered for purses and clothes. I think equal respect means, let us and apes be free with no violence or getting our homes torn down (Student 9, March 27, 1997).

After reading the final journal entry of Student 9, my concerns of the unit having little to no effect on her attitudes were dismissed. Although her caring and compassionate attitude remains, she included animal rights issues that were addressed in the unit. She writes,

I really agree with this statement because it is very true that animals and humans should be treated with equal respect. If a human shoots an animal s/he should be punished, but if s/he shoots the animal because the animal was attacking, they kind of have the right because the animal could have been scared, and why would the person have a gun? The animals have the right to attack the person if s/he is going to kill the animal (Student 9, March 14, 1997).

Before being exposed to the unit, the male and female students in the experimental group asserted, in the interviews, that animals have the right to live, to be free, to run, to catch their own food, and not to be killed. One female student in the control group responded that animals do not have rights, but they deserve to do what they want. Another female student stated that even if an animal does not want to do a trick, people force them. The male student in the control group responded that animals have some rights. However, they speak their own languages that people do not understand, therefore, people shoot animals with guns. Another female student responded that animals have the right to live where they want and do tricks only when they want.
After being exposed to the unit, one of the male students in the experiment group stated, in the interview, that animals do not have many rights, yet, and they should have many more rights than they have. A female student stated that animals should be allowed to live in their natural habitats, be left alone, and have many of the same rights as humans. Another female student asserted that animals have many rights; however, people do not respect them because animals get killed and get taken away from their natural habitats.

Before exposure to the unit, all of the students in both groups, attested, in the interviews, to having been to performances with animal performers, such as circuses. As well, they talked about seeing animals on television programs. One female in the experimental group stated that it is cruel to train animals for television. One male student from the experimental group admitted that he enjoys watching the talking birds' show at Disney Land. When asked the same question, one female student in the control group stated that the animals walk around, do tricks, but they do not always want to perform.

After exposure to the unit, none of the students in either of the groups stated that they had attended any performances that involved animals since the last time they were asked the question. A discussion with the students in the experiment group ensued when one student talked about the movie Free Willy. The students debated whether a real whale was used in the production of the film. One of the female students insisted that a real whale was used, while one of the male students stated that a real whale was not used, but rather, a machine was designed. However, the male student insisted, "...that's not fair, because they probably put a real one in a tank and studied it, and they wouldn't let it be free until after the show" (Student 11, Second Interview).

In the interview, the question of whether animals have a choice when they perform brought a variety of insights from the students. Before the unit,
one of the male students from the experimental group stated that animals who perform choose to do so, while the other students in the group said that the animals do not have the choice. After the unit, the same male student exclaimed that animals who perform do not have a choice. He compared animals who perform to the Blacks who were slaves, “They don’t have a choice. It’s like when Blacks were slaves; they didn’t have a choice to be slaves. Even if animals did have a choice, they should be paid something that is useful to them, not only money” (Student 11, Second interview).

Before exposure to the unit, the students in the control group, with the exception of one female student (Student 7A), stated that animals who perform do not have a choice. However, many of them did not explain their reasons. After being exposed to the unit, the students explained their answers more fully. For example, one female student talked about the abuse that performing animals endure. Student 7A’s response was that animals “do not have the right to say that they don’t want to be in a movie. I think they should have the right because people are whipping them to do things” (Student 7A, Third interview).

One of the most rewarding results of the experiment came from reading the students’ thoughts (male and female) concerning what they believe they can do to help the welfare of animals, as well as how humans’ actions are destroying other species. The CBC film Serving Time had an impact on the students’ attitudes toward the use and abuse of animals in society. I was pleased to see that the students were taking information from the film, drawing implications, and thinking about lifestyle changes. Unfortunately, it is out of the realm of this study to investigate whether the students will act on the thoughts about which they have written. For example, a female student writes,

I think we can help animals by not buying things or eating things that are from animals, like furs, meat, and jewelry. We should also not waste things that are from trees, like
paper and wood, because when we waste...we are really taking away from the animals' homes. We should also stop hunting animals because they are almost extinct, and we should help them (Student 17, April 7, 1997).

A male student writes, “I wrote a letter that I want to send to hunters, people that kill animals for a sport, animal [rights] lawyers, and a lot of other people. My letter is about how to try and stop killing animals as much and to try to stop polluting” (Student 11, April 10, 1997). Another male student writes, “I think our way to help stop the animals from dying is not to buy leather things made from animals like gloves and jackets, and hopefully the company will stop making it” (Student 10, April 9, 1997).

