
The Lewis and Clark bicentennial (2003–06) has stirred many people to investigate and discover the legacy of the Corps of Discovery voyage. Lewis and Clark spent more time (213 days) in what is now North Dakota than any other state during their journey, and the bicentennial celebration will be a major event in North Dakota. Thus, it is not surprising to see a Lewis-and-Clark book that focuses on North Dakota.

Geology is the emphasis as the title suggests, but the book covers many related subjects of North Dakota landscapes and rivers, such as hydrology, glaciation, geomorphology, and climate. Human activities are discussed also, including prehistoric, historic, and modern human use of the landscape and geologic resources. The first three sections of the book cover background information. President Jefferson’s scientific inclinations are dealt with quite effectively, particularly his fascination with prehistoric animals. The general geologic history of North Dakota is presented in non-technical terms, and the Missouri River is described.

The middle portion of the book consists of a detailed field guide along the Missouri River in North Dakota. Subjects range from auroras in the upper atmosphere to deep subsurface structures associated with oil fields. The last part of the book includes an extensive glossary of terms, references, and the index. I was pleasantly impressed by the readability and technical accuracy of the book. Numerous color pictures of landscapes are complemented with aerial views and color maps. Outstanding rock and fossil specimens are pictured from the North Dakota Heritage Center.

Lewis and Clark are justly famous for their observations of the living world—plants, wildlife, and native Americans, as well as their navigation and cartographic accomplishments. They discovered hundreds of plant and animal species that were new to science two hundred years ago (Cutright, 1969), and they collected a huge body of observations concerning native Americans (Ronda, 1984). This reflects to a large extent the emphasis Jefferson placed on their mission and the training Lewis received from eminent American scientists prior to the expedition.

However, Lewis and Clark’s geological exploits rarely are mentioned in accounts of their journey. For example, Cutright’s (1969) exhaustive study, Lewis and Clark: Pioneering Naturalists, has only a few brief notes about rocks, minerals, or fossils. Thus, I was surprised by the amount of geological observations and interpretations attributed to Lewis and Clark.

Soon after the death of Sergeant Floyd near what is now Sioux City, Iowa, Lewis began systematic chemical testing of rocks along the Missouri River for possible poisonous substances such as arsenic and cobalt (Hamilton, 2004). Hoganson and Murphy elaborate Lewis and Clark’s geological contributions in North Dakota with numerous quotations from various journals. Lewis and Clark commented frequently on soil, rocks, landscapes, erosion, sediment, and other geologic phenomena. In particular, they noted coal (lignite), salt, fossils, and other geologic materials in North Dakota. They were first to recognize the relationship between burning beds of lignite and clinker, which they called pumice or lava stone.

As the foregoing comments suggest, this book is a worthy addition to the Lewis and Clark bicentennial celebration and would be suitable for teachers and students interested in North Dakota geology. An added attraction are historical paintings by George Catlin and Karl Bodmer from the 1830s. These famous paintings portray realistic landscapes and human activities much as Lewis and Clark saw (Dippie et al., 2002). However, the included paintings by modern artists are amateurish depictions of imagined Lewis and Clark scenes. The latter should have been omitted in favor of more of the historical paintings by Bodmer and Catlin.

References:

Jim Wark, an aerial photographer, and Joseph A. Mussulman, a teacher and cartographer, have combined efforts to produce one the most attractive books related to the Lewis and Clark bicentennial. The main purpose of this book is to present more than one hundred striking aerial views at selected sites along the entire Lewis and Clark route, beginning at Monticello, Virginia and stretching across the continent to the Pacific coast of Washington and Oregon. Most of the images between St. Louis and the Pacific were acquired in May 1999, and additional pictures were obtained during subsequent side trips. The airphotos are arranged in temporal sequence and indexed to maps of the expedition route. Each photograph is accompanied by a short description that includes main features and viewing direction. Particular emphasis is placed on what happened to the Corps of Discovery at each of the selected locations.

The pictures were taken with a hand-held camera from a small airplane and were acquired from heights of 500 to 3000 feet above the ground, although most were taken in the 1000–1500 foot range. All the airphotos are oblique (side) views. High-oblique views include the horizon, and low-oblique views do not; none of the images presented in the book are vertical airphotos. This is appropriate for a general audience, for whom vertical airphotos might be difficult to interpret. The oblique perspective is more natural for most people to recognize. About an equal number of pictures are in landscape (horizontal) and portrait (vertical) format.

