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Animals and their rights in our society : an action research project in unit plan form

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ANIMALS AND THEIR RIGHTS IN OUR SOCIETY

An Action Research Project

in Unit Plan Form

Directed by

Dr. Shirley Jennings

School of Education

University of the Pacific

In Partial Fulfillment

of the Requirements for the Degree

Master of Education

by

Julie Hinson

July 1981

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Chapter I

I. INTRODUCTION

Today, with world concerns like the rising cost of energy, sky-rocketing inflation, and the universal threat of war taking the headlines, problems concerning the environment are lost. They don't receive the needed emphasis unless there is an immediate threat to our health, safety or financial interest. Some of these environmental concerns are: the polluting of our water, air and land; our ever-increasing world population which encroaches on animal habitats; and man's total disregard for animal life which results in the threatened or actual disappearance of some animal species. Noted scientists and humanitarians have tried to caution man as to these dangers. One of these is the world famous oceanographer, Jacques Cousteau, who warns: "The direct destructions are mainly the consequences of over-fishing, hunting, poor management of natural resources, mis-planned or careless land developments and ignorance."¹

Cousteau further maintains that there is very often no visible reason for destroying our animal populations. He emphasizes that killing for "sport" is neither a sportsmanlike

¹Jacques Yves Cousteau, Oasis In Space (New York: World Publishing Co., 1972), p. 134.

activity or even fair competition between man and animal.

...The plain ordinary man knows that shooting polar bears from helicopters, for example, cannot be accounted a sport. How can the bear escape? Where is the 'game'? Somehow businessmen organized into 'hunting clubs' forget this common sense, with the result that the lordly polar bear is today a very seriously 'endangered species'.²

All of these environmental problems can be reversed "through severe regulations, controls and education."³ In examining controls and regulations the National Wildlife Federation observed ten years ago the following plight of the environment and its inhabitants:

On the high seas, some whales were being commercially hunted almost to the point of extinction. In the continental U.S., populations of brown pelicans, eagles and peregrine falcons were being devastated by chemical residues. More than 1½ million acres of prime wildlife habitat were being destroyed annually for development and highways. Most of the Great Lakes fisheries had already been tainted by pollution. There were no effective national programs for saving endangered animals.⁴

During these ten years, "wildlife has become an increasingly popular issue. This mounting public concern has helped to move some important new laws through Congress--laws that relate specifically to improving wildlife's lot."⁵

There are federal and state control on air pollution which has improved air quality for man and animals, the

²Cousteau, p. 134.

³Cousteau, p. 134.

⁴National Wildlife Federation, 1969-1979 A Decade of Revolution (Washington, D.C.: National Wildlife Federation, 1969), p. 6.

⁵National Wildlife Federation, p. 6.

pesticide DDT has been banned and is disappearing from our water and animals and the Alaska land bill was approved thereby doubling America's conservation holdings. Even with gains through laws and regulations in government there remain many problems that are unsolved.

Education is perhaps the easiest and most effective way of meeting the environmental needs. Through education our society can learn the extent of these environmental issues and how they can be solved. The following simple ideas if universally adopted could save a great deal of energy, water, and other natural resources, as well as money. Further, they would prevent litter and air pollution, and keep pesticides out of our environment. Not only our wildlife, but also man, would be greatly benefited by the elimination of these dangers.

Hopefully, by generating and circulating these ideas in our educational system, the public will learn to drive less and use mass transportation, a bicycle, or walk; lower the thermostat inside the homes and/or offices; stop littering by recycling materials such as glass bottles, cans, and newspapers; start a compost pile to be used for fertilizer; attract birds with feeders to cut down on the use of pesticides; and turn off lights and other appliances when not in use. All of these and many more ideas can be very beneficial to the environment as well as economical to the public.

One idea that has proven to be both economical in

the long run and which protects the environment as well, is the use of solar energy as an alternative to fossil fuels. As a nation, we are becoming more and more aware that not only is the use of fossil fuels limited as an energy resource, but also that the sun is limitless and has been providing energy for three or four billion years. As a result of this awareness, in the last few years, many people have converted their home's oil and gas heating systems to those which use the sun's rays to heat.⁶

The foregoing is just one specific example of how we are capable of changing our habits to meet the environmental crises facing our world. Certainly, this same type of ingenuity can be utilized to develop an attitude of respect and concern for the protection of our wildlife and other members of the animal world. They are a most important part of man's environment. As many naturalists have observed, the world would be a very lonely place without their company, and man, given so many benefits by animals, must assume the responsibility for helping and protecting the helpless. As Mel Morse, a former President of the Humane Society of the United States and a member of the Council of the World Federation for the Protection of Animals, the Hague, suggests:

...Our well-being, and often our lives, depend upon a great number and variety of animals. Their unnecessary ordeals in our behalf is an account they

⁶Cousteau, p. 122.

have neither the choice nor voice to reveal. Therefore, the public, the real source of reform, has been blinded to the extent and manner of brutality thousands of animals undergo each day in this country.⁷

It is essential to open the eyes of the society to see that it is feasible to use animals in science, as food, clothing and as entertainment in a humane manner. Unless the public knows what the animal situation really is, it's difficult for solutions to succeed. Education to the problems and dangers facing animals is the best way to increase public awareness and improve the lives of our wildlife.

Besides the dangers facing animals, it is vital to realize that they are part of a biological chain linking man to his environment. Once the chain is broken there is a lack of balance in our world. It is man's obligation to maintain "balance between environmental protection, economic growth and energy development."⁸

Finally, it has been shown that wildlife is an indicator of the levels of pollution in the environment.

New York State recently released coho salmon into Lake Ontario. When the fish return to spawn and die, the amount of the toxic chemicals in their fat will indicate how contaminated the water is. By now, just about everyone realizes that a world unfit for wildlife is also unfit for man.⁹

⁷Mel Morse, Ordeal of the Animal (Englewood Cliffs, New Jersey: Prentice-Hall, 1968), Introduction, p. v.

⁸National Wildlife Federation, Walking the Tight-rope (Washington, D. C.: National Wildlife Federation, 1980), p. 1.

⁹National Wildlife Federation, 1969-1979, p. 7.

And as Jacques Cousteau declares "if we are to succeed in our quests, or survive as a species we must reconcile with nature and with the sea."¹⁰

II. THE PROBLEM

Statement of the Problem

The purpose of this action research project was to develop and implement in a sixth grade class, a unit focusing on animals. It was the present researcher's belief that by exposing children to the problems concerning animals this exposure would in turn develop more sympathetic attitudes toward animals. With this change of attitude and awareness, as well as the thoughtful production of possible solutions, there is hope for the animal, his kingdom, and our own survival and preservation.

Specifically, three topics were selected to present to the children: first, the brutal and senseless killing inflicted on our domestic animals; second, the importance of the animals' right to freedom from fear, pain and suffering; and third, the plight of our endangered and threatened species. Based on this three-topic study of animals the primary question that was addressed was: "Will an instructional unit covering this issue produce an observable change in students' behavior and attitudes toward animals?"

¹⁰Cousteau, p. 140.

Rationale for the Study

The rationale for this project was provided by a decision made by the current investigator after examining the animal situation just as it appeared in the San Joaquin Valley area. She felt that if this information could be generalized to a larger area, a situation nearing desperation was facing animals.

Therefore, this researcher felt it was crucial to take some action however small, to attempt to solve the problem.

First, the investigator acquired the following information in a phone conversation on February 25, 1981, with an employee at the Animal Pound of a middle-sized community of about 120,000 people. In the community the average number of stray dogs picked up per day is between thirty and forty dogs. This does not include the sixty dogs carried in, on an average, by their owners because the animal has become an inconvenience, or it barks, it is no longer a cute puppy, and for a variety of other reasons ranging from allergies to a lack of time to care for the pet. Thus, on any day, a minimum of 100 pets "utilize" the facilities. All the animals that owners bring to the pound

are destroyed the same day. These owners are in effect signing a death certificate for their animals. Stray dogs that are picked up in the field without identification are held three days before being put to death. Those animals with identification are held indefinitely until the owners are notified. Once the owners are found, the animal is held for five days then put to "sleep" if not reclaimed. All animals are destroyed with nitrogen gas, which makes them go to sleep only to never wake again. This can be slow death but it is not as cruel as decompression chambers where the animals die of oxygen deprivation.¹¹ With this knowledge, it is conceivable that one hundred animals are killed per day.¹² In summary, the Pound does not make any effort to find homes for the animals; the Humane Society has that job. However, the animals at the Pound can be adopted.

¹¹Telephone conversation with an employee at the Pound by investigator, February 25, 1981, 10:00 a.m. (For reasons of discretion the name of the city and the Pound have been withheld.)

¹²The exact number cannot be substantiated by the current investigator. In a second telephone conversation on March 18, 1981, a second employee noted that only 60 pets per day including those delivered by owners ever cycle through the facility.

As the researcher gathered this information it was realized that the issue of animals is an extensive one, thus it was necessary to isolate the more important areas and cover them thoroughly. The subject was divided into a study of pets, the cruelty suffered by some animals, and those endangered and threatened species of animals.

A unit plan was then developed focusing on the foregoing areas. Also included were student interests which were specifically delineated by the investigator by the use of a pretest.

Hopefully, with an eye-opening experience such as this, children can seem some of the problems their generation faces and maybe learn some positive action to overcome them.

III. PURPOSE OF THE STUDY

Purpose of the Study

The purpose of the study was to make students aware of the dangers our animal population faces today. Specifically, they were involved with a study of domestic pets and how we can help protect many from a premature, cruel death, as observed in the San Joaquin area. Secondly, they focused on animals in general and their right to life. Included in this section was a study of animals that are used for food and the cruelty some are subjected to in experimentation. Finally, they studied the endangered and threatened

species on this earth. They learned why they are threatened with extinction and what can be done to help them.

It was suggested that by increasing the awareness in the rights and feelings of animals, each child might be able to comprehend the importance of protecting the animals that inhabit this earth, their right to live a normal life free from fear and pain, and to learn to communicate these beliefs to others, adding support to their arguments by citing facts. Throughout the study the attempt was made to expose the group to different positive ways of solving problems in general, a technique which can then be applied to other problems with which they may be faced in the future.

IV. ASSUMPTIONS AND LIMITATIONS

Assumptions

It is assumed for this research project that:

1. A unit plan developed solely by the present investigator is an effective teaching tool.
2. The investigator's values reflect the general concern of important naturalists who agree that there needs to be more concern for animal well-being likewise the cruelty imposed on them and the possible extermination of some beautiful species.
3. The unit plan approach will change the attitudes of the children toward animals and meet the needs of all the students.

4. This approach will help children formulate reasons for their opinions and increase awareness of world issues.
5. Children can learn how to solve problems using positive action.
6. Children will learn with varied activities and from each other as well as through information supplied by the teacher.
7. Each week there will be thirty children, and a total of seventy minutes with which to work for a period of three and one half months.
8. There will be adequate material for the children and the teacher to utilize.
9. The children at the sixth grade level, will be enthusiastic concerning this question.
10. No formal or standardized test was used in the study. The informal questionnaire/survey developed by the researcher was presented initially to discover previous knowledge, was an adequate measure of this knowledge. The utilization of this same questionnaire to review any changes in attitude was adequate, particularly since these were supported by the following types of evaluation devices: (1) teacher observations of the students; (2) student participation in activities; (3) changes observed by parents, reactions to material presented.

Limitations

The limitations of this study were:

1. The study was limited by the time factor: seventy minutes per week was devoted to the unit. This averaged only two times per week as exposure time for a period of three and one half months. In changing attitudes, we know that a more frequent positive encounter will reinforce these attitudes.
2. The information was limited to the availability of current material at several animal organizations; for example, the National Wildlife Federation, Project Jonah, Fund for Animals.
3. The other sixth grade class served as the control group in this research project.

