Urban Wildlife in Houston

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"A teacher affects eternity; he can never tell where
his influence stops."
--Henry Adams

INTRODUCTION

My kindergarteners are children who are very curious and who love to come into close contact with the animals that are around the school and neighborhood. The students in my classroom are eager to absorb knowledge about intriguing and exciting animals. The majority of students in my campus are Hispanic and, even though our school is primarily Latino, we have a few children who are of Korean and Indian descent as well as African-American and Anglo.

The diversity in our campus is credited to our Environmental Magnet Program, which provides a fantastic science curriculum to those individuals interested in attending our campus. Besides our regular district-wide curriculum, the students receive an extra 50 minutes of science twice a week with one of our science teachers. In these classes children are taught to care for our garden and nature trail. Since the creation of our gardens and nature trail by our science department, the children plant and cultivate different species of plants and flowers. Most of the students in our campus walk to school and are able to enjoy the trees and animals that inhabit the neighborhood. These same species of animals can be seen outside my classroom in our courtyard. Above the walkway, mourning doves build nests on the metal pipes and pillars that hold the structure together. At times we sit quietly to observe the mourning doves building their nests as they carry in their beak a small branch or twig.

BACKGROUND

Houston is not only known for its diverse ethnic population, but also for its diverse animal population. Citizens can enjoy our great city by visiting our parks, wetlands, prairies, gardens, rivers, etc.; once they do this, they will encounter pretty and exotic creatures that make Houston their home. The purpose of this unit is to enlighten my students and help them absorb information about the wildlife and ecosystems in the Houston area. As the handbook for Project Wild states, ecosystem diversity is affected by many influences, such as climate and the level of human disturbance. Animal diversity is generally higher where there is a mild climate and an abundance of food and cover, or where ecosystems overlap (Project Wild 144). The students will learn about the vast number of species that live in the Houston area, such as insects, mammals, and birds. The

children will study how these animals exist and how they survive in this populous metropolis of Houston amidst the freeways, buildings, automobiles, air pollution, bayous, and people. Sometimes our views of animals mingle facts with misconceptions and obscure the truth; I want this class to help my students see them accurately.

This four-week thematic unit will begin with the introduction of *The Great Kapok Tree*, by Lynne Cherry. This wonderful book displays to society the problems in the rainforest when humans destroy it. This story is a great teaching strategy, serving as the foundation to my unit on animals and educating the children on conservation and respect for all living things. The students will be able to understand that we must respect the animals and their habitats. I need to show the students that even animals are concerned for their welfare, because a predator might devour them.

As we read along and discuss the different animals in the story by studying the illustrations, we are initiating dialogue and the children's perspectives on the critters. "Two men walked into the rainforest. Moments before had been alive with the sounds of squawking birds and howling monkeys. Now all was quiet as the creatures watched the two men and wondered why they had come" (Cherry 1). Although this unit is not about the rainforest, I feel that reading this dramatic book will make a connection to my thematic unit as we open our minds to preservation and respect for wildlife. "The animals have largely managed to adapt to our presence" (The Humane Society 1). The purpose in utilizing this text at the beginning of the unit is to interest students in the urban wildlife that resides in the Houston Metropolitan area. An oral discussion will be held after the book is read using a story map to discuss the problem, character, solution, etc. The teacher will write this information on chart paper as students answer the appropriate questions on why, who, how, where, when, and what occurred in the story. The students will then relate the information on their own individual story maps.

This thematic unit will be taught in correlation with the Project Clear objectives for the Houston Independent School District focusing on all the content areas.
ELA.R.K.2.b. **Language Arts.** Understand narrative text structure.
ELA.R.K.3.a **Language Arts.** Develop vocabulary using a variety of strategies.
ELA.R.K.5.b **Language Arts.** Listen actively to text being read aloud.
ELA.R.K.5.c **Language Arts.** Demonstrate comprehension after a selection is read.
ELA.R.K.8.c **Language Arts.** Draw conclusions from information gathered.
ELA.R.K.3.a **Language Arts.** Use a variety of strategies prior to reading to enhance comprehension.
SCI.K.112.2.b.K.5.A. **Science.** Describe properties of objects and characteristics of organisms.
SCI.K. 112.2.b.K.5.B. **Science.** Observe and identify patterns including seasons, growth, and day and night and predict what happens next.
SCI.K. 112.2.b.K.6.A. **Science.** Sort organisms and objects into groups according to their parts and describe how the groups are formed.