Without question, many of the airphotos are stunning images of the modern riverscapes through which Lewis and Clark passed two hundred years ago. Among the most striking images are the confluence of the Missouri and Kansas rivers (#22), spillway at Fort Peck Dam, Montana (#49), White Cliffs of the Missouri River, Montana (#54), Three Forks of the Missouri River, Montana (#66) and the Columbia River estuary, Washington and Oregon (#91). Several airphotos depict remarkable differences in water color at river junctions, for example Ohio–Mississippi (#10), Missouri–Mississippi (#14), Osage–Missouri (#17), Yellowstone–Missouri (#45), Milk–Missouri (#48), and Clearwater–Snake (#80). Sun glint is captured effectively to highlight stream channels in some of the river views.

Certain technical points bear some criticism. All the photographs were taken on Fuji Velvia film, long a favorite among landscape photographers (Zuckerman, 1996), but not particularly appropriate for aerial photography. This film strongly oversaturates colors, so greens (vegetation) and blues (sky) are more intense than in real life. Thus, vegetation appears unnaturally green in many pictures. The soft light of early morning or late evening is considered optimum for ground-based landscape photography. Not so for airphotos which should be taken at mid-day for uniform ground illumination. Some pictures in this book were acquired in early morning, and much of the ground is obscured by long shadows. Likewise, cloud shadows detract from several of the airphotos.

Some sites of little historical importance are included, whereas others, such as Leavenworth and Atchison, Kansas, are omitted. Among the most important historical sites is the Knife River Indian Villages, near where the Corps of Discovery spent the winter at Fort Mandan, North Dakota. Hundreds of earth-lodge remains at this site are most dramatic (Fig. 1), but hardly can be seen in the book's picture (#42). In the beautiful picture of Lewis and Clark River at Fort Clatsop (#96), the location of Fort Clatsop is not identified.

This book is warmly recommended for those interested in the Lewis and Clark bicentennial. Its visual depiction of the Corps of Discovery route far outweighs the minor negative aspects of the book. It is also worthwhile as a demonstration of low-height aerial photography and a documentary on modern landscapes along the route. The quality of the book's format, printing, paper and binding are excellent. This book deserves a place in the Lewis and Clark bicentennial library.
Reference:

--Dr. James S. Aber, Department of Earth Sciences, Emporia State University

Fig. 1. Knife River Indian Villages National Historical Site. A. superwide-angle overview showing a portion of the Big Hidatsa Village site. Circular depressions, each 30–40 feet in diameter, mark the remains of earth lodges. B. closeup vertical image of the Awatixa Village. Knife River, visible in lower right corner, has eroded away some of the site. Light patches are animal burrows. Kite aerial photographs by J. S. Aber, Oct. 2003.

*Whales! Strange and Wonderful* is an in-depth, exciting book that captures the reader’s attention from the beginning statement “If you were a great whale you could open your mouth wide enough to hold an elephant.” Pringle explains that some of the world’s largest mammals do not walk on land—they swim in the ocean. Whales are mammals that cannot breathe underwater; the whale blows waste air from its lungs out of one or two holes in its head (blowholes) then breathes in fresh air.

There are about eighty species of whales. Whales come in all shapes, sizes, and colors, and some have dorsal (back) fins, whereas others do not. There are two main type of whales, toothed and non-toothed. Whales that have teeth have one blowhole, are sociable, and usually hunt in groups. Toothed whales (belugas) live in cold arctic water, and often have white skin to hide them from being seen by polar bears and killer whales by blending with the jumbled ice of the Arctic sea. The unusual narwhal whales also live in the Arctic. They have two big teeth, but the right tooth stops growing and the left tooth keeps growing out through the lip up to nine feet long. Compare this to the killer whale (*Orca*) which has forty or more big teeth. These whales are huge; even a newborn *Orca* is longer than a man is tall. Sperm whales are the biggest of all, weighing up to sixty tons and are as big as a school bus.

Nine species of whales have no teeth—these are the baleen whales. Sheets of a flexible material made of keratin (like our fingernails), called baleen, hang from the whale’s upper jaw inside the mouth. The baleen whale eats by taking in a big mouthful of water. They then use their tongue and cheek muscles to force the water out of their mouth; the baleen fringe traps thousands of little animals and fish, which the whale swallows. The blue whale is the largest of the baleen whales; it can grow to 100 feet long and 160 tons (heavier than thirty elephants).

Whales have the ability to communicate. The biggest whale has the loudest voice—some say it is as loud as a jet engine. All whales have the ability to hear and make sounds. Because sound travels farther in water than in air, this allows whales to call to each other, helps them find their way underwater, and helps them locate food.

Merry Henderson, the illustrator, does a wonderful job with the illustrations. They are very realistic and show the unique features of the different whales, thus bringing the whales to life. Also included are maps of migration routes and illustrations showing how the whales live and eat.

This is a very informative book with dramatic pictures, and would be a great read-out-loud book for younger children and a good book for 3rd to 6th grades. This also would be a good book to tie science with geography as well as history.