One female student in the control group acknowledged that “[s]ome humans do care about animals but not enough for the government to do something to take care of the animals” (Student 6A, May 29, 1997). I would have liked her to explain what she could do to encourage the government to help the animals. My written comment to her was whether she thought that she could do something to help the animals; however, she did not respond.

One of the students in the experimental group wrote about eating meat a number of times in her journal. It is an issue that obviously is important to her, while she acknowledges that God allows her to eat animals. She begins by stating that “…We shouldn’t kill animals, but God put animals on Earth not just to live but to give food and stuff to us” (Student 5, April 1, 1997). A few days later she writes, “…I think you shouldn’t kill creatures just because they are different than you” (Student 5, 1997). In her final entry, where the students were asked to comment on the statement, Humans and apes should be treated with equal respect, the student expresses her thoughts on the issue of eating meat. She writes, “I think animals should have the right to be treated with the equal respect that we have, because they have a life too, but I still think I should be able to eat meat, because I still want to live my normal life” (Student 5, May 14, 1997). I was pleased that the student thought
critically about the issue, made a decision that pleases her, and had the confidence to write her thoughts in her journal.

All of the students, in both groups, acknowledged that they had not heard of The Great Ape Project prior to learning about it during the unit. Questions were asked and comments were made, and many of the students' journal entries were insightful. Only two students from both of the groups questioned the philosophies in The Great Ape Project. They are the same students who disagreed with the equality statement in the pre-test writing assignment. The female student suggests an alternative to granting rights to apes (as mentioned in the Literature Review),

I agree that they should try to give animal rights because animals deserve respect, but I think they should start with an animal that is not an ape because apes are so similar to us that they should be last. I think they should start with an animal that is not a thing like humans so they can do the hardest to the easiest (Student 2, April 16, 1997).

The other student writes,

I’m not sure because apes are a little less important because people get killed just like apes, and people kill human beings’ mothers and take the kids, same with apes. So, it’s not a big deal if some people take baby apes because the same thing happens to human beings, and in the whole world, people get killed every fifteen minutes.... (Student 8, May 14, 1997).

The majority of the students in both groups accept the philosophy of The Great Ape Project. A female student writes, “I think the book could teach a lot of people the right things to do like how to treat apes, and if everyone in the world reads the book maybe they would treat apes differently” (Student 4, April 17, 1997). A male student writes, “...animals
and humans should have equal rights so they [people] won't kill animals, be murderers, or capture animals and cage them up for no reason” (Student 15A, June 10, 1997). A female student writes, “I think The Great Ape Project is a good idea because I think apes deserve the same rights as humans like to live in their homes, not in cages, and not to be killed for fun” (Student 5A, June 10, 1997).

In their final journal entry that occurred at the end of the unit/treatment, the majority of students, in both groups, wrote that they agree with the statement, *Humans and animals should be treated with equal respect.* According to one student, “…animals are just like a different kind of human. Humans should have laws and rights, but animals should, too” (Student 6, May 14, 1997). Before submitting her journal, Student 2 (the female student who disagreed with the statement when it was the pre-test assignment and later thought that an animal other than apes should have been chosen for the Project) said to me that before the unit, she never knew that animals had feelings and are able to suffer, that is why she has changed her mind about animals. She writes,

I think that apes and all other animals deserve the same amount of respect [as humans], because each species has the right to live in freedom and respect because if we were animals, we would want to be with our families, not to be killed, not having our homes taken away from us, or having a life in a cage…. (Student 2, May 14, 1997).
As the researcher and teacher, I tried to develop a “harmonization of ‘message’ and ‘medium’” (Selby, 1995, 35) throughout the school year. Messages of humane education, such as kindness, compassion, peace, and equality were practised in the climate of the classroom between the teacher and students. Moreover, positive and respectful relationships were encouraged among the students. What this promotes is dialogue between the students and with the teacher, valuing peers’ contributions, “co-operative learning, a decentralization of power, decision-making and initiative-taking with the learning community, and sustained commitment to esteem-building and group-bonding processes within learning programmes” (Selby, 1995, 35). The belief that all living beings possess intrinsic value was a central theme promoted throughout the treatment, as well as throughout the academic year. While devising the unit, I tried to ensure that interdependence would be acknowledged “within co-operative learning situations and in which a diversity (ecology) of teaching and learning approaches...[would be] offered” (Selby, 1995, 35).