SCI.K. 112.2.b.K.6.C. **Science.** Record observations about parts of animals including wings, feet, heads, and tails.
SCI.K. 112.2.b.K.7.D. **Science.** Observe and record stages in the life of organisms in their natural environment.
SCI.K. 112.2.b.K.8.A. **Science.** Identify a particular organism or object as living or non-living.
SCI.K. 112.2.b.K.9.A. **Science.** Identify basic needs of living organisms.
SCI.K. 112.2.b.K.9.B. **Science.** Give examples of how living organisms depend on each other.
SS.K.5. **Geography.** Identify and distinguish between the physical and human characteristics of places.
SS.K.13. **Science, technology and society.** Identify examples of technology used in the home and school and describe ways technology helps with specific tasks.
SS.K.15.a. **Social Studies Skills**. Acquire information using a variety of oral and visual resources.
SS.K.15.c. **Social Studies Skills.** Identify main idea from oral, visual and print sources.

My main goal is to teach my students a great deal of information as they take a journey mentally and visually in the beautiful world of nature. As they learn about mammals, the students will compare and contrast the characteristics among them as they learn to identify each critter more thoroughly. Every mammal has hair, has a four-chambered heart, feeds its young milk, and regulates its body at a constant level (Miller 13). Students have come into contact either directly or indirectly with squirrels, raccoons, mourning doves, grackles, lady bugs, and butterflies through observations as these animals roam the neighborhood in search for food. "Urban Wildlife" is a unit that is geared to preparing students to learn about animal habitats, diet, and characteristics. Beyond these characteristics and other anatomical features, the appearance, behavior, lifestyle, and diet of mammals differ in every imaginable way (Miller 13).

We will also study animals using pictures displayed on poster board. The pictures will be labeled with the appropriate name, along with the scientific name. I want to challenge my students and have them adopt higher order thinking skills as they learn and remember the animals' scientific names. The students' interest will develop each day as they learn more and more information about the creatures. Studying the characteristics of the animals, their habitat, how they have adapted to an urban environment, and how they contribute to the survival of the environment will enhance my students' knowledge. Animals, just like humans, need basic necessities like food, water, and shelter to survive. We will discuss the basic needs of the animals and compare them to those of humans. The children will learn that all living things share the same environment and need food, water, shelter, and space to survive.

Activities are going to be presented using several learning tools such as books, magazines, globes, maps, videotapes, the Internet, and field trips; the students will absorb an enormous amount of information. Each lesson will begin with students reading books

according to the species of animal being studied. They children are going to get a chance to check out books from my personal library once a week. A field trip to the Houston Zoo will enable students to see animals that live in a fabricated habit and compare them to animals that reside in the Houston area. The field trip to the zoo is essential because some students may have never visited a zoo, and it will be a very educational experience for them. The students can describe their experiences in the zoo using pictures and words as they compose a short essay with illustrations. The field trip to the zoo is a great instrument to demonstrate the differences between freedom and captivity. My students will not go to the zoo clueless; they will arrive with prior knowledge of the animals that they will observe. The purpose of discussing captivity and cruelty to animals will foster a feeling of appreciation and, most of all, respect for life.

That is why it is very important for the students to learn that we must respect the animals' space so that they can live freely within our community. In addition, it is essential to demonstrate to children that as a society we are responsible for the welfare of the animals. As an educator, I need to educate the children that cutting down trees in one's backyard that are not interfering with our space is not such a great idea, because they might be the home of an animal. People tend to cut trees daily as they consider them a nuisance. As an assortment of resident and migrating animals pass through Houston, we need to provide appropriate shelter for them. Not all birds migrate. The more severe the climate of an area, the greater the percentage of nesting birds that migrate. Two-thirds of bird species found in the United States migrate, some only short distances to more southern states (Shackelford et al. 2).