--Bernice Evans, Retired Elementary Teacher


*Bizarre Bugs* is a well-written, well-documented, in-depth book that introduces the reader to the world of bugs. The author explains that bugs make up one group—insects. Bugs come in all shapes, sizes, and colors, and have odd and unusual behaviors. These features help the insect to survive and reproduce.

Although bugs are different in many ways, many use color in some way—some use it to blend into their environment (by using camouflage), others to escape from enemies. Walkingsticks look like sticks, and treehoppers look like thorns on a branch. Bright coloration can also warn the predator, so it will not confuse one bug from a similar-looking bug. This is of benefit for both the bug and the predator (an animal that eats other animals). Bright colors often warn “look out—leave me alone.” Some bugs are fakes and bluffers; for example, a sphinx moth looks like a coral snake (fake), and katydids can look like a dead leaf (bluffer).

Insects seem to have odd and unusual body parts; for example, katydids do not have ears on their heads to hear, but instead use a slit on each leg (tymanum) which is like our eardrum. Other insects such as moths use antennae to hear. Insects live different lifestyles; they undergo metamorphosis through one of three different paths, all explained in the book. All of these characteristics help the insect to survive. They also help us enjoy the odd and exciting world of bugs.
The amazing photographs in the book capture many different bugs, showing the colorful and strange features that make bugs different from one another. They help us see how they live in the world and how these features help them survive.

There is a short glossary that is helpful and there is a good index, which will make the book a helpful reference tool for the classroom. It is very thorough, and the many new words are put in bold type with the meaning explained in the text so that the reader does not have to stop and look up the word. This keeps the flow of the book. This book will be helpful in the classroom and it is a good book for children from 4th to 8th grade.

--Bernice Evans, Retired Elementary Teacher


Cows, Cats and Kids is an easy-to-read book that tells what happens inside a veterinarian’s office in a twenty-four hour period as told by his three children. The children tell the different jobs they do to help their father in his Veterinary Clinic as he works with small and large animals. Shea helps with emergency calving, Kendall helps with vaccinating calves to get ready them for summer pasture, and Catherine helps assist in surgery.

Alvis Uptis, the photographer, has very well-done photos that help to explain the story line without being too graphic. As a reader, one can imagine what it would be like for the children to help in small clinic.

A small glossary introduces new words and helps to explain terms that children might not know. The information is factual and could easily prompt discussions on what happens when their pet goes to the veterinarian and lead to discussion on different professions in the science field.

--Bernice Evans, Retired Elementary Teacher


Lizards Weird and Wonderful introduces the reader to 13 different lizards. The book describes how lizards are similar to each other and explains the many unique and unusual characteristics that make them very different from each other: from some (such as the gecko) that are sort of cute, to others (such as the Gila Monster) that are fierce looking. Facklam explains that lizards are reptiles and tells how a reptile is different from an amphibian. After giving the basic information, she discusses the 13 different lizards.

Facklam not only provides the facts but also shares interesting stories about the different lizards that holds the reader’s attention, from explaining how a Chameleon seems to change colors to how the Fence Lizard is able to escape capture by having its tail break off. She discusses a variety of lizards from the small chameleon to the large Komodo Dragon.

The illustrator Alan Male has done a wonderful job of capturing the details of the different types of lizards and helps to show the differences among the 13 lizards discussed in the book. The lizards almost leap off the page as the illustrations make the lizards come alive.

The book, while being informative and factual, it is an easy-to-follow book that has wealth of information in it. It would be a good reference book in addition to being a good reading book. There is also a helpful chart in the back of the book that explains the differences among snakes, lizards, and salamanders. I think that the grade level would vary from 5th through 8th if the students were reading it, but it could be used to introduce lizards to 3rd and 4th graders if read aloud. It might be helpful for the teacher to use a map of North America to tie science and geography together.

--Bernice Evans, Retired Elementary Teacher


Where Horses Run Free is a fast-paced, easy-to-read story about a group of wild mustangs and how they used to run free across the prairie. The story would be good for children five years of age and up, and would be a great story to read aloud to the younger ages.
In the story, after years of running free across the prairie, wild horses are being rounded up and put in pens. Some of the horses have been there a long time and have become ill. A farmer driving down the road sees the pen of horses and how they are being treated. He feels sorry that the horses are in a crowded pen; they are hungry, scared, and getting sick. He remembers when mustangs used to run free across the prairie and knows that something has to be done to help the horses. It takes time for him to raise enough money to purchase rangeland in South Dakota, so the horses can once again run free. He has arranged for trucks to come and take the horses to the new land. However, because it has taken time for the farmer to do all of this, the lead mare has become more ill. The farmer takes care of the mare by feeding her and nursing her back to health. When she is healthy again, she is able to lead her herd to run wild across the prairie.