The lessons that I chose did influence the students’ attitudes toward human and animal rights. They promoted discussion, interaction, and reflection. However, by reviewing the journal that I kept during the unit, I understand how some of the lessons might have been facilitated slightly differently. For example, after facilitating Recalling Injustice, I realized that I should have told the students to give great detail when they were sharing their story with a peer. Unfortunately, some of the students told their story in one or two sentences without offering much detail. Incidentally, many of the students wrote positive comments in their journals about the activity. Many of them expressed that they enjoyed telling somebody else’s story in the first person, because they had never done so in the past.
The *Human and Animal Characteristics* activity gave students the opportunity to relate to animals as sentient creatures. Humans feel pain, happiness, and strength, as do animals. This activity bridged some of the similarities between humans and animals and helped the students understand that humans and animals solve problems, nurture their young, and act on instincts. Furthermore, the characteristics that the students put on chart paper hung on our bulletin board throughout the unit.

Ms. Leslie Bisgould’s visit had a positive impact on the students for many reasons. First, many of the students said that they had never heard of an animal rights lawyer prior to meeting Ms. Bisgould. Many of the students had comments and questions for Ms. Bisgould, and they sat attentively while she spoke. Furthermore, she did not deliver a scary message to the students. She helped them realize that they have choices. If they continue going to circuses and zoos, she asked that they think about what is taking place ‘behind the scenes.’ In other words, she asked the students to think about how the animal arrived at where s/he is, and to think about whether the animal is happy being there.

The *Life of Confinement* activity gave the students the opportunity to imagine what it would be like to be confined to their bedrooms for an indefinite period of time. Together, the students came up with both positive and negative aspects. Many of the students concluded that they would not enjoy being confined to their rooms because they would crave human interaction, fresh air, and freedom. Such a decision came about even after many of the students admitted having televisions, stereos, and a supply of toys in their bedrooms. Some of the students said that animals in zoos must feel this way, because they are confined to an area, such as a cage or display, for an indefinite period of time.

As mentioned earlier, the CBC video *Serving Time*, with David Suzuki, had a tremendous impact on the students, as they indicated in their journals and in their oral comments and questions. The video showed life inside
zoos. It showed both the positive and negative impacts zoos have on animals' lives. Furthermore, it helped the students understand that many animals are kept in zoos to protect them from human hunters and poachers. In other words, the students learned that in many cases, animals' worst enemies are humans.

Few of the students were familiar with the term speciesism before they were introduced to it during the unit. They understood how it was comparable to racism and sexism, terms to which they were familiar. Introducing them to the term was important and influential, because many of the students used the term in their writing, as well as in their oral comments and questions. Hopefully, they will continue to use the term in their everyday vocabulary.

Reading the article about the Danish couple who put themselves on display at the Copenhagen zoo gave students a chance to read from The Globe and Mail. Many of the students had comments and questions about the topic. As well, the information in the article gave the students the chance to picture a scene that is very uncommon; humans on display at a zoo. If I were to use the lesson again, I would have the students draw or paint a picture of how they imagine the scene.

Introducing the students to the concepts of The Great Ape Project was exciting, because it gave me the chance to explain a concept and philosophy to children that has been written in a book for adults. I was satisfied with the students' understanding of The Great Ape Project and thought their questions were insightful. A few days after exposing the students in the experimental group to The Great Ape Project, I received a phone call from the mother of Student 9. She informed me that her daughter refused to go with her family and friends to the zoo. The mother seemed angry because as she explained, she was required to hire a babysitter while her family and friends were visiting the zoo. She 'assured' me that all of the animals at the Toronto Zoo receive excellent care, and there was no reason
for Student 9 not to attend. I assured her that the students had not been told not to go to the zoo, and I explained that they were taught that they have a choice. I ended the conversation by telling the mother that she should be proud of her daughter for being able to form opinions on issues that are important to her and acting on them! She responded by saying that she would have liked her daughter to have gone to the zoo.

Showing the video *The Life and Times*, on Dr. Birute Galdikas, gave the students the opportunity to see a Canadian woman help save the lives of primates. As well, Drs. Jane Goodall and Dian Fosse were shown in the film. In their journals, many of the students reflected on the emotions they felt toward Dr. Galdikas, her work, and her family. Dr. Galdikas spoke about how she began her work, the hardships she endured, and the progress she has made.