"People are frequently confronted with many wildlife species, including deer, raccoon, woodchucks, squirrels, beavers, and a variety of birds" (The Humane Society 1). My students will learn the names of the diverse animals, their feeding habits, and other special characteristics as well as their importance in the ecosystem. "When we describe how the organisms in the system behave; how they interact, grow, adapt; what they eat; how long they live; what happens to them when they die and what they require to stay healthy or to reproduce we are dealing with the way in which the household system operates—and we are thinking SYSTEM-atically" (Project Wild 482). The children are going to discover that we do not have to go as far as the zoo to see a squirrel, a raccoon, a ladybug, a grackle, a butterfly, etc.; we can see and study them nearby. As mentioned earlier, Houston is home to hundreds of species of animals, and I want to encourage my students to observe these animals when they see them at school, in the park, in ponds, etc. Through observation so much information can be mastered as we learn more about animal habits, characteristics, sounds, and most of all appreciate their beauty.

SQUIRRELS

A mammal that has been selected for this thematic unit is the squirrel. The squirrel is a species of animal that belongs to the rodentia order and is grouped into three categories of families. These categories are ground, tree, and flying. The Eastern Gray Squirrel

belongs to the tree family, meaning they live on trees. Their main differences are that most ground squirrels live in burrows and hibernate (Bare 16). There are over 260 species of squirrels in the world, but I am going to be focusing primarily on the gray squirrel that dwells in the city of Houston. "The Eastern Gray Squirrel (Sciurus carolinensis) is the most common squirrel in America and is equally at home in hardwood forest or city parks" (Bare 17). The gray squirrel is diurnal and is very active during the day. These squirrels are seen in schoolyards, parks, and university campuses all over the city. The gray squirrel only weighs about a pound and is only eighteen inches long. Twice a year the squirrel molts and its appearance changes from grayish to white in the winter and yellow-brown in the summer time.

A good description of the squirrel's coloration is that the upper part is gray or brown, while the bottom part is red. Squirrels are very agile as they leap from tree to tree and run along telephone and power lines. Squirrels are intelligent and fast animals that use their cleverness to their benefit as they sneak and hoard food. Squirrels in the wild have little problem finding suitable nesting sites" (Long 147). Squirrels can be seen all over the Houston area and several have officially declared our school courtyard their home. However, in urban and suburban locations, a lack of trees and competition for space with other squirrels often drives these animals to move into structures built for humans (Long 147). The students can observe squirrels running around the school or their home and record their habits.

An exercise that is intriguing is for them is to verbally describe the physical characteristics of the squirrel. "The tree squirrel's special trademark is its long, plumelike tail that is half the length of its body" (Bare 26). The tail is an important aspect in the life of the squirrel. The tail is so essential in the squirrel's life that without one, it would not be able to exist. The tail is closely involved with the life and safety of the animal, and a tree squirrel with a damaged or severed tail usually cannot survive (Bare 26). The squirrel uses the tail for many functions such as a shield from the rain and sun. During mating season the tail plays an important role in a squirrel's existence. The fluffing and posturing of the tail is also important during courtship. Angry squirrels do a lot of jerking and flicking of their tails, accompanied by vocal barking, squeaking, and quacking (Bare 30).

Squirrels have their own unique way of escaping predators. A squirrel uses its legs and feet to climb quickly up a tree when danger appears before it. Another mechanism that the squirrel utilizes is spreading its legs when it is climbing up a tree. One explanation lies in the squirrels' large, sturdy feet and powerful legs built for climbing (Bare 36).

Another exceptional feature that a squirrel possesses is that it has excellent eyesight. A squirrel's eyes are on the sides, giving it an ample view of its surroundings. It can see all around to each side, behind, and up and down without moving its head, which helps in running and jumping (Bare 41).