The illustrations by Layne Johnson are beautiful and the reader actually gets a sense of how the horses must feel being penned up and how they feel as they are freed. The reader can almost feel the movement on the page as the horses race across the land, with their hoofs pounding the ground.

It is a delightful, factual story that will introduce children to life on the plains when the settlers first came, when there were many wild horses. It could stir up interest in care of horses. The teacher could use it to introduce geography and a discussion of farmers and ranchers.

--Bernice Evans, Retired Elementary Teacher


The Case of the Biological Biosphere is a 59-page Lesson Guide with Activities in Mathematics, Science, and Technology, with a 60-minute video. The lesson guide gives the teacher an overview for the four lesson segments. Each segment covers some aspect of the National Science, Mathematics, Technology, and Geography Standards for grades K–8. Each segment contains objectives, vocabulary, and activities to do prior to viewing the video; experiments and activities to do after viewing the video; and follow-up questions. Each segment concludes with a list of additional resources, plus a list of web sites. The four lesson segments correspond to the four 15-minute segments on the video. The video is educational as well as entertaining, and the information is presented in a way that will hold the students’ attention. The students will be able to relate to the characters on the video who are knowledgeable and communicate well with the different scientists and doctors from NASA and the CDC.

The video and lesson guide revolve around a group of boys and girls who have formed a science club called “the tree house detectives.” A club member, Jason, has a chance to go on a vacation to a foreign land. However, he has learned about a flu epidemic in town and does not want to get sick. He read that NASA quarantines astronauts before space flights, so he decides to quarantine himself in the tree house. The other club members decide to learn more about quarantines, viruses, bacteria, and infectious diseases to try to keep Jason healthy. They talk to different scientists and doctors to learn as much as they can about disease so they can help Jason.

After viewing the first 15-minute segment of the video, the students do different experiments to see how bacteria develop and how to prevent bacterial growth. The experiments are simple but scientific. One of the experiments they can do is to keep a carton of milk cold and leave one at room temperature to see what happens (the warm carton develops bacteria). The video has information presented in an entertaining way by different professionals, who teach the students about diseases. It shows students that they can become knowledgeable about science at a young age. It also shows that science is helpful and necessary, and it can be fun. The girls and boys on the video are treated the same, showing girls that they can do well in the science too. This could create an incentive for girls to become more involved in science and show them that they, too, can become scientists. This video provides a positive influence and incentive, for both girls and boys to pursue a career in the sciences.

I recommend this lesson guide and video series because I think the students will be able to relate to the club members on the video and will want to learn more. The experiments are fun and educational. The lesson guide has study sheets for students with well-written instructions and enough room on the sheet to answer questions.

--Bernice I. Evans, Retired Elementary Teacher

The Case of the Wacky Water Cycle is an 81-page Lesson Guide with Activities in Mathematics, Science, and Technology, with a companion 60-minute video. The lesson guide and the video are divided into four 15-minute lesson segments that work in conjunction with the video. The complete lesson guide and video will cover the National Science, Mathematics, Technology, and Geography Standards for grade K–8, but primarily focusing on grades 3–5. Each lesson contains objectives; vocabulary, activities to do prior to viewing the video; experiments and activities to do after viewing the video; and follow-up questions. The teacher’s lesson guide has a list of web sites and additional reading material suggested for the teacher to incorporate into the lesson, and a list of books for the students to read. The four 15-minute video segments correspond to the four lessons in the guidebook. The video is educational but also entertaining, so should hold the students’ attention. The entire series is about a group of 3rd to 5th grade students who call themselves “the tree house detectives.” The video has actual boys and girls, not cartoon type characters.

The “detectives” try to help a fellow club member raise money for a white-water rafting trip for the member’s soccer team. It starts when the team wants to hold a car wash. While watching TV, the “detectives” hear that there is a water rationing rule enforced in their town. They do not understand why, because they had been getting some rain. They want to know what is going on with the water supply. The “detectives” are very intelligent young people and have contacts with NASA, so they decide to ask them for help to understand what is going on. After talking with their contacts at NASA, they speak to other scientists who study water, and learn the many ways that water affects us. The scientists show them different experiments to help them understand the water table, the different rocks that are affected by water, weather patterns, and other reasons that could be causing the town to enforce water rationing.