Showing the two videos to the students, the CBC film and *The Life and Times*, gave them the chance to view the humans and animals on whom they conducted research for their independent research project. The students were given nine days to complete the project (two weekends and five school days). They were given the choice of how they were going to display their research (folder, poster paper, and so forth). The students were encouraged to gather their research from the school library, public library, information gained in class, and the Internet. I emphasized that the majority of the research should be obtained from books, while the Internet should serve as additional information. Unfortunately, not all of the students who chose to conduct their research on the great apes included their views and interpretations of The Great Ape Project. If I were to facilitate the unit again, I would emphasize the importance of including that information when giving the directions for the project.

While speaking to the mother of Student 15 in the hall, she mentioned that her son enjoyed learning about The Great Ape Project. I told her of the well-researched project he submitted. She assured me that her son
conducted and completed the project on his own. In his work, he explains his interpretations and theory on The Great Ape Project. Although he sees the benefits of The Great Ape Project, he recognizes that problems may result. He writes,

**The Great Ape Project** is a project on how to help save apes and help save their natural habitats around the world. I think The Great Ape Project will affect apes’ lives in a good and bad way. The good way is that apes' lives and homes will be saved. The bad thing is that poachers will go out of business and they might start hurting or killing the people trying to save the apes (Student 15, 1997).

Having the students create a Declaration of Rights for all Species was an appropriate way of concluding the unit. The activity gave the students the opportunity to share and reflect with each other on what they had gained from the unit. Each group created a colourful and interesting Declaration. Some of the rights that the students included in their Declarations are given below:

"Animals should have most of the same rights as humans, like not to be killed and to keep their homes."

"Men, women, and animals have the right to be gay."

"Animals and humans have the right to be free."

"Animals have the right not to be chained up."

"Humans have the right to show their body parts in public."

"Humans and animals should have equal respect."

"Humans and animals have the right for forgiveness."

"People have the right to have an opinion."

"Animals have the right for people to leave them alone."

"All species should not be locked up in cages."

"Every species has a right to be free unless you commit a crime."
“Species have the right to go places without being bugged, threatened, or shot.”
“Species do not have the right to steal, hurt, or touch someone without getting permission.”
“Species have the right to be treated with respect and equality.”
“Species have the right to use violence only for self-defense.”
“Species have the right to choose between right and wrong.”
“No captivity unless the animal is endangered.”
“Every living thing should be allowed to express his/her opinions.”
“Every adult should be allowed to vote in their country’s elections.”
“Everyone should have the right to life.”
“Everyone should have the right of freedom.”
“Everyone should have the right to equality.”
“We all have the right to be in the community of equals.”

The quantitative and qualitative evidence from this study suggest that gender differences with respect to attitudes toward human and animal rights are not significant. Although the study by Kellert and Berry (1987) indicates gender differences, they report that once a humane education curriculum is presented to students, it directly influences both males' and females' attitudes toward the subject matter. It is important to note that the Kellert and Berry (1987) study was conducted using interviews with 3,107 adult participants, ranging in ages from nineteen to over sixty five, who were not exposed to a humane education curriculum. This study (1997) and others (Eagles and Muffitt, 1990), differ from the Kellert and Berry study (1987), because they focus on exposing school children to a humane education curriculum, finding no gender differences in attitudes toward human and animal rights. Educating children in humane education, is one way to insure that the gender differences which are apparent in the general adult population will be eliminated or reduced in our future generations.
The education system can affect the attitudes of children. There is no doubt that teaching children to care for the environment, other animals, and humans, positively affects their attitudes. It is unclear whether this effect will influence their actions, whether it will remain with the children as they mature into adults, and whether they will pass this education and knowledge on to their children and families.

Fraenkel and Wallen (1996) suggest that if a researcher loses over ten percent of the participants, s/he should acknowledge this limitation in his/her findings. Fortunately, none of the sample withdrew or was withdrawn from the study. Student absence during the treatment was a phenomenon to be expected and was out of my control. Fortunately, I was able to interview, facilitate lessons, and have students complete written attitude scales.

Although random sampling was not possible for my teaching and research situation, the unit/treatment could be facilitated with participants at different schools. Facilitating the unit at different schools would help the researcher gather data based on different geographical locations, as well as studying students from various economic, ethnic, and racial backgrounds. If the results were similar each time, “a researcher may have additional confidence about generalizing the findings” (Fraenkel and Wallen, 1996, 108).