V. SUMMARY

Chapter I has presented the introduction which includes the statement of the problem and rationale of the project. The purpose of this study was outlined and the hypothesis was covered. Finally the assumptions and limitations were also declared.

The remaining chapters of this study are: Chapter II, Review of the Literature; Chapter III will discuss the actual steps involved in the study; Chapter IV contains the actual unit and Chapter V presents the results of the study,

the reactions of the students to the unit and offers suggestions for further research. The bibliography and extensive appendices complete the study, with samples of activities done by the class.

Chapter II

REVIEW OF THE LITERATURE

In reviewing the literature for this master's degree action research project, it was necessary to review several different aspects of education. In Section A the present investigator reviewed the literature pertaining to value and moral education. Section B relates the way value education can serve as an integrator for environmental education. In Section C of the literature review, the focus became what the present school textbooks contain concerning animals and the environment. Section D offers sound justification for incorporating these subjects at this particular age level. Finally, in the last two sections, E and F, reasons are explicated for the value of developing and utilizing unit teaching, as well as the provision of a current list of units available on animals.

A. Value Education

Initially, this researcher investigated the idea of value and moral education. It seemed important to this study because of the nature of the subject matter and because we know that throughout life, "persons have experiences; they grow and learn. Out of experiences may come certain general

guides to behavior. These guides tend to give direction to life and may be called values."¹ As to how values are related to experiences, Raths continues:

We, therefore, see values as constantly being related to the experiences that shape them and test them. They are the results of hammering out a style of life in a certain set of surroundings. After a sufficient amount of hammering, certain patterns of evaluating and behaving tend to develop. Certain things are treated as right, or desirable, or worthy. These tend to become our values.²

The process of obtaining values is also explored by Raths, who suggests that it is based on the following seven-point criteria called the process of valuing. This process can be divided into three parts: choosing, pricing, and acting. The following summary of these three parts indicates how they may be identified by observing the overt action of human beings.

- Choosing:
1. Choosing freely. Values must be freely chosen if they are to be really valued by the individual.
 2. Choosing from alternatives. Only when a choice is possible do we say a value can result.
 3. Considering consequences. Values are chosen only after thoughtful consideration of the consequences of each alternative.
- Prizing:
4. Cherishing values. The individual is happy with the choice. A person's values flow only from choices that we are glad to make.

¹Louis E. Raths, Merrill Harmin, and Sidney B. Simon, Values and Teaching (Columbus, Ohio: Charles E. Merrill Publishing Co., 1966), p. 27.

²Raths, p. 28.

- Acting:
5. Willingness to affirm the choice publicly.
 6. Doing something with the choice. When we hold a value, it will be revealed in one or several aspects of our lives.
 7. Persisting repeatedly, in some pattern of life, values tend to have persistency; they tend to make a pattern in life.³

When working with children to help them develop values several authorities maintain that it is necessary to keep these seven points in mind. They also stress that a teacher should help the children make an important value adjustment that contradicts those values held by prior generations. They emphasize that if human kind is to survive, the children must finally be aware that:

...The massive competitive value structure in which people see only parts of the puzzle of global survival must be dismantled and replaced. This value structure which pits man in competition over limited resources, must give way to an understanding that the earth's limited resources must be shared by all if any are to survive.⁴

Because of this new attitude which must be developed, it seems imperative that "human values must be taught in the classroom and wherever education goes on."⁵ Moreover, when working with children to encourage the development of values, an adult would be advised to take the following specific steps which directly parallel the three part of value

³Raths, p. 30.

⁴Robert C. and Isabel L. Hawley, Human Values in the Classroom (New York: Hart Publishing Co., 1975), p. 13.

⁵Hawley, p. 14.

processing--choosing, prizing, and acting outlined on page 15.

1. Encourage children to make choices, and make them freely.
2. Help them discover and examine available alternatives when faced with choices.
3. Help children weigh alternatives thoughtfully, reflecting on the consequences of each.
4. Encourage children to consider what it is that they prize and cherish.
5. Give them opportunities to make public affirmations of their choices.
6. Encourage them to act, behave, and live in accordance with their choices.
7. Help them to examine repeated behaviors or patterns in their life.⁶

The foregoing activities, it has been suggested, can be accomplished by any interested adult in working with children. Teachers, however, have an even greater responsibility. It has been proposed, for example, that "it is the teacher's role to foster human values by creating learning opportunities where human values will come into play. And, perhaps even more difficult for the teacher, it is his/her role to live by the value he/she is teaching."⁷

⁶Raths, pp. 38-39.

⁷Hawley, p. 14.

More specifically,

It is the job of teachers to set up learning experiences which will facilitate moral development. These experiences fall under the general category of what Lawrence Kohlberg calls role taking: that is, opportunities to take a variety of socially useful roles so that the student will be able to see a moral decision from a number of different perspectives. The wider the range of role experiences, the more likely the student is to make a moral decision that will be just and satisfactory to many people instead of only to himself.⁸

B. Integration of Value Education
and an Environmental Study

As a means of helping students develop human values-- values based on moral judgments--it is necessary to teach subjects other than reading, writing and arithmetic. Just one area that can promote this necessary value education is a curriculum that includes an environmental study.

In an excellent article appearing in Journal of Environmental Education, Kauchak, et al. emphasize this point as they note that ". . . there appears to be consensus among environmental educators that ethics form an integral part of the curriculum. All too often an indoctrination approach to affective goals in environmental education has developed instead, with emphasis on the inculcation of 'correct' attitudes and values and the replacement of 'wrong' views and beliefs."⁹

⁸Hawley, p. 22.

⁹Don Kauchak, Flo Krall and Kim Heimsath, "The Need for Education, Not Indoctrination," Journal of Environmental Education, 10 (Fall, 1978), 19.

These same authors see one alternative to this type of approach is one which ". . . treats environmental issues as moral dilemmas to be wrestled with and solved by students from their own personal perspectives."¹⁰ They point out that this method is based primarily on Lawrence Kohlberg's theory of moral development which ". . . views environmental education as both an area of study and an arena in which students learn to deal with and resolve moral dilemmas in their lives."¹¹

When one examines Kohlberg's theories in detail it is clear that he, these writers feel,

. . . believes that moral judgment is a significant factor in influencing moral behavior and that people with more organized and integrated moral reasoning systems (at higher levels) are more likely to follow through with behavior consistent with their judgments that are those with lower level systems. The implication is that moral reasoning has a potential which makes the examination of values an important part of the environmental education curriculum.¹²

This whole concept is crucial to the task of the present investigator. Kohlberg's theory, when put into action, might indeed appear as a unit such as the present one focusing on a subject area in which children are exposed to various values, are presented with factual information and are allowed to interact with it and explore their own value structures with relation to it. Such a procedure promotes a

¹⁰ Kauchak, p. 19.

¹¹ Kauchak, p. 19.

¹² Kauchak, p. 21.

reconciliation of two competing value orientations. For example, the writers note that:

. . . the bowhead whale is facing possible extinction from hunting pressure from bands of native Eskimos. But attempts to stop the hunting of these whales threatened a way life which dates back over 3,000 years. Elders of the Eskimo tribe claim that it is 'a right more sacred and grander than government.' Essentially, then, the problem becomes one of reconciling two competing value orientations. It is with issues like this that Kohlberg's theory becomes relevant to environmental education.¹³

Kohlberg's theory can be applied in many concrete ways. One method, for example, which might be utilized by teachers is to match instruction with the capabilities of the students. Each student's response "to an environmental issue involving a class of values will depend upon his moral and intellectual development."¹⁴

Another possible use of Kohlberg's theory is as "a means of helping students develop more comprehensive and complex means of resolving value conflicts," thereby, "helping students move from one level to the next. Environmental dilemmas provide not only a means of teaching environmental values but also a way of helping students develop their problem-solving skills."¹⁵

Since "environmental education which deals with the interrelationship of man and his environment provides a

¹³ Kauchak, p. 21.

¹⁴ Kauchak, p. 21.

¹⁵ Kauchak, p. 21.

natural curriculum for moral development," by, "using Kohlberg's theory as a framework, teachers can help students understand the complexity of various environmental problems as well as provide them with a means of solving future problems."¹⁶

The necessity for environmental education cannot be overemphasized. We dare not neglect it further. The consequences of such neglect are detailed by Mary Berry. In a recent article appearing in U.S.A. Today, she notes that:

Only in recent years has the private and public eye come to focus on environmental education. As a result, we have paid dearly for that neglect--in the land eroded and destroyed, the animal species which have become extinct, and the water and air pollution which we experience today. Even now, while attention is more keenly directed to the environment, we continue to pay the price in the daily waste of resources because too few realize that certain of our supplies may be finite.¹⁷

She further proclaims that,

. . . education about the environment is as basic and fundamental as education in any other area. No man or woman has the right to consider himself or herself an educated person until he or she understands something about the world in which we live, what we are doing to harm the world, and what we can do to save it.¹⁸

In conclusion this researcher has supplied information from several authorities who state that a study of environmental education can be integrated with moral education

¹⁶Kauchak, p. 21.

¹⁷Mary F. Berry, "The Pressing Need for Environmental Education," U.S.A. Today, 107 (May 1979), 50.

¹⁸Berry, p. 50.

to promote moral and value development. She has also noted the vital importance of a study of this type for the future of our world.

C. Textbooks Used in Public Schools

As previously explained education is a vital part of saying the environment and these animals which inhabit this earth with us; however, many textbooks used by schools lack this important study. The investigator reviewed five elementary school textbooks and recorded what the of environmental studies were included in each. The results follow.

The first book that was examined is entitled Elementary School Science and How to Teach It, published by Holt, Rinehart and Winston. In this text ecology and ecosystem are covered, including the food chain and the conservation of water, soil and air. However, there were only two pages concerned with animal conservation and brief discussion of what would happen to the life chain if some species didn't exist.

There was extensive information on animals in general. They were classified in the chapter called "Nature of Life," as invertebrates and vertebrates also sub-classified into mammals, birds, reptiles, amphibians, and fish. Coupled with each chapter is a chapter of ideas for activities that correspond to information in the preceding chapter. Some activities for teaching the nature of life were: keeping a

pet animal, feeding of animals, and watching animals care for their young.

Another chapter was concerned with animal behaviors during the seasons of the year. The ideas for activities on this topic included: taking field trips, looking at animal tracks, discussing superstitions and feeding squirrels and other mammals.

Finally, there was a chapter on specific animals. In this section certain animals were discussed in detail covering information such as where they live, what they eat, ways of protection, migration, and hibernation. There were also ideas given on how to observe these types of animal activities.

In conclusion this textbook contained extensive information and activities about animals but did not seem to be concerned about the problems facing animals today, as it suggested animal preserves as the only solution to the problem of endangered and threatened species.

Another textbook examined by the researcher was A Source Book for Elementary Science, published by Harcourt Brace Jovanovich. This book had one chapter of approximately seventeen pages focusing on animal life. Included were summaries of:

1. The different kinds of animal categories, i.e. mammals, fish, birds, reptiles and amphibians, with examples of an animal in each category; and
2. A small discussion of life chains as they evolved

from the ocean. There was no mention of the controversies surrounding animals and the environment.

The textbook, Exploring Science, published by Laidlaw Brothers, was concerned with the life cycles of plants and animals. There was a section specifically concerned with animals in each of the different categories. It was, however, topically arranged in a rather unusual manner. For example, there was only one paragraph that contained a very general statement concerning each category of species. Then one or two examples of the species were chosen and their life cycle detailed as an apparent representative of the whole species.

In the section of fish, the general statement was that fish have gills and live in water. The two representatives were salmon and grunion which have unusual life cycles themselves. Since these two have special characteristics it's difficult to know the general characteristics and habits of all fish.