Due to urban development, a lot of squirrels have lost their natural habitat, making them wander throughout the city to find appropriate shelter. Squirrels tend to make their homes in abandoned tree holes. Here the animals rest, sleep, raise families, hide from predators, and find shelter from bad weather (Bare 41). An interesting quality in squirrels is that they are known to be neat. Once squirrels locate a suitable tree hole, they clean it before moving in. The squirrels literally bring fresh leaves and other items to make their living arrangements more comfortable. A squirrel cleans out rot and litter from the hole and brings in new materials such as leaves, pieces of bark, and twigs to make a soft, dry bed (Bare 41). Part of the nesting process is the unique way that squirrels build their nests. The nests are typically made really high in a tree for safety purposes. When a squirrel's nest becomes infested with fleas, ticks, lice, or flies, it will immediately move out and build a new one. Using its teeth, it cuts branches and twigs to the proper size. Then, with its mouth, teeth, and front feet that work like hands, it weaves the twigs and leaves together to form the foundations, sides, and roof (Bare 43).

Most animals are territorial and squirrels are no exception. The nests they prepare for their families are used for many years. Several squirrels can use a nest at the same time. "Squirrels live in loosely organized groups and tend to be territorial, claiming feeding and property rights to certain trees and branches" (Bare 44). The squirrels protect the food they have gathered by making loud noises to scare away trespassers. Squirrels are not only dominating in their territory, but also in mating. The adult male is the controlling squirrel in the group. "The biggest, strongest, most dominant male is accepted by the female and, after much chasing through the trees, mating occurs" (Bare 46). Breeding depends primarily on the amount of food supply. If it is high, they will breed twice: once in the spring, the other in the summer; however, if there is a shortage of food, they will only have one litter.

The diet of the squirrel is not that selective; they are, in fact, omnivorous. Squirrels eat anything that is attainable and do not have an abundant amount of choices. The shift in seasons can be a factor in the diet of squirrels. Nuts and seeds from a variety of trees are squirrel favorites: oak, hickory, elm, beech, walnut, butternut, black cherry, basswood, maple, ash, and pine (Bare 55). Strawberries and wild cherries are some fruits that squirrels enjoy eating. Squirrels are known to eat insects, beetles, moths, and bird eggs. Autumn is the season that the squirrels hoard food for the winter. Tree squirrels, including the flying squirrels, bury nuts in the earth for winter storage (Bare 56).

RACCOONS

Raccoons are easily recognized, if you get a chance to see one, by their characteristic masks. Almost everyone who spends much time outdoors encounters "a particularly brazen animal that wears a mask like a bandit – the raccoon" (Miller 87). The mask is usually gray-black outlined in white. Unlike squirrels, there are about 18 species of raccoons. Raccoons (Procyon lotor) belong to the carnivora order and are seen throughout the United States, Canada, and Mexico. "Raccoons are found across the

United States largely due to their excellent ability to adapt and take advantage of new habitats" (Huxoll, Messmer, and Conover 1). Raccoons can be seen in and around the city, but you must go out at night if you want to catch a glimpse of the critter. These creatures adjust easily to urban environments as they build dens underneath homes and in abandoned buildings. "Raccoons adapt to their environment and eat whatever it has to offer" (Brimner 43).

A unique characteristic of the raccoon is that it has hind feet that resemble the hands of a small child. "On the forepaws are long, sensitive digits, with which the raccoon dexterously handles food" (MacMillam 127). They have salt and pepper bodies with bushy tails and black masks that are recognizable when seen outdoors. Raccoons have rings around their tails. The raccoon is known to be an excellent climber and, if necessary, it can swim too. "A skilled climber, it can ascend a tree of any size and is able to come down backwards or forwards" (*Raccoons*).