Most of the treatment occurred in the classroom, with the exception of library visits. Much of the students’ written and oral responses on human and animal rights were expressed in the classroom. The extent to which the results of the study can be extended to other situations refers to ecological generalizability (Fraenkel and Wallen, 1996, 109). What holds true with material and/or curriculum in one learning environment may not necessarily be generalized to other situations. For example, the experiment focuses, in the school environment, on constructs such as written material and oral
comments. I did not study actions by the students outside of the school environment. For example, will students attend circuses that have trained animals or will they willfully boycott them? Will students write letters to production companies that use live animals? Such issues are beyond the domain of the experiment, but are worthy of research.
CONCLUSION

When helping students understand the lives of beings that are unique as are their own lives, “it is more useful and accurate to think not of a hierarchy with human beings at the top, but of a spectrum of creature commonality” (Masson and McCarthy, 1995, 68). We all are distinct beings. The question that students should be asking is not whether non-human animals such as apes deserve rights, but rather, is there any reason why we should not grant them rights? By regarding species on a spectrum of equality, students may respect living beings, as they want to be respected. The unit focusing on human and animal rights gave the students an opportunity to ask questions, investigate, and reflect on their personal attitudes and actions. This experiment shows conclusively that a humane education curriculum in the classroom changes the attitudes of students toward human and animal rights, in the short and mid-terms. Moreover, it seems reasonable to conclude that these positive attitude changes will remain with the students for some time. The students learned that they can obtain enjoyment from other species in ways that do not promote abuse. Hopefully, the students will enlighten family members, peers, and teachers about the abuse that animals endure by humans and will continue to have respectful attitudes toward human and non-human animals. Further research could investigate the students’ actions.

On February 27, 1997, Tony Banks, member of the British Parliament, presented Parliament with the Great Apes' Bill (Pearson to Teweyman, Email, 1997). This was the first time in the history of British legislation that such a Bill was proposed. Although the Great Apes' Bill was defeated, it received exposure, and people have been exposed to a new concept; the acceptance of a non-human species into the community of equals. Perhaps it will take many years to have such a Bill passed in the United Kingdom, Canada, or
elsewhere. Perhaps with the support, encouragement, and persistence of interested citizens such as the students who are exposed to humane education curricula, such a Bill may become a universal law with widespread acceptance and approval.
APPENDIX A - ATTITUDE SCALE

Assigned Number: ________

Please circle the answer that best describes your feelings.

1. Apes should perform in movies.

   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

2. Apes enjoy living in small and crowded cages.

   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

3. People should teach apes to perform tricks.

   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

4. As long as they have food and water, apes have no other needs.

   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

5. Apes are not able to feel pain.

   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

6. Apes have feelings.

   Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree
7. *Apes enjoy living in open areas such as rainforests.* Strongly Agree
   Agree      Not Sure      Disagree   Strongly Disagree

8. *Apes are like human beings.*
   Strongly Agree      Agree      Not Sure      Disagree   Strongly Disagree

9. *Apes know the difference between right and wrong.*
   Strongly Agree      Agree      Not Sure      Disagree   Strongly Disagree

10. *It is acceptable to transport apes in boxes from their natural homes to work in zoos and circuses.*
    Strongly Agree      Agree      Not Sure      Disagree   Strongly Disagree

11. *People are more important than apes.*
    Strongly Agree      Agree      Not Sure      Disagree   Strongly Disagree

12. *Every person deserves rights.*
    Strongly Agree      Agree      Not Sure      Disagree   Strongly Disagree

13. *I have the right to decide what job I will have when I grow up.*
    Strongly Agree      Agree      Not Sure      Disagree   Strongly Disagree
14. I have the right to live with my family.

Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

15. It is wrong to use apes in circuses.

Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

16. It is acceptable to take baby apes away from their parents.

Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

17. People have the right to put apes in cages.

Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

18. People who abuse apes should not be punished.

Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

19. It is not wrong to abuse apes.

Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree

20. It is okay to transport apes in boxes from their natural homes to work in zoos and circuses.

Strongly Agree   Agree   Not Sure   Disagree   Strongly Disagree
APPENDIX C

The Interview

You are going to act as a reporter! You are going to interview a parent, grandparent, aunt or uncle (or any other adult with whom you feel comfortable). Your job is to find out what life was like for them when they were your age.

When you are conducting the interview, you may want to take notes while the person is talking (not word for word, please!), or you may want to tape record them. The decision belongs to you and the person you interview.

You may want to ask the following questions:

- Did you go to school? Until what age did you go to school?
- What was school like? Please explain.
- Did you have responsibilities at home? If so, please explain what they were.
- What did you do for fun?
- Did you have a lot of spare time? Why or why not?
- Did you go to lessons after school? (For example, gymnastics, hockey, piano, etc.)
- Do you think your childhood was similar to my childhood? Why or why not?
- Any other questions that you think may be important.

