

**Embracing our Wild Things Next Door  
(Project T. H. Rogers: Urban Sanctuary)**

*Lola McIntosh*

T. H. Rogers K-8 School

Barren is the morning without the conversations of the wild things next door  
Their messages clearly resounding over the airways of Earth.  
Planning their days, their months, and their years.  
Creeping into the souls and existence of humankind,  
Soothing our heartaches,  
Fanning our fires of determination and accomplishments.  
If that beauty, that necessary element for life to continue were taken away by man's  
selfish insensitivity,  
What would happen to the world?  
How can humanity continue without the presence of the wild things?  
How can it exist, void of an awareness, respect, understanding and compassion for the  
"wild things next door"?

*Lola McIntosh*

## **INTRODUCTION**

Houston, Texas is a rapidly growing metropolis (approximately 4.7 million and counting), with construction sites and new developments springing up almost daily. When development of this magnitude occurs, mankind violates nature (by imposing his desire and quest for the "best things in life"), and the wildlife, their habitats, and native plants are disturbed and often destroyed. Over the years, I have watched sadly when I have observed animals wandering around dazed and confused; and plant life dying out because their natural habitats have been violated.

During my career as an educator in the Houston Independent School District, my former students and I have observed, written about, and completed projects involving ecological and environmental studies about our city. After classroom discussions and research sessions, they have continued on their own to study and keep abreast of their specific areas of interest (especially butterflies and hummingbirds). So far, the studies we have completed have been chiefly abstract, using projects such as research papers, dioramas, and posters. Now, I want to produce more hands-on projects with the students, empowering them with enriched experiences to pass on to others. Hopefully, they will develop a passion for ecology and the environment, and leave a legacy for others to emulate. Perhaps some of them will seek employment in wildlife conservation. Maybe some of them will become published authors on environmental literature. Ideally, one or more of them will become a twenty-first century Walden or Thoreau.

This unit is planned to foster a curiosity and desire to study Houston's wildlife and nature and involve my students in a lifetime quest to save and protect our natural systems. Their way of looking through the windows of the world will change to include the awareness of "green" places, and the penalties for destroying and abusing them. They will have an educated voice to use to influence those in power to preserve and respect nature; for without this, humanity will perish.

This unit will concentrate on, but not limit itself to, birds, insects and rodents common to the Houston area, and more specifically to our campus, T. H. Rogers School.

Our studies will include a focus on the migration, behavior, and habitats of these animals. During our course of observation, research, and study, we will surely become aware of other critters, animals, birds (specifically mourning doves, grackles, Carolina chickadees, mocking birds, blue jays, cardinals, squirrels, and butterflies) and insects. Conducting research on these other creatures will certainly enhance the students' awareness of nature and wildlife.

## **UNIT BACKGROUND**

Before we start our observations, we must familiarize ourselves with our surroundings. We will conduct our first field observation on our own campus, using the Five W's (who, what, when, where, and why) investigation method. Some of the questions we plan to find answers for are: What animals, birds, or plant life do you see? What evidence do you see that suggests habitats for them? Where do you see it? Why do you suppose it's there? Does it belong there? How has it adapted to its surroundings? Will it survive long term? Is it a nuisance, asset, threat, or liability? We will take a digital camera along with us for photographing and recording specific areas of interest. The students will make notes and sketches in their field journals for future references.

Ideally, this unit will be completed at the end of a nine-week report card period. Scheduling, group sizes, and weather conditions may prolong its completion. Study and interest in these systems however, will continue for a lifetime. It will incorporate a study of our environmental and ecological systems in Houston, focusing specifically on investigating native animal, plant, and insect life, with an emphasis on habitats native to our local area and school campus. Field trips to parks and sanctuaries that safely shelter our native plants and animals will add even more interest and reality. Knowledge and expertise gained from these experiences will enable us to study, and will help to maintain, improve, and expand our campus gardens and sanctuaries.