Raccoons, like squirrels, are omnivorous and depend on available foods in order to survive. Basically they eat anything that they can find if food becomes scarce. A raccoon is a hunter and it inspects food prior to eating it. These creatures are very intelligent and use their sense of touch to find food in places where they cannot see. "In muddy water, a raccoon feels around for clams, crayfish, frogs, or fish to eat" (Roberts and Huelbig 10). The raccoon's diet shifts according to the season and level of food supply. These animals enjoy eating a broad variety of vegetables and fruits including mulberries. "Raccoons will eat nearly anything, including poultry, bird's eggs, insects, fish, frogs, nuts and wild fruit" (Simon 10). Those raccoons that live in the city are known to search for food in trashcans. Many city raccoons have found an easy way to make a living. They are able to lift the lid on garbage cans to make a meal of human leftovers (Roberts and Huelbig 10).

Raccoons are animals that do not create long-term relationships with their partners. They pair only for mating purposes, and the male can have more than one partner. Breeding occurs between the months of January and March, and females give birth in the upcoming months. In the spring, in April or May, a mother raccoon gives birth to four to six babies (Simon 10). Raccoons, like many other animals, are very protective of their young. If danger comes, the mother pushes the babies up the nearest tree (Simon 10). The babies stay with their mothers for only one year and then they are on their own to start new families.

A compare-and-contrast lesson can evolve after studying squirrels and raccoons using a venn diagram. The venn diagram can be used to initiate a writing lesson on the information derived from comparing these two animals. A take-home project will be discussed with the parents so they can help the children create habitats for the squirrel and raccoon using shoeboxes. A contest for the most creative habitat will be conducted in my room and we will display the projects in the main hall.

MONARCH BUTTERFLIES

Monarch Butterflies are beautiful creatures that grace us with their presence and we will be studying them in our thematic unit. Monarch butterflies are insects; therefore, they have six legs and their bodies are divided into three segments: the head, the thorax, and the abdomen. (Latimer and Nolting 4). The head of a butterfly carries three important parts: the antennae, eyes, and the proboscis. The proboscis is a long tube used for drinking nectar, water, and tree sap. The antennae of the butterfly have two main functions: smelling and balancing. Beautiful, colorful, and delicate wings are features that distinguish butterflies from other flying animals. To many of us, butterflies look as though they have only two wings. They actually have four – two on each side (Latimer and Nolting 5). These four wings help the butterfly move quickly and smoothly. The spots and bands on the butterfly's wings are important characteristics that enable butterflies to hide from predators. Large eyespots make the butterflies look like scary animals and may frighten predators away (Latimer and Nolting 6). However, some predators might leave them alone anyways, since they taste bad and it will make an animal sick if they eat it. The wings on a butterfly are covered with a powdery flake called scales, which gives the butterfly its color when light reflects off it.

The life cycle of the monarch butterfly is interesting, since they go through several stages during their lives. The first stage is the egg, and they are laid on leaves or stems of a plant. It does not take long for the caterpillar to hatch – just a few days. The caterpillar is the second stage, where it does all the growing. Immediately after hatching, the caterpillar or larva begins to eat. Monarch caterpillars like to sip nectar from the milkweed plants. As milkweeds begin to fade in fall, adult Monarchs visit goldenrods and other flowers (Latimer and Nolting 43). The caterpillar sheds its skin four times during this stage of its life. The caterpillar stops eating once it is fully mature and finds a place to settle for its next stage. During the chrysalis stage the Monarch butterfly is forming inside a hard shell. This process is known as metamorphosis (Latimer and Nolting 8). The last stage in the life cycle is when the butterfly emerges from the shell after a few weeks. A great book to read to the kids is *The Very Hungry Caterpillar*, by Eric Carle, with its beautiful illustrations demonstrating the stages in a butterfly's life. These four stages are clearly explained through its vocabulary and illustrations, which makes it a great sequencing lesson.