As another example, the general statement of mammals was that mammals have hair and feed their young milk. There was no mention of any other characteristics. The two representatives were whales and baboons which could lead to confusion to whether mammals live in the water or on land.

The amphibians and reptiles were discussed together and the similarities and differences were pointed out. They used frogs and snakes as the representatives and stated that

snakes have lungs and live in the water or on land where frogs begin their life in the water with gills and as adults move to the land and develop lungs.

There was no mention of the bird species which can make their classification difficult. From reading such an approach, a child, without direction, might possibly have trouble transferring from small facts about a certain animal to the larger generalization of the species as a whole.

Concepts in Science, published Harcourt, Brace and World, Inc., had no information on animals or the environment.

The last textbook reviewed by the current investigator, was Inquiring into Science, published by the American Book Co. This book had one chapter in which it tried to describe all living things as well as classify animals. In its classification section, animals were classified as invertebrates and vertebrates. In each classification, animals were separated into the different kinds of vertebrates and invertebrates and were explained only in general terms.

The invertebrate section was quite detailed with each of the different categories explained and some examples given. The vertebrate section was a similar classification as in the other books reviewed where a description of mammals, birds, fish, reptiles and amphibians was given. There were few examples of the kind of animals that were in each category.

There were, however, concern for the problems faced by animals today.

The investigator concluded that in each of these textbooks there was minimal information on environmental problems as they relate to man and animals; likewise, the information concerning animals was limited to a classification of the different species of animals. There was no attempt to look at the treatment of animals and the moral judgments that need to be made by students concerning animals and our environment. A prayer by Albert Schweitzer poignantly summarizes the results of the failure of our textbooks to treat realistically the problems faced by animals. It describes the horrors animals are subjected to in our society. It provides a set of goals on which children can base their search for values and moral judgment. The prayer is as follows:

Hear our humble prayer, oh God, for our friends, the animals, specially for animals that are suffering, for all that are overworked and underfed and cruelly treated, for all wistful creatures in captivity that beat against their bars, for any that are hunted or are in pain or dying, for all that must be put to death We entreat for them all thy mercy and pity, and for those who deal with them we ask a heart of compassion and gentle hands and kindly words. Make us ourselves to be true friends to animals and so to share the blessing of the merciful.¹⁹

D. Age Level

The sixth grade was selected as an appropriate level

¹⁹ Albert Schweitzer, The Delta Humane Society, Stockton, California, 1980.

in which to initiate this study on animals. The researcher considered Lawrence Kohlberg's three stages of moral thinking, Robert Havighurst's "developmental tasks" and Jean Piaget's stages of cognitive development and concluded that these authorities provided ample justification for inclusion of this moral issue at this grade level.

All these highly regarded educators/psychologists emphasize that it is during the years spanning grades five-seven that students reach a readiness stage to develop values and morals. Because of the influence each of these men have had on the educational process, their central concepts related to this research are presented in the following pages.

Lawrence Kohlberg

Lawrence Kohlberg's theory of moral thinking can be used to judge what types of material students can handle. He suggests that there are three stages of moral thinking: 1. the pre-conventional; 2. the conventional; 3. the post-conventional. Teachers are urged therefore to keep in mind the student's level of intellectual thinking when planning learning experiences and the materials to be used.

For example, a child at the pre-conventional level deals with a moral situation "in terms of physical consequence (punishment) or out of a desire to avoid trouble."²⁰ The

²⁰Robert F. Biehler, Psychology Applied to Teaching, (Boston: Houghton Mifflin Company, 1978), p. 378.

world is viewed as "good" and "bad", "right" and "wrong."

At the conventional stage, children first conform to please others; later, within the same conventional stage, they conform out of a desire "to show respect for authority and to help maintain the social order."²¹ The result is conformity to established laws--laws are obeyed because they exist. They are not necessarily questioned but are followed blindly because of the desire to conform.

If an individual grows into the next moral stage--the post-conventional level--"they then make independent moral judgments: they recognize that the rules of the social order are somewhat arbitrary and make decisions in terms of general ethical principles and personal conscience."²² "Right" is defined by universal standards that relative to each individual and are arrived at through logical reasoning. Moral values of the society are derived from moral values of the individual.

Unlike Piaget, who precisely states age levels, Kohlberg maintains that there is no specific age level for these moral stages. Nevertheless, he for example, does suggest that the switch from pre-conventional to conventional thought generally takes place around the end of the elementary grades or around the sixth grade.²³ This means that these children are ready for material that requires them to make decisions that affect others not just themselves.

²¹Biehler, p. 378.

²²Biehler, p. 378.

²³Biehler, p. 378.

Robert Havighurst

Similar to Kohlberg's levels of moral thinking, Robert Havighurst also considers what he calls "developmental tasks" for different age groups. These developmental tasks must be learned, he asserts, by the individual and "are those things that constitute healthy and satisfactory growth in our society."²⁴

He delineates many tasks which should be associated with the elementary grades. Among those important to the upper elementary grades are the following:

1. Developing conscience, morality and a scale of values.
2. Achieving personal independence.
3. Developing attitudes toward social groups and institutions. (Specifically defined by Havighurst as encouraging "children to respect the rights of others and to explain the necessity and desire ability of rules)"²⁵

By developing materials that includes these foregoing tasks, teachers can help stimulate the minds of children and help produce satisfactory growth in our society, by producing citizens/adults who are sensitive and capable of forming values which show consideration of others.

²⁴Biehler, p. 108.

²⁵Biehler, p. 110.

Jean Piaget

According to Jean Piaget, children from seven to eleven years of age operate at the concrete operational stage of cognitive development. At this stage the kinds of operations that children can engage in limited to those which utilize concrete objects that they can feel, smell or taste--those that somehow they have actually experienced. At this level, they are unable to work with abstract ideas, such as "freedom."

When children reach the age of twelve, however, they "begin to move into the final stage of cognitive development, which Piaget calls "formal thought."²⁶ Children at this stage become increasingly more capable of dealing with abstractions and of formulating and testing hypotheses. Formal thought allows teachers to develop or use materials that are not always concrete objects. Words and other symbolic representations are utilized more frequently and allow more freedom within the mind of the child with result that he/she can often create his/her own opinions and reasons for them.

Based on the theories of these three men this researcher decided that the sixth grade was an appropriate grade in which she could help children deal with abstract ideas, formulate opinions about such issues and the environment and animals, discover their own values, and put their values to work in solving problems using their best moral judgment.

²⁶Biehler, p. 118.

E. Value of Unit Teaching

The current investigator decided to use a unit approach in teaching the sixth grade class about animals because it offers greater flexibility in meeting the divergent needs of students, through the utilization of various techniques, levels of resources, types of materials, and specific assignments.

A teaching unit is a characteristic of the experimentalist philosophy of John Dewey who encouraged teachers to use a problem centered approach and the active involvement of students in the learning process. Specifically, it is a group of related concepts that are unified for instructional purposes which may last several days or several weeks. It "contains just the things that you want the pupils to know and to do within the confines of the time you have."²⁷ The subject matter of the unit can be created by utilizing material "from a single discipling, or it may bring together ideas from a broad field."²⁸

One of the values of a unit is in its ability to bring together the individual differences in children, so all of the students can learn the same material. It is important to know the growth characteristics of development

²⁷ Marcell H. Nerbovig and Herbert J. Kalusmeier, Teaching in the Elementary School (New York: Harper & Row, 1969), p. 106.

²⁸ Nerbovig, p. 106.

common to children at various ages and the levels of developmental tasks related to each stage. Only through the understanding of and the ability to bring together these differences in growth characteristics can a teacher choose curriculum experiences that "will foster good mental health and cause the optimum amount of learning to take place."²⁹

Once a teacher is aware of the developmental differences of children, he/she needs to use effective techniques in unit instruction to meet the needs of the students.

Barbara Olmo, an article appearing in the magazine The Social Studies, offers these suggested techniques:

Motivate, arouse, awaken curiosity; then provide a variety of examples to illustrate, expand and clarify the theme and sub-themes to sustain interest; and finally encouraged synthesis, application of concepts and formulation of generalizations.³⁰

Teachers, when developing a unit, should create a teaching unit that contains more materials and activities than is necessary. This allows the teacher to plan with the students, to provide extra activities in case some do not succeed and to be flexible enough for worthwhile unexpected events.³¹

²⁹Lavone A. Hanna, Gladys L. Potter, Neva Hagaman, Unit Teaching in the Elementary School (New York: Holt, Rinehart and Winston, 1963), p.34.

³⁰Barbara Olmo, "Determining Effective Teaching Techniques in Unit Development," The Social Studies, 69 (March/April, 1978), 80.

³¹Nerbovig, p. 107.

A teaching unit can contain the best ideas and activities from many different resources. Some resources that can be utilized are books, films, magazines, speakers, pictures and field-trips--all of which can be used to supplement and expand the main subject to provide for large group activities as well as individual and small-group activities or simply to stimulate the interest of the students.

Thus a teaching unit's value can be based on its ability to meet the needs of individual student differences, as well as its ability to challenge the different levels of thinking and finally its flexibility in varied activities and resource possibilities.

Development of a Unit

There are four main parts important to a unit plan:

1. The broad topic;
2. the areas to be covered, translated to goals and objectives;
3. the activities by which these goals are achieved;
4. the resources needed to engage in the activities and finally;
5. concrete methods of evaluation.

First, a teacher must begin with a topic that may be part of the school's curriculum or supplementary to what already exists. In selecting the topic it is important to keep in mind the maturity level and psychological needs, and growth characteristics of the students involved. Also important for success of a unit is consideration of the attention span of students and the length of the unit, as

well as the time of year it is to be presented. All of these factors will influence the students interest, motivation, and successful performance.

Next, it is necessary when writing the unit plan to list all of the areas to be covered and to state the goals and objectives of the unit. These would include the major concepts and understandings to be developed (cognitive domain); the abilities and skills the students will attain (psychomotor domain) the interests, attitudes and values (affective domain) one wants to explore in the unit.³²

One way a teacher could formulate and sequence objectives and activities in a logical manner, would be to use the levels of cognitions suggested by Bloom and his associates in the Taxonomy of Educational Objectives: Cognitive Domain. They are arranged in hierarchical order--for example, a student must know and comprehend or understand before he/she can apply. The six levels may be defined briefly as follows:

Lowest Level

Level I: Knowledge. The ability to recall a definition or fact.

Level II: Comprehension. The ability to interpret information.

³²Nerbovig, p. 108.

- Level III: Application. The ability to apply knowledge learned in the classroom to situations outside.
- Level IV: Analysis. The ability to separate the aspects of the problem to examine each component separately.
- Level V: Synthesis. The ability to rearrange the knowledge to form a new idea.
- Level VI: Evaluation. The ability to choose from alternatives to make a judgment.

Highest Level

An effective teacher will always attempt to move each student toward the higher levels of cognitive functioning. Too often, we find students frozen at the knowledge level. This is suicidal in a democracy which demands of its citizens the highest level of functioning--evaluation.

In each of foregoing areas of cognition there are a number of methods a teacher and activities that would encourage the growth of cognitive development in each child. The following table illustrates first the desired goal (column 1), second the methods to be utilized to achieve that goal (column 2), and finally in the last column (3) the activities which would facilitate the achievement of the base goal.

I	II	III
Major Cognitive Objectives	Teaching Methods	Activites
I. Knowledge	identify, match, discover, listen, observe	filmstrips, records, diagrams, books
II. Comprehension	translate, explain, summarize	graphs, tell a story, show what is being explained
III. Application	experiment, report, interview, simulate	scrapbook, map, diary, illustration
IV. Analysis	classify, categorize, advertise, survey	graph, questionnaire, commercial, chart.
V. Synthesis	role-play, predict, hypothesize, create, imagine	invention, pantomime, write a poem, new game
VI. Evaluation	discuss, debate, editorialize, choose	panel, letter, court, trial, news item.