No endeavor of this magnitude is ever complete or successful without parental involvement. During the course of study, I will approach my students' parents, asking them to help with the observation lessons and construction of bird feeders, observation platforms, and sets. Perhaps some of them are experts or novices in the study of birds and backyard habits. Their expertise and involvement will certainly enhance our work.

Specific academic skills will be introduced, applied, and enhanced. Boys and girls of this generation are involved in the era of “accountability” learning. Each year, they are assessed on their academic performance. All of the academic areas are tested in one format or another. Involving the students in the field discovery lessons will strengthen their reading, math, science, language, and social studies skills.

Skills used for reading such as: drawing conclusions, making inferences, getting meaning from context, comparing/contrasting, main idea, supporting details, and summarizing will be strengthened. The students will become aware that they are continuously involved in the implementation of these skills as they prepare their field journals and discuss the information they record daily and weekly.

Mathematical, geographical, and scientific skills are interwoven in every other skill. As the students measure areas, assess the amounts of materials we will need for specific projects, and build them, they will have hands on experiences and application in context.

Researching the areas the animals travel to and come from will give the students a trip around the state and the world on paper. This will make classroom application of geography realistic and easy.

Scientific skills will be strengthened and enhanced as the students research and study the animals and creatures. The Scientific Method will “come alive” as they observe wildlife in their natural habitats.

The following research will acquaint the students with, and give them an overview of the birds and the creatures that are the wild things next door. Involving ourselves in the study, knowledge, discovery, and awareness of critters will make our research even more valid and complete. It will also serve as a guide for the teacher to prepare lectures, units, games, and lessons for field observation and interest.

## **HUMMINGBIRDS**

There are three hummingbird groups particularly common in the Houston area. During the months of August through October, and March through May, the ruby-throated groups of these birds remain here and breed in the summer. Very few stay during the winter. Males and females have green plumage, but the adult male has a crimson throat.

The Rufous Hummingbird is here during October through March. The male is identified by his brilliant orange-red plumage. The female has a green back with an orange wash along the sides.

The Black-chinned Hummingbird can be found here in the winter. The male is similar to the Ruby-throated, but his throat is purplish-black instead of red.

Several other species can be found occasionally in winter including the Allen's, Anna's Broad-tailed, and Buff-bellied. We will briefly discuss these varieties and include information about them in our recorded research.

## **GRACKLES**

Grackles are part of the Icterids family. They have a greater size range than any other family in the order Passeriformes. Size difference between the sexes is especially conspicuous, particularly in the larger species. The male great-tailed grackle may weigh as much as sixty percent more than the female. The diet of this family varies greatly. In general, they feed on insects, seeds, and grains. (Forshaw 274)

There are three species of grackles in Texas: Common, Boat-tailed and Great-tailed. There are similarities and, unless you are a birdwatcher, a grackle is a grackle. There are also three species of crows in Texas: American, fish and Tamaulipas. The same applies to them, they appear very similar to the average person. The fish crow is mostly found along the eastern coastline and the Tamaulipas crow is only found around Brownsville. (*Zoonosis Control Division*)

Common grackles are about 12.5 in. in overall length, have a long keel-shaped tail and pale yellow eyes. The heads, necks and breasts of the males have an iridescent purple cast to them. The bill is long but far thinner than a crow. Females are smaller and a duller brown color. They are mostly found in the eastern half of the state. (*Zoonosis Control Division*)

## **MOURNING DOVES**

The mourning dove is the most abundant and widespread dove in Texas. It is the only native Texas bird that has been documented as occurring in every one of the state's 254 counties. It inhabits a wide array of habitats and feeds primarily on grain, seeds and berries. Its overall plumage is brown with black spots on the upper wings of adults.