The lifespan of a butterfly is not very long and it mainly depends on the weather. This is the reason they migrate. Some butterflies live only 11 weeks, and there are some that can live up twelve months. The Monarch butterfly must fly south during the winter; if it does not, it will die. Monarch butterflies need a warm place in order to survive. Migration plays an important role in a Monarch butterfly's life. "Insects usually migrate to a better climate or better food supply and/or for reproductive purposes" (Kite 29). Monarch butterflies migrate south in the months from August to October. They hibernate in the central Mexican state of Michoacan. "Millions, perhaps even billions, of butterflies

gather at the wintering sites in Mexico, covering the trees with their bright orange wings" Latimer and Nolting 44).

The Monarch butterflies travel up to 2,000 miles to reach their destination, and they sip nectar along the way. When the Monarchs are returning north in the spring, they lay their eggs and die. It takes two generations to reach the northern United States and southern Canada by June (Latimer and Nolting 43). Monarch butterflies can be seen throughout our city and the southern part of the state of Texas. In the past my students were accustomed to stepping on caterpillars and watching their bodies spatter all over the ground. Each year I read *Monarch Butterfly* by Gail Gibbons to the children so that they can learn about and respect them. It is not their fault, because they have not been taught that we do not step on insects just for fun. When I see a child near a caterpillar I remind them that it is going to be a butterfly and to leave it alone.

LADY BUGS

Beetles make up forty percent of the insects in the world, and one cute little beetle that we will learn about is a ladybug. The body of a ladybug is protected by two red wing cases with black spots on them. The front of the body contains the head with two eyes and feelers. These feelers are used for touching and smelling. Ladybugs, like butterflies, have six legs with the exception that a ladybug's have claws on them. The claws help ladybugs grasp leaves and stems. The wings on a ladybug are transparent and are folded under the wing cases. Once a ladybug decides to fly, the wing cases open and its wings spread out.

The diet of ladybugs consists of small insects. They seem to have a preference for aphids. They use their tiny eyes and feelers to find their prey (Bailey 7). A ladybug sucks juice from the aphid's body as they grasp them with their sharp claws. Ladybugs eat about 100 aphids a day, but they also consume pollen and nectar.

Mating for ladybugs occurs during the spring when males go in search for females. Although they both look the same, the female has a special smell that distinguishes her from the male. He climbs on the female ladybug's back and squirts a special liquid into her body to make her eggs grow (Bailey 11). The female then goes in search of a plant that has plenty of aphids to lay her eggs on. The reason she prefers plants with aphids is that she wants to make sure her offspring have something to eat. The eggs that she lays are yellow, and she hides them underneath the leaves so birds will not find them. The larvae hatch out of the eggs and the eggs turn white. "Soon the tiny ladybug grubs crawl out of the eggs" (Bailey 11). At the beginning the larva is white, but it changes to black. The larva goes through a molting stage just like the caterpillar. The larva eats aphids and each day grows bigger and bigger. As it matures, the skin becomes firm – splitting open and peeling off. The larva will stop eating when it is ready to go to the next stage. At this stage the larva hangs itself upside down, molting its skin and transforming into a pupa with a hard case. Inside the pupa, a ladybug beetle is growing and pushes its way out of

the hard case. The pupa is now a ladybug as it steps out into the world. A fresh ladybug does not have any spots. The wing case is soft and the color is a drab orange. During this stage the ladybugs are not able to fly until their wings harden.

Ladybugs tend to reside in parks, gardens, and fields. In the schoolyard we have plenty of ladybugs running around, and the children enjoy gathering them. Over the last five years, I have observed my students interacting with ladybugs and they are friendly little critters. Every time a new lesson is introduced I like to initiate it with reading a literature selection related to the topic. A good story to introduce my ladybug unit with is *The Grouchy Ladybug* by Eric Carle. So many lessons can be developed from this story.

MOURNING DOVE

Houston is home to a variety of birds such as the mourning dove, cardinal, blue jay, and sparrow, just to name a few. It would be wonderful to study the many species of birds that inhabit our state, but unfortunately only two are going to be discussed in this unit. Birds are seen in parks, gardens, yards, rivers, lakes, woods, fields, etc. – basically they are all over the place. "Few groups of animals can match the diversity, flamboyance, and distribution found among 8,600 species of birds" (Miller 103). Birds are animals that inhabit every corner of the world. Some species of birds are able to persist in excessive climates. Bird bodies are adapted to the different habitats they live in (Hickman and Collins 7).