After viewing the first 15-minute segment of the video, the classroom students will do several experiments (which increase in difficulty); one involves understanding water and limestone. The students place a sugar cube in a flattened piece of clay, wrap the clay around the sugar cube, poke several holes in the clay, and place this in a shallow amount of water. They wait about 30 minutes then take it out, unwrap it, and see what happened to the sugar cube. The sugar cube represents limestone and how water flows through it and dissolves it—that is why limestone looks the way it does. The experiments in the guide require easily-obtainable supplies, so even the smallest class could do the experiments. The lesson guide (the four segments) introduces water tables, rocks, weather, caverns, and other aspects of water that will hold the students’ attention from simple experiments for 3rd grade students to the more complex ones for the 5th grade students.

I highly recommend this lesson guide and video series. The lesson guide is in a loose-leaf notebook so the worksheets and activity sheets can be copied, making it economical for smaller schools to afford, and easier for the teacher’s at the different grade levels to share the same book. Teachers can copy the entire series of lesson segments and have a book for each grade-level. In addition, if the school system wishes, they can purchase the video or DVD off the web-site at http://catalog.core.nasa.gov/core.nsf/?CoreWtype?SearchView&Quert=files. The teacher can then print off the guide, which requires Adobe. There is no fee to print off the PDF version and the teacher does not need to register. It is available at http://scifiles.larc.nasa.gov/text/educators/resources/index.html. Or, the teacher can go on-line and register and receive a free printed version of the guide.
--Bernice Evans, Retired Elementary Teacher


A Fish Named Spot is about a young boy who really wants a dog. There is one problem, however; Simon is allergic to dogs. His aunt brings him a dog from a trip she made to England, but the puppy makes him sneeze. After his aunt's trip to Africa she brings him back a fish. Simon names the fish Spot after his puppy. Simon also gives Spot something else that that belonged to his puppy; some dog food. After Spot eats the food, he starts to grow and act strange, somewhat like a puppy.

This book is appropriate for children in 2nd and 3rd grades. Some pages have a lot of words, which would make it more difficult for a younger child to read, but I am not sure if an older child would be interested in the book. I really like the illustrations—they are big and colorful and show a lot of detail. I
also like the theme of the book. I recommend this book to any child who would like to use their imagination.

--Christi Clark, Elementary Education, Emporia State University, Emporia, KS


This book is about a boy named Paul and his little brother Jimmy. While Jimmy is playing one night before dinner, an alligator climbs through the window. Paul runs to see what the commotion is about and finds that the alligator is eating everything in sight, including his little brother! This is a funny book that is appropriate for 1st or 2nd grade. It is short enough to read quickly and keep children's attention. It does not have a lot of science-related material except for giving the basic idea of what an alligator looks like. I would recommend it for a fun book for a reading unit to go with the science theme of alligators.

--Amy Wilson, Elementary Education, Emporia State University, Emporia, KS


*Animals in Winter* contains helpful information for children 10 and younger. This book is a descriptive story discussing some of the ways certain kinds of animals survive through the winter. Children can learn about animals, hibernation, and what animals do in the winter to stay alive.

The illustrations do not include much color but portray exactly what the text is talking about. They are simple but very detailed. For example, pages 7–8 describe butterflies going south, and the illustrations include amazing detail.

This book will wonderfully supplement an animal section in science.

--Sabrina Forsberg, Elementary Education, Emporia State University, Emporia, KS


*Asteroid Impact* is a colorful illustration that seems most appropriate for students in the 5th or 6th grade. It details the theory that the collision of an asteroid with Earth at the end of the Cretaceous Period caused the extinction of the dinosaurs.

The text seems very factual but it does not force-feed the information; instead the reader gets caught up in the mystery of an asteroid. Readers learn what it is made of and are given comparable situations to help understand the force of an asteroid impact. There is also a short question and answer section that briefly addresses a few other questions about asteroids that could strike Earth.

Brilliant illustrations accompany the text and offer a stunning picture of what could have happened. Captioned illustrations introduce the names of dinosaurs and describe them in a way that makes them easily identifiable. Other pictures include a visual of our solar system and the position of the asteroid belt.

Many children are fascinated with dinosaurs. This would be a delightful book for the whole classroom, for individual readers, or could even be read aloud to the class. If used in a group setting, it would be important to take time to discuss the pictures, because they are extremely beneficial in understanding the text. This book would also fit quite nicely in studies of science because of its emphasis on the planets, asteroids, and other bodies in space.

--Jamie L. Thombrugh, Elementary Education, Emporia State University, Emporia, KS


This book is about barnyard animals that catch a cold. Each animal sneezes in its own sound as the cold goes from animal to animal. A little girl who lives on the farm hears her barnyard friends sneeze and goes out to the barn to take care of them. After caring for the animals, she ends up catching their cold.

This book has full-page pictures with big print for the younger readers. The book is appropriate for preschool age only. I read it to my 5-year-old and she did not find the book that interesting. There is very little point to the book except showing what sounds the animals make in a humorous fashion.