They are the most widely hunted of all game birds nationwide, and are able to maintain their population because they adapt to every habitat and nest at least twice a year. They inhabit farmyards, cultivated fields, prairies, open woodlands, deserts, and suburban parks and yards. In treeless areas, the nest is placed directly on the ground. Texas birds breed virtually year round, with a peak season from March through September. (Tveten)

## **BLUE JAYS**

In Texas, the blue jay ranges through the northern and eastern portions of the state. White patches and black –and-white barring ornament its blue wings and tail, while a black necklace crosses the whitish breast. These birds are around 10 inches in length. Males and females basically look the same. They are very curious and intelligent birds. (Tveten)

These birds roam the woodlands, parks and towns in search of a variety of foods. One study found their summer diet to contain 30 percent insects and other invertebrates, as well as some small vertebrates; the other 70 percent was made up of acorns, fruits and seeds. Jays are also notorious nest-robbers and will devour small birds and suck the eggs of other species. (Tveten)

## **CAROLINA CHICKADEE**

“The black capped, black-bibbed chickadee is a gleaner of insects and snatcher of seeds” (Tveten). This bird is a delight to behold. Its call announces its presence. The chickadee nests in deserted woodpecker holes and other spaces and trees in backyards, especially in suburbia. Tubular feeders filled with black sunflower seeds provide a feast for these beauties.

## **MOCKINGBIRD**

The mockingbird has been the Texas state bird since 1927, so we should learn all we can about it. Beautiful is his song and strong is his character just like a true Texan!

This fine-feathered specimen ten inches lengthwise, is a slim, grey bird with yellow-orange eyes, and a long sharp beak. “It can mimic the songs of forty different birds as well as sounds made by other animals, including cats.” (Tveten)

The male mocking bird is the one who does all the singing to attract females. His own personal repertoire can consist of 27 songs. These birds are very protective of their young and will even attack cats when baby birds are threatened. (Tveten)

These skilled vocalists are found in open areas and near people, such as in suburban neighborhoods where they perch on rooftops to sing. They eat a varied diet of insects, berries, and seeds. They are not traditionally attracted to birdfeeders, but will occasionally feed from platform feeders stocked with a mixture of millet, corn, peanut chips, and sunflower seeds. (Tveten)

## CARDINALS

Cardinals in Texas nest two or even three times a year, and captive birds have lived as long as 22 years. The monogamous cardinals remain together throughout the year, and both sexes sing forcefully, especially as they establish their territory and before the female begins to nest. She incubates three or four spotted eggs, which hatch in 12 or 13 days. Both sexes feed the young that fledge about 10 or 11 days later. The male may also take over the care of the brood while his mate incubates a second clutch. The young consume primarily high-protein insects; adults eat seeds and berries as well. They can be found in woodlands and swamps, along edges of rivers and streams, and in suburban gardens. (Tveten)

Audubon wrote of the colorful cardinal: "In richness of plumage, elegance of motion, and strength of song, this species surpasses all its kindred in the United States." The familiar "redbird" occurs as a year-round resident throughout Texas, although it is less abundant and more local in West Texas and the Panhandle. It also ranges throughout the eastern half of the country, from southern Ontario to the Gulf of Mexico, and through the Southwest and Mexico. Once rare in the northern states, it has expanded its range during the 20th century, perhaps because of abundant food supplies at winter feeders" (Tveten).

The male northern cardinal is red with a heavy, conical reddish bill and a black face. No other all-red bird has a conspicuous crest. The female also displays the crest but is buffy brown with tinges of red on the head, wings and tail. The name, of course, comes from the color worn by the cardinals of the Roman Catholic Church. They, in turn, took their title from the Latin *cardinalis* meaning "important," or "that on which something depends," from *cardo*, or "hinge." (Tveten)

## SQUIRRELS

Squirrels on this campus have truly adapted themselves to urban living. According to research, they are especially resourceful. They consume vegetation and insects. Although they are considered by some as a menace, George Floyd, (a volunteer of Houston Parks and wildlife) thinks they are problem solvers.