The foregoing summary table illustrates the fact that the teacher needs to present stimulus, ideas, situations, questions, and problems that build in a logical sequence--one level to the next so that the students will be able to apply previous knowledge to the next level. In this manner they will not become confused rather, each student, no matter at what level of cognitive development he or she enters, can progress to the next highest level. In this manner, even the very brightest or slowest will always be in the process of "becoming."

Similar to the development of objectives in the cognitive domain, is the development of these objectives in the affective domain. They, also, are arranged in hierarchical order. The five levels may be defined as follows:

Level I: Receiving. The willingness to receive or to attend to certain stimuli.

Level II: Responding. The willingness to become involved or committed to a subject so that satisfaction is gained through this commitment.

Level III: Valuing. The internalization that a thing, phenomenon or behavior has value.

Level IV: Organization. The organizing of values the interrelationships among them and the determination of the dominant values are established.

Level V: Characterization by a Value. The consistency of actions of the individual to the extent that the value becomes a characterization and the integration of the beliefs to a total philosophy.

As can be observed, this action research project required the use of both of these types of educational objectives. This allowed for growth in at least two areas--the cognitive domain and the affective domain. It is most important to include cognitive as well as affective objectives so that the student can reach their highest levels and become affective citizens of the world community.

The learning activities to be used make up the third section of the unit plan. The activities need only be listed

at this point as they will be explained in detail in the fourth section covering resources.

The resources that are to be used by the teacher and the students are compiled in the fourth section of the unit plan. Included in this section of the unit will be a separate listing of each resource (Titles and authors) and a description of those learning activities that require more explanation such as learning centers, group and individual projects, art and music activities, et al. These resources may be books, films, magazines, records--anything which can be used by the students or the teacher that will help with the development of the children's levels of cognition.

Finally, it is necessary to decide on the type of evaluation processes to be used. One must know, for example, where students enter, and how far they progress. Therefore, at the entrance point of the unit there may be a need to pre-test for the knowledge already attained by the students. Further, it would be advisable to keep a written record of changes observed. The methods of evaluation, including oral reports, all forms of written communication (stories, reports, letters), tests, projects, products (mobiles, art works) et al. should also be included in this section. For each method of evaluation the teacher must specify the criteria which would signal the student's success. (An example of one type of evaluation developed by the investigator to evaluate oral and written reports can be seen in Appendix B1-B27.)

A summary of the qualities of a good unit are illustration in the following excerpt described by Edward Meyen.

He suggests that a good unit should:

- stand alone. It should be sufficiently complete that it represents a complete teaching package in terms of teacher direction. To the degree possible, it should be designed so that a teacher other than the developer could implement the unit with the results approximating the intended outcome.
- be cumulative, in that the skills, concepts and information are clearly integrated.
- provide instruction in academic skills and concepts, information and social development.
- allow for continuous evaluation of pupil progress.
- represent an attainable goal for the students who will participate in the unit and for the teacher. Teachers need to keep in mind the time frame in which they will be teaching.³³

Because of the foregoing characteristics and qualities of a unit this investigator decided that the unit approach to teaching the subject of "Animals and Their Rights in Our Society" offered a clear, and comprehensive way of dealing with a sensitive issue. At the same time, it would allow any other teacher many options, much flexibility in a number of areas considered in the explanatory pages. The balanced curriculum, possible to achieve through emphasis on not only the cognitive, but affective and psychomotor domains is a strong argument for the utilization of a unit plan--thereby emphasizing the total growth of the students.

³³ Edward L. Meyen, Developing Instructional Units (Dubuque: Wm. C. Brown Company, 1976), p. 80.

F. Other Unit Plans

There were few published unit plans about animals found by the researcher. However, she did review three units that were concerned with animals. None of them had information on the treatment of animals in the society but they did have information that could be supplementary to the unit presented in this action research project.

The three units were entitled: 1. Animals, Environmental Education Curriculum; 2) Resource Handbook-Animals, A Supplement to Basic Curriculum; and 3) Activities for Studying Wildlife. Each one is explained in the following sections.

1. Animals, Environmental Education Curriculum Grades 4-6

This particular unit was implemented in the Topeka Public Schools in Kansas in 1973 and focuses mainly on the (a) biological aspects of animals; (b) zoo life and life in the wild; and (c) the animal's impact on the environment. In addition, it does have sections on endangered species, hunting, and the feelings and rights of animals.

Goals in both the cognitive and affective domains are included--a fact that makes this unit more comprehensive and the most acceptable of the three. Further in the cognitive domain the objectives incorporate characteristics of the animals and their habitats, man's place in this environment, zoo life and why zoos are necessary plus a brief study

of endangered species. This broad topical approach offers a wider variety of choice for teachers and students.

In the affective domain, objects are written covering areas such as the value of animals to our society, the rights and respect that animals deserve, hunting and its place in the wildlife balance, a look at man's quality of life as seen in his view of animals in the wild and zoo life. The inclusion of these affective objectives adds a dimension to this unit that allows for a complete growth on the part of the students.

The unit contains numerous ways of informing both students and the teacher. There are poems and stories about animal feelings and rights; information sheets about endangered species, zoos, animal characteristics and habitats, as well as man's hunting practices. There are questions for the students to answer following each type of information sheet. There are diagrams included of animals that accent the parts of the body.

Included in the unit is a field trip activity to a zoo with ideas developed centering on what should be covered before going and what can be seen while at a zoo. Finally, there is a sample test at the end of the unit plan.

2. Resource Handbook--Animals, A Supplement to Basic Curriculum Guide K-6

This unit was initiated in the Gary City Public School System in Indiana in 1968 and contains activities to supplement any basic animal study. Some of the many concepts covered

in the unit are: (a) different kinds of animals; (b) how animals move; (c) what they eat and where they live; as well as (d) changes in animals' appearances as seasons change; and (e) the physical characteristics of different animals.

There are also separate sections devoted to discussions of cold-blooded animals, warm-blooded animals, insects, birds, and spiders.

A section focusing on the animal's place in the environment, as well as his usefulness to man is a "plus" for this unit. Included, too, is a rather careful discussion of those animals considered harmful to man. Finally, a conservation program that offers ideas to save endangered species is presented. It terminates the unit on a positive note.

Under each of the foregoing sections there are lists of ideas of activities to do and ideas to talk about with children. For example, following the concept of some animals are pets, there are ideas such as: talking about pets, displaying bulletin boards of pet pictures, visiting a pet shop, developing clay models, reading animal stories and listening to animal records. However, one negative aspect of this section is that because there is absolutely no concrete information provided to back up the ideas, the teacher must do the research necessary to use the listed concepts and activities.

However, included in this unit plan are things to make, with complete directions included for the teacher and students to follow. For example, there are diagrams of animals in which the parts of the body. Charts that can be used by the teacher for bulletin boards are also included. Lastly, there is a sample evaluation and a complete list of children's books and films that can be utilized with the units. Titles as well as publishers are included, but no cost is listed.

3. Activities for Studying Wildlife Grade Level 4-6

This is not a unit, rather it is a brief summary of activities that was incorporated in the Montgomery County Public Schools in Rockville, Maryland in 1970. This "unit" is merely a list of outdoor activities concerned with animals and their habitats in the outdoors. Some of these activities are: stalking techniques, making casts of animal tracks, and identifying animals by sign they have left behind. There is absolutely nothing else offered for the teacher and its usefulness is thus very limited.

G. Conclusion

In this chapter the researcher reviewed the literature pertaining to value and moral education and, the way this type of education can be developed by engaging the student in the study of environmental education. Also presented was an examination of the textbooks currently used in

some elementary schools. The investigator researched information to justify using this type of study at this age level. Finally, she reviewed the value and techniques of unit teaching and offered a description of some published unit plans that are concerned with animals.

In Chapter III the exact procedures, implementation dates and activities utilized by the present investigator for presenting the unit she developed for this research project are thoroughly explained. Specifically the length of time required for each section, the exact topics discussed, as well as all activities utilized in the unit are described. In Chapter IV this actual unit plan in its entirety developed by the researcher is presented. Finally, in Chapter V, the results from the investigation based on the pre- and post-tests as well as teacher observation are delineated. Reactions of the students indicating levels of affective domain functioning are described. Recommendations for further study are also included.

Following Chapter V, there is a complete Appendices and a selected bibliography including books, films, magazines, etc., actually used by the researcher. Finally, sources not utilized in the present investigation, but which might prove useful to other interested in teaching a similar unit, are incorporated.

Chapter III

RESEARCH PROCEDURES

This research project developed because of a strong desire on the part of the researcher to let children become aware of the rights of animals and how they are abused in our society.

School Site and Population of Study

The investigation was initiated in Jim Marsh's sixth grade class at Village Oaks School in North Stockton, California. The sixth grade was chosen specifically because it has been suggested by authorities, such as Jean Piaget and Robert Havighurst, that this is the appropriate time for the average 11-year-old child to gather information, process this information into concepts, and, with encouragement, to form opinions based on these concepts.

Development of Materials

The current researcher decided which topics were to be explored, and for which materials and ideas would be developed. Activities and topics of the study were chosen to enhance the interest of the students as well as give them an opportunity to increase their mental knowledge. Included in these activities, were individual projects, group projects,

and art projects. Individual projects were both oral and written; when these were combined with the art activities, they helped prepare the students for the demands which would be made during junior high school and after. The projects were enhanced with information and ideas gathered from sources such as the National Wildlife Federation, Project Jonah and the Fund for Animals.

Assessment of Students

Before the unit was introduced, the study actually began for the class of thirty was a pre-test; administered on September 18, 1980. This was done to establish the current understanding of the problem that the class already held. This pre-test may be found in Appendix C1-C27. The sixth grade class in the school served as a control group. The investigator recognized this as a limitation; see Chapter I--Limitations. This group was pre-tested on September 29, 1980; however, from that point on did not participate in the activities. Their pre-test may be found in Appendix D1-D26.

The unit was introduced on October 8, 1980, and continued two days a week for seventy minutes each week until December 18, 1980, a total of 695 hours. The post-test was given in both classes on December 17 and 18, 1980, to re-evaluate the attitudes of the students to determine if there was any change. (Please see Appendix E1-E52 for the post-tests of both groups.)

The Study of Pets

The unit which may be found in Chapter IV began with a three-week investigation of pets. This was a topic that the students could easily relate to since most of the class had a pet. There were several major activities, however, that seemed to be major pivotal points. One, initiated on day one was the journal by which the students were encouraged to keep a record of all of the animals they would help during the unit. A sample of the journal can be found in Appendix F.

A second major and continuing activity was focused on discussions which began with the problem relating broadly to how existing, deplorable conditions of animals at the Pound could be changed. The class suggested alternatives for the whole concept of keeping animals in a "Pound." They pointed to methods of funding for various institutions or ways of handling stray animals. These ideas were recorded on a poster by the investigator to keep a record of the suggestions. The posters can be found in Appendix G.

On another day, the children focused on the topic of people who hurt pets or use them in experimentation. They considered the types of penalties that there could be to animal/pet abuse, and the educational efforts which could encourage people to take good care of their pets. They also considered what substitutes could be used instead of animals in science experimentation.

The section was concluded with the children writing letter to the editors of several California newspapers. (See Appendix H1-H6 for copies of the letters and the cover letter sent by the researcher). The letters were written on October 16, 1980, as part of a small group effort where each member contributed ideas that had been discussed, including their suggested alternatives. The researcher sent the letters to the following newspapers: The San Francisco Chronicle, the San Francisco Examiner, the Sacramento Bee, the Sacramento Union, the Los Angeles Times, the Stockton Record and the Pacifican (the University of the Pacific newspaper). Only two of the letters were printed; the letter to the Stockton Record which appeared on November 10, 1980, and letter to the Pacifican which was printed on November 14, 1980 (see Appendix I for the actual letters as they appeared in the newspapers).