The mourning dove is the most widely hunted game bird in many states. The mourning dove has been quite controversial – some enjoy observing it and others relish shooting it. The students in my school have had the opportunity to observe the mourning doves nesting outside my classroom. Every year the mourning doves create nests outside our hall above the columns and deliver their young. It will be enriching to know more facts with regard to this creature and to be able to identify it when spotted elsewhere. The mourning dove is the most abundant, widespread dove in Texas and across the continent (Tveten 201).

The students are going to be taught how to identify birds by their color, song, shape, beak, feet, feathers, etc. These characteristics will make it easier to identify the mourning dove, a member of the pigeon family, when they see one. Although the kids in my school have seen mourning doves, they really have not had any close contact with them. "Color is one of the first things you notice when you see a bird" (Peterson 5). Light plays a key role in trying to identify birds, especially colors that are hard to see because of poor lighting. "Birds have special marks like spots or stripes on their feathers that assist people in distinguishing them. Field marks can be found on a bird's head, wings, body, or tail" (Peterson 5). These marks can help you differentiate between similar birds. A vital characteristic that the students must know is that shape can help you identify one bird from another. Sound is an attribute that can assist a young birdwatcher in the identification process. A mourning dove's song is often long and complex. It is usually

produced by males during the nesting season, but some females also sing (Peterson 5). The best time to enjoy birds singing is sitting outside in your yard in the morning or afternoon. Mourning doves have a distinctive mournful call (coo, who-o coo). "The mourning dove is well named because its song is certainly suggestive of sadness. It is a sweet sadness though that has a genuine appeal when heard from a distance early on a summer morning" (Wildlife Neighbors 1).

A good description of a mourning dove is that it is brownish gray with a sharp tail. The outer tail feathers have white tips with a black marking midway, so that the tail is edged with a black and white stripe (*Mourning Dove*, Cornell Lab). The feathers on a bird are important, because they keep it warm and dry, help it to fly and attract a mate, and are used as a shield from its predators. The wings make a whistling sound when the bird takes off. Males and females look alike, though the female is a little smaller and duller in color (Boring 38). The mourning dove has a little black bill with short, red legs. The male has blue-gray on his cap and the back of his neck. It is about eleven to thirteen inches long. The eye has a bluish ring of bare skin, and there is a small black spot and larger iridescent purplish area on the side of the neck (*Morning Dove*, Cornell Lab). These characteristics should assist students in identifying mourning doves around the school and home. Our school owns a couple of binoculars that the science department has purchased for students to use when they go bird watching. The binoculars are going to help us see the doves more closely. A person can be assigned to be the recorder and he or she can record the observations of the class. The students are going to be able to inform the class of their observations.

Diet for mourning doves consists of insects, weed seeds, grasshoppers, and waste grain from cultivated fields. Nursing the young is essential to the successful growth of any animal. Adults nourish their young by coughing up a partially digested food mixture (called pigeon milk) and feeding it to their chicks until they are ready to eat insects and seeds on their own (National Audubon Society 91). Their favorite food is corn and sunflower seeds.

MOCKINGBIRD

The last animal that we are going to study is the mockingbird. The mockingbird is the state bird of Texas, Florida, Mississippi, and Tennessee. Mockingbirds are the best bird mimics in North America. One was heard imitating the calls of 32 different birds in just 10 minutes (Latimer and Nolting 44). Male mockingbirds sing to attract a mate during mating season. Mockingbirds can be seen throughout the city of Houston, and they exist in all of Texas. "Most mockingbirds are year-round residents but some migrate as far south as southern Mexico, the Bahamas, and Greater Antilles" (Texas Parks and Wildlife 2). Students, through various visuals, will be able to see the physical qualities that mockingbirds possess. This will enable my students to recognize them when they see them. A characteristic of the mockingbird is that it is gray on top and paler at the bottom, with a long tail. The mockingbird has white patches on the outer part of the feathers.