There are three species of squirrels here: the Eastern gray (which forage by day and sleep in nests by night), the fox squirrels, which weigh from 1¼ to 1½ pounds and have a chipmunk look (they spend more time on the ground, and are the ones we are probably most familiar with), and the Southern flying squirrel, which is nocturnal. This squirrel has huge eyes, webbed hands, and a flatter tail. (It eats seeds and nuts and forages for insects.) I was always amazed that the students and teachers could eat lunch in our courtyard and never worry about insects trying to eat lunch with them. As a matter of fact, I can hardly remember seeing a single fly out there, ever! Perhaps our squirrel families have taken care of them for us.

It is interesting to note that squirrels are not disease vectors. If a squirrel contracts rabies, it dies. Squirrels that survive being hit by cars or eaten by predators can live eight years to twelve years. We will research to find ways of identifying the ages of our squirrel families.

The students will be delighted to learn these facts. Perhaps some of them will be inspired to research even further and become experts on each one of the different kinds of squirrels that are native to our area.

## **BUTTERFLIES**

Monarch butterflies cannot survive a long, cold winter. They spend their winters in roosting spots. Those butterflies east of the Rocky Mountains fly to the forests high in the mountains of Mexico. Our gazebo area is a stopping point for them on their way. Their migration is driven by seasonal changes. The length of the days and temperature changes drive the movement of the Monarch.

The Monarchs travel farther than all other tropical butterflies (up to three thousand miles). They make this two-way migration every year, flying in great masses to the same winter roosts. Their migration is like that of birds or whales. Unlike birds and whales, individual butterflies make this round-trip once. Their great grandchildren are the ones that return south the following fall.

Other species travel long distances, but they usually go in one direction only, following food. In tropical areas, butterflies migrate back and forth during seasonal changes. When the dry season begins, their food plants die, and they leave to find a moister climate. When the rains start, the food plants revive and they return.

One of the mysteries of the Monarchs is how they find the same overwintering sites each year. No one has discovered how their homing system works. Perhaps my students will be inspired to continue the research and one day solve the mystery.

The bibliography of this paper contains websites and other information about these creatures that will give more detailed information once the study has commenced.

## **FIELD OBSERVATIONS**

Field observations will begin (first day) with The Memorial Rose Garden (front of campus, Bering Street entrance), which is a “green” monument for our multiply impaired departed students and teachers. This will be a five-day activity allowing enough time for thorough investigations in all areas. The activity for this specific area will be to make a sketch of the garden and show where each rosebush is planted. The follow-up activity will be an ongoing study to identify the species of each rose bush. As a finale activity,

students will make labels naming each plant. The area will be monitored once a week in order to observe the changes taking place. Observations will be recorded using the journals, digital photography, short film documentaries, poems, skits or illustrations. Poems will be performed in oral and sign language before the class as the audience.

Our next area of interest (second day), will be the front area of our campus where there are trees, shrubs, and flowerbeds around the trees. There are crepe myrtles, oaks and other unidentified trees. Many other shrubs and plants provide a home for critters and bugs. Squirrels run about freely (they have adapted themselves to an urban environment). Sometimes, there is aromatic evidence of a resident skunk there, too. Many of the trees have pinecone bird feeders made by the kindergarten students. These unexpected handouts for the birds make this area a “migratory hotel,” super market, or rest stop for hungry birds. Students will sketch this area in their journals to identify plants and trees later. During a later classroom session, we will make more bird feeders and explore the construction of different kinds to give the area new look, and the birds an extra treat of kindness. Observation data from this area will be recorded weekly using the methods mentioned previously.

From this area, we will cross the L-Shaped Drive (pick-up area for students who travel to school in automobiles), and begin our observations here. This part of the campus has trees only planted on the landscape. Discussions about improvements to attract and or provide layovers for migrating birds and insects will be conducted using the questioning strategies mentioned earlier. This area will be sketched in the field journals to use later as we plan to make improvements (nature friendly) in this area.