The class also created collages on October 22-23, 1980, to help visualize their feelings for animals. This served as a culminating activity for this portion of the unit, and they were then ready to move forward to the second section, the cruelty all animals suffer in our society.

Cruelty Toward All Animals

A study of the cruelty toward all animals perpetuated by humanism, was initiated on October 30, 1980, and lasted for a period of five weeks. A poignant yet shocking look at the treatment of animals which was depicted in "Do Animals

Have Rights?," aired on the ABC program "20/20," September 18 1980, and videotaped by the researcher, was day one of this portion of the unit. This fifteen minute program examined the cruelty animals endure in slaughterhouses, the mass production of meat and animal products; and the ways some animals are treated in experiments.

Before this was initiated the present investigator took the precautions in the form of the following steps:

1. She consulted the master teacher.
2. She received permission from the principal.
3. No letters were sent home to the parents on the advice of the master teacher.
4. The day before the program was shown, the children were forewarned of the programs contents. Specifically these were the words used by the investigator:

"This program contains material that may bother you to look at. I find this difficult to watch myself. You are not required to watch it at all, however, for your education to understand the abuses animals face, I encourage you to watch part of it, if you can."

The foregoing are essential steps when any controversial, violent, or emotionally packed material is utilized.

Each student wrote down their initial reaction to the program and a discussion followed concerning what we could do to stop such cruelty (see Appendix J1-J28).

The following week, November 5-6, 1980, the class wrote a two-part role playing story. The researcher asked

the students to list five "pests" they didn't like, for example, ant, fly, or mouse. The investigator then assigned one of the disliked "pests" to each of the student to role play. (A sample of the form used to assign the pests can be found in Appendix K.) Each student in turn imagined herself/himself as this pest and developed a story explaining its life and the difficulties involved in its survival. The following day the story continued or a new one was created. At the end, each student assumed his human role and then imagined being bothered by the same pest. (See Appendix L1 - L17)

This section closed with a highly motivated activity where seven groups composed of four or five students made a filmstrip or slide presentation about any aspect discussed concerning animals. The slide show was selected by only one group. These students chose pictures from magazines and the investigator took pictures using a special camera that can take pictures from magazines. The other groups all chose to make a filmstrip. The "U-Film" kit was purchased by the researcher from Prima Education Products for about \$20.00. The kit included enough materials for several filmstrips and directions for how to make them. The groups made their own story and drew the pictures with each group using different methods of getting all members involved.

Originally, three days were allotted to make the filmstrips: November 11, 12, and 19; however, because of the complexity of the task the time was extended two extra

days, November 20 and 26, so all of the groups could finish. This section affectively introduced and informed the class on animal cruelty in the society. This particular art activity helped them to realize and visualize what animals mean in our society. Next, the class began work on the final section dealing with threatened and endangered species.

Threatened and Endangered Species

The final topic covered by the group concerned threatened and endangered species of animals and they spent eight days looking at this very important issue. The researcher began the examination by reading two children's books: The Lorax and The Giving Tree on November 26, 1980. These two books gave the class an idea of what extinction means and what kind of trouble our environment can be in for if measures are not taken to preserve some areas from the destruction of industry and progress.

A discussion of hunting was held on December 2, 1980, and helped them understand that killing animals for food is a personal choice that each individual must make and may be necessary to protect the environment. The class argued that man may need meat to survive. They finally decided that the killing of animals for food or shelter can be justified as long as it's not for profit nor wasteful (that is killed for a skin, antlers or some other specific part of the animal).

The investigator then conducted lectures on December 3, 4, 10 and 11, 1980, on whales and seals their life, why

they are hunted and what can be done to stop the slaughter. Each lecture lasted between 20 and 30 minutes. The four species of whales discussed were: blue, sperm, killer, and humpback. Each specie was researched by the investigator so that she could explain the similarities and differences. In addition to lectures, the class learned how to breath like a whale (information supplied by Project Jonah), listened to humpback whale music, and supplied ideas to be incorporated into a letter written by the researcher to those countries still whaling.

In studying the seals, the researcher decided to focus on the Harp seal because of the current world wide controversy surrounding its destruction. Included in the lecture were points dealing with their life, the reasons why they are killed, and what can be done to stop the hunt.

This section was summed up with oral and written reports from the students on endangered and threatened animals throughout the world on December 17 and 18, 1980. The students selected their topics from the list of species provided by the researcher (see list in Unit Plan, page 81). The investigator also supplied basic information provided by the National Wildlife Federation on each animal on this list. The oral and written reports were thus evaluated together and credit was given for each point covered by either method, with any extra knowledge passed on the group receiving special accommodation (see Appendix M1-M5). For

the evaluation, the researcher had asked the students to cover 5 points in the oral and/or written report. The 5 points were:

- 1) A description of the animal;
- 2) Where it can be found;
- 3) Why it is endangered;
- 4) What can be done to save it; and
- 5) Personal feelings.

Summary

This chapter explained the steps followed and activities used in this research project. The next chapter contains the unit plan in its entirety and Chapter V has the results evaluated by the researcher during and after the project was completed. This last chapter also contains some suggestions for further study and other areas that may be of interest to children in a study of animals.

Chapter IV

THE UNIT

Subject: Science-Animals and Their Rights in our Society

Grade: 6

Subject Time Allotment: 11 weeks (One 25 minute period
and one 45 minute period per week)

I. Topics to be covered

- A. Identify endangered and threatened species of animals
- B. Why these animals are endangered or threatened
- C. Identify what rights animals have to live free from fear, pain and suffering
- D. Discover ways to protect all animals
- E. Insight to ways of caring for pets

II. Goals

- A. To increase awareness in those issues to protect animals, such as Saving the Whales
- B. To be able to identify 20 endangered or threatened species of animals and why they are in trouble
- C. To gain insight to the rights and feelings of animals
- D. To learn what positive action can be taken in protecting all animals from cruelty

III. Learning Activities

- A. Books, pamphlets
- B. Video tape (15 minutes)

- C. Group projects, Individual projects
- D. Records
- E. Speaker

IV. Resources

- A. Books: The Lorax by Dr. Seuss
Whale Manual by Friends of the Earth
Seal Song by Brian Davies
Marine Mammals by Pacific Search Press
Whale Watch by Ada and Frank Graham
The Giving Tree by Shel Silverstein
The Plague Dogs and Watership Down by
Richard Adams
Ordeal of the Animals by Mel Morse
Men, Beasts, and Gods by Gerald Carson
Dangerous to Man by Roger A. Caras
- B. Pamphlets, Magazines: Project Jonah
National Geographic-various
issues
National Wildlife Federation
articles
Life Magazine-September 1980
Articles from Fund for Animals
- C. Video Tape: 20/20 segment on animals
- D. Group projects: Discussions
Letters to the editor
Filmstrips
Letters to countries that are
whaling and hunting seals

E. Individual projects: Collage on animals

Paper written on the feelings of an animal from the animal's point of view and from the point of view of a person trying to hurt it.

Paper written on an endangered species including the points:

1. Description of the animal
2. Where it is found
3. Why it is endangered or threatened
4. What can and is being done to save the animal
5. Personal feelings

This will be done orally, also.

F. Record: "Songs of the Humpback Whale"

G. Speaker on using animals to help the handicapped

V. Evaluation

The class will retake pre-test that was given before the unit began to see if there is a change in attitude. I will evaluate the paper on feelings to see that they cover the two points of view. Also I will evaluate the paper on the endangered or threatened animal to see that the five points are covered and any extra information given. Following the oral reports each day there will be a quiz covering the animals that were talked about, so each student will be able to list 20 endangered species and why they are endangered.

Finally each student will be evaluated on participation in all of the group projects.

DAILY PLANS

Wednesday:

- Goals:
1. Introduce the students to the unit
 2. To tell what's expected from them
 3. Make journal

- Objectives:
1. Each student will demonstrate the knowledge of what's expected of them by listing 2 things they will be doing in the unit on a sheet of paper with 100% accuracy.
 2. Each student will demonstrate the ability to complete making a journal with 95% accuracy.

Materials: Lined paper for journals
Construction paper for cover
Poster with list of activities

Procedure:

A. Introduction

"You all seem concerned about animals so we are going to find out what can be done to help them. We will be discussing what we can do to help pets and other animals from cruelty and what can be done for endangered and threatened species."

B. Motivation

"This week I saved a spider in my bathtub by giving it a different and new home outside."

C. Lesson

Explain schedule and show list of activities:

Writing letters

Making collages

Making filmstrips or slides

Writing a report on an endangered or
threatened specie

Make journals

D. Conclusion

Each student will write two activities that we will be doing on a sheet of paper. They will check their own answers.

Thursday:

Goals:

1. To discuss abandoned pets
2. To find solutions for the problem
3. To discover why pets are hit by people
4. To think of ways to teach animals without hitting

Objectives:

1. Each student will demonstrate their knowledge of how to care for an animal by listing five ways to teach an animal other than hitting with 75% accuracy.

2. Each student will demonstrate their understanding of abandoned animals by giving suggestions for solutions to the problem with 50% accuracy.

Materials: Life magazine September 1980 "Do you know where your dog is?"

Poster paper for listing suggestions.

Procedure:

A. Introduction/Motivation

Read article in the magazine, show pictures.

B. Lesson

Discussion answering the following questions:

What can we do about it? Should we have criteria for adopting pets? If you think it's bad to hurt an animal, then why have most of you hit an animal? What other ways are there to teach animals right from wrong?

C. Conclusion

On a sheet of paper each student will list five ways to teach an animal other than hitting. They will check their own answers with the list.

I will also check to see if they did the assignment.

When they finish this they will be given time to write in their journal if they helped an animal this week.

Wednesday:

Goals: 1. To discuss ways to make people stop hurting animals

2. To find solutions to the problem

Objectives: 1. Each student will demonstrate the ability to discuss with the class by making suggestions for the class to consider with 50% accuracy.

2. Each student will demonstrate the knowledge of the solutions to the problems by listing three suggestions discussed with 95% accuracy.

Materials: The Plague Dogs, excerpts from pages 20,21,22
Ordeal of the Animal, pages 156-158
Poster paper for listing solutions

Procedure:

A. Introduction/Motivation

Read sections of The Plague Dogs on animals used for experiments

B. Lesson

List solutions to using animals for experiments.
Answer these questions: Is this of because it's part of science, to learn more? Should we spend more money and possibly use something not living? What can we do about people hurting animals.

C. Conclusion

Using thumbs to show agreement or disagreement

with suggestions.

D. Evaluation

I will record the results

Thursday:

Goals: 1. To use positive action to make feelings
on pets heard

2. To learn proper letter writing

Objectives: 1. Each student will demonstrate the ability
to work in a group activity by helping
write the letter, with 100% accuracy.

2. Each student will demonstrate their know-
ledge of using positive action to solve
problems by participating in writing letters
to the editor, with 95% accuracy.

Materials: Paper for writing letters

Puzzle

Procedure:

A. Introduction/Motivation

My experiences with writing letters; responses
from people who read letters

B. Lesson

1. How to write a letter

2. Break up into groups--rules for group work

3. Pick person to write the letter

4. Write letters

5. If finished, puzzle

C. Conclusion

Write in journals and introduce collages for next week.

Wednesday and Thursday:

Goals: 1. To allow students to visualize and express their feelings for animals
 2. To learn how to make a collage.

Objectives: Each student will demonstrate the ability to make a collage to express feelings for animals by cutting out pictures and pasting them on paper with 100% accuracy.

Materials: My collages as examples
 Scissors
 Magazines
 Paste
 Construction paper

Procedure:

A. Introduction/Motivation

Show my collages and explain the two kinds that are acceptable; positive or with a message of ways not to treat animals.