Due date: ____________________________
APPENDIX D

Statements

1. We shouldn’t be forced to come to school.
2. We should be allowed to choose where we sit in class.
3. We should be allowed to say and write whatever we want in class.
4. There should be a student council, with representatives elected from each class.
5. The school should provide all the equipment we need, like pens, paper, and books.
6. People who are good at speaking should be allowed to speak more frequently in class.
7. We should be allowed to waste time if we do not want to work.
8. Teachers should not make fun of us.
9. The smartest students should all be together for lessons.
10. Teachers should always listen carefully to what students say.
11. Teachers should make sure we can work without being disturbed.
12. If you need to leave the classroom, you should be allowed to leave.
13. Girls should have some lessons by themselves.
14. Bigger kids should have a bigger share of the playground.
15. Everyone in school should be treated with politeness and respect.
16. The school should make sure that no one gets bullied.
17. The school should be clean and comfortable.
APPENDIX E

CHARACTERISTICS

1. The ability to feel and express pleasure
2. The ability to suffer and show pain
3. The ability to think things out and solve problems
4. The ability to learn
5. The capacity to act and respond instinctively
6. The ability to show affection
7. The ability to play
8. The ability to care for the young
9. The ability to build things
10. The ability to know right from wrong
11. The ability to communicate
12. The ability to remember things
APPENDIX F

Independent Research

1. There are some very important people who have dedicated their lives to saving primates. Your job is to choose one of the following people and conduct research on them:
   - Dian Fosse
   - Jane Goodall
   - Birute Galdikas

Questions you may want to answer in your research:
   - Where was the person born?
   - How did the person become involved with primates?
   - Why did the person become involved in trying to save primates?
   - Is the person still involved in saving primates?
   - Where does the person live?
   - Do you think the person has helped primates? Please explain.
   - Would you like to be like this person? Please explain.

OR

2. Conduct research on apes.
   Questions you may want to answer in your research:
   - What/who are apes?
   - Where do they live?
   - What do they eat?
   - Do they hunt? If so, what do they hunt?
   - Do apes have enemies? If so, who are their enemies?
   - Do apes tend to live with their families in their natural habitat?
   - What is the Great Ape Project? Do you think apes' lives could be affected by the Great Ape Project? If so, how? Please state and explain your opinions.

Be sure that all of your writing is in your own words.
Be sure to use at least three sources; do not make the Internet be your main source.
Be sure you understand everything you have written.
Be sure to include a bibliography.
Be sure to complete your final copy in your neatest cursive writing.
Be sure to read over your work before submitting it.
Dear Parents of Students in Grade Four:

As part of my requirements for completing my Masters of Arts in Education at the Ontario Institute for Studies in Education of the University of Toronto, I am conducting research on the effects of a humane education curriculum, that focuses on human and animal rights, on the attitudes of fourth grade students. As part of the curriculum, the students will learn about the following issues:

- the rights the students have as Canadian Jewish children living in Canada
- the similarities and differences between rights, responsibilities, and privileges
- The Great Ape Project which is an initiative aimed at recognizing the rights of primates
- how animals, such as primates, are used in circus performances, and in movie making, as well as how they live in zoos

The students will participate in independent, small, and large group activities where they will engage in critical thinking and decision making exercises.

The students will learn the material similarly to the ways in which they learn other Social and Environmental Studies units. The lessons will occur three to four times per week, as thirty to forty minute sessions. The unit, for each class, will take approximately four weeks. The students will be assessed and evaluated on their participation and completion of assignments. The students will be asked to complete questionnaires and engage in discussions. For each lesson, the students are asked to have one folder, one notebook, and writing and drawing materials.

Please sign and return the bottom half of this letter with your child to school by February 11, 1997. If you have any questions or concerns regarding the material and/or the unit, please contact me at U.S.D.S (905) 770-0642.

Sincerely,

Justine Tweyman

I understand that my child will be participating in a unit of study for Justine Tweyman’s research. I give you permission to use my child’s work (including oral comments) as part of your research, and I understand that my child’s name will be kept anonymous in the research report.

Child’s name_______________________________________

Parent’s signature ________________________________
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**Canadian Charter of Rights and Freedoms.** 1982.


National Association for Humane and Environmental Education. *Kind New Primary* (2), 1.


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