--Brenda Wagner, Elementary Education, Emporia State University, Emporia, KS

This story is about a dog named Benny and his farmer who is missing a sheep. Throughout the story Benny looks for the sheep and visits all the other farm animals to see if they have seen a sheep. At the end they find the lamb, who tells them that he was playing hide and seek. Then all the other animals want to play hide and seek.

I would say that it is appropriate for 2nd grade or maybe even late 1st grade. I like the book for the most part. It teaches a child what animals and farm equipment can be found on a farm. The children would probably have a lot of fun with the magnets, but the child could also lose their concentration on what the book is about just wanting to play with the magnets. Because there are only two places to put the magnets, the child must take off the magnets that they just put on, thus requiring more time to read the story. A way to improve the time issue would be to make a magnet board individually for each page or every other page. Another concern about this book is that the little magnets could easily get lost. Once the pieces are lost, the child could not make the picture on each page.

Overall I think that it is a good book. It would definitely keep children interested in it because of the magnets.

--Penny Lewis, Elementary Education, Emporia State University, Emporia, KS


*Big Tracks, Little Tracks* is an exciting book for any young detective who wants to learn how to identify the tracks of various animals. The clues are in the text and the illustrations that accompany it are helpful in learning how to distinguish the differences between the paw prints of a cat and dog or a rabbit and fox and among several other animals. At the end of the book the importance of using other senses, such as smelling and hearing, also is emphasized. Also included are examples of activities that can be done to go along with the animal tracks theme from the book. This book contains a lot of information about animals and nature that will make it enjoyable for many young readers.

--Erica Rindt, Elementary Education, Emporia State University, Emporia, KS


*Bow-Wow: a Day in the Life of Dogs* has photographs of various breeds of dogs performing all sorts of human activities. From eating breakfast and getting dressed to going to the beach and watching television, these dogs do it all. Judy Reinen is not only the author of this book, but the photographer of these personified Sharpés, Tibetan Terriers, Cocker Spaniels, Collies, Basset Hounds, and many more.

I would recommend this book for ages 6–8. The pictures are outstanding, with bright colors and humorous depictions. In addition to the excellent photographs, I liked the way the author depicted a day a typical human (particularly a child) might go through, such as eating lunch, taking a nap, exercising, and relaxing at night. Although it has no educational value about dogs themselves, I would still recommend having this book in a classroom for purely entertainment purposes. The only thing I did not like about the book is a few of the depictions: for example, it shows a “little snack” as a huge bowl of several types of ice cream with all the fixing. Although ice cream is one of a child’s favorite snacks, I don't think it is appropriate for a children's book to show such an unhealthy snack, considering the current problem with child obesity.

--Jackie Bishop, Elementary Education, Emporia State University, Emporia, KS


*Broken Bones* discusses how a young girl has broken her arm for the third time. It makes a science lesson out of going to the doctor. In the hospital, they discuss what an X-ray machine is, and how it is different from a regular camera. The book goes on to discuss that for a cast to get hard, a chemical
reaction must take place. The chemicals makes heat (which is an exothermic reaction) so the cast can get hard. After the visit to the hospital, the little girl goes home to conduct a few experiments on how bones break. She tries using toothpicks, but they aren't quite right. Then she uses straws but they aren't quite right, either. Finally, she pushes the straws into clay. From this, she learns how something bends or doesn't bend. This experiment and information in the book show how forces and weight work together.

*Broken Bones* is a very interesting, entertaining story. It had tremendous amounts of information for young children, and this information is very easy to understand. The book deals with real life, making it more interesting for young children to read. It talks about bones being dense, forces that make things happen, and how exothermic reactions make heat. It teaches children how bones break and what energy is. However, the book isn't quite as believable to someone who has ever had an X-ray. When Namila gets her X-ray taken, she does not have to wear the radiation protector apron. The author also forgets to introduce Fet. After reading a few pages, one could figure it out, but a child might not be able to do so. I saw only one potential problem with the book; after Namila comes home from the hospital with a new cast, she practices rolling on the floor when she should be resting. Thus, the teacher might want to discuss that although a cast is on, the bone is not back to its old self, and it needs time to heal. Otherwise, the material in the book is great fun and very interesting. I even liked how at the end the author gives some experiments for the teacher to do with the students that reinforces the lesson about gravity.

--*Jolene Wilcoxson*, Elementary Education, Emporia State University, Emporia, KS


In this book, Namila's mom goes to her school and shows her classmates some science tricks. For the first trick, she wants to know if Namila's classmates can hold 100 pounds on one of their hands, but they can't. The next day she wants them to blow a crumpled up piece of paper into an empty jar, but they can't do that either. The last trick she plays on them is to have them put a newspaper on top of a yardstick with only a tiny piece of the yardstick sticking out of the newspaper. However, they can not do that, either. By this time, Namila is getting upset with her mother and wants to know the answers. Fortunately, by the end of the book, she and her classmates find out that the tricks all have to do with air pressure.