B. Lesson

1. Cut pictures from magazines
2. Put pictures inside animal journal to keep them together.

3. When all the pictures are cut, put the pictures on construction paper without paste to see how they should be arranged.
4. Then paste pictures into place.

C. Conclusion

Share with class some of the collages and what the student is trying to say in the picture.

D. Evaluation

I will look at each collage and comment on the back because the students need to know that each collage is good. I will also record who did not turn one in. We will also hang them around the room.

Wednesday:

- Goals:
1. To introduce cruelty to all animals
 2. To learn the types of cruelty that exist in our society.

- Objectives:
1. Each student will demonstrate the understanding of cruelty by responding in writing to questions I ask with 75% accuracy.

Materials: Ordeal of the Animals, pages 67,70,90,92,173,
177-178

List of questions - see page 81

Procedure:

A. Introduction/Motivation

"We have talked a little about cruelty earlier

but now we are going to learn some more about all animals not just pets."

B. Lesson

Read from the book and ask if the students have any questions.

C. Conclusion

Give the mini-quiz.

Explain about video tape that will be seen Thursday.

D. Evaluation

I will check the answers to the questions.

Thursday:

- Goals:
1. To open the eyes of the students to what is happening in our country to animals.
 2. To apply what they see and hear on the tape to everyday life.

- Objectives:
1. Each student will demonstrate understanding of cruelty by writing a reaction to video tape with 95% accuracy.
 2. Each student will demonstrate knowledge of cruelty by applying it to everyday experiences in the discussion with 50% accuracy.

Materials: Tape recorder

Television

Video tape from 20/20 episode "Do Animals Have Rights"

Paper for writing reaction

Procedure:

A. Introduction/Motivation

Warning of video tape's contents. Tell the students that they will be expected to write a reaction following the tape.

B. Lesson

Watch the show. Write reaction following the show. We will have a discussion following about the tape and the donkeys in the Grand Canyon (Sacramento Bee 8/24/80) and the killing of worms on the sidewalk.

C. Conclusion

Write down 5 animals or insects that you don't like and why, they can't be ones that hurt you.

D. Evaluation

I will evaluate the reactions and comment. I will also assign each student one of the animals they didn't like to write their feelings paper.

Wednesday:

- Goals:
1. To understand the feelings of animals that are not liked.
 2. To write a story expressing the life of a pest.

- Objectives:
1. Each student will demonstrate the ability to understand the right of life of animal

they dislike by writing a story with 50% accuracy.

2. Each student will demonstrate the ability to write a story by completing the assignment with 90% accuracy.

Materials: Paper, pencils

Procedure:

A. Introduction/Motivation

Each student will have their assignment on their desk. The animal will be one they do not like. I will explain that the assignment must be done in the time allowed or part II cannot be done.

B. Lesson

Write the story, imagining they are the disliked animal.

C. Conclusion

Part II will be done the next as long as part I was completed.

D. Evaluation

I will evaluate each paper and include comments as well as make assignment for Thursday. Each assignment should be made as individual as possible.

Thursday:

Goals: To finish 2nd part of paper where they are humans trying to hurt the pest.

Objectives: Each student will demonstrate the ability to complete the assignment of being the person trying to hurt the pest by writing a second story with 50% accuracy.

Materials: Paper, pencils

Procedures:

A. Introduction/Motivation

There will be comments on the previous assignment which give the students this assignment.

B. Lesson

Write part II, a human being bothered by the pest in the previous story.

C. Conclusion

Tell class that we will be working on filmstrips next week.

D. Evaluation

I will check each paper and comment on each paper.

Wednesday and Thursday:

Goals: 1. To write and create a filmstrip or slide presentation.

2. To work cooperatively with a group.

Objectives: Each student will demonstrate the ability to participate in a group of giving ideas and suggestions for the filmstrip or slides with 80% accuracy.

Materials: U film kit
Felt pens (fine point)
Books or magazines with pictures for slides

Procedures:

A. Introduction/Motivation

Everyone will work in groups to create a story with pictures that can be put on film. They will be shown to class upon completion.

B. Lesson

Before they can work on actual filmstrip they must show me ideas and possible pictures. They will receive a practice sheet to draw pictures and lettering the right size for filmstrip. Then they will receive the filmstrip to work on. For the slides they must choose pictures from books and magazines so pictures can be taken with a special camera.

C. Conclusion

Show slides and filmstrips

D. Evaluation

The class will make the evaluation.

Wednesday: The same as last week

Thursday:

- Goals:
1. To watch filmstrips.
 2. To introduce endangered species by reading The Lorax and The Giving Tree.
 3. To think about papers on endangered species.

- Objectives:
1. Each group will demonstrate the ability to speak in front of the class by showing and discussing filmstrips or slides with 80% accuracy.
 2. Each student will demonstrate the understanding of endangered species by answering questions following the reading of the stories with 80% accuracy.

Materials: filmstrip projector
books--The Lorax and The Giving Tree
list of endangered species and 5 points to be covered in the paper
scratch paper

Procedure:

- A. Introduction/Motivation
Show filmstrips, if finished. Read the books.
- B. Lesson
Give the questions; What is endangered in The Giving Tree? What is endangered in The Lorax?

C. Conclusion

Choose animals next week for reports.

D. Evaluation

I will check papers.

Wednesday:

Goals: 1. To introduce pros and cons of hunting.

2. To choose animals for endangered species paper.

Objectives: 1. Each student will demonstrate their understanding of the pros and cons of hunting by participating in discussion and listing some of them with 80% accuracy.

2. Each student will demonstrate the knowledge of endangered species by choosing one to report on with 80% accuracy.*

Materials: Pictures of animals to choose from

Information on the animals -- "Hunting and Conservation" and "Should we Hunt?" from

National Wildlife Federation

Ordeal of the Animal, pages 97, 98, 103-106

*I will provide information--copies from Wildlife Notes from the National Wildlife Federation.

Procedure:

A. Introduction/Motivation

Read some sections from Ordeal of the Animal to get the class thinking. Introduce the manner of choosing animals; by listing three choices in order.

B. Lesson

Discuss pros and cons of hunting--some ways of avoiding extinction of animals that are hunted. Make selection of animals during discussion.

C. Conclusion

List some ways discussed to hunt without extinction.

D. Evaluation

I will evaluate the lists and assign animals to students based on their choices. I will tell them we will be looking at the problem of the extinction of the whales.

Thursday: Holiday

Wednesday:

Goals: 1. To introduce whales.
2. To help the students understand the whale.

Objectives: 1. Each student will demonstrate the ability breathe like a whale by participating in the activity of breathing with 80% accuracy.

2. Each student will demonstrate the knowledge of whales by listening and participating in the discussion with 70% accuracy.

Materials: Project Jonah "How to Breathe Like a Whale"
Marine Mammals-Pacific Search Press
The Whale Manual-Friends of the Earth, pages 7-9
National Geographic January 1979
Poster of whales--showing different whales and sizes

Procedures:

- A. Introduction/Motivation
"Did you know that one of the greatest creatures to ever have lived is in danger of extinction."
- B. Lesson
Cover physical characteristics of whales, breaching, beaching of whales, breathing (Read and told from Whale Manual). Show pictures in the books.
- C. Conclusion
Participate in activity where they imagine they're a whale and actually breathe as a whale would.
(Project Jonah)
- D. Evaluation
I will evaluate for participation in discussion and activity

Thursday:

- Goals:
1. To discuss Killer Whale, Humpback Whale, Blue Whale, Sperm Whale and dolphins.
 2. To discuss why they're endangered, the differences in the whales and their uses.
 3. To listen to whale music

- Objectives:
1. Each student will demonstrate the knowledge of these types of whales by identifying each with 80% accuracy.
 2. Each student will demonstrate the knowledge of the problems of using the whales and dolphins by listing some of the ways it's abused with 80% accuracy.
 3. Each students will demonstrate the ability to listen to whale music by listening with 80% accuracy.

Materials: Whale music (tape) "Songs of the Humpback Whale"
Tape recorder
National Wildlife magazine Sept./Oct. 1980
National Geographic April 1979, Dec. 1976
The Whale Manual, pages 122-127, 116-117
Project Jonah
Coloring book of whales

Procedure:

A. Introduction/Motivation

Ask the students if they can identify a physical description of the whales.

B. Lesson

Discuss uses, problems of whales today, as well as the special characteristics of each whale.

Listen to the tape-color pictures while listening.

C. Conclusion

The students will list problems of whales on back of picture they are coloring.

D. Evaluation

I will look at lists.

The following pages has information about each whale.

Killer Whale: This whale is not endangered or threatened but I'm sure you have all seen one. It is a toothed whale, marked black and white. It is found in North Pacific waters. It is highly social and travels in packs of 2-40. There have been very rare killer whale attacks. The killer comes from the fact that it takes warm-blooded prey (survival instinct like that of a wolf). The Orca's hunt is an organized manner and may send signals by using sonar.

Blue Whale: This is the largest animal to ever live in the world. It is a baleen whale that eats in the summer and fasts during winter living off body fats. It is blue-gray in color. It was hunted in the early 1900's because of it's size. During this time there were 200,000 whales, today there are 12,000 and hunting has been banned since 1966. From February to June it can be found off the coast of Baja, California.

Sperm Whale: This whale can be found in all waters of the world. It is the largest toothed whale. It uses sonar to find food, which consists

mostly of squid. It is one of the deepest diving creatures. It can stay down for as much as 1 hour. The whale has a huge head which contains a clear liquid oil called spermaciti. This substance is used in many products and is why it has been hunted almost to extinction.

Humpback Whale: This whale is also found in all oceans of the world. It is a baleen whale with $2\frac{1}{2}$ foot baleen plates. The whale has a long thin snout and long winglike, flippers, like that slap the water. It eats in the polar regions and lives on body fat while living in warmer regions. It's brain is 5 times that of man. The humpback hunts for krill (the main food) in a very organized manner. One technique is the bubble net where the whale blows bubbles at a depth of perhaps 50 feet in a circle which cause the krill to come close together in the center. The whale then swims upward in spiral motion with mouth open to scoop the krill up. The most fascinating fact about the Humpback is its haunting songs. Their song displays dialects which leads scientists

to believe whales in different areas have different songs. Traveling hundreds of miles in space is Voyager 1 and 2 which carries songs of Bach, Mozart, a rock group and songs of the Humpback Whale. This whale has been under full protection since 1966. It was hunted for its blubber and baleen which are used to manufacture some products. Since so many whales are under protection hunting is not such a threat as before. Pollution has become a mortal threat to whales.

Following this discussion of the different whales, read uses of whales found on pages 116-117 in the Whale Manual.

Wednesday:

Goals: To write letters to countries still whaling.

Objectives: Each student will demonstrate the ability to write a class letter by offering one sentence with 80% accuracy.

Materials: Large lined paper

Procedure:

A. Introduction/Motivation

"We can do something to stop whaling and the killing of dolphins unnecessarily"

B. Lesson

Write letter with suggestions from class.

C. Conclusion

Send letter off with hopes of a reply.

D. Evaluation

I will evaluate those that give suggestions.

Thursday:

Goals: To discuss the harp seal and the killing of the baby seals.

Objectives: Each student will demonstrate the understanding of the seal problem by listing ways that the seal hunt can be stopped.

Materials: Seal Song

Information from The Fund for Animals "Let's Save the Seals"

Procedure:

A. Introduction/Motivation

Point out the poster of the harp seal baby.

"That defenseless animal is being slaughtered so people can use the fur to trim coats and make bow ties. They are used for a luxury that is totally unnecessary."

B. Lesson

Read pages from Seal Song and articles about their life, origin of the name, why they are hunted and the pros and cons of the hunt.