We will travel further along the San Felipe side of the campus (south) and investigate this area. We will sketch this area in our journals so that we can discuss changes for this part of the project later. Our field studies will end for the day at this point. As a closing activity, we will review the discoveries and decisions made during this session.

The Butterfly Sanctuary will be the starting point for our field investigation today (third day). The plants that attract butterflies and hummingbirds during their migration have been planted in this specific area. It is quiet and secluded, allowing these birds and insects privacy. Many times, the students find cocoons while they are examining the plants. We always post a cocoon alert when we know it is time for these phenomena to occur. Students will sketch this area in their journals. Digital photographs will be taken here for comparison of the changes that take place during the final weeks of summer and the early weeks of fall. Weekly observation schedules will be decided upon, and groups will be assigned.

The Courtyard Area will be our final area for visitation today. This is a squirrel’s paradise. The students eat here during lunchtime and the trashcans are treasures of goodies and food for the squirrels. They are truly adapted to urban living. After the students have gone back to class, they freely run around to gather whatever foods they



want or need. We can walk through the courtyard, and they stand and look at us instead of running away. Students will sketch this area in their journals. Rose bushes are planted along the walkway that connects the buildings. Students will sketch this area and identify the roses later. We will discuss the different kinds of insects and critters that make their homes here. This will be an area to research to learn more about the creatures that share our school environment. We will close this session by passing out a bibliography of web sites and books the students can use for research.

The Garden/Fruit Tree Area will be our starting point for the third day of field study. This area is where fruit trees and gardens are planted. We have garden plots on both sides of these sidewalks, which also connect the buildings. The sides where the fruit trees are have gardens that give a great harvest. Since it will be time to plant this year's fall garden, we will spend the entire class session here, cleaning out the gardens and preparing them for planting. Students will sketch the area. We will discuss the kinds of seeds we will be planting. Seed catalogues and local nursery ads will be studied also. On the other side of these sidewalks, oak trees are planted. A wheelchair accessible garden was added last year. All in all, though, we have not had much success with our vegetable harvests here. Our challenge will be to find out why we have not had successful gardening in this area. We will record our weekly observations in our journals. The following week, we will plant our new seeds.

Part of the playground area is away from the playground proper. It is a paradise for critters, bugs, or worms. There is rarely human invasion in this area. We will perform activities that will allow us to find the critters. These activities will be taken from teacher resource books and Internet sites. We will continually research the critters we find. Students will use the library, Internet sites, and other books, pamphlets, brochures, and guest speakers brought in by the teachers, parents, and other students to help them find answers for the many questions this study will generate.

Day five's investigative study will commence in the gazebo area in the middle of our playing area, where the playground equipment is located. A flowerbed with plants that attract butterflies surrounds the structure. The students observe the butterfly and other wildlife activity occurring around it daily, and during the spring and late summer. They find lots of cocoons and discover other insects and bugs that make their homes here too. It is amazing how the insects and loquacious children can occupy the same area cohesively. Since it will be late summer, and the early fall Monarch butterflies will be emerging from their pupae, or chrysalides, the investigators (students and teachers) will have the rich experience of seeing these insects from a very close range. Observations will be recorded in the field journals, and we will end this day's field study. Each group of students will complete a Venn diagram comparing and contrasting each other's findings for the next class discussion.

This fifth day's session will culminate in the courtyard area. All groups will meet to discuss, compare, and contrast their sketches, notes, and research compiled during the

field sessions. This will complete our initial unit beginning. From this point on, students will return to assigned areas for more in-depth studies and observations.

When we take our on-campus field trips, we will discuss each area, how our campus affects the wild things, and how they affect us. When we return to the classroom, we will brainstorm for a KWLN chart. (What I Know, What I Want To Know, What I Learned, and What I Still Need to Know). This chart will be updated periodically during our course of study.