I really enjoyed reading this book. I learned a lot about air pressure and how that air pressure can have an effect on things. The pictures were nice to look at, and when the author was talking about a trick, there was an example of the trick being tried by the students. I would like to have this book in the classroom and I might even perform some of the tricks from the book. This is meant for younger children, and I personally think the author hit the right age group.

--*Lupe Puente*, Elementary Education, Emporia State University, Emporia, KS


The book *The Experience* is a book about having an experience while doing an experiment. In this book, the experiment involved adding and subtracting food colors and making different colors. The book also showed how you can do science experiments at home with materials around your house.

The activities in the book are good. For example, it tells them how to make different colors by just using the three primary colors so they can save money. At the end of the book there is a rainbow that the kids can paint after they have mixed their colors from food coloring or paint. I think everything in the book (the facts about the paint and colors) is presented well. The story is interesting because the reader doesn't know what color they are going to make before they do it. I think this is a very good book, and I would use it in my classroom.

-- *Brandon Meuten*, Elementary Education, Emporia State University, Emporia, KS

Bugs is a fun and informative book that is appropriate for ages eight and above. The book illustrates sixteen different kinds of bugs and explains everything about that bug, from what it eats to how it moves. Before the bug is discussed, there is a short rhyme introducing the insect with fun illustrations. There is a paragraph below the picture of each insect explaining in detail all of its traits. The scientific name is written after the common name of each insect. It would have been very useful for the authors to supply the readers with the correct pronunciation in parenthesis so the students would be able to correctly pronounce the scientific name.

Each illustration is bright and colorful, and will capture the attention of readers of all ages. Each insect is illustrated with each body part correctly labeled, and the color of the bug is accurately portrayed. At the end of the book the illustrations show how bugs grow and there are examples of growth stages. The authors have also supplied the readers with a picture glossary with definitions.

This book would be a great start to learning about insects. All the bugs illustrated in the book can easily be found outside the school building. The students should be able to find these insects, bring them to class, and discuss them while watching them move around. Children need to be able to see the real insects while learning about them. Each day the teacher could read a different page of Bugs and discuss the insect that has been brought into the classroom for that day.

--Janelle Adams, Elementary Education, Emporia State University, Emporia, KS


Can You Believe? Volcanoes begins by discussing what makes up the power of a volcano. The book then goes through the process of how volcanoes form, what happens when they erupt, and the life cycle of a volcano. The book discusses what is happening in the volcano, and there are related activities to do. For example, the first page asks what powers up the volcanic process. On the next page it gives the answer and the facts, along with an activity about heat. These fun activities are found throughout the book. Everything a child would want to know about volcanoes is in this book.

I thought that this book was very interesting. The activities that are presented in the book are great—they go along with concept and help the children to understand what is going on. This book will be good for a student who needs facts about volcanoes. The book is very easy to read and, because it is split into sections, it is easy to find things. There is a glossary and pronunciation guide for unfamiliar terms in the back of the book. Overall this is a good book that will come in handy in a classroom.

--Jill Mahon, Elementary Education, Emporia State University, Emporia, KS


Cave is an intriguing book, appropriate for ages 10 and up. It is the story of the creation of a cave and the numerous creatures that inhabit this wonderful and mysterious place.

The reader is told how shifting continents became mountain ranges that displaced the sea. The water left behind from the sea created the hollows that grew long and wide—a cave in a mountainside. Many creatures share this dark and wonderful place, including swallows, snakes, porcupines, rats, skunks, and of course, bats. This book also talks about the silhouettes that humans once drew on the cave walls.

The illustrations by Wayne McLoughlin are amazing. They are masterfully drawn and truly depict what a cave might look like. Elementary aged students will be fascinated by these illustrations. The text, on the other hand, is more appropriate for upper-level elementary students. The language is very descriptive and advanced.

--Deidra O'Connor, Elementary Education, Emporia State University, Emporia, KS


This book is about a rooster who has a problem crowing in the morning. The rooster can make other animal sounds, such as a cow’s moo, a duck’s quack, and a pig’s oink. But there is no crowing from the rooster. If he doesn’t crow in the morning, none of the animals will know when to get up and start their
day. There are no activities in this book, but it has a good concept behind it. It shows how each person’s (or in this case animal’s) job is important to the rest of the group or herd.

I liked this book because it shows how important the job of the rooster is and why, although we all have separate jobs, all are important. This book was very well written and it also had a lot of good pictures of different animals.