C. Conclusion

List some peaceful ways to keep the hunters from killing the seals.

D. Evaluation

I will evaluate and possibly use the suggestions in a letter to the Canadian Government.

Wednesday and Thursday:

Goals: To learn about endangered and threatened species, why they are endangered and what can be done to save them.

To learn how to speak in front of the class.

Objectives: Each student will demonstrate the ability to cover the basic four points necessary for the paper by the oral or written presentation with 80% accuracy.

Materials: Evaluation sheet

Procedure:

A. Lesson

Each student will give an oral presentation for 3 minutes and turn in a written copy. The names will be drawn out of a hat with volunteers going first.

B. Conclusion

They will ask for questions.

C. Evaluation

I will evaluate each presentation and paper. A test can be given at this time covering the different animals and why they're endangered.

Questions from Ordeal of the Animals

1. What happens to the chickens if they don't lay enough eggs?
2. Are there laws against cropping of dogs ears? Are there any fines?
3. Why is the rabbit slaughtered in North Carolina at Christmastime?
4. What could happen to the donkeys that are airlifted out of the Grand Canyon?

List of endangered and treatment species to be used for individual reports:

Alligator	Hawk-Puerto Rican
Bald Eagle	Jaguar
Black footed Ferret	Kangaroo
Brown Pelican	Koala
Buffalo	Manatee
California Condor	Panther-Florida
Cheetah	Prairie Chicken
Cougar	Prairie Dog
Crocodile	Polar Bear
Falcon	San Joaquin Kit Fox
Gray Wolf	Sea Otter
Grizzly Bear	Snow Leopard
	Tortoise-Galapagos
	Vicuna
	Whooping Crane
	Wild Horses
	Woodpecker-Ivory billed

Chapter V

CONCLUSIONS

The purpose of the current action research project was to develop and implement a unit on animals and their rights in our society in a sixth grade classroom. This unit in its entirety may be found in Chapter IV. It was the researcher's hypothesis that a unit of study such as this would help the students develop not only a greater body of knowledge about animals through a greater awareness, develop a more compassionate attitude toward animals.

In this final chapter, conclusions, based on information from the pre-test and post-test, as well as teacher observations, are presented. Also included in this section are student reactions on all areas of the topic. Representative remarks were recorded by the investigator and are included to give the reader an idea of the scope of student interest and concerns. Finally, there is a summary of topics to expand the unit, other materials that could be utilized by teachers interested in duplicating this type of study, as well as teaching methods not utilized by the current investigator but which would be appropriate for a similar unit. Further, techniques and materials which would enable

a teacher to utilize this unit at a higher or lower grade level are suggested.

These conclusions and recommendations were reached based on the terms relative to the assumptions and limitations stated in Chapter I.

The Results

The pre-test and post-test, used in this project developed by the investigator (see Appendix C1-C27, D1-D27, and E1-E52, respectively) which contained questions with yes/no responses as well as questions that asked the students to justify or explain their answers, indicated that the overall change in attitudes of the students was not as significant as anticipated. It is noted, however, that as can be seen in the pre-test this group was highly knowledgeable and concerned about animals before the investigator began the study (see Appendix B1-B27).

The results of the study can be found in the Appendix (O and R). There is also an explanation of some of the results in the following paragraphs.

One very controversial area in the unit was the topic of hunting. This was represented by question number twelve on the pre-test and post-test and seemed to produce the most significant change in attitude. Originally, eight students believed that the animal had a right to live and should not be killed under any circumstances. For example, this subject was discussed by the class, the pros and cons were presented

by the researcher and other students, and it was decided that this was a personal choice to be made by each individual. In the class of 26 students, however, eight changed their opinion of hunting, if the animal provided food for the hunter. However, they eventually appeared to accept food as a justification for the hunting of animals in this society. The post-test revealed that some students did make a change in attitude.

Another area that stood out as one in which a real change of moral values took place was that which was represented in the pre- / post-test by question 11: "Do you step on worms?" In this area many students engaged in the activity of stepping on worms found on the sidewalk after a rain storm. Before the unit, students gave as their reasons for stepping on worms, "slimy," "not important," "icky,"--answers which revealed a real lack of concern for the life of a worm. In the post-test, however, these types of answers diminished and were replaced by responses such as "right to live," "never hurt anyone."

Again, in the pre-test, students generally agreed that the killing of animals for their fur or skin was not unacceptable in a civilized society (see Question 13 of the pre-test Appendix C1). This was reaffirmed in the post-test as 100% of the students thought that this type of killing was not justifiable. Perhaps the illustration of the killing of the baby harp seals used by the investigator during the

study tapped a common abhorrence in the students. Moreover, each of the students tried to give a reason why they didn't like the killing of animals for their fur or what they would like to do to people who do kill animals so unnecessarily. Another change noted in question 13 was related to the reasons why the students didn't like the killing of animals for their fur or skin. On the pre-test the students' answers were short and not explicit. However the post-test revealed answers with more detail and thought as the type of punishment there should be for people that kill these animals was detailed by some of the students.

Overall, in the post-test it can be seen that the area of greatest change in the written responses centered in the students' ability to provide more explicit answers to the questions, with some of the students being able to use facts that were discussed in class in their arguments. A good example of this can be seen in question fourteen. This question was concerned with the reasons for killing endangered and threatened species of animals. On the pre-test there was considerable agreement that the animals should not be killed but the reasons were weak and not specific. On the post-test, many students not only agreed that the animals had a right to live but further, that the animals might become extinct if some action were not taken to save them.

The foregoing were the areas which held the most

interest for the students and provided the most impressive changes in attitudes. There was, however, an area of minimal change. The initial topic of pets and how they should be treated seemed to have the least impact on the class.

Since this was the first topic it is possible that some of the students simply forgot what was discussed or it lacked the impact that later studies had on their attitudes. Because of these results, this researcher feels that this area needed to be improved to stimulate interest and produce real changes in attitudes toward pets.

An example of this lack of attitude change can be seen in question 4 on the pre-test and post-test. The question related to whether or not the students hit their pets and the reason for this type of punishment. The results of the pre-/post-test show that there was no real change in the students' attitudes toward the punishment of their pets. Since on the pre-test there were 18 students who had at one time hit their pet as a form of punishment. Of these 18 students, 14 felt bad, sorry or guilty for having used this type of punishment.

On the post-test the results were almost exactly the same. Nineteen students admitted they had hit their pet. Once again, 14 students felt bad, sorry, or guilty for punishing the pet in this manner. Overall, therefore, most of the students felt that the only way to solve problems of disobedient pets was to physically punish them. This produces problems for the children since most of them felt guilty or remorse

for the animal later. Through discussion during class on different ways of teaching an animal, the student also realized that this type of "teaching" does not guarantee that the animal will learn. However, this discussion did not appear to be effective enough to produce a change in the students' attitude.

Similarly, the students were generally angry when they saw someone else hurting an animal (question 5 of the pre-/post-test). However, they disagreed on both the pre- and post-tests as to the most constructive means of confronting this type of situation.

The areas previously mentioned produced results that reflected little change in attitude. The complete pre-/post-test results of student responses can be seen in the graphs found in Appendix O and Q.

As another means of establishing if the students were adopting new attitudes toward animals, the investigator sent a questionnaire home with each of the students to find out if the parents had noted any changes in their child's attitude toward animals. Only eleven of the questionnaires were returned but all of these parents noted changes which ranged from the child talking about the unit activities with the parents to the child paying more attention to family pet. (Please see Appendix S1-S12)

In contrast to the group involved in the study, the control group responded to the question with similar answers

on the pre-test and on the post-test. (See Appendix D1-D26 pre-test results and Appendix E27-E52, post-test results.) The reasons for their responses also remained the same. These complete test results can be seen in the graphs located in Appendix P&R. As the graphs show, this class also proved to be very knowledgeable to the rights of animals at the time of the pre-test.

Throughout the unit, the investigator observed that the students were highly motivated and interested in the study of animals. There were no students who seemed bored or decided that because of this type of study animals had no rights in our society. They instead expressed the opinion that animals have a right to life and that man does not have the authority to make decisions concerning their life or death for his/her own profit. Finally, they affirm this commitment by the majority of the class agreeing that man has the obligation to spend more money to save animals and protect them for future generations.

Student Reactions

The investigator kept informal but dated, written records of unusual or noteworthy student reactions, statements, questions, etc. to a variety of circumstances and happenings during the unit. Some of the situations and resulting student responses are detailed in the following paragraphs.

Overall, the students were very enthusiastic about a study of animals. (See the last question on the post-test

of whether or not they enjoyed the study--Appendix E1-E27). All of the students said they had enjoyed it; with most indicating they had learned a great deal or had enjoyed it.

A rapport developed rather quickly between the investigator and the students because of the focus of the study. This investigator revealed in a number of ways, one of which was that the students kept the researcher informed of things they had done to help animals, programs they had watched on television and their opinions about the treatment of animals. They also began to associate the researcher the cause of helping animals and many students had something to say about animals to her each day.

Another illustration of this rapport was revealed on October 8th, when one of the students asked the researcher what would be the first thing she would take from her house in case of fire. She responded that her pets would come first. This student also felt that the saving of his pet rats was more important than saving himself.

Again on October 10 the class had a creative writing assignment of "I wish there was a law...", several students wrote laws against the killing of animals at the Pound. This was a topic that had been discussed the day before. Some of the students who wrote such laws had not participated in the discussion but had felt the impact of the class discussion.

At the conclusion of the study of the treatment of pets, the class wrote the letters to the editor. The class

was very anxious to know when the letters appeared in the newspaper, and asked the researcher everyday. They were deeply disappointed when they found out that only two of the letters had been printed by the newspapers.

Certainly of interest was the occasion when the students who had written the letter to the Stockton Record received a package of information about pets and the abuse of animals from a concerned member of the community.

Also of interest was the letter received from the Delta-Stockton Humane Society as a result of this same letter that appeared in the Stockton-Record. This letter stated that the students' letter had been read at a board meeting and the board decided to invite the students to the society to see that there is an alternative to the City Pound. (Please see Appendix T for a copy of this letter.)

As a result of the videotape shown on October 30, concerning the treatment of animals in slaughter houses and in experimentation, several students chose not to watch the program at all and some refrained from viewing only certain segments. Specifically, the section of the tape involving the use of rabbits in experimentation was difficult for many students to view. After the students watched the videotape, the class was requested to remain quiet so that each student could record their initial "gut" reaction to the program. (These reactions can be found in the Appendix J1-J28.) After they had completed their responses there was a

discussion that included all of their worries, frustrations and hopes for the future of animals and their rights in our society.

Again, following a program on the harp seals aired on ABC's "Those Amazing Animals," on November 29, several students wanted to know if the researcher had seen the program. They were each appalled at the brutality that was depicted in the show and wanted to know her opinion of the problem.

Another example of the students' interest occurred on one of the days the investigator spent talking about whales. This happened to be the day the class visited the library. Following the lecture, the class went to the library and proceeded to check out every book on whales the library had to offer. They could identify the whales that were discussed and were very interested in learning more about each of the whales.

Lastly, one final example of the student's concern for animals can be observed in their preoccupation with some feather earrings worn by the researcher. Each time the earrings were worn a different student would ask how the feathers were obtained. She was pleased to tell them it was not necessary to kill the birds to make the earrings and that the feathers used in the earrings were found by the people who made them. As the researcher has illustrated in the foregoing pages, this group showed that they were concerned about animals and the kind of treatment our society inflicts on

on the animal kingdom.

Recommendations

Since the current investigator developed this unit, she was constantly thinking of new ways of improving the unit, other materials and activities that could be utilized as well as ways to use the unit at higher and lower grade levels.

As a means of improving the unit there are several ideas that are explained in the following paragraphs. As explained in Chapter IV the study was implemented only two days per week, it is suggested that it be utilized more often each week. As observed by the researcher, the students were highly motivated and there are plenty of materials and activities that can be utilized to justify more time spent per week on an animal story.

One way to expand and improve the overall quality of this unit would be to include a study of the total environmental situation--the problems of pollution, conservation, and how it all relates to animals and their protection from possible extinction.

It is also possible to include the biological aspects of animals that most studies include--their classification as well as similarities and differences of all animals in the world. The researcher believes that these ideas could be incorporated with a study of animals which would unify the problems concerning man and the environment.

The Use of Different Materials and Activities

The materials and activities that can be applied to this unit seem to be endless. The researcher believes that it is best to use as many current materials as possible. There are many books, films, magazine articles, television programs, etc. that can enhance the students interest and ability to learn since other points of view are presented. It is possible to obtain several different types of free materials from the many animal organizations in the country, such as the National Wildlife Federation and Project Jonah.

To implement these varied materials there are numerous activities suggested by the researcher and described in the next paragraphs.

The best way to help children learn how to care for and teach a pet would be to raise one. It may be possible to have a class project of raising a dog that is cared for by the students and given to an interested family chosen through a drawing at the end of the school year.

It is also important to plan field trips so students can see animals of all kinds. It would be of value to plan a trip to a local humane society. While at the humane society students can see how the organization functions and possibly be motivated enough to volunteer time to help.

It would be desirable to take the class to visit a zoo or an area where animals live in the wild. Such a visit would help the class learn more about the different kinds

of animals in the world. A highly motivating and memorable experience would be to take a trip to see whales in the wild. The experience can be deeply moving and tap the interest of those students who need more than just words and pictures to motivate them.

To ease the burden on the teachers to familiarize themselves with all the material, it is possible to invite speakers to the class. These speakers could be animal authorities such as a veterinarian or non authorities who are knowledgeable or concerned about animals. Speakers can provide different facts and answer the many questions that students have.

Some other ideas which might be of interest to motivate the students would be to raise money to donate to an animal organization, Save the Whales, or volunteer free time to an animal organization, Greenpeace.

An art activity to help students understand the life of an animal might be to develop a story and film it using clay models of animals.

Finally, according to reading authorities, it is vital in the development of reading skills to read to students every day. To accomplish this in a study of animals is to read books about animals in all aspects of life or suggest books that the students might enjoy reading.

These are just some of the many activities that can be utilized in the broad topic of studying animals. Unlike

the simple classification of animals approach that is offered in many classrooms and textbooks. Through the use of these varied activities and methods of teaching such a unit can produce many different positive results in the preservation and care, of our animals.

Grade Levels

This unit was designed for use in a sixth grade class. It could however be used at any grade level with only a few changes. Some suggested ideas for students at a higher level would be: 1) an extensive research project, oral and/or written; 2) a discussion into the laws protecting animals and the laws that should be put into effect; and 3) a book about animals written by students for younger students studying animals.

For those teachers at a level below the sixth grade can have the students 1) write a story about their pet; 2) draw a picture of what it would be like to be a certain animal; or 3) build a bird house so it would be possible to observe a bird in its natural habitat.

These are just some of the ideas created by the investigator. She is convinced that there are many more methods and activities that can be developed by other teachers.

CONCLUSION

In this final chapter the current investigator has explained the results of the study, offered some student

interests and concerns during the study and presented a summary of recommendations on improving or expanding the study for those teachers interested in duplicating a study of this type.

Throughout the research project the investigator has stressed the point that there is extensive abuse of animals in this society and that there is a real threat to survival of many animal species. She believes that this can be changed by the children of this society. They need only to be aware that such cruelty exists and that they can make a difference to curtail the problem, and eventually change the way society reacts to the members of the animal kingdom. Many concerned environmentalists and animal lovers agree with the investigator as is emphasized by actor Robert Redford in the introduction of the book, Vanishing Creatures: "As development encroaches on natural habitats, whole species disappear. The only way to begin to solve a problem of such proportions is by educating the public--making people aware of a frightening situation."¹

Finally, man has a moral right to maintain the livelihood of all animals on this earth. Jacques Cousteau believes also that man needs to develop a moral code "which would govern our relations with the great creatures of the sea as

¹Douglas Stermer, Vanishing Creatures (Berkeley, California: Lancaster-Miller Publishers, 1981), p. 11.

well as with those on dry land." He further states that "if human civilization is going to invade the waters of the earth, then let it be first of all to carry a message of respect-- respect for all life."²

If this respect is not given the consequences could be the elimination of large numbers of life forms including the possible destruction of man himself. The finality of such an extinction is emphasized by William Beebe:

The beauty and genius of a work of art may be reconceived though its first material expression be destroyed; a vanished harmony may yet inspire the composer; but when the last individual of a race of living things breathes no more, another Heaven and Earth must pass before such a one can be again."³

²Jacques Yves Cousteau, The Whale--Mighty Monarch of the Sea (New York: A & W Publishers, Inc., 1972), p. 256.

³Douglas Stermer, p. 12.

BIBLIOGRAPHY

Fiction

- Adams, Richard. The Plague Dogs. New York: Alfred A. Knopf, 1977.
- Adams, Richard. Watership Down. New York: Avon Book, 1975.
- Farley, Walter. The Black Stallion. New York: Random House, 1969.
- Rawlings, Majorie. The Yearling. New York: Charles Scribner's Sons, 1939.
- Seuss, Dr. The Lorax. New York: Random House, 1911.
- Silverstein, Skel. The Giving Tree. New York: Harper and Row, 1964.
- White, E. B. Charlotte's Web. New York: Harper and Row, 1945.

Non-Fiction

- Adamson, Joy. Born Free. New York: Bantam Books, Inc., 1960.
- _____. Living Free. New York: MacFadden-Barley Corp., 1961.
- Bielher, Robert F. Psychology Applied to Teaching. Boston: Houghton-Mifflin Co., 3rd Edition, 1978.
- Blecha, Milo. Exploring Science. River Forest, ILL: Laidlaw Brothers Publishers, 1976.
- Blough, Glenn and Schwartz, Julius. Elementary School Science and How to Teach It. New York: Holt, Rinehart and Winston, 1979.
- Brandwein, Paul E. Concepts in Science. New York: Harcourt, Brace and World, Inc., 1966.

- Caras, Roger. Dangerous to Man. New York: Holt, Rinehart and Winston, 1975.
- Carson, Gerald. Men, Beasts and Gods: A History of Cruelty and Kindness to Animals. New York: Charles Scribner's Sons, 1972.
- Cousteau, Jacques-Yves. Oasis In Space. New York: The World Publishing Co., 1973.
- _____. The Whale-Mighty Monarch of the Sea. New York: A & W Publishers, Inc., 1977.
- Davies, Brian. Seal Song. New York: Penguin Books, 1979.
- Friends of the Earth. Whale Manual. San Francisco: Friends of the Earth, Ltd., 1978.
- Graham, Frank and Ida. Whale Watch. New York: Delacorte Press, 1978.
- Hanna, LaVone A., Potter, Gladys, and Hagaman, Neva. Unit Teaching in the Elementary School. New York: Holt, Rinehart and Winston, Inc., 1963.
- Hawley, Robert C. and Isabel L. Human Values in the Classroom. New York: Hart Publishing Co., Inc., 1975.
- Herriot, James. All Creatures Great and Small. New York: Bantam Books, Inc., 1972.
- _____. All Things Bright and Beautiful. New York: Bantam Books, Inc., 1974.
- _____. All Things Wise and Wonderful. New York: Bantam Books, Inc., 1976.
- Hone, Elizabeth and Joseph, Alexander. A Source Book for Elementary Science. New York: Harcourt Brace Jovanovich, Inc., 1971.
- Jacobson, Willard J. Inquiring into Science. New York: American Book Co., 1965.
- Leavitt, Emily Steward. Animals and Their Legal Rights. Washington, D. C.: Animal Welfare Institute, 1978.
- Mason, Jim and Singer, Peter. Animal Factories. New York: Crown Publishers, 1980.
- Meyen, Edward L. Developing Instructional Units. Dubuque, Iowa: Wm. C. Brown, Co., 2nd Edition, 1976.

- Morse, Mel. Ordeal of the Animal. Englewood Cliffs, New Jersey: Prentice-Hall, 1968.
- Nerbovig, Marcella H. and Klausmeier, Herbert J. Teaching in the Elementary School. New York: Harper and Row Publishers, 4th Edition, 1974.
- Pacific Search Press. Marine Mammals. Washington: Pacific Search Press, 1978.
- Raths, Louis E., Harmin, Merrill and Simon, Sidney B. Values & Teaching. Columbus, Ohio: Charles E. Merrill Publishing Co., 1966.
- Regan, Tom and Singer, Peter. Animal Rights and Human Obligations. Englewood Cliffs, New Jersey: Prentice-Hall, 1976.
- Stermer, Douglas. Vanishing Creatures. Berkeley, California: Lancaster-Miller Publishers, 1981.

Magazines

- Berry, Mary F. "The Pressing Need for Environmental Education." U.S.A. Today, Vol. 107, No. 2408 (May, 1979), 50.
- Fadiman, Anne. "Do You Know Where Your Dog Is?" Life Magazine, Vol. 3, No. 9 (September, 1980), 38-44.
- Kauchak, Don, Krall, Flo and Heimsath, Kim. "The Weed for Education, Not Indoctrination." Journal for Environmental Education, Vol.10, No. 1 (Fall, 1978), 19-22.
- Olmo, Barbara. "Determining Effective Teaching Techniques in Unit Development." The Social Studies, Vol. 69, No. 2 (March/April, 1978), 77-80.

Pamphlets

- Project Jonah. Bolinas, California. National Wildlife Federation. "1969-1979--A Decade of Revolution."
"Walking the Tightrope." "Wildlife Notes."

Record

- Songs of the Humpback Whale, Capitol Records, St-620.

National Geographic Magazine. Washington, D. C.: National Geographic Society.....

Carr, Archie, Davidson, Treat and Hardy, Laymond. "Alligators, Dragons in Distress," (January, 1967), 133-148.

Craighead, John, Charles and Derek. "Sharing the Lives of Wild Golden Eagles," (September, 1967), 420-439.

Franklin, Williams. "High, Wild World of the Vicuna," (January, 1973), 77-92.

Graves, William. "The Imperiled Giants," (December, 1976), 722-751.

Kenyon, Karl W. "Return of the Sea Otter," (October, 1971), 520-541.

Kristof, Emory and Morgan, Carl. "The Last US Whale Hunters," (March, 1973), 346-355.

Lineham, Edward J. "Trouble with Dolphins," (April, 1979), 506-545.

McFarland, Craig and Jan. "Goliaths of the Galapagos," (May, 1972), 632-649.

McGahan, Jerry and Libby. "The Condor, Soaring Spirit of the Andes," (May, 1971), 684-709.

Payne, Rogers. "At Home with Right Whales," (March, 1976), 322-339.

Payne, Rogers, Curtsinger, William R., Nicklin, Charles R., Jr. "Swimming with Right Whales," (October, 1972), 576-586.

Scheffer, Victor B. "Exploring the Lives of Whales," (June, 1979), 752-767.

Walker, Theodore. "The CA Gray Whale Comes Back," (March, 1971), 394-415.

Films

The Lorax (30 minutes)

Watership Down (1:32 hours)

Black Stallion (1:58 hours)

Television Programs

20/20 (15 min) Rights

Nova-Whale Hunters in Alaska (60 min.)

20/20 (15 min) Wildlife Habitats (January 29)

Prospect of Whales (50 min.) (Channel 6)

Bloody Ivory, 60 min. (15 min)

Humpback Whales--Universe (July 8; 10 min.)

Harp Seal--Those Amazing Animals (10 min.)