After our on-campus tour, we will take field trips to other sanctuaries. The trips need to be taken when they will be effective to our lessons, so they will be planned and scheduled during the summer. Some will be taken in the fall. Others will be taken in the spring as follow up activities. All participating classes will be invited to take the field trips. The sites for the trips will be booked and scheduled before school starts so they can be interfaced with the lessons for a more abridging study.

## **RESEARCH LESSONS**

The next lessons will focus on research. Some of the questions we will try to find answers to will be generated as I plan and implement this unit. This is the first written assignment for the unit. When we finish this unit, students should have detailed answers based on research for the following questions:

1. What insects did we find or observe?
2. Were these insects on the plants, on the ground, etc.?
3. What evidence did we find that suggests critters or animals that live here that we did not see?
4. What things do we have here that attract animals, critters, insects, and birds?
5. What are some of the native plants we have planted on our campus?

These questions will be the motivators for getting the students to ask more questions. As their questions arise, we will add them.

Research teams will be formed from the earlier mentioned groups. These teams will choose (by lottery) a specific area they want study. While these students make observations, the others will be researching, journaling, or recording in their investigation journals.

After the research has been gathered, the students will start to put together ideas for dialogue and narrations for the play they are going to perform. During visits with the art, Spanish, music, computer, sign language and science teachers, (along with the librarian), they will perfect their work in the specific areas where these persons are experts.

Once weekly, we will meet with our hearing impaired counterparts to pinpoint where we are and what we will do next to complete our play. We will collaborate on information and discoveries, and start writing, combining, and casting the parts of our play. The music and art teachers will work with the students as they write their song lyrics and sketch their costume and set designs. During the fourth and fifth weeks, work on costume and set design production will begin. Construction will begin the sixth week. During this time, the life's skills/vocational teacher and students will be involved as advisors to the field study students, using their expertise to help build the set and complete the costumes.

Play rehearsals will begin the fifth week, allowing four weeks to prepare for our opening performance. Dates should be set to coordinate with other activities on the school calendar. This should be done as soon as the school year starts. At this point, all collaborating teachers should meet and agree on the set date.

The week before the production, student drawings, books, and field journals will be on display to show the audience the work that was completed during the study. Guided tours of our campus sanctuary will be provided by the students one hour before curtain. For fundraising purposes, copies of the script, which will include biographies and pictures of the authors, will be for sale. An explanation for the use of the funds will be included in the script booklet. Survey and volunteer forms will be provided for the audience to provide feedback and join us in a continuing study of our school.

The final grades for the unit will be taken from the field journals, play production and involvement, responses to the essay questions, and oral discussions. The students will also use a rubric that they generate with the teacher to assess themselves. The final grade for the project will be taken from the rubric and the project grades averaged together.

After we have completed our studies and musical production, the enriching experiences brought about through the implementation of this project should touch our lives and render us never the same again.

## **FINALE**

We have lived with the wild things next door,  
We have become good friends and know each other very well.  
Our humanselves have connected with their wildselves  
Communion between us is evident as we show mutual respect.  
They remain part of our lives as we remain part of theirs.

## **LESSON PLAN 1**

### **Setting Up a Field Journal**

#### ***Student Objectives***

To prepare the field journal for recording and diagrams. To create a format conducive to the study. To use formal English grammar. To record the introductory entry using a topic sentence. To establish a vocabulary for the study.

#### ***Materials***

Mead composition book  
Pencil  
Chart paper

#### ***Activity***

Students and teacher will brainstorm for ideas about the information that should be included in the journal. Some of the questions for this activity are: Why should we keep a journal? What are some of the specifics that we need to address? What are some of the recurring words we will use?

Student groups will be established. They will brainstorm for 15 minutes to create a format for their recordings for each field study. Each group will draw a sample of their entry for the class. They will explain their sample and why they chose to set it up this way. After all presentations, the students will vote on the format they like best. We will record our introductory journal entry.