--Brandon Meuten, Elementary Education, Emporia State University, Emporia, KS


*Coyote and Badger* is a great read-aloud book for early grade levels. The pictures are excellent and the story has many opportunities for curriculum integration. This could be used in social studies because the partnership between these two animals is often mentioned in Native American stories. A study of biomes could also be integrated. In biology it could be used in the discussion of animals’ struggles to survive in nature. Students will see how animals might have to be dependent on others at times.

At $15.95, it might be too expensive for the classroom, but is worth talking the librarian into ordering a copy for the school. If not, be sure to check it out from somewhere else to share with your class.

--Teresa Wagoner, Elementary Education, Emporia State University, Emporia, KS


*Daisy’s Hide-and-Seek* is a fun story that will be a great book to read aloud. Its colorful, vibrant illustrations and fan flaps will encourage children to follow the story and make predictions about Pip and where he might be hiding.

The children will learn the sounds each animal makes in the story. Daisy the duck looks for her brother Pip while they play hide and seek in the farmyard. The flaps are lifted to help Daisy find Pip in the henhouse (cluck, cluck), in the meadow (baa, baa), until Daisy finds Pip in the best place of all—under mother’s wing.

There is one confusing thing in the book that I would change. The mother duck is shown with two wings on one side, and Pip is hidden under the small wing located under the larger wing. There should be only one large wing.

This book is appropriate for preschool age children aged 1–4.

--Rochelle Butler, Elementary Education, Emporia State University, Emporia, KS


Dexter’s mother was yelling at him to clean up his room, his dad was yelling at him to wash the car and mow the lawn, and his sister DeeDee was yelling at him to clean the sink. But Dexter the boy genius was not listening to any of them because he was busy working on his new experiment. Dexter made a hypnotizing pen by using toxic vapor and a smoking tablet to create a dark liquid. When it reached its critical mass it was ink that he put into a pen he created. All Dexter had to do was write down a task next to the person’s name that he wanted to do the task and presto, they did the task. Dexter’s mom, dad, and sister were now doing all of his chores.

Dexter was tired from his big day and decided to go to bed. Meanwhile, Mandark, Dexter’s competitor, had eluded the security system and sneaked into Dexter’s laboratory to steal the magic pen. Mandark put Dexter under his control and caused Dexter to destroy his own laboratory. Then DeeDee came in and distracted Mandark, and took the pen from him. Not knowing what the pen could do, she wrote Mandark’s and Dexter’s names down on a piece of paper, causing them both to become hypnotized. Finally, DeeDee dropped the pen and both boys came out of hypnosis. Dexter finally got his pen back and hypnotized DeeDee and Mandark, ordering them to clean up his laboratory.

I thought Dexter’s Ink was a good book and it kept my attention. It got me excited about science, and definitely stirred my imagination, which is something I look for when reading books to kids. I would read this book in a classroom setting to get students excited about science.

--Lindsey Fuzzell, Elementary Education, Emporia State University, Emporia, KS

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Award-winning photographer Nic Bishop delivers another outstanding science book. In 1998, he joined paleontologist Cathy Forster on an expedition to Madagascar to search for ancient bird bones and reveal some of the "mysteries of bird evolution." The book also recounts her finding a "missing link," connecting birds and dinosaurs at this same site. Dr. Forster named the fossil Rahonavis, combining the Malagasy word rahona, meaning cloud or menace, and avis, the Latin word for bird. Bishop's thoughtful text and amazing photographs give readers a glimpse at every facet of the expedition, from the privations of camp life (tents, no running water, and supplies trucked in from 30 miles away), to the dedication of the paleontologists and their excitement with their finds. He also shares the group's concern for the local villagers who have no school for their children. The dig is located in an ancient riverbed, which dates to the Late Cretaceous period (about 70 million years ago), when dinosaurs shared the earth with snakes, frogs, turtles, crocodiles, and primitive mammals and birds. An on-site geologist explains the likely terrain and climate at the time the various animals died and were fossilized. Readers accompany Dr. Forster on a quest for a new dig site and learn the criteria for determining a location's potential. Finally, we return to the current site as the team prepares to move the fossils out of the quarry. The site is carefully mapped so the scientists can reconstruct which bones go with them back to the lab. The bones are then "jacketed" in burlap and plaster to protect them on their journey.

After the paleontologists complete their study, the fossils will be returned to Madagascar to a museum in the capital city. The reader joins the team in the village for a farewell feast. We smell the smoke and cooking as rice, vegetables, and stewed zebu are prepared, and women sing and children dance. After an elder offers a prayer of thanks, villagers and team members share the food around the partially-built school. Finally, we join Cathy and her team as the fossils arrive at the university lab and are carefully unpacked and prepared for study.

This book provides a fascinