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A Description and Analysis of an Integrated Science-Social Studies Curriculum for a Class of Emotionally Disturbed Children

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A DESCRIPTION AND ANALYSIS OF AN INTEGRATED
SCIENCE - SOCIAL STUDIES CURRICULUM
FOR A CLASS OF EMOTIONALLY DISTURBED CHILDREN

BY

MARGARET MCNAMARA

Submitted in partial fulfillment of the requirements for
the

DEGREE OF MASTER OF SCIENCE IN SPECIAL EDUCATION
Bank Street College of Education
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INTRODUCTION

While working in a small independent special school, this writer developed an animal curriculum for four emotionally disturbed boys with another teacher. The teaching of this curriculum took place from March to June of the school year 77-78. This independent study is a description and analysis of the animal curriculum done with special students.

This paper is structured so that it begins with a description of the new environment of these children including a daily schedule. A short explanation of the group's functioning and brief case studies are included. Previous curricula and the origin of this curriculum is discussed. An outline of the concepts and activities is presented, followed by a complete record of the various learning experiences and the children's reactions. After the learning experiences are presented there is a summary on each child's most successful experiences and areas of development. The conclusion of this paper considers the value, difficulties and possible future of this type of curriculum.

ENVIRONMENT

GENERAL INFORMATION ON THE SCHOOL

The "R" school is a small independent special school housed in a brownstone. The size of the building gives the

classrooms an intimate and warm feeling. The children who are serviced by the school are between the ages of 5-14, and may have emotional disturbances, minimal neurological disturbances and learning and language deficits. Many of the children usually have a combination of these problems. All of these children have potentially average or above average intelligence but could not function in their own age group in public or private school.

The children are required to undergo psychological and psychiatric evaluations before or after enrollment, and every three years thereafter. Many of the children receive some type of treatment; family therapy, group therapy or individual therapy either privately or through clinics. The school tries to work as closely as possible with the children's therapists and parents. There are two yearly conferences with parents, a child's teacher, any specialists involved with a child and administrators to discuss all aspects of the child's development; to exchange information; and to make recommendations to one another. Recently, a 'conversation' group composed of parents and the school's director has been set up to meet weekly. This group provides parents with an opportunity to talk to one another perhaps sharing some of the difficulties in caring for a special child.

Some families pay tuition through public funds as out-

lined in P.L.94-142 while others pay directly to the school. Tuition is \$6,000 per year. School buses are provided to take children to and from school by New York City Board of Education. The school is in session weekdays from 8:30 a.m. to 2:30 p.m. and follows New York City Public School calendar.

The school population is composed of children from a large range of socioeconomic backgrounds. Forty children is the average enrollment of the school. The children are organized into six or seven small groups in an attempt to ensure that their individual needs can be met and that they can grow socially without undue competition. The composition of these groups is determined by the children's age, maturity level, academic level, physical size and potential for being socially compatible. The group's size can range from six to nine children with one teacher for every two to three children; there are at least two teachers per group. Each child's academic program is individualized, although teachers try to set up small groups for certain academic activities. The physical dimensions of the classroom are small with standard tables, chairs, shelves and cupboards. Generally, they are arranged to provide individual space for children while also promoting a group feeling.

A time-out room, which is located next to the director's

office is available for children when they can not control themselves in the classroom. The younger children use the school yard for outdoor activities while the older groups use local parks. An indoor physical education program started this year, provides swimming once a week for each group with some individual instruction. Children are shown the proper way to do physical exercise. They are also encouraged to use their bodies freely and creatively through body movement activities.

The school is administered by a Director and a Assistant Director who work closely with teachers and parents. The teaching staff is made up of men and women who are trained and experienced in special teaching. Both paid interns and student teachers in the field of special education work in the school while receiving in-service training. The school has a number of specialists. Language Disorder and Learning Disability Specialists work with individual children. A Curriculum Advisor helps teachers develop individual class curricula and develops some subject area curricula for the entire school. Children are observed by a Psychiatric Consultant who meets with the teachers weekly to discuss his perceptions of particular children and their teacher's concerns. There is, as well an Art Therapist Intern and a Physical Education and Swimming Instructor as already mentioned above. All of these specialists are available for consultation.

THE CLASSROOM

Our classroom was located in an apartment annex of the school. Two classes were in the annex sharing a kitchen and bathroom. The classrooms were on the street level and had easy access to the school backyard. The dimensions of the room were adequate for the class size. Each child had his own work area where he kept books, drawings and other materials. There was a large common table used for all group activities and by one child during work time. All activities, both individual and group were planned by a head teacher and a student intern, the writer. The teachers chose to work with all the children on an equal basis because working with one child all the time became too intense. This was arranged in a flexible manner.

THE SCHEDULE

Arrival - 8:30-9:00 - This is a free period when children would often play games, talk to children in another group or converse with teachers.

Meeting - 9:00-9:15 - Each child is given an opportunity to tell the group something he has done or new information he has learned. Because it is hard for the children in this group to listen and wait for a turn, meeting time turned into a conversation period, where children and teachers talk

individually rather than to the entire group. In addition, teachers use this time to make daily announcements and trip plans.

Work Time - 9:15-10:30 - This is an individual work period which covers work in all curriculum areas. Each child's work is highly individualized. Their daily work is listed in separate folders. With a teacher's help, the children select the order in which their work will be completed. Children are encouraged to work independently. Some need teacher's support when moving to a new assignment; others cannot work without a teacher's presence. When children are reviewing similar concepts they are encouraged to work together. During work time a semi-behavioral system is in effect. Work period is divided into five fifteen minute periods. For each period children are required to be in their seats trying to do some work. They receive a point (a circle with their name on it) for following these rules. Every Friday they trade in their points for prizes. (book-toy-food)

Juice Time - 10:30-10:45

Group Games - 10:45-11:00 - Group teaching usually takes the form of participation in a teacher-made game designed to emphasize specific concepts. Occasionally a popular commercial game and a teacher-made game are played during this period. This shortens group work and the free period.

Group Work, - 11:00-11:15 - This time slot is used for discussions before trips and after trips and projects in art and science.

Free Period - 11:15-11:30 - Every Wednesday we went swimming during group work, free period and our morning yard time.

Playground - 11:30-12:00 - use school back yard and local playground

Lunch - 12:00-12:30

Book Time - 12:30-1:00 - A flexible time of day which may consist of a variety of individual or group activities in art, music, cooking, making games, or trips. Trips are usually taken on Mondays and Fridays between 1:00-2:00.

Playground - 1:30-2:00

Dismissal - 2:00-2:30

CASE STUDIES

GROUP FUNCTIONING

The group was composed of four boys who functioned on very different levels in their academic, social, emotional and physical development. Their great differences in functioning necessitated that they be taught individually, or they might not learn at all.

Creating similiar activities on a variety of levels was a challenge that the teachers took on. Social Interactions with teachers and peers were often negative due to their low frustration tolerance and the need for immediate gratification. Any outdoor or indoor games needed close supervision because fights could erupt easily. Teachers tried to assist each child in developing the necessary skills for interacting in a group. But this was a difficult task: some of the children were 'set in their ways' or possibly afraid to change, even when their habits were not useful and sometimes harmful to themselves. The lack of social skills and limited emotional control made the group dependent on the teachers for functioning. These four boys rarely interacted as a group of four. Similiar interests often accounted for their breaking into groups of two. It was not until the last month of school that close friendships formed between some members of the group. Essentially, they were a group of very different children with enormous needs who functioned as a group only in teacher-directed activities never becoming a group on their own. Within the total school population these were the most impaired children.

In the pages to follow, each child's physical, emotional, social and academic development will be described in detail.

ROGER

Roger is a tall, thin dark haired boy with large brown eyes, which usually have dark shadows around them. His eyes portray confusion and depression. Recently, braces have been put on Roger's teeth causing him much pain and over-concern. Corrective shoes were bought for him this year to improve his gait. There has also been many changes in his medication, Ritalin, to curb his distractability. All of these factors have added to making Roger's school performance very difficult.

Roger is eleven years old and has been attending the school for five years. His tempo is usually extremely slow. Daily routines of dressing, eating and speaking are executed painfully slow with a ghost-like detachment. Frequently, Roger comes to school dazed and exhausted. The first thing he does each day is check the schedule. If there are any changes he needs repeated explanations as to what the changes are and why they have been made. Roger's adjustment to school has been uneven. There have been several periods when he was able to pay attention to daily tasks and activities conducted in the classroom. More often he is extremely distractable. Any activity may be interrupted by rituals such as; shutting closet doors tightly, retying his tie in the mirror or stubbornly remaining at the sink trying to wash "non-existent or tiny spots" off his fingers.

Singing, being silly, a moment of friendliness with a peer or teacher are the times when Roger experiences pleasure. When pleased he will grin widely and giggle. But most of the time, Roger appears sad, depressed and withdrawn. He is difficult to reach in this state because he does not verbalize his sadness directly except to say "yuh" when a teacher asks him if he is sad.

Roger's anger towards teachers is expressed in words and aggressive action. There are frequent struggles between Roger and teachers. These struggles usually occur when Roger is teasing another child, when he is leaving the building without permission or when he is engaged in any activity that is forbidden. Ignoring some of these behavior patterns can sometimes deter him but most of the time he seeks other forbidden activities too provoking to ignore. Anger at peers is expressed in a parrot-like imitation of his teachers. Whenever Roger is praised he appears slightly dazed and confused. He does not seem able to connect what he is hearing with anything concrete about himself.

Roger experiences problems when participating in any group activity. He is unable to understand the language of the instructions and/or follow the rules. His peers are often frustrated by Roger's slowness, his teasing behavior and constant distractability. Although Roger wants to have friends he chooses inappropriate ways to relate, such as

close bodily contact or taking their possessions. This frequently leads to annoyance and possible rejection. His most successful way of relating is being silly or imitating inappropriate behavior. Despite his behavior, Roger has engendered warmth and matter-a-fact acceptance in his relations with peers. They often try to cajole him into doing the right thing.

Roger is particularly interested in his peers when they are in distress. He will usually move to the scene of the turmoil and try to comfort the child. Although he tries to be consoling at these times, much anxiety exudes from him because he cannot separate himself from the situation. Roger enjoys associating with younger children when he can take on a big brother role. His relationships with teachers fluctuate between that of a teasing, testing and negative nature to a kind of protective imitation and identification.

Short attention span, suspected asphasia and his anxiety anticipating failure greatly impair his academic performance. His tolerance for instruction has declined as he has progressed. He appears to be increasingly aware of the gap between himself and his peers which has added to his resistance to do his own work. Roger is totally dependent

on working with an adult one-to-one in order to complete any task. If a teacher leaves his side for a minute, he will wander about. A movement or sound in the room can also cause him to wander. After he begins this straying there is little that can get him back to his work.

Reading orally with a teacher is the most successful and rewarding task for Roger. He seems to enjoy reading aloud because he can recognize many words by sight. Roger can decode on a third grade level but his comprehension is poor. He appears unable to synthesize sentences and ideas into meaningful sequences. Little progress has been made in his mathematical ability. He still has problems with simple addition and subtraction and his work is inconsistent and mechanical. For this reason all his work is designed with concrete material. The anxiety of making imperfect letters causes writing to be a painful process. He is critical of each letter which forces him to constantly erase and write letters over. All of this has caused a deterioration of his ability to write.

Roger does not understand or use language well. He appears to have internal organization problems in his receptive language. When he is spoken to, the speaker is not really sure what he has understood. Roger compensates for his language difficulties by using gestures and facial expressions for communicating. Many times he seems to 'tune-out' any

language. This is evident when he answers a question by shrugging his shoulders and then says "he doesn't know", when distinct actions prove otherwise. His expressive speech is slowly and often painfully executed with one or two word phrases and some repetition of words. His language is thought to be a crucial factor for his difficulty in functioning and is complicated by a fragile emotional stability. Because language does not have much meaning for him, the daily events of life are difficult for Roger to link himself to.

There is constant upheaval going on inside Roger. The enormous amount of consistency and security that he requires has not been available to him because of his own inability to make close attachments to teachers and the limits of his environment. This has caused Roger to be removed from good social interaction, class curriculum and real growth.

BAIN

Baine is five feet tall and has a solidly built body. He has short blond hair, very fair skin and sky blue eyes. These features sometimes give him an angelic, far away look. This year marks his fifth year at the school; he turned eleven in November. Baine's tempo is either very fast and panicked or real slow. His attention span for self generated tasks is quite long but very short for assigned academic work.

Emotionally, Baine is a fragile and hypersensitive child who takes a long time to get adjusted to people. He has slowly gained tolerance for being teased, physically hurt, academically frustrated or denied a request by a teacher. Such incidents in the earlier part of the year could cause him to lose control. When he loses control he screams, cries, falls immediately to the ground and shouts, "I've been shot". He might also strike out at another child or teacher, either verbally or physically. Recovery for Baine usually occurs when a teacher while acknowledging his feelings, uses humor and points out the absurdity of the situation. A teacher's anger or stern rationality will panic him and increase his loss of control. Warmth and good natured teasing can frequently coax him out of being upset. When Baine has problems within the school environment he is able to be reached and talked through the crisis. Often he borrow a teacher's phrase to attempt to talk himself through the crisis. Anticipation on the part of the teachers has been a key factor in sustaining Baine's emotional control in any environment.

Baine shows pleasure by extending eye contact, laughing, grinning and hugging. His sadness and anger are more apt to be expressed in coded forms, such as stories about robbers and thieves which a teacher must pry out and translate. Baine has shown pride and delight when praised for academic or

social accomplishments. Being corrected by anyone was particularly hard for Baine, and was something he and his teachers worked at very closely. From Baine's perspective his day was either very good or very bad. If he had trouble during part of the day, the rest of that day would be spoiled for him. This quest for perfection affected his own image and his expectations of others.

Baine is a warm and loving child who can be quite charming in relating to adults and children. Many of his teachers have formed close friendships with him and still see him after they have finished teaching him. Baine can be very demanding and dependent on his teachers but it seems that it is through these relationships that he has been able to develop the social skills necessary for peer interaction.

There has been growth in his ability to relate to other children. He has developed increased interest, patience and tolerance for his peers. Earlier in the year he could only relate to them when they were involved in his world. This element still exists but Baine has begun to acknowledge his classmates as separate entities. He has become spontaneously helpful; invites them to play games and tries to convince others to do the right thing. Baine developed a close friendship with Martin while playing a particular game together.

Although he has grown socially, he still seems to prefer solitary activities of writing and designing a newspaper

using the New York Times as a model and illustrating fantasy characters. Baine's grouping with lower functioning children has been helpful to his social growth. His intellect and artistic sophistication have won him respect and admiration.

Baine is gifted both artistically and intellectually; he talks about becoming an artist. His understanding of phonics, spelling and grammar is very advanced. It became a class practice to consult Baine when bewildered about the spelling of a word. On the Metropolitan Achievement Test (M.A.T.) he scored ninth grade on grammar; his Wide Range Achievement Test (W.R.A.T.) scores for decoding and spelling were on a college level. Baine frequently tries to read books and newspapers that are above his conceptual level. This leads him to a confusion about the facts reported. He tested on a fifth grade level on M.A.T. and Reading Comprehension. His need to finish quickly hampered his performance. It is my perception that he can read on a seventh or eighth grade level when he is interested in the topic. Baine enjoys reading books about television, radio and newspapers and recently developed an interest in animal books. Trivia books, encyclopedias and other specialty books are his favorite type of reading. Most of his reading is done silently. Occasionally he will read with a teacher.

Creating fantasies while using a newspaper as a vehicle is the main way Baine does creative writing. He will take a

bit of reality and expand it into an elaborate story, often using familiar people to be the supposed reporters. The content of these papers center around death and destruction. This was one way he dealt with his great concern about death, his own, his mother's and other people he cared for. Baine also created imaginary characters by using some characteristics of a real person. For example: a) he combined a cartoon dog, Barry White, a singer and made a disco dog dressed in Barry White's clothes; b) he designed Disco Dog album covers using the real Barry White albums as a model.

These activities are a major part of his life and often stand in the way of academic work. There has been little success in combining these activities with academic work. For these reasons Baine is dependent on his teachers during work time. He needs constant refocusing. Helping him do work involves much support and compromise. Compromises are arranged with Baine on how much work he will do to get a free period. All assignments need to be short, readily completable and entertaining. Baine has a tendency to complete an assignment as rapidly as possible. When faced with work he cannot immediately understand and complete, he will abandon it. Again his quest for perfection is apparent in how he perceives work. An assignment that was too hard one day will rarely be tried again. It is somehow spoiled

for good. Teaching new material requires a presentation which will guarantee success, therefore progress is very slow.

Baine has been resistant to mathematics. A turning point this year came when he mastered two-digit multiplication. At times Baine appears superior in his mental addition and subtraction. Low frustration tolerance seems to slow him down in doing word problems and more complex math.

Baine speaks quickly but is easily understood. His sentences are syntactically correct and he appears to have quite a good vocabulary. He is particularly fascinated by the many meanings one word might have. Baine frequently imitates a newscaster's tone when telling a story. There are many times when he uses language in a perseverative manner; an example of this is when he will continually tell the same story about a particular actress. He repeats the exact words so many times that teachers and children can no longer listen.

Over the course of the year, Baine has developed new social skills, learned some control of his emotions and has become a more enthusiastic learner.

REGGIE

Reggie is a solidly built, attractive, black, eleven year old of average height. This is his first year at the "R" school. He is always meticulously dressed and very conscious of his physical appearance. His hair is short, even in winter, because he does not like tangles. Reggie is constantly in motion, finding it very hard to sit still even when eating. Due to his hyperactive condition he is given Thorazine. The medicine seems to have little effect because he either refuses to swallow it or it is probably administered irregularly at home. Reggie also goes to a therapist once a week.

There is a constant need for Reggie to be in control of situations. Perhaps this is due to his own lack of inner control and inability to deal with control systems outside himself. Reggie was frequently out of control. Loss of control could be stimulated by a number of factors: a need is not immediately gratified; he is fantasizing about sex; or he is trying to control a situation to his liking and is unsuccessful. The duration of his lack of control can be an hour, a morning, or bits and pieces of a day. When he is uncontrollable, he may run out of the building, bother other children or attempt something dangerous which requires a teacher to restrain him. Touching has been an issue for him during loss of control. He complains of

being touched but constantly puts himself in a situation which requires restraining. Reggie can become violent during these times and strikes anything in his path. Most times he picks one person to focus his aggression on. Reggie can be helped to gain composure by being left alone, and given a chance for physical exercise, such as running or by restraint. No one method works all the time and none is completely successful. Anticipating his breakdowns has been difficult for teachers, and has only helped on a few occasions. For the most part his breakdowns are unpredictable.

The strongest emotion affecting Reggie's make-up is his overwhelming rage and anger, which comes out in many situations with or without provocation. His response is usually stronger than the situation requires. His expression of sadness is closely connected with his feelings of anger and he can be brought to tears when angry. Reggie shows pleasure by jumping up and down or demonstrates other kinds of movements. He also displays pleasure by speaking loudly and quickly and usually with a wide grin. Disbelief is Reggie's normal response to praise. He seems unable to trust what people say, yet he becomes quite happy when he feels he has accomplished something.

At times Reggie seems to have the potential to be a warm, loving and related person but needs strong support systems. Unfortunately his home environment does not give

him this needed support. At times, Reggie is quite sensitive to other children's needs and difficulties. Yet, there is a manipulative quality to his relating with children and teachers. He often wants to be in charge of other children's behavior. Reggie does not seem to think through his actions towards other children but responds impulsively. When attention is called to a particular behavior, he can understand intellectually but appears unable to internalize the information. Inducing fear in children is another way in which he interacts. He might say with a mean face. "If you don't give me that I am going to hurt you."

Reggie enjoys the company of teachers and can be quite charming, but needs much attention. His anger about life events, unrelated to teachers, (e.g. relationship with his mother) is often misdirected towards teachers. The manner in which Reggie behaves constantly requires teachers and administrators to set limits. Helping Reggie control himself permeates all social interaction with adults. Reggie formed two close friendships this year: one because of a fascination with a child's artistic ability; another because of similar interest in sports. He was loving and caring in these relationships but would try to influence these children to misbehave. When these friends tried to help Reggie do the right thing, they had little influence

even if his behavior was hurting them personally.

Reggie appears to have an above average intelligence and a real cleverness in art projects, games developing stories and in grasping information. He speaks clearly in complete syntactical sentences, enjoys talking and can tell elaborate stories. Learning tasks have been approached with ambivalence, he seems to want to learn but needs the information and skills to come easily. His attention span is short and there is little work he can do on his own. This is not due to a lack of cognition but an inability to focus on a task. He seems pressured by the immediate need to gratify his wishes whether or not they are reality-based. Anticipating failure also appears to hinder his work. When Reggie is working, he usually gives as little input as possible and therefore deals with short tasks which are easily completed and entertaining. His most successful work is done with close teacher interaction.

As the year has progressed Reggie has become less and less able to do any work. For this reason it has been hard to get a clear sense of his academic functioning. His sense of grammar seems good as illustrated in his creative dictated stories. Reggie exhibits basic decoding skills for reading and appears to be on a fourth grade level but rarely reads on his own. Reading is usually done with a teacher alternating reading a page. Most of his reading

material has been trade books about animals. Reggie is insecure in his reading ability and often wants a teacher to read to him. When he is read to, he is actively involved and has good comprehension. Although Reggie understands concepts of addition, subtraction, multiplication, place value and division, he does not know his number facts. It has been hard to help Reggie expand his knowledge.

Reggie has been very involved in the group's animals curriculum. It has been the one area that has sustained his interest. When he is unable to do any other work he is usually able to be engaged in looking through animal reference books with a teacher. His interest in animals has caused him to think about becoming a veterinarian. His participation in the curriculum gives some indication of his ability to gather information and be reflective in his observations.

Reggie is a difficult child to work with because there are many negative interactions and frustrations in dealing with his acting out behavior. It is hard for Reggie to trust anyone which leads him to use manipulation. Yet, there is a basic warmth and charm in Reggie which influences a teacher to keep trying.

MARTIN

Martin is an average height, slenderly built eleven year old, who arrives at school each day with a wide grin and a color coordinated outfit. He seems very conscious of what he wears and what others are wearing. Martin wears braces and glasses. His vision is quite poor. His stance and gait are awkward and unsure due to a lack of muscular control and inability to judge depths. When walking or running, he bends forward from the waist and his hands dangle loosely in front or at his side. Self help skills still present Martin with some problems because of lack of motor control and poor vision but he has begun to take more responsibility. His tendency to look away from his hands when doing a fine motor task adds to his problem. Martin doesn't use the mirror when dressing and refuses adamantly when it is suggested by a teacher. This is Martin's fifth year at the "R" school.

Martin enjoys all aspects of the daily school routines. His general tempo can be both very fast or very slow. It is hard for him to have an even pace. Martin has a low tolerance for frustration but has been developing techniques to deal with this. He has a long attention span when given minimal support from teachers.

Martin prefers to be seen as a happy child. Pleasure is exhibited by jumping up and down and saying in a high

pitched voice "I'm so proud". Martin is an affectionate child and kisses teachers quite frequently. At times, his kissing becomes too much for teachers, so he is encouraged to show his affection in another way. There are also times when Martin gives a teacher a bear hug when he is undecided whether he is angry or pleased with her. When sad, Martin, will say that he is sad and generally explains why. Then he will put his head down and groan. He has had trouble dealing with his anger and usually speaks in a loud voice, then anxiously asks later "are you angry". When bothered by other children he will defend himself by shouting a vehement "no" or "stop". He has slowly developed this ability. Martin takes pleasure in his accomplishments and agonizes over his failures.

There are many things which frighten Martin. He cringes any time juice or milk are brought to the table; he worries about them spilling. His anxiety level rises anytime a tape recorder or record player is used in the room. Martin is concerned with objects falling and breaking, so he is constantly practicing falling in his games. On one occasion he fell by accident and was quite jolted. When I asked him if practicing falling helped him when he really fell, he replied, "yes it did."

Martin has made a good adjustment to the group and when asked to be involved in a group activity he functions well as a group member. His preference in play is usually solitary

where he pretends to be a fix-it-man, doctor or bus driver. At these times intrusion by anyone irritates him. He talks much more about his friends than he does to them and is very aware of other's behavior. He likes to point out that he is a good boy when someone else is misbehaving. There is a tendency for Martin to steer clear of more aggressive children.

With encouragement from teachers he has developed a friendship with Baine while playing a particular game. This relationship has helped him deal with the frustration and joys of winning and losing. When Martin becomes frustrated with a game, he is impatient and grumpy. It is very hard for him to deal with other children's cheating. He often confuses having bad luck in a game from being treated unfairly.

Although Martin has warm relationships with teachers he has a hard time with separation. He will often fixate on a teacher, being overly concerned about her; when she will be in school. Martin shows concern for teachers when they are upset by saying something to make them feel better. He has a strong need for constant reassurance and approval from his teachers. Much of his conversation revolves around questions such as: "Do you like me"? or "Are you mad"? Martin can accept help and instructions but often qualifies it with one of these questions. This writer once asked him whether my help made him angry sometimes and he acknowledged that it did.

Martin is an enthusiastic learner; he can sit working up to an hour with a variety of academic and fine motor tasks. He depends on a teacher to get started on each new task but can do the work on his own. When frustrated about an error being pointed out, he will grunt and groan. If a teacher looks over his work, he immediately assumes that something is wrong. Martin is tolerant of small doses of new material accompanied by a lot of reassurance and recognition of the fact that it is new and hard for him. Games as a form of instruction are an enjoyable experience and he is an dependable participant.

Writing is hard for Martin because of poor motor control. His handwriting is oversized, sprawling and poorly controlled but has become slightly more legible. Defined space in the form of a block for each letter helps him to write clearly. The legibility also seems to be dependent on his level of anxiety and whether he can slow down enough to write. Martin decodes reading on a fourth grade level but only comprehends on a second grade level. He has worked hard on developing the ability to read several pages to himself and answer a series of specific content-related questions. A major portion of his reading has been animal short stories and books. He has learned to use some of these books as references.

In order to grasp mathematical concepts, Martin needs

repeated explanations and a great deal of drill. His progress in math has been slow due to the fact that he tends to forget already learned processes as he learns new ones. He appears to have solidly grasped addition, subtraction with exchange and place value. Although he has memorized all the times tables, he has trouble when doing them in the isolation of a problem. Word problems involving anything other than simple addition present Martin with great difficulty. The use of concrete material has been essential to his learning.

Martin speaks in complete syntactical sentences, sometimes experiencing problems with his braces. He has become quite fascinated with language particularly with rhymes and homonyms. A language specialist has given him special help with abstract words which confuse him.

An increasing awareness of his inadequacies and the fact he is growing older has caused concern for Martin. Frequently, he asks how many more years he will be at the school. Martin has many handicaps but he is a willing learner who has made developments in intellectual, social and emotional skills. If guided carefully by parents and teachers he may come to deal with his strengths and weaknesses realistically.

CURRICULUM DEVELOPMENT

Need and Rationale

After being placed in this group in February, the writer became interested in how a core curriculum might be developed with these children. Earlier in the year, group curriculum had focused the children on their development physically, socially, emotionally and intellectually. Each child made a "all about me" book which contained pictures of them at an earlier age and various facts about themselves. They also investigated the school neighborhood, but these content areas did not motivate the group. For most of the year, the curriculum has been individualized with children studying many different topics. Therefore, children were experiencing bits and pieces of curriculum areas according to their level and interests. Such was the situation because of the variety of reading and math levels, their great emotional needs and low tolerance for group instruction. Both teachers were concerned that their programs were too "skill oriented". We hoped that a core curriculum could bring the group together while still allowing for enough individual differences to satisfy the enormous needs of these particular children. The teachers also wanted the children to be really interested in learning about something and hoped their emotional needs might be met through a curriculum. The following behaviors and interests of the children

were considered in determining a common interest. Martin was constantly going to the zoo and showed interest in reading books about animals. Reggie was enchanted by cougars and other kinds of cats and watched television shows about animals. Roger would often want to stop and touch dogs while on a walk. Baine had a cat at home who he talked about and sometimes imitated. Keeping all these facts in mind, we decided that developing a curriculum around animals might be a way of bringing the children together. Since the teachers only used hunches in choosing a topic, they planned initial experiences with animals to determine whether there was enough real interest.

Using an outline form, the writer will report on the entire curriculum including concepts and activities. The learning experiences section which follows will expand on the activities listed.

CURRICULUM OUTLINE

- I. Initial Experiences - trips to the Central Park Zoo, the Central Park Children's Zoo, American Kennel and a Dog Grooming Store.

- II. Concept 1; Body Parts - animals have many different kinds of bodies; how are animals and people different?

Activities

- A. Book: Why Can't I by Jeanne Benedick - teacher read to group.
- 1) group discussion on the differences between particular animals and people mentioned in the book.
 - 2) individual discussions on the advantages and disadvantages of having certain types of bodies.
- B. Trips - During initial experiences, teachers made children aware of the animal bodies (fur, size, color, feathers).
- C. Games - Teacher-Made
- 1) Who Does?- a game which reinforces the skill of differentiating body parts.
 - 2) Animal Clue Game - players guess an animal from a description of their body and other characteristics.
- D. Discussions: facts about animals were often discussed during a meeting time. A lot of information was transmitted to students through informal discussion with teachers.
- E. Worksheets - Teacher-Made, focused children on:
- 1) the names of parts of animals (wings, paws, fins)
 - 2) parts of their own bodies
 - 3) comparison of themselves in relation to different animals.
- F. Photographs - of the animals at the Bronx Zoo were available for intense observation.
- III. Concept 2: Habitat - animals live in many different places. Why do animals live in certain places and not in others?

Activities

- A. Books: At Home in It's Habitat by Phyllis Busch,
Everybody Has A Home by Mary McBurney Green.
- 1) books were used on an individual basis by children
 - 2) also used to stimulate an individual discussion with a teacher on habitats particularly concentrating on their own habitat.
- B. Trip to the Museum of Natural History - African Mammal Exhibit
- 1) children gathered information on the habitats of African mammals on teacher-made worksheets (desert, jungle, forest)
 - 2) one child recorded information on animal life spans
 - 3) information was graphed.
- C. Games used to introduce new habitat information and to reinforce already-learned facts - Teacher-Made.
- 1) Habitat Bingo
 - 2) Who Does?
 - 3) If I were An animal.
- D. Discussion - for trip planning and individual informal talks between teacher and a child.
- E. Worksheets - Teacher-Made reinforced information about particular animals habitats.
- IV. Concept 3 Motion - the many ways animals move (run, gallop, trot, fly, swim, crawl, walk, hop).

Activities

- A. Discussion - group members talked about the various movements of animals. The teacher provided them with some new vocabulary.

B. Trip to Museum of Natural History - African Mammal Exhibit.

1) children were encouraged to look for the food source available to animals in various habitats.

C. Games - food was one of the concepts in these games.

1) Who Does?

2) If I were An Animal.

D. Worksheets - Teacher-Made, children were asked to match an appropriate kind of food with an animal.

E. Art Activity - Children made a collage of animals who eat plants and fruit and animals who eat other animals.

VI. Concept 5: Animal Babies and Their Development - animal babies have many different names, mammal babies grow in their mothers and are nursed. Birds, Snakes and other Animals lay eggs and care for them. Frogs, Fish and Toads deposit eggs and leave them.

Activities

A. Books: Animal Babies by Joan Elwart, How Kittens Grow and How Puppies Grow by Millicent Selsam.

1) books were used for reference and to promote individual discussion.

B. Trips - Informal trips to a local Dog Grooming store to observe and interact with a pregnant cat, kittens and finally a new litter.

C. Games

1) Animal Info Yes or No - a game which tried to teach specific characteristics of animals.

D. Worksheets - Teacher-made which helped children with The process of differentiating animals.

LEARNING EXPERIENCES

Games, Trips, Worksheets, Discussions and Books were the five techniques used in creating the learning experiences for the group's animal curriculum. Each of these ways had its specific goal but they often served the purpose of complementing each other through presenting the same concepts in a different manner. For example, after taking a trip which focused the children on animal habitats, some of their individual assignments at Work Time would consist of worksheets which helped them to remember an animal's specific home. Also during this time each child would be involved in an individual discussion with a teacher concerning animal homes. At Group Games the children might play Habitat Bingo, Who Does or If I were An Animal, all teacher-made games which encourage each child to think about habitats. Books with information on Habitats might be read independently or in a group at Book Time. During Special Activities an art project which involved making a habitat mural, collage or a three dimensional habitat could be planned. This is a description of an optimal day's activities. It usually did not go as smoothly as the explanation suggests. Activities were often discontinued because of lack of motivation or inappropriate behavior.

The curriculum began with trips for interest, then the trips developed into more concrete adventures in gathering

facts, on animals. Games provided teachers with a means to teach and reinforce particular concepts in a group setting, to a group who had a low collective tolerance for group academics. It also gave the children a method for ordering and remembering information. The most individualization occurred through the teacher-made worksheets, in which each child's conceptual, skill and tolerance level was carefully considered and developed. Close relationships between teachers and children seemed to be the most important influence in how each child related to the curriculum. After these relationships were formed they were nourished through individual discussions among teachers and children concerning the curriculum. Therefore, individual discussions served as an effective means in assisting each member of the group's thinking and organizing of information.

Group discussions were short and did not usually involve the entire group. The necessary preparations for trips encouraged group discussions and helped to create more informal group talking. The books were selected with each child's interests and reading level taken into account. There were also books used for group reference. As will be indicated in the case summaries, each child enjoyed and functioned better in particular learning experiences. The two most effective techniques for the entire group were for individual discussions and group games. Each of these techniques will be elaborated

on, presenting the details of the teachers' ideas and preparation and the responses made by the children.

G A M E S

Due to the fact that this group had a low collective tolerance of group instruction, there was very little formal group academics. Group teaching took the form of participation in teacher-made games designed to emphasize specific concepts. Therefore, games were a very important vehicle for instruction in the animal curriculum. The games gave the children a way of organizing and remembering information. One of the basic problems with games and these children were the aspects of winning and losing. It was hard for any of them to lose a game, but they would not be interested in games where winning and losing were not involved. The ideas for these games came from both teachers as we developed new concepts in the curriculum. Children were enlisted in the process wherever it was possible.

The first games were played in an informal manner with simple structure, no specific rules, informal game materials and no real winner. It was a way of introducing the idea of playing games using animals. The next six games were developed in the progression that they are presented. Each game had a formal game board and cards, specific concepts being introduced, rules to follow and a winner of the game.

GAME 1--Informal Guessing Game

The first games were played in a simple manner using cards with animal pictures. One person at a time chose a card and tried to give the other players clues so they could guess the animal. There was no scoring of how many correct guesses anyone made. It was hard for some of the children to think of a verbal clue and they often made sounds or moved around the room in a particular way. The interest in this game motivated the teachers to create more games about animals.

GAME 2 Who Does?

Concepts: body parts of animals, habitat, motion and food of animals.

How to Make Game

Materials: poster board, pictures of animals, blank cards.

1. Construct the game board using different pictures of animals as the spaces on which the players will move.
2. The last space should be removable and replaced with different animal pictures.
3. Make four sets of cards: one set for animal body parts, I HAVE WINGS; one set listing various places animals live; I LIVE IN WATER; one for foods eaten; I EAT PLANTS and one which describes movements I CAN SWIM.

How To Play Games

1. decide who will be first
2. select which sets of cards you will use for the game BODY PARTS, MOTION, FOOD, HOME. You can use as many

as you want but players must agree at the beginning of the game.

3. On each turn, the player must decide which card she/he wants to use. They then move to the first animal that has the characteristics described on the card. e.g. I HAVE FOUR LEGS, I EAT MEAT, I LIVE IN A HOUSE. If a player picked anyone of these cards and a dog was the next animal in line, they would move to the dog.
4. Who ever comes to the finish line first is the winner.

Rationale For Game - The teachers wanted to begin the curriculum by introducing a game which would help the group think and look carefully at the shape, size and textures of animals. The game was designed to be played throughout the curriculum by adding sets of cards as the new concepts were developed.

Student Reaction - This was a difficult game for the group. It seemed to be due to the fact that they had to think and look carefully on each move. This slowed the pace of the game which made it hard for some children to wait their turns. The amount and great variety of animals on the board might have been another factor. It appeared best to have fewer animals and less variety to make the game less complex. Martin and Roger played the game frequently during the period we were studying animal body parts. Both boys seemed to gain information through the game. The slow pace suited their style while the pace was too slow for Reggie. Baine was not playing board games at this time. The game was not used as originally designed because of lack of response from the group. It was played again toward the end of the curriculum.

GAME 3 Animal Clue Game

Concepts: body parts, categories of animals, habitats, sounds made, and food eaten.

How To Make Game

Materials: index cards, pictures of animals.

1. On five separate index cards write one clue about a particular animal, e.g. I HAVE A LONG NECK, I LIVE IN THE FOREST, I EAT PLANTS, I AM A MAMMAL, I DON'T MAKE ANY SOUNDS, PICTURE OF A GIRAFFE.
2. The index card should be put together with a paper fastener so the order of clues could be changed. This prevents memorization of the first clue. The picture card is considered the answer card and should always be at the end.
3. Make as many sets of these cards as possible. We were not able to enlist the children but this would have been a good activity for them.

How To Play Game:

1. Select the sets of cards that will be used and the person who will read the clues.
2. Decide how many turns each person will have (usually 10 turns each)
3. Scoring is determined by how quickly a person can guess the identity of the animal. If guessed on the first clue-5pts.; second clue-4pts.; third clue-3pts.; fourth clue-2pts. and fifth clue-1pt.
4. After proscribed number of turns, all players add up their scores.
5. The person with the most points wins the game.

Rationale for Game - In order to encourage the group to think about animals, using specific characteristics as a guide and to promote decision making, using facts.

Student Reaction - This game was really an expansion of the first game played. It had periodic popularity but was always exciting when played. Some children became so involved in the game that they found it hard not to call out another player's answer. The design of the game seemed to help children deal better with losing because the winner was not so obvious during the game and the scoring gave every child a sense of achievement.

GAME 4 Animal Bingo

Concepts: animal names, habitats, and the spelling of animal names.

How To Make Game

Materials: cardboard, animal pictures, blank cards.