## **LESSON PLAN 2**

### **Constructing a KWLN Chart**

#### ***Objectives***

To find out what students know about “the wild things next door.” To list the information students already know about field studies, habitats, and those sanctuaries that already exist on our campus. To record prior knowledge for everyone involved in the study. To collaboratively form a plan for our field studies. To write a summary using correct grammar, spelling, and punctuation.

#### ***Materials***

Chart paper  
Colored Markers

#### ***Activity***

The teacher will open the discussion with the following questions:  
What are wild things?

What does the phrase “the wild things next door” mean to you?

Name some “wild things” in our city.

What is an animal habitat, a sanctuary?

The teacher will record the students’ responses in the appropriate columns on the chart and keep them on display during the entire study. They will serve as a visual model of student progress and knowledge.

The students will write a summary of what they learned each day in their field study journals

### **LESSON PLAN 3**

#### **Vocabulary Roundup**

##### ***Materials***

Chart paper

Markers

Sentence strips

Assorted prizes (chosen by the teacher)

##### ***Activity***

Students and teacher will brainstorm, making a list of the words they already know about nature study and bird watching. After the list is compiled, the charts will be displayed in the classroom so that new words can be added. These words and their definitions will be transferred to the students’ field study guides.

The words will be written on sentence strips. After they are completely mixed up, they will be alphabetized by students who have been divided into small groups. The first group to finish will get a prize.

The next part of the activity will require the groups to combine all the words in alphabetical order. When this part of the lesson is completed, the students will get a prize.

To culminate the activity, individual students will be called upon to summarize the lesson.

(This activity can be divided into a two-day session).

## **ANNOTATED BIBLIOGRAPHY**

*American Forest Foundation Activity Guides*. Project Learning Tree, 1997.

This environmental education activity guide will supply hands on activities, and outcomes of experiments and research for the students.

*CLEAR Curriculum: Mathematics, Science, and Social Studies*. Houston Independent School District, 2002.

These curriculum bulletins will give information on the TAKS and TEKS objectives that the students in HISD need to master on their grade levels in all academic areas.

Forshaw, Joseph M. *The Little Guides: Birds*. San Francisco: Frog City Press, 2000.

This book has pictures of birds and their habitats.

*Houston: Around Town*. Impact II Development Team Draft Curriculum Bulletin.

Houston: Houston Independent School District, 1994.

This curriculum bulletin will give information on where to go for observations and field trips.

Kneidel, Sally Stenhouse. *Creepy Crawlies And The Scientific Method*. Golden, CO: Fulcrum Publishing, 1993.

Activities in this book are helpful and conducted using the scientific method format.

*Science Enrichment*. Grand Rapids, MI: Instructional Fair, Inc., 1992.

Another book with teaching ideas and hands on activities.

### **Annotated Reading List**

Bryan, Kelly, Tony Gallucci, Greg Lasey, Mark Lockwood, and David H. Riskind. *A Checklist of Texas Birds*. Texas Parks and Wildlife Press, 1995.

This book gives information on birds that are found in Texas. It provides an accurate listing of Texas birds. Included are common and scientific names and seven status designations that are used in the checklist. For example, A=accidental: out of range and not expected yearly; X=extinct: no longer in existence, etc.

Caitlin, Stephen and Joel Snyder. *Amazing World of Birds*. 1990.

Students will find the pictures and the information contained in this lower reading level book informative and helpful.

Cherry, Lynn. *The Great Kapok Tree*. Harcourt, 1998.

This book will show how important it is to maintain “green” spaces. The story shows what happens when abuse and overuse of natural resources occurs.

Damude, Noreen and Melanie Pavlas. *Bluebirds in Texas*. Texas Parks and Wildlife.

This pamphlet gives specific information on this bird, plus addresses to order birdhouses and other resources for successful study.

Dixon, Terrell F. *City Wilds: Essays and Stories About Urban Nature*. Athens, GA and London: The University of Georgia Press, 2002.

This book gives information about the environment, how it is affected, and how it affects people in the form of essays. It is good to show the students that writing about the environment is something people actually do, and get paid for. (Some of the essays have adult content.)

Dossenbach, Hans D. and Emil Buhner. *The Family Life Of Birds*. New York: McGraw-Hill, 1971.

Pictures of birds in their habitats, along with pictures of their eggs, will give the students a general idea of what they look like.

*For the Birds*. U. S. Fish and Wildlife Service, 1997.

This pamphlet gives information on ways to build birdhouses and create a habitat or way station for birds.

Geisel, Theodor Seuss. *The Lorax*. New York: Random House, 1971.

This book and video give information about extinction. It shows the students how important green spaces are. The story shows how overuse and abuse of natural resources can destroy our natural resources.

Richardson, Don et al. *A Birder's Checklist of the Upper Texas Coast*. Houston Outdoor Nature Club, Ornithology Group, 1998.

*The Annual Birding Festivals of Texas*. Texas Parks and Wildlife.

Gives specific dates for bird watching tours including the cities where they are held.

*Texas Hummingbird Roundup*. Austin, Texas Parks and Wildlife.

Another pamphlet with registration form to receive packet, seeds, recording records, and a newsletter on hummingbird migration.

*The Rough Wings*. Austin: Texas Parks and Wildlife.

Pamphlet including information on bird watching competition among Texas students.

## **Pamphlets (and addresses to send for them)**

Migratory Songbird Conservation Newsletter: *Partners in Flight* Newsletter.

National Fish and Wildlife Foundation  
1120 Connecticut Avenue NW, Suite 900  
Washington, D. C. 20036

A pamphlet that gives information on conserving migratory songbirds, along with addresses for further and specific information.

Nordyke, Lewis "Listen to the Mockingbird" *Reader's Digest Books. Marvels and Mysteries of Our Animal World.* Pleasantville, New York: Cornet Books, 1964.

Partnering With Texas *Partners in Flight*

Pamphlet with information on joining in an effort to reverse declining populations of all land birds.

Address: Texas Partners in Flight  
C/O Texas Parks and Wildlife 4200 Smith School Road  
Austin, Texas 78744

Whittle, Dr. John. *Birding Hotspots of Southeast Texas.*

Convention and Visitors Bureau  
3401 Cultural Center Drive  
Port Arthur, Texas 77642  
1-800-235-7822

This pamphlet gives information on birds that are found in Southeast Texas.

## **Web Sites**

Tveten, John. *The Birds of Texas. In August 2001 Bird of the Month – Mourning Dove.* 2001. Texas Parks and Wildlife. 12 May 2003. <<http://www.passporttotexas.com/birds/aug01.html>>.

This resource provides information about Texas birds to use for identification and focused study.

*Zoonosis Control Division.* Texas Department of Health. 15 May 2003.

<<http://www.tdh.state.tx.us/zoonosis>>.

*The following were not used for research, but may prove helpful for both teachers and students.*

*eNature.com.* National Wildlife Federation. June 2003. <[www.enature.com](http://www.enature.com)>

This link will provide in-depth study and pictures for the students.



*TeachNow.com*. 2003. Teachitnow.com LLC, DBA. May 2003. <[www.teachnow.com](http://www.teachnow.com)>  
This link will provide information via e-books for the students and teachers.

*Birdwatching*. June 2003. <[www.tpwd/state.tx.us/advbirding/pif/txpif.htm](http://www.tpwd.state.tx.us/advbirding/pif/txpif.htm)>  
Gives information on bird watching.

*Birdhouses*. June 2003. <<http://www.fws.gov/~r9mbmo/>>.  
How to build and maintain birdhouses and way stations for birds.