The bill of a mockingbird is thin and short. Mockingbirds are about 10 inches long with a wingspan of 14 inches. Mockingbirds can be fiercely territorial during the mating season as they defend their nests and territories (*Attracting the Northern Mockingbird* 1).

The diet for the mockingbird depends mainly on the season and the food that is available at the time. Mockingbirds enjoy eating beetles, ants, grasshoppers, spiders, berries, seeds, crustaceans, and vertebrates. These birds are known for invading people's gardens by eating fresh fruits and vegetables. "Gardens are among its favorite dwelling places especially if winter berries are available" (*Attracting the Northern Mockingbird* 2).

Overall, the children will greatly benefit from this thematic unit as they embark on an educational journey that is very rewarding. They will learn through hands-on experience, as when we take field trips to certain Houston area wildlife sanctuaries. My classroom will be converted into a wildlife sanctuary by creating trees with colored butcher paper and using toilet paper rolls, newspapers, and twigs to create nests for our animals. In addition, pictures of animals will be displayed throughout the classroom. The students' major lesson in this whole unit is to learn to appreciate the animals that live among us and to learn to respect their homes. Parental involvement is so vital in the education of the children that I want them to participate in our thematic unit. The parents are going to be receiving a letter discussing our thematic unit and the projects that the children must complete at home.

LESSON PLANS

Lesson Plan 1: Map of *The Great Kapok Tree*

Student Objectives

The thematic unit will begin with a reading of the book *The Great Kapok Tree* by Lynne Cherry. The students need to comprehend and discuss the problem, characters, and solution in the story.

Materials Needed

Chart paper
Markers
Tape
Paper
Colors
Pencils

Assignment

The lesson will begin with an oral discussion about the cover page. The students will be asked to look at the picture and to predict what is going to happen in this story. The children must be able to respond that the cover page contains snakes, birds, monkeys, plants, flowers, and other types of animals. My students should relate that the illustrations

on the cover page are very colorful. The book will be read and questions will be asked after each page is read, to determine comprehension. After the story is read, the teacher will create a map of the story on the key points of the text. The students are going to copy the information on their own individual story map. Here is an example of the map of the story:

Story map
Title:
Illustrator:
Author:
Setting:
Problem:
Solution:

Lesson Plan 2: The Life Cycle of the Butterfly

Student Objectives
Observe and record stages in the life cycle of organisms in their natural environment. (SCI.K.12)

Materials needed
Construction paper
Scissors
Glue
Handout
Colors
Pencil

Assignment
The teacher reads *The Very Hungry Caterpillar* by Eric Carle. As the story unfolds, the stages of the butterfly are discussed. Prior to the lesson, the teacher will review the life cycle of the butterfly. The students will complete a Butterfly Life Cycle sequence. Students will color, cut, and paste the pictures in the correct order onto the construction paper. This activity is a teacher made handout. The students will need to label the stages and write a sentence about each stage.

Lesson Plan 3: The Life Cycle of the Butterfly Book

Student Objectives
Observe and record changes in the life cycle of organisms in their natural environment. (SCI.K.12)

Materials Needed
Construction paper

White construction paper
Scissors
Glue
Colors
Pencils
Markers
Stapler

Assignment

It is very refreshing after doing a teacher-directed lesson for the students to put into practice the information they just learned. My students will use their higher level thinking skills and create a book about the life cycle of the butterfly. The teacher will hand out two pieces of colored construction paper, which will be utilized as their front and back cover pages. The white construction paper will be used for writing and illustrating. Additional construction paper will be given for them to create a picture to cut and paste on their cover page. The teacher will staple the white construction paper onto the colored construction paper. The student must have a very unique cover page with an illustration and title. Each book page must demonstrate an illustration of each stage with a sentence describing the picture.

ANNOTATED BIBLIOGRAPHY

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A guide for naturalists with tips to use when you go bird watching.

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Book that illustrates science in our daily lives using concepts in biology, chemistry, and physics.

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