1. This game was made by the children. Each child was given a card which had six spaces marked out on it. They were asked to select pictures of animals and paste them into the spaces. Each child would then have their own Bingo Board.
2. Two sets of cards are needed to play all variations of the game. One set would list the animal names which are on the board made by the children. Other sets of cards should list the homes of these animals. It is best to have the group actively involved in the process of naming the habitats and the spelling of the animal names.

How To Play Game

1. This game has three variations: Animal Recognition, Habitat Recognition and as a spelling game.
2. Every player picks a card and someone is selected as the caller.
3. In the first variation the player must call out "Bingo", when the name of an animal on their card is called.
4. In the second variation the player must listen for one name of their animal's homes.
5. In Spelling Bingo, the third variation, the player must listen for the names of animals on their cards, then remember how to spell the name.
6. The first person to fill the entire card wins the game.

Rationale For Game - In the earlier part of the year, math bingo for multiplication and addition, clock bingo and spin bingo were very popular games. Therefore it seemed like a good medium for learning information.

Student Reaction - Since the group was familiar with the bingo system, they responded immediately and positively to the game. An interest developed in making the components for the game. Roger had much pleasure and success in the game especially when he was the caller. Initially, this was the only animal game that Baine would even try to play. Animal Bingo was a popular game which had its day.

GAME 5 Animal Concentration

Concept: names of animals

Skill: memorization of placement

How To Make Game

Materials: cards, pictures of animals, contact paper.

It is best to find two of the exact same pictures of an animal, (All Kinds of Animals - A Golden Readiness Workbook provided these kinds of pictures), paste them on to cards and cover them with clear contact.

How To Play

1. Spread cards into neat rows.
2. Decide who will be first
3. Each player chooses two cards on a turn, if they match she/he keeps the cards and goes again. If they don't match, player puts them back in original place.
4. Players continue the game until all cards have been matched.
5. The player with the most pairs wins the game.

Rationale - Concentration was also used as a game for other skill areas, such as: matching opposite rhyming words, and words and pictures. It was a simple and successful game when played in the above ways, so it was assumed that it would play a similar role in teaching animal names.

Student Reaction - Roger and Martin enjoyed playing the game together and needed little supervision. It was a successful game for Roger because it did not require alot of instructions and could be fast or slow moving while still giving him information on animals. All children seemed to be learning new animal names through the game.

GAME 6 If I Were An Animal

Concepts: Animal homes foods and babies

How To Make Game

Materials: poster board, cards, magic markers

1. Construct a game board with alternating cards which say "Home", "Food", "Babies", "Any Card".
2. Make three sets of cards: Food, Home, Babies, each set of cards should have a variety of responses. i.e., FOOD - plants, meat, HOME - desert water; BABIES - calves, chicks.
3. Each card should have the type of card on one side, i.e., FOOD and the response on the other i.e., PLANTS/
4. Select plastic animals which the children may be interested in and make sure there are three cards (FOOD, HOME, BABIES) for each animal.
5. As children become more interested in game they can add different animals and make additional cards.

How To Play Game

1. Each player chooses an animal and decides who will go first.
2. Players can start on any point of the board but must go in one direction.
3. When a player lands on a space she/he picks the appropriate card, if their animal lives, eats or has these kinds of babies, the player keeps the cards. If not the card is returned to the bottom of the deck; i.e., if the buffalo player picks PLAINS as a home card she/he would keep it but would not keep a WATER home card.
4. The first player to get all three cards for their animals wins the game. i.e., BUFFALO: PLAINS GRASS CALVES.
5. Many animals live in similiar habitats or in more than one habitat, so there is more than one card for each animal. This is also the case for their food and babies.

Rationale - After much discussion and reading about where animals lived, what they ate and what their babies were called, this game was introduced. It was seen as a culmination of all the animal facts and a constant review.

Student Reaction - This game received an enthusiastic response from all members of the group and visiting children. It was played more than any game had been played and eventually could be played with little teacher supervision. Children began to develop skill and tolerance for checking information in a reference book with teacher assistance. Whenever someone was not sure of an answer, it would be investigated in the book Look Up Book of Mammals. Although all children reacted postively to this game, Baine and Martin had the strongest response. A close friendship developed between them while they played the game together. This

might have happened anyway but the game gave it a boost. This was the first board game Baine played all year and it helped him in being more willing to play other games. It was also the forum in which he dealt with ways of compensating when losing a game. A fascination with the Buffalo developed for Martin and Baine after using this animal in the game. It led them to learn more about the animal. It was assumed that this fascination might be due to the similiar sound of the head teacher, Buffy and Buffalo. Baine and Martin played the game so often that teachers were concerned about their peserverance. They seemed to latch on to the game like the last remaining piece of a good year.

GAME 7 Animal Info Yes or No

Original Concepts: reinforce specific characteristics of mammals - feed young with milk, bear young in bodies, warm-blooded, hair or fur on bodies. We began with specific qualities of two animals - cat and mouse (differentiation within mammals) contrasting specific qualities of other types of animals in order to distinguish mammals.

Planned Concepts for Future development of the game:
reinforce characteristics of reptiles, amphibians, birds and fish.

How to Make Game

Materials: posterboard, circle square triangle shapes for cards.

1. The game boards were designed with three shapes in mind, circle, triangle, square. These shapes were the spaces on which the players would move.
2. Make three sets of cards which correspond with these shapes.

3. Write true and false facts about cats and mice, using the various characteristics of mammal versus other

animals. Cats Cats feed
 lay young with
 eggs milk

Mice Mice Mice
are chase eat
rodents cats cheese

How To Play Game

1. Select marker, roll dice, highest player is first, then clock wise progression.
2. Player throws dice and moves appropriate number of spaces.
3. Player picks the same shape card as the space she/he has landed on.
4. Player reads card and decides if statement is correct or wrong.
5. Card says "Yes" correct "No" wrong.
6. If player is right she/he remains on space - if wrong she/he moves back two spaces.
7. First player to get to end of board is winner.

Rationale - We wanted a game in which the characteristics of mammals, reptiles, fish, birds and amphibians could be reinforced. The children had read information in books and studied it on worksheets previously. Martin's poor vision was taken into account in designing large shapes which could be easily seen. We decided to introduce format of game with familiar animals so there would be little frustration in the game.

Student Reaction - Everyone enjoyed playing the game, the questions were not too hard and most of the group felt successful. Martin was frustrated by the game because it was hard for him to make "Yes" and "No" decisions. The practice provided through the game aided him in developing this skill. In general, the game was not widely received and had an arch rival in "If I Were An Animal". The lack of challenge and its late introduction in the school year seemed to add to its lack of popularity.

After taking into account the many responses to the games, there seemed to be certain elements which made a game successful. A game needed to be designed with simplicity both in its physical appearance and in its rules. The collecting of a certain number of cards for the completion of a game was another essential element. This collecting seemed to give the player a link with the game and served as a measure of their progress in the game.

T R I P S

Trips are important in any curriculum with children, yet they are particularly crucial when dealing with children who need to experience the concrete as these children do. Direct contact with animals was a key factor in the development of this curriculum. Going on trips with these

children presented the writer with special problems not encountered with other groups of children. Although, they were enthusiastic and involved in the content of each trip, the common elements of fear and anxiety about being in an unfamiliar place and the excitement of this new place strongly affected their behavior and reaction to the trip. For some children these elements became so escalated that they were immobilized.

A teacher's reaction to a trip contains much anxiety about the behavior of children and the decision of whether a problem child should be allowed to go on a trip. Sometimes there was little alternative but to take a child, although there was some realization of a possible problem. Teachers needed to be totally involved and focused on children at all times. They needed to function at a heightened level, continually focusing on each child and acting as an interpreter.

There is a certain kind of preparation that occurs before every trip. Children read, look at pictures, participate in discussions and make predictions about the place they will visit. Pre-trip planning should provide children with the needed information to anticipate the trip and an outlet to express their concerns and fears. Pre-knowledge of the trip and sequence of events may serve to reduce anxiety.

The first three trips were planned with the idea of giving the children initial experience with animals and to help the teachers gain insight into the group's knowledge and future interest. The group which shared the apartment with us became involved in the curriculum through the trips. This group did not have the extensive preparation before a trip. Their reaction will be reported here because they were an important dynamic on each trip.

TRIP 1

Place: Central Park Zoo

Teachers' Goals - Have children make predictions about animals; what would be at the zoo and validate these predictions at the zoo; encourage the group to be more aware of the physical characteristics of animals; gain insight into the children's interest and knowledge of animals.

Pre - Trip Planning - There was a teacher initiated discussion prior to the trip where children were asked to make predictions of the animals they would see at the zoo. The names of the animals were written down by a teacher. A teacher-made map of the route that the bus would follow to the zoo, was shown to each child.

Children's Response - Most of the group was involved and focused on the animals at the zoo. However, the open space and the excitement of a new place was too overwhelming for

Roger who was highly agitated and unfocused the entire time. Baine was most impressed and pleased by the amount of animals we had correctly predicted. He wanted to add the names of the animals we did not know and was curious why others on the list were not there. Reggie was particularly interested in an ocelot mother who had just given birth. A sign informed us not to make noise because the mother would kill the babies. Reggie really wanted to see the babies but was concerned about putting them in danger. One of the boys from the other group was so excited by the sight of so many animals that he called out to one and introduced himself.

TRIP 2

Place: Children's Zoo Central Park

Teachers' Goals - Give children another experience with animals; this time in a place where they would be able to touch and move around more freely. Children had enjoyed the first trip and asked for another)

Pre - Trip Planning - Teachers initiated a discussion before the trip concerning the different animals that might be at the Children's Zoo, in contrast to our other zoo trip.

Children's Response - The day of this trip was a tense day for teacher and children because Reggie had many periods of losing control, which influenced other children. It was hard for teachers to decide whether he should go on the trip.

Reggie was high strung the entire time. Teachers tried to give him a lot of space to move in. He moved too quickly from animal to animal to be focused on anything. At one point he wanted to feed some birds and was not able to understand the danger of getting bit. The day ended with him being physically helped back to the bus after laying on the ground and refusing to move. Although the trip was frustrating and unsuccessful for Reggie, the other children enjoyed the close contact with the animals and were focused during their visit.

TRIP 3

Place: American Kennel Pet Store

Teachers' Goals - Children will be able to see a variety of different dogs and other animals that could be pets.

Pre-Trip Planning - During work time each child was given a work sheet. Reggie and Baine were asked to identify breeds of dogs and Roger and Martin were asked to identify animals that could be pets. A short discussion was conducted during group work period in order to show the group directions to the store through a teacher-made map and to also give them an opportunity to think of a question that could be asked at the store. The group was interested in siamese cats, the age, size and manes of dogs and whether they would have a chance to hold a cat.

Children's Responses - The group of six children were very excited about being in the store. Their vibrations seemed to raise the excitement level of the dogs. This fact made teachers, store-keepers and children a bit nervous. The children seemed to have separate reactions and concerns on the trip. Reggie spent most of his time investigating the price of a siamese cat and an Alaskan Malamute. Baine barked at the dogs and meowed at the cats. He appeared happy to be there at first but became impatient after ten minutes. Although the barking unnerved Martin, he responded positively to the suggestion that giving the dogs some attention might make them stop barking. Roger was infatuated by the dogs and really wanted to pick one up. This was not possible and caused him much frustration. He had to be prevented from continually bothering a salesman with the same question, "Can I pick up a dog?"

TRIP 4

Place: Museum of Natural History - African Mammal Exhibit

Teachers' Goals - Children would develop skills of gathering information on worksheets. They would have a chance to observe different animal habitats and begin to think why certain animals live in particular habitats and what foods were available in each habitat.

Pre-Trip Planning - The teachers had individual discussions with each child to stimulate thought about their own habitat and animal habitats. This occurred during work time a week previous to the trip. On the day of the trip the group was given a teacher-made map, which illustrated directions to the Museum. Three different worksheets were made for gathering information: a Habitat Worksheet (for Baine and other Groups) which listed the names of animals in the exhibits and possible places they might live. The children were asked to check the appropriate place; a life span worksheet for Baine consisted of a list of animals which had life span data on their information panels; and an animal recognition worksheet for Roger which just required him to check off animal names as he encountered them in the Exhibit.

Children's Response - The entire group enjoyed the exhibit and the idea of gathering information. Children were broken into small groups of one or two children with one teacher. Baine began collecting information as soon as he entered the exhibit. His pace was very quick and he needed a teacher to record information and give him one to one attention. He was particularly interested in the life span information. It seemed to satisfy his fascination with death in a more positive manner. Roger and a child from the other group went through the exhibit very slowly spending alot of time at each display. Although it had not been planned, both

boys wrote the appropriate habitats next to the animals on their list. Being in one exhibit really helped Roger focus. Both boys were very proud of their work. Other members of the second group moved quickly through the exhibit but filled out their worksheets carefully. At School they turned their information into a bar graph. (See Appendix)

Life Span Graph - While Baine was gathering the information, the writer suggested that a graph could be made from the information during the next work period at school. The writer drew a sample graph and encouraged Baine to make decisions about the format and materials he might use. By coincidence a friend had given him a book on lettering and he decided to use the book to make the graph. Using the lettering book was an exciting prospect for Baine. His creative juices flowed. He needed alot of reassurance as he began the project. Baine was able to overcome his obsession of making things perfect by keeping liquid paper by his side. He spent one and a half hours on the graph, the longest I have ever seen him work on any project. Baine was very pleased with himself. (See Appendix)

TRIP 5

Place: Crystal Aquarium

Teachers' Goals - Expose children to the variety of fish and reptiles with a real experience.

Pre-Trip Planning - A map of the store's interior was made by a teacher to provide the group with some familiarity of the store, before we arrived. Each child completed individual worksheets on fish and snakes. A group discussion was conducted by a teacher, where predictions about the fishes, snakes, lizards and turtles were made. Each child thought of a question to ask at the store, (Why are there no alligators allowed? Can snakes come out of their boxes?) and concerns about the animals in the store were discussed.

Children's Response - Everyone was well behaved and calm and this increased the teachers' capacity to focus the children and ask thought provoking questions. The group was amazed by the color variety and amount of fish. Baine could not believe that they were real. A simple worksheet and close teacher supervision helped Roger deal with the complexity of the store. Most children were not that interested in gathering information and preferred to just look at all the animals in the store. Teachers assisted children in finding answers to their questions. This trip experience was supplemented back in the classroom by making a picture book on fish available to the children in order to refreshen their memory on the fish they saw. All the children were fascinated by the book. It made their real experience come alive again, through a book.

TRIP 6

Place: Bronx Zoo

Teachers' Goals: Provide the children with a culminating experience with many of the animals we had studied and talked about.

Pre-Trip Planning: The head teacher, myself and Martin went to the zoo the Sunday prior to the trip. Martin was not going to be in school the day of the trip. We discussed the most valuable exhibits for the children to see as we traveled through the zoo. During our day at the zoo we realized that we had learned a lot of information about animals through our books, worksheets and games.

Both teachers decided the places appropriate for the group and maps were made up for each child in the group. Several methods were used to prepare the group for the trip. During Group Work a day before the trip, children were given an opportunity to discuss the kinds of places the animals might live in the zoo in contrast to their natural habitat and also which animals might live together. Individual discussions were conducted with each child so they could voice their concerns and the week of the trip's objectives would become clear. We also played a game with the Bronx Zoo map. Each person picked an animal, then asked everyone else to locate that animal's home on the map and find a good way to get there.

Children's Response - Most of the group was observant, inquisitive and involved with the animals. However, Roger was overwhelmed and frightened by the experience and resistant to help. Baine started the day off badly and seemed to search for a reason to be out of control but had many good moments. Reggie was surprisingly in control. He had been having a lot of periods with uncontrollable behavior on the days previous to the trip. With close supervision, he was relaxed and appeared to gather important information. The boys in the other group were for the most part able to follow group instructions and at times provided a good example of behavior.

FAVORITE SIGHTS

SEA LION POOL

Signs around the pool informed us that pups were to be born soon. Reggie was particularly fascinated because the birth process had been a strong interest of his. All the children speculated on which sea lion was pregnant. They watched each sea lion's swimming and other movements. The size of each animal was also observed. With a mixture of fear and excitement they watched hoping the pups would be born soon. It was hard for Reggie to leave this exhibit.

MONKEY HOUSE

Most of the group watched the monkeys' behavior intently. They observed breast feeding, grooming, playful activity and what appeared to be sex. Reggie was frightened by the sex. He shared this fact with me when we left the monkey house. He had not been stimulated by the act, just frightened. The reality of this situation had suppressed his fantasies and forced him to deal with facts. The study of animals provided him with an outlet to deal with the issue of sex in a removed yet factual manner.

HOUSE OF BIRDS

This was a perfect exhibit for the group to actually experience the various habitats we had read and talked about. Everyone let out an "Ah" as we entered the jungle and rain forest. Trying to locate birds in the trees was a challenge most of the group enjoyed. Similiar to his experience at Crystal Aquarium, Baine found it hard to believe that it was all real.

BUFFALO

The buffalo had become a symbol in the group through the game, "If I Were An Animal". It was the highlight of everyone's day, especially Baine. The actual viewing of a buffalo grazing on a plain with a young calf made the learning they had collected in the classroom worthwhile and real for these concrete learners.

WILD ASIA

Most of the group went to this exhibit. They were impressed with the animals being able to live in a natural habitat. This exhibit seemed to raise their consciousness of how hard it must be for the other animals who live in cages.

SAFARI TOUR

Most of the group went on this tour. The train provided closure for both boys and allowed them to view the zoo more comfortably with a greater sense of security.

INFORMAL TRIPS

Neighborhood Dog Grooming Store - The owner of a dog grooming store was raising siamese cats which had two litters during our curriculum. She often let the children, particularly Reggie play with the cats and answered all their questions about breeding, pregnancy, likes, dislikes and physical characteristics. All the children were amazed at the size, color and behavior of newborn kittens. When Roger was given the opportunity to hold a kitten, his face "lit up" as he held it gently and petted it carefully. His entire disposition changed. Reggie's interaction with the cats and kittens provided him with the needed outlet to understand the mothering process. He showed a very tender, loving and gentle quality in the way he related to the cats. From the reaction of this visit, it seemed that having a class pet would have been a profitable and worthwhile experience.

Museum of Natural History - Reptile and Amphibian Exhibit

Baine suggested we see this exhibit after our trip to Crystals Aquarium. Although there was little structure in this visit, most of the group was actively involved in the content of the exhibit. We revisited the African Mammal exhibit and it was like "old home" week. Everyone seemed to remember the information they had gathered and the facts they now knew about animals.

Central Park Zoo - On our revisit to the zoo we saw the baby ocelots which had been hidden on our previous trip. Everyone was so excited it was as though we had grown up with them. All of these trips were taken toward the end of school and there was a marked difference in how observant and thoughtful each child was in contrast to earlier visits.

Other Group - As mentioned in the beginning of the trip section of this paper, the group that shared the apartment with us, went on trips with us. Although the group only participated in the curriculum through trips, they absorbed much information about animals. By the end of the year trips and studying about animals provided members of both groups with a common ground and symbol that would stand for them.

WORKSHEETS

Worksheets were the one element of the curriculum where the most individualization took place. Most of the worksheets were made by teachers. They played two important roles in the curriculum; in planning and gathering information on trips and in emphasizing concepts during work time. The animal worksheets appeared to be an enjoyable activity for all. If a child did any work on a given day it would usually be these sheets. This reaction seemed to be due to a number of factors. Worksheets were specifically made with one child in mind by an individual teacher (almost like a love gift). Only a little input was necessary on the child's part while a lot of information was presented. The child became part of this mass of information without too much frustration. It also appeared that each child on some level had genuine interest in learning about animals. These sheets gave them a concrete sense of what they knew.

While providing information on animals these worksheets also incorporated skills needed for language arts, math and reading comprehension. Baine's tolerance for reading comprehension questions and Martin's ability in comprehending was primarily strengthened through animal worksheets. Each concept presented in the curriculum was either introduced or reinforced with worksheets. A particular style and content was developed for each child's worksheets.

When making a worksheet for Baine, teachers were conscious that Baine enjoyed humor. On the sheet Animal Babies, included at the end of this section, some of the choices were silly but this kept him interested in the sheet. Teachers were also aware that Baine could be very silly in his responses as illustrated in the sheet Tallest on Earth. There was a delicate balance needed between motivating him with humor and the potential for uncontrolled silliness. Teachers had to develop a sense of him to create this balance. Baine was receptive to a variety of sheets: "Yes and No" sheets, finishing sentences with multiple choices; animal sharing math problems and when asked open questions for reading comprehension.

Martin completed the most worksheets of anyone in the group. This was partially due to the fact that the books we had did not have large enough print, but he was also influenced by his great success with the sheets. A large portion of his worksheets were done using the format of answering "yes" or "no" to a particular statement, e.g: Yes or No about Crocodiles. Making "yes" or "no" decisions was a hard task for Martin but he slowly developed some skill. This technique was also used in developing reading comprehension questions, e.g.: Tallest on Earth (a short story from Animals Do the Strangest Things). Martin had a poor sense of parts and whole and poor body image. Many worksheets

were made to help him focus on the parts of his own body and of animals, e.g.: It is part of you, It is part of a Buffalo. Martin also completed worksheets which had multiple choices and recognition of true sentences, e.g.: Where do they live?, True things about Dogs.

Reggie's worksheets required very little input from him. On most of the sheets he had to circle yes or no, or check true statements. In order to motivate him, it was important to have a picture of the animals that the statement related to. As it became harder for Reggie to work, most of his work centered around gathering information from books and discussions, while worksheets played a minimal role.

Roger also needed the pictures of animals on the worksheets for motivation. Most of his sheets required him to answer yes or no to a simple statement that was reinforced in the picture, e.g.: Yes or No about Monkeys. They became a little more abstract, up to the point where he could answer a sheet looking up answers in a book with teacher support, e.g.: Yes or No about Snakes. Due to Roger's inability to sit up and do work, worksheets were minimally successful.

In the next few pages sample copies of each child's worksheets will be presented.

D I S C U S S I O N S

Discussion can often be a significant way in which children can exchange and learn information. Many times the great emotional needs of these children prevented them from participating in a successful group exchange. Group discussions were relatively short and almost never involved the entire group at one time. This was the case because there might always be one child engaged in self initiated activity. Trip preparation was the most significant topic for group discussion. Each member of the group had the desire to get the details of the trip and feel some comfort in the fact that their ideas and concerns about the trip could be addressed. Even when the motivation was strong, there were still problems with taking turns and listening to others. Toward the end of the year conversations about animals were started spontaneously during meetings, juice, lunch and other group events. It was during these conversations that the group developed some discussions skills.

Individual discussions between teachers and children were the most effective way of transmitting information and gauging what each child had learned. For some children this was the major method in which concepts were taught. The close interaction with a teacher appeared to be a necessary component for engaging each child's attention and developing their learning process. It was as though the teacher served

as a bridge between information and the child's capacity to learn.

Every child was involved in individual discussion but for some it was their main facilitating factor for learning. This was particularly the case with Reggie. It was amazing how many facts he could absorb and how much thinking he would do when involved in reading and discussion with one teacher. There were days when he would read and discuss facts about cats and dogs or snakes and remember this information for days and sometimes weeks later. If a teacher could not give him this individual attention, his worktime would disintegrate into sleeping or acting out behavior.

It was difficult for this group to have group discussions because of their great needs. But their knowledge and interest in animals provided the group with a common ground which led them to develop abilities in having individual conversations and eventually a little success in group talks. Discussions between teachers and individual children served as a very important way of helping children learn information.

B O O K S

Books served as a foundation in our development of the curriculum. Teachers used them for their own reference while also helping the children find answers to their questions. Sometimes books were read to the entire group but most times they were read by an individual child with some teacher support. The selection of books was determined by each child's interest and reading level. An annotated bibliography will be presented in this section of the paper. Books have been divided into groups according to the concepts covered in the books. Five different categories of books have been established; books about individual animals; birth and development of animals; animal habitats; categories of animals and reference books.

INDIVIDUAL ANIMALS

J-F-A

Anderson, La Vere. Balto, Sled Dog of Alaska illustrated by Herman Vestal, Garrard Publishing Co. Champaign, Ill.:1976
Reading Level: 4th-5th

A fictionalized account of the life of Balto, an Alaskan Malamute, who led the final relay team carrying life giving diptheria serum into a epidemic torn Nome in 1925. The author creates a believable and lovable character in his portrayal of Balto, when he is just learning to pull a sled until he becomes a hero. The pictures which have been delicately illustrated in pastel water colors help the words come alive. Response of Children - Balto was chosen for Reggie at his request, for a book about a malamute. Although he was enthusiastic about the contents of the book, he would not read it alone but always needed a teacher to share the responsibility

of reading. After reading the book he chose words from the book as his spelling words, then he dictated an adventure story of his own.

J-P-B

Birnbaum A Green Eyes (illus)

Golden Press, New York: 1968

Reading Level: 1st-2nd

One year in the life of a kitten called "Green Eyes" is depicted in this book. The story is written in the first person which gives the reader a kitten's perception of the world and the struggles and joys of growing.

Children's Response - A successful book for Roger because of the theme of growing, especially a cute kitten. The attractive pictures seemed to stimulate his thoughts about the kitten's experiences. A minimal amount of words is presented on each page and the vocabulary was on a 1st grade level. These factors lowered Roger's frustration and helped him read with some ease.

J-P-B

Bornstein, Ruth, Little Gorilla, (illus)

Seabury Press, New York: 1976

Reading Level: 1st grade

A very simple story about a young gorilla growing up in the forest, with a primary concern, his relationships to the other animals. Essentially, this is a picture book with cleverly illustrated pictures, which take up the entire page, and a limited amount of words.

Children's Response - Roger enjoyed this book very much and seemed to identify with the developing gorilla making friends in the forest. The fact that there were few words make it a less anxious reading experience for him.

J-636

Holman, Michael, Cats illustrated by Jill Lovat
Franklin Watts, New York, London: 1976

Reading Level: 4th

An easy to read fact book which examines history, habitats, physiology and different breeds of cats. The text is more complicated than his book Dogs. Some of the physiology might be a little difficult to understand. Many new interesting facts are presented to the reader and common knowledge is elaborated on.

Children's Response - This book was primarily used with Baine, who had a cat of his own. He was particularly interested in the information about cat's history and their physiology.

J-636

_____, _____, Dogs illustrated by Derich Brown
Franklin Watts, New York London: 1976

Reading Level: 3rd-4th

Dogs is an easy to read fact book which gives an introduction to the most common varieties of dogs. It also describes some of the services dogs perform for people. The vocabulary and content is on a third grade level. Pictures are realistic and the text flows smoothly.

Children's Response - Reggie was interested in any book which gave him some information on a Siberian huskie because he was planning to get this kind of dog for a pet. This book provided him with some information. While finding the information, he became interested in the many ways dogs help people.

J-599M

Miller, Patricia, Seligman, Iran, Baby Elephant illustrated by Ed Renfro, Holt, Rinehart, Winston, New York: 1963

Reading Level: 1st

Baby Elephant is a book which combines facts with the authors' perception of an elephant's life. The reader is given information about the height and weight of a baby elephant and the functioning of body parts such as, poor eyesight and hearing, although she has big ears, as described. The trunk, a unique part of the elephant is shown to have many functions. Finally, our little baby elephant is given a mischievous character as she hides from her mother. But poor baby elephant ends up in a hole needing all the elephants to retrieve her. The authors are careful not to humanize the elephants but still illustrate the universal quality of mother-child relationships.

Children's Response - Roger read this book aloud with a teacher. The words and concepts were simple and clear enough for him to understand while still getting important facts about animals. Roger particularly enjoyed the fact that the story was about a baby elephant. This seemed to fulfill the need he had to protect and be protected.

J-599M

_____, _____, _____, _____, Joey Kangaroo, illustrated by Ed Renfro, Holt Rinehart, Winston, New York: 1963

Reading Level: 2nd-3rd

Joey Kangaroo presents the reader with basic information about the kangaroo and its baby. The special feature of the kangaroo mother's pocket for her baby is introduced using the reader's familiar experience with their own pockets in pants and coats. Specific information about the baby kangaroo is given in the first few pages when we are told its name is

"Joey" and its physical characteristics as a baby. The reader watches "Joey" grow up and finds out about the life habits of kangaroos. This story is similiar to Baby Elephant which was written by the same authors. Information about the animal is intertwined with a simple story of the animal's daily life. The information and vocabulary are more complex in this book but the format is basically simple.

Children's Responses - The author and illustrator again managed to captivate Roger's attention with their playful manner. He read this book aloud with a teacher and he was attentive and involved in the story. The next day he was able to answer questions relating to the story.

J-599P

Pearson, Wanda Lynn, The American Buffalo, illustrated by Betty Cobb, The Steck Company, Austin, Texas: 1961

Reading Level: 3rd-4th

An easy to read book with a wealth of accurate, basic and realistic facts on the buffalo's physiology, habitat, history, lifestyles and relationships to people. The vocabulary is carefully selected, the type is large and the sentence structure simple. Illustrations are in full color, two colors and black and white. They give the reader a vivid picture of the early buffalo.

Children's Response - Baine was ecstatic when I brought this book to school. He and Martin had developed an affinity for the buffalo. I tried to encourage them to learn facts about the buffalo. Upon receiving the book Baine immediately started to read through the book, discussed facts he knew and became excited about the new information. During a quiet reading time, he sat reading the book with a small plastic buffalo by his side.

J-636W

Widder, Robert, Jennie Has a Birthday (photographs and text)
Carol Rhoda Books, Minneapolis, Minnesota: 1974

Reading Level: 4th-5th

A dog owner created a book through imagining what his dog might be feeling while growing up. The reader meets the dog on her first birthday. They are then thrust back into the past through pictures and projected thoughts of the author to observe the exploits of the dog as a puppy. The text is cleverly written and gives one a warm feeling about the dog and owner. The photographs are quite beautiful and give belief to the text. At times the book is too cleverly written and seems to miss the young audience. This is what some of my group experienced during the reading. The good feature of this author's style is that it may help children get in touch with their own feelings about growing up. The difficulty lies in the anthropomorphizing of an animal instead of looking at its reality.

Animals of the World Series, Raintree Children's Books,
Milwaukee, Toronto, Melbourne, London: 1977

Reading Level: 4th-5th

Chimpanzees - Ralph Whitlock

Elephant - Edmund Roger

Zebras - Daphne Machin Goodall

Lions - Mary Chipperfield

Kangaroo - Bernard Stonehouse

Penguin - Ralph Whitlock

Each book presents an in depth study of the animal's life style. Beautiful color photographs enhance and reinforce the concepts. The books are short enough to be a reasonable goal for a child but still contain a lot of information. There is a glossary and a bibliography for reference at the end of every book.

BIRTH AND DEVELOPMENT

J 50-1B

Bridges, William, Zoo Babies, (photos)
William Morrow and Company, New York: 1953

Reading Level: 4th-5th

This is a collection of twelve stories about the babies at the Bronx Zoo. The author asserts that babies are full of bounce and adventure and are more interesting to hear about than the adult animals. Some of the animals written about were: a buffalo calf who broke his leg; a bear taking a bath and a chimp who decided to mop a floor. The print is large, the stories are short but there are a lot of words on one page. There are many pictures which tell much of the story without words. The stories reveal the personality of each animal but the extra charm is the author's affection for the babies at the zoo.

Children's Response - The majority of the group just looked at the pictures in the book and seemed turned off by the full page of words. The book's presence and pictures added to our discussion on baby animal names. After Martin and Baine developed an interest in the buffalo, we read about the calf. Both boys seemed to enjoy the style and content of the story. I would have liked to have read more stories to the entire group but the time never seemed to be available due to their inability for group work.

J-599H

Hurd, Thacher Edith, Mother Beaver, illustrated by Clement Hurd, Little Brown and Company, Boston, Toronto: 1871

_____, _____, Mother Deer illustrated by Clement Hurd
Little Brown and Company, Boston, Toronto: 1971

_____, _____, Mother Whale, illustrated by Clement Hurd
Little Brown and Company, Boston, Toronto: 1972

Hurd, Thacher Edith, Mother Owl, illustrated by Clement Hurd
Little Brown and Company, Boston, Toronto: 1974

_____, _____, Mother Kangaroo, illustrated by _____
Little Brown and Company, Boston, Toronto: 1976

_____, _____, Mother Chimpanzee, illustrated by _____
Little Brown and Company, Boston, Toronto: 1978

Reading Level: 3rd-4th

These are an excellent series of books written by the same author which deal with the relationship between mother animals and their babies. Each book follows one year in the life cycle of a female animal. The reader is introduced to the mating, development and birth of offspring against the back-drop of everchanging seasons. There is a unique quality to each book which really gives a real sense of each animal's life style. Yet, there is also a familiar format in the written expression and illustrations which encourages a reader to read more than one of these books.

McClung, Robert, Bufo (illus.)

William Morrow and Company, New York: 1955

Reading Level: 3rd

This is about the first three years in the life of a toad. It depicts his life as a tadpole making narrow escapes from bigger animals and then his gradual development into a toad. In a story-like manner, important facts about the development of this toad are presented. The print is large and there are not too many words on a page. The water color illustrations make Bufo come alive for the reader.

Children's Response - This book was used primarily with Martin.

It took him two days to read the entire book. The many pictures broke up the presentation of words. This was helpful for Martin because it decreased his anxiety while reading. Martin enjoyed the story-like style of the writer because it made him feel like he knew the toad after finishing the book.

J-P-M

McNaught, Harry, Animal Babies, (illus.)

Random House, New York: 1977

Reading Level: 2nd-3rd

This is a picture book which gives information about the special names and behaviors of baby animals. The reader learns that a babyswan is called a cygnet and that a duck begins to swim at a day old. Although, it is primarily a picture book for a young child, its pictures and content are valuable for an older child.

Children's Response - This was a favorite book of all the members of the group. It was through this book that the children first became aware and interested in baby animals. The book had a certain simplicity which captured everyone's interest.

Animal Babies was constantly used as a reference to verify facts about baby animals.

J-591.3P

Podendoff, Illa, Living Things Change, illustrated by Darrell Wiskur Children's Press, Chicago: 1971

Reading Level: 2nd-3rd

This book is a part of the Stepping into Science Series in which concepts are presented in an easy to read and understandable fashion. The concepts of great and minimal change in the development of animals and people are discussed in this book. The language used is clear and gives the reader a good grasp of the concepts. Pictures illustrating the changes in caterpillars to butterflies and tadpoles to frogs are done well.

Children's Response - Living Things Change was specifically chosen for Baine because of his interest in development and the various changes that occur in animals and people. Although he knew about caterpillars and tadpoles, the book helped to crystalize his knowledge and stimulate his thoughts on development.

J-591P

Podendorf, Illa, The True Book of Animal Babies, illustrated by Pauline Adams, Children's Press, Chicago: 1965

Reading Level: 1st-2nd

The contents of this book are divided into four sections: describing babies that need alot of care, babies which care for themselves, animals who change greatly as they grow and how parents interact with their children. This print is large, the vocabulary and sentence structure are simple. Pictures have a babyish quality which is one of its drawbacks. The book provided a nice complement to Animal Babies, by adding more details about the growth of baby animals.

Children's Response - Roger and Martin were given this book to help supplement their knowledge on animal babies because it was on their reading level. They liked the pictures but were not motivated or interested in learning the new information presented in the book.

J-636

Richards, Jane, A Horse Grows Up, photographs by Bert Hardy Walker and Company, New York: 1972

Reading Level: 3rd-4th

Photographs and a simple text are used to acquaint the reader with development of a new foal. Some drama enters the text when the foal is lost in the woods and scared. This incident clearly illustrated his dependency on his mother. He is quickly found and stays close to his mother. The text ends inviting the reader to choose a name for this animal. The writing style of the author is not inspiring but the book is valuable because its pictures tell an important story. The length of time for development in a foal was an interesting contrast to the books we read on kittens and puppies. Children's Response - A Horse Grows Up received a good response in a group reading and stimulated a discussion on the different

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Children's Response - All members of the group had the pleasure of seeing a pregnant cat and her kittens a few days after birth. They were all fascinated by this process but did not understand the details because they had not actually experienced it. This book filled in the gaps of their experience and put the encounter with the cat and her kittens into a clearer perspective. Similar to his response to the puppy dog, Reggie was very inquisitive about kitten's birth and development.

HABITAT BOOKS

J-591, 5 B

Busch, Phyllis S., At Home in its Habitat, photographs by Arline Strong World Publishing Company, New York: 1970

Reading Level: 4th-5th

One of a series of books designed to acquaint young children with the interrelationships which exist among living things and their environment. The book concerns itself specifically with places animals live and the reason they choose this place. It begins by describing people's various habitats and adaptability. The reader is given the opportunity to imagine that she/he is exploring the meadow, forest, plains, seashore and city for places where animals live.

Children's Response - This book was used as a teacher resource. It was the basic for starting a discussion with individual children about their own living space. The discussion was expanded to include the places where animals live.

P-G

Green, McBurney, Mary, Everybody Has A Horse and Everybody Eats illustrated by Louis Klein, Young Scott, New York: 1961

Reading Level: 2nd-3rd

These are two early science concept books which were originally published as separate books. The latest addition combines the books in one volume but presentation is still sep-

arate. Both books use simple words and sentences. The author's style consists of asking the readers a question and then providing them with the answer. These books are classified as picture books and are colorfully illustrated. Similar animals are used in each book to get the message across and concludes with what people do. Everybody Eats has a more poetic style and includes animal sounds.

Children's Response - These books were read in a group with Martin, Roger and a boy from the other apartment group. Each boy took a turn reading a page. Many comments were made about the pictures which they liked but they were silly at times. They particularly enjoyed the flow of the language in both books, especially the poetic style and inclusion of animal sounds. Although these books might seem to young for these boys, their reading level and interest were well suited. The fact that they were reading on their own, made the content and style of the book a successful group reading.

J-591,5M

Moncure, Jane, Belk, Animal Animal Where Do You Live, illustrated by Edward Lafferty, Children's Press Chicago: 1975

Reading Level: 1st-2nd

In a simple and somewhat poetic style, this book introduces the reader to the residents of the jungle: monkey; elephant; leopard; the pond; ducks; turtle; frog; the hole in the tree; squirrel; woodpecker and burrow under ground; bunnies; racoon. The color pictures very beautifully depict each habitat. The print is large and the words and sentences are easily read and flow with a poetic quality. A similar phrase is used to introduce each animal, e.g.:

Monkey, Monkey, Where Do You Live?, Duck, Duck, Where Do You Live? The questions are answered in words and pictures.

Children's Response - Roger and Martin read this book on an individual basis. The large print and simple words and sentences

made it possible for them to read independently. Both boys seemed to enjoy the flow of the language and the repetition. This book provided Roger with a lot of information about habitats. It was the main way he obtained this kind of knowledge. The clear pictures were helpful in depicting and explaining the various habitats to the entire group.

Kirk, Ruth, Desert Life, photographs by Ruth and Louis Kirk
American Museum of Natural History Press, New York: 1970

Reading Level: 4th-5th

Through the use of poetic images in photographs and in writing style, this author attempts to give the reader a different image of the desert than usually portrayed. The book is designed with a presentation of a picture which takes up an entire page and immediately following is a description of the pictures. The pictures are clear and striking. They give the reader a new and different perception of the desert. We learn about the plant and animal life and how they survive in this environment. The most important aspect of this book is the love and respect shown for a misunderstood environment.

Children's Response - The pictures in the book were the main attraction for Reggie and Martin. Both boys had a simple image of the desert as a dry, sandy place. They were surprised to find all the plants and animals in the desert. It caused them to think and ask questions concerning, how someone could live in the desert. The meaning behind the words seemed to be a little too sophisticated for them. The entire group used the book as a reference when the group was making a habitat collage.

CATEGORIES OF ANIMALS

Bendick, Jeanne, Why Can't I (illus.)

Scholastic Books, New York: 1970

Reading Level: 2nd-3rd

Why Can't I makes the readers aware of the variety of sizes, textures, body parts, movements, habitats and needs that animals have. It encourages them to think about why they cannot behave like a particular animal such as; a bird, a fish, or a fly. It points out the benefits of being a particular animal. For example, birds can fly and cats can move well in the dark. It then compares these abilities to human characteristics. The major theme of the book is, that animals have a variety of characteristics and that each animal is special in its own way. The content, concepts and writing style are well done but the illustrations are bland.

Children's Response - The title immediately caught Roger's and Martin's attention as they listened to the story together. At first they thought it was funny to imagine a boy flying but then their imagination ran rampant and they started to question why people couldn't fly. An active and productive discussion continued through the reading of the entire book. For Roger it was the most worthwhile discussion he had with one of his peers. Both boys seemed to feel enlightened in his understanding of the difference between himself and other animals.

J-599-H

Hornblew, Leonara, Arthur, Animals Do the Strangest Things illustrated by Michael K. Firth, Random House, New York: 1964

Reading Level: 3rd-4th

One of a four book Step Up Nature Series, which has a collection of short stories on various mammals. These stories contain funny and interesting facts about the behaviors of animals, e.g.: camels, lions. Each story is two to three pages long, print is large and sentence structure is simple. The illustrations are numerous and add to the explanations of facts presented.

Children's Response - The short stories in this book lent itself to be used for reading comprehension stories. This proved to be a successful experience for Martin and Baine. Martin owned this book and was pleased that we were using it in school. After reading stories and answering questions, he began to absorb the contents of this book for the first time. He soon transferred these abilities to other stories he read. The large print made it easy for him to read, even with his visual problems. Baine had been resistant to any reading comprehension tasks but read these stories willingly and answered questions. The stories were short and clever enough for Baine to enjoy.

J-599-L

Lowery, Barbara, Mammals illustrated by Michael Charlton
Franklin Watts, New York: 1976

Reading Level: 4th

Mammals is listed as an easy to read fact book and it was just that. The print was large and clear and the vocabulary was simple. Pictures are clear and colorfully illustrated. They take up most of the pages with short sentences introducing each idea. The first few pages show pictures of mammals including humans, then slowly introduces the general character of mammals, contrasting them with other types of animals, e.g.: reptiles or birds. The individual variation between mammals is handled by describing briefly the life styles of a few mammals.

Children's Response - My first use of this book was a resource for my development of concept on mammals. I read this book individually with Reggie and Martin. Both responded to the quantity and clearness of the pictures, but it was hard for them to absorb the general concepts.

J-591 R

Ricciuti, Edward, Do Toads Give You Warts, photographs
Arline Strong Walker Publishing Company, New York: 1975

Reading Level: 3rd-4th

This book deals with the many myths attributed to specific animals. It tries to correct some of the commonly held doubts about animals and the way they live. Here is a sample of the questions considered: Do Bulls Hate Red? Are Pigs Dirty? Do Camels store water in their humps? These questions and other are answered in two pages. The style and language is clear but sometimes too sophisticated. Dramatic photographs supplement the text. Basic biological concepts of animal behavior and physiology are introduced. It is not necessary to read the entire book at once or at all. The table of contents guides the reader so they can look up the questions they are interested in.

Children's Response - This was one of the most enjoyable books read by Baine. It was the first book that we read together and was significant in strengthening our relationship. Baine did not have a clear understanding of what a myth meant when we started the book but did at the end. The questions fascinated him and motivated him to read the entire book. He would often pause and talk about facts that were hard for him to believe. All of these behaviors were not typical for Baine, a child with a short attention span for academic work.

J-597-S

Selsam, Millicent; Hunt, Joyce, A First Look At Fish
illustrated by Harlet Springer, Walker and Co., New York:1972

J-598.2-S

_____, _____, _____, _____, A First Look At Birds
illustrated by Harriet Springer, Walker and Co., New York:1973

Selsam, Millicent: Hunt, Joyce, A First Look at Mammals
illustrated by Harriet Springer, Walker and Co., New York: 1973
J-598.1-S

_____, _____; _____, _____, A First Look at Snakes
Lizards and Other Reptiles,
illustrated by Harriet Springer, Walker and Co., New York: 1975

These four books are a part of a first book series written by the authors using a consistent format. Each book begins by asking the reader to define, in some way the specific category of animals being discussed. A series of questions are asked and the reader is taught how to make differentiations between animals with similar characteristics but are not in the same category. For example, a bee and a bird both have wings but are not in the same category of animals. The remainder of these books has a combination of questions, straight facts and a chance for the reader to figure out puzzles. Most of the books have many illustrations to aid their message. The average number of sentences on a page is three or four with some having less. The content is on a third-fourth grade level. The most detailed and complex book is A First Look at Snakes, Lizards and other Reptiles because of the amount of material it covers.

Children's Response - The group responded well to the clear, concise manner of these books. They were primarily used as reference books for understanding and differentiating categories of animals. Teacher-made worksheets to reinforce the information were presented in each book. I found these books helpful for my own understanding and used them as a guide for teaching.

REFERENCE BOOKS

J-591.B

Bridges, William, The Bronx Zoo of Wild Animals. A guide to Mammals, Birds, Reptiles and Amphibians of the World
New York Zoological Society and Golden Press, New York:1968
Reading Level: Adult

This is an excellent book for teachers because it contains brief information on a variety of animals. The book is divided into four parts; each part describes one type of animal using an extensive collection of pictures and facts. Photographs are taken in the zoo and in the animal's natural habitat.

Children's Response - This book was introduced to the group a week prior to our planned trip to the Bronx Zoo. It was useful because it gave them some sense of the animals they could expect to see at the zoo. The book was also made available to them after the trip in order to refreshen their memory. It received the most enthusiastic response after their trip and stimulated discussion about the animals we had seen and their behaviors.

J-597.H

Herald, Earl, Living Fishes of the World
Double Day, New York: 1961
Reading Level: Adult

A large, colorful selection of fish photographs, makes this book an excellent reference book for children and teachers. The text is appropriate for a teacher's reference only.

Children's Response - The group was exposed to the book after our visit to Crystals Aquarium. They had been fascinated with the variety and colors of the fish at the aquarium. This book rekindled their interest. Children were encouraged to consider why a fish had a certain name, using the photographs in the book for this analysis.

Lauber, Patricia, The Look It Up Book Of Mammals, illustrated by Gay Cohenleach, Random House, New York: 1967

Reading Level: 4th-5th

An alphabetically indexed book containing short paragraphs and pictures of the many kinds of mammals. Many aspects of animal life styles are discussed briefly.

Children's Response - This book started out as Martin's favorite book to page through, looking only at the pictures. Popularity for the book grew as the children had more questions about animals and also while working on animal worksheets. This book provided them with an easy way to find answers. The most important role the book played, was with the game, If I Were An Animal. The children were able to solve disputes on where an animal lived, ate and their babies' names. Through this experience the members of the group developed greater tolerance for looking up answers.

J-580,22M

Mason, Robert (ED.) Life Picture Book of Animals

Time Life Books, New York: 1969

Reading Level: 4th-5th

This book had a beautiful collection of color photographs of lions, tigers, mandrills, gorillas, king cobras and many other animals in their natural habitats. At the end of the book, there was a short description of each animal presented.

Children's Response - This book was greatly received by the group. It was introduced during a group meeting where a discussion began concerning what each animal might be doing in the photographs. The pictures brought the animals to life for the children and this made the book very popular.

J-591, 38 Z

Zappler, George, Lisbeth, Then and Now, illustrated by Dorothea and Sy Barlowe, McGraw-Hill, Singapore: 1975

Reading Level: 6th-7th

This is a book which deals with the concept of evolution, showing the reader many familiar creatures which have evolved. The beginning of the book introduces the concept of change using the butterfly and frog as examples of great change and the season color change as an example of minimal change. It goes on to illustrate the changes in dogs, cats, horses, turtles, camels, giraffes and more along the years.

Children's Response - As the year progressed, Baine had become particularly interested in the changes going on in himself due to puberty. He was also observant of the changes in the pictures of famous personalities as they grew older. He even created a character depicting it as different ages and enjoyed using the expression, "now and then" when referring to the character. For all these reasons this book was especially selected for Baine, in order to introduce the concept of evolution within his already understood concept of growing and changing. He was responsive to the book and was able to have a meaningful conversation with a teacher on the concepts presented in the book. Baine appeared to gain some sense of evolution from the book.

J-599 Z

Zim, Herbert, Cottam, Clarence, Insects

Simon and Schuster, New York: 1951

_____, _____, Ingle, Lester, Seashore

Simon and Schuster, New York: 1952

_____, _____, Smith, Herbert, Reptiles and Amphibians

Golden Press, New York: 1953

Zim, Herbert, Hoffmeister, Donald, Mammals, A Golden Nature Guide, Simon and Schuster, New York: 1955

Reading Level: 4th

These books were designed as small reference books and written in a similar fashion. In each book animals are listed according to their families. The reader is given a clear indication of an animal's placement in the animal kingdom. Every animal described has a color picture and information concerning their names, origins, habitats according to season, mating, birth of young and characteristics specific to them.

Children's Response - The variety, amount and clearness of the pictures made these books attractive to the group. Reggie made most use of these books. Often, during a work period a teacher and he would read parts of these books and discuss the facts. Many times this was the only activity which would sustain his interest.

VETERINARIAN

J-E 636.089-G

Green, Carla, Animal Doctors: What do they Do? illustrated by Leonard Kessler, Harper and Row, New York: 1967

Reading Level: 4th

This is a simple, informative and well written book which describes the different kinds of veterinarians (city animal doctor, country, zoo, circus and space animal doctor) and their functions. Each doctor is shown in action. The reader becomes aware of the training needed and the dangers of being a veterinarian especially at the zoo and circus. Children's Response - Reggie had expressed interest in finding out how someone became a veterinarian. We read this book together during a quiet reading time. He was very attentive, asked questions and appeared to be synthesizing the material. He retained much of the information and was able to answer questions the next day.

SUMMARIES

Each child experienced the curriculum in a different manner. Some learning experiences were more successful with one child than another. In this section I have summarized the role the curriculum played in each child's development.

ROGER

Roger was relatively removed from the group curriculum as he appears removed from life. Most games and trips were either too restrictive, complicated or overwhelming for Roger - although Animal Bingo in any variation (Name, Habitat or Spelling) was the most successful game for him, especially if he was the caller. Roger's informal trips to a dog grooming store were relaxed controlled. The small space of the store, the friendliness of the store owner and the opportunity to touch animals seemed to establish a connection for him. Curious George, Harry the Dog and animal baby books were the kinds of books Roger responded to the best. Often he would become attached to a book and it would be hard to introduce a new book. Reading aloud with a teacher would sometimes entice him to read a different book.

Dramatic play was the one activity Roger could do for the whole day. This diverted him from academic pursuits

and upset his balance of fantasy and reality. This desire for dramatic play was carefully channeled into an Animal Body Movement activity in which Roger and Martin were involved. Then the teacher asked each boy to move like an animal. Roger's entire disposition and body stance became alive and creative. Pretending to be an animal seemed to release his constrained body and satisfy an emotional need. He could be the fierce angry tiger and then the lovable puppy who wanted affection. Teachers were especially careful in these situations to help Roger distinguish between actuality and fantasy.

Roger gained minimal information on animals, remained unconnected to the group and seemed to gain little knowledge about himself during the curriculum. Since touching animals appeared so important for him, having a class pet might have made everything more authentic. A pet might have helped him develop the nurturing quality so evident in his relationship to younger children and also given him a chance to observe animal behavior in a repetitious, concrete, day to day manner.

BAINÉ

Through a slow and gradual process, Baine became very involved in the animal curriculum. The first activity which engaged him totally, involved his work on a Life Span Graph.

He had actively gathered information from the Museum and with a teacher's guidance constructed a bar graph. This was one of the first times he spent so much time and creative energy on an academic task. He was very proud of this accomplishment.

Baine was an active participant in trip preparation. He particularly enjoyed making predictions and validating them when we arrived at our destination. His favorite trips were to Crystals Aquarium and the Bronx Zoo, where the beauty and authenticity of the animals and their environment made it hard for him to believe it was all real.

Books on animal myths, evolution and the Buffalo attracted his attention the most. Before the game, "If I Were An Animal" was introduced, he rarely played board games and had much difficulty with playing games, especially coping with losing them. Some of the features of the animal game that made it so appealing, was its simplicity and the fact he was collecting something. The head teacher, who Baine was very proud of originated the game and this added an extra attraction to it. Baine used the game as a transitional object from the end of school to summer vacation, by taking it with him and playing with it.

Baine developed in many areas during the curriculum. He gained alot of information about animals and was able to absorb content with a group rather than being off in

his own world. Through playing the game, "If I Were An Animal", Baine developed a close relationship with another child and also learned to deal with the frustrations of losing a game without having to quit. He was more willing to do Reading Comprehension exercises when it was on an animal story. All these behaviors developed slowly through-out the curriculum.

REGGIE

Reggie's involvement in the animal curriculum was one of the most positive experiences he had in school. It was the one area of the total curriculum which sustained his interest. When he was unwilling to do other work, he could usually be tempted into looking at an animal reference book or a trade book which dealt with birth and mothering. The most successful and almost only way he collected information in the classroom was through reading with a teacher and than discussing the facts. When this was possible, he could spend forty-five minutes doing this activity.

On trips, when Reggie was in control of himself, (particularly our trip to the Bronx, and the Dog Grooming store) he was thoughtful, inquisitive and observant. Trips seemed to be enjoyable and productive activities for Reggie. He formed a close friendship with the owner of the Dog Grooming

Store who kept Siamese cats. He was very attracted to the cats. His defenses were down when he was playing with the cats and he became totally immersed in them and did not respond impulsively. Reggie's gentle and warm nature, so often complicated by school, home and his own pathology, were nurtured in his relationships with the cats and the store owner. His intellectual curiosity was stimulated and he had the desire to learn facts about cats, dogs and other animals.

Another very significant effect was that this learning and interaction with animals was to provide an emotional outlet for enabling him to deal with sex, birth and the mothering process. Reggie was struggling to understand these concepts in his own life and it provoked less anxiety for him to begin by understanding animals. This was facilitated primarily through his experiences with the Siamese cats, and also from his trips to the Bronx Zoo and Central Park Zoo. In any of these situations; whenever something was happening in relation to sex, birth and babies, Reggie wanted to be involved in the action. After forming questions in these places, he then went to teachers and books for his answers.

Reggie had a difficult year and many aspects of the animal curriculum failed to reach him, but an important emotional need was fulfilled through his participation.

MARTIN

Martin had the strongest interest in animals in the group. He visited the zoo quite often and had many of his own books on animals. But most of his knowledge was superficial and fragmented. Through this curriculum he gathered more specific information and became more reflective.

Martin participated enthusiastically in all learning experiences. He was most able to obtain facts from worksheets and games. Due to his visual disability, books presented him with a problem because of the small print and pictures, and he had a tendency to just page aimlessly through books. He needed encouragement to read through an animal trade book on his own, but read well with a teacher. Through short animal stories he began to develop the ability to focus in other important facts in a story and could answer comprehension questions. This seemed to be due to his genuine interest in learning about animals.

Although Martin enjoyed trips and retained information from them, he would often pass by exhibits, not really exploring them. He became a little resistant when a teacher would call something to his attention. Martin seemed to want to experience the events on the trips in a peripheral manner. This might have been due to a lack of ability or the fear of total involvement. By the time we went to the Bronx Zoo, he had changed slightly.

Martin was a dependable game participant. He shared the same affection that Baine had for the game, "If I Were An Animal", and they developed a close friendship while playing the game together. During Body Movement activities, Martin moved his body in a variety of ways that animals move. This gave him the needed practice in coordinating his body. It also helped to release his body from a stiff and unsure stance. He moved his body more freely when he was pretending to be an animal. Feelings that he might not express himself, came out in the actions of the animals. For these reasons body movement was a very successful activity for Martin.

Martin has made important developments during the animal curriculum. His knowledge of animals increased in facts and organization. Martin knew this and felt proud of himself, which gave him a better self-image. The content of the animals gave him incentive to play games more often with the group rather than solitary play. They also gave him a forum for developing a friend. He increased his competency in reading comprehension while reading about animals. Martin also gained a better understanding of his own body by studying animals' bodies and contrasting them with people. While moving his body like an animal he gained some ability for handling his own body and released deep feelings.

CONCLUSIONS

The summary of this paper will discuss the value of studying animals for children in general. It will detail the joys and difficulties of teaching the children mentioned in the paper. Finally it will consider how this curriculum might be expanded.

VALUE OF AN ANIMAL CURRICULUM

As I mentioned earlier in this paper, the selection of the topic, "Animals" for the group's curriculum was determined by the teachers' hunches, gathered by observing the children's behavior. It became clear as the curriculum unfolded, that this was a very appropriate study for the group. The children's interest, teachers' interest, and outside group's enthusiasm, made me curious about the role animals play in everyone's life plus the value of studying animals for any person, especially children.

Animals have played many roles in the lives of people. They have been used for protection, as food, as servants and to provide companionship. It seems only natural that they have influenced people's behaviors and have affected their psyche. Their impact on humankind is evident when we look at the animal symbols in the world across cultures in religion, art, literature, and in the toys and games of

children. But what special role can studying and interacting with animals play in the social, emotional and cognitive development of all children?

There have been many popular magazine articles written about pets and people. The writer was only able to find one author who had dealt with the subject seriously, Pets And Human Development and Pet Oriented Child Psychotherapy. In these books the writer is reminded of the already - noted long dependency on animals for food, clothing and work. Levinson suggests that as the society becomes more complex, people become more alienated from nature. Animals, especially pets, provide people with a link to nature.¹

There appears to be a universal interest in animals but children seem to have a special innate interest in animals.² It is with this fact that Levinson begins to answer the question of the role animals play in the child's development. Children according to Levinson identify with animals because they are not as complex and demanding as adults.³ Baine copied the behavior of hiding when a new person came into the room from his pet cat. He would choose a place a cat might hide. Children often consider animals, particularly a pet as their equals.

¹Boris Levinson, Pet Oriented Child Psychotherapy
Charles C. Thomas, Springfield, Ill: 1969 p.21

²op cit p. 158

³op cit p. 158

Animals love children in a more accepting manner because animals are not concerned with society's rules. By identifying with animals, children can experience a feeling of strength which they see animals possessing.¹ While pretending to be an animal, Roger and Martin became fierce lions or tigers who could have power over people and could protect themselves and others. Reggie often expressed his anger by acting like a fierce cat. When a child can order his pet around, be its master, he may also be better able to deal with his parents, whose size and authority seem overpowering.

By caring for and studying about animals, children can learn about bodily processes in an open and natural manner. When children see an animal defecating, masturbating or giving birth, they are provided with an outlet to deal better with their own feelings of shame, guilt or confusion around these issues. Reggie was particularly anxious about sex and the birth process. Some of this anxiety was subdued when he learned facts and experienced the birth of siamese cats. But facts are not the only important aspect in studying animals. Fantasy play, as mentioned earlier, about animals can serve as an outlet for children to act out the problems of childhood. All of the factors mentioned are important in the development of a child's self image.

¹op cit p. 159
Boris Levinson

JOYS AND DIFFICULTIES IN TEACHING THE CURRICULUM

An important element in this curriculum was the genuine interest both teachers had in learning about animals. The teachers had never taught an animal curriculum before, so along with the children, the teachers learned much information. Although we started off being the main resource people in the class, it slowly developed into a partnership of learning. With the children this partnership was very difficult to develop because they required a lot of input in order to get a response. It was important for the children to know that the teachers didn't know all the answers but were interested and motivated learners. In this way, the teachers provided them with a model for learning.

There are similar dynamics in motion when the non-handicapped child is learning. A teacher's interest and enthusiasm can really motivate a child to learn, but often an interest can be a great enough force. The difference in the children described in this paper lies in the need for a strong connection with a teacher, which then facilitates the child's capacity for learning. It is as if the child becomes rooted through his relationship with a teacher, creating enough stability so that he may bear with the anxieties of learning. Martin and Baine made this connection and the writer feels it was significant in their learning.

information and the development of their social and emotional skills.

The teachers encountered many difficulties while developing the curriculum. The major problem was the constant disruption of activities caused by acting out behavior, low frustration tolerance and short attention spans. Often hard worked plans had to be put aside to deal with a child's emotional upheaval or simply just a lack of ability on the children's part to attempt to do what was presented. Planning is always an important element with any group of children but with this group the teachers never seemed to plan enough.

Concepts had to be presented in a variety of ways because one worked only the one time. The opposite to this was when a teacher introduced an idea and the children perseverated on this idea and were resistant to moving on. All of these factors put teachers in the position of always looking for another way to reach a child. The planning of any activity required teachers to concentrate heavily on individual needs. This took a lot of time and emotional and creative energy on the part of the teachers. It meant a lot of brain picking together and also coming in tune with one another.

Often the children's fears and obsessions interfered with the materials teachers could use. Martin was afraid

of a tape recorder and a record player. Baine always needed to be in control of any audio-visual equipment brought into the room. If these objects were not handled in a certain manner he would lose control. Teachers could not take polaroid pictures on a trip because he would be obsessed by wanting to take pictures of buses.

Although similar components go into developing curriculum for non-handicapped children, these components seemed to be particularly heightened with these kinds of children.

FUTURE POTENTIAL OF THE CURRICULUM

As the children were leaving in June and during the process of writing this paper, this writer had thought of many ways in which the curriculum could have been expanded. It would be important to continue the study of the categories of animals in depth so that each child would have a way of thinking about animals in a logical fashion. The study of specific animals in detail could facilitate the studying of various countries in which the animals originated. The evolution of animals which was only touched upon would be significant for these children because of the onset of puberty when they would be experiencing a lot of change. In general, the writer would have tried to encourage the group to work more with their hands, creating animal habitats, murals and other projects. This might have been feasible.

The most significant addition would have been to have a class pet. The enthusiasm shown for the cats at the Dog Grooming store indicated how helpful being close to animals through physical and daily contact would have been for the group.

Levinson wrote an entire chapter on the emotionally disturbed child and their need to be motivated to learn. He discussed the value a pet might play in educating

emotionally disturbed children. These children seem to have ambivalent feelings toward learning because it represents a subtle threat to a child's precarious emotional balance and defense structure.¹ Another problem encountered with these children is their lack of interest in subject matter and the difficulty in motivating them to learn.² "A pet," he says, "makes education interesting and motivates them to return to the classroom to learn."³ There are other developments affected by a child's relationship to a pet. Learning through association with a pet may store up a child's ego through recognition from classmates on his/her skills with a pet. Group identification might be built around the caring for and learning about a pet. Children can begin to understand the reason for delaying gratification because they must tend to their pet's needs.⁴ After caring for, reading about and learning first hand, normal bodily functions assume their appropriate place in a greater tolerance of their own physiological processes.⁵

¹Boris Levinson, Pet Oriented Child Psychotherapy
Charles C. Thomas, Springfield, Ill.: 1969 p. 121

²op cit p. 123

³op cit p. 124

⁴op cit p. 126

⁵op cit p. 128

Through training a pet, children get a sense of the difficulty in learning and begin to understand their own learning process better. Love and affection for a pet might serve as a bridge to human relationships. "The pet becomes a mirror in which the child sees himself wanted and loved, not for what he should be or might be, but for what he is."¹ The manner in which the child treats the pet also provides him with an image of a good provider and a kind, loving person.

A pet should be chosen with care, children should be actively involved in the selection process and aware of the responsibility they will take on. After considering all these factors, the teacher must provide a model for loving and caring for an animal.

¹Boris Levinson, Pet Oriented Child Psychotherapy
Charles C. Thomas, Springfield, Ill. 1969 p.130

This animal curriculum will always have a very special place in my heart and mind. Teaching these children and developing this curriculum helped to develop many of my teaching techniques. It proved to me that curriculum is both possible and essential with this type of child. I only hope that the children written about in this paper received as much from this learning experience as I did.

REFERENCES

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Charles C. Thomas, Springfield, Ill.: 1969

_____, _____, Pet and Human Development
Charles C. Thomas, Springfield, Ill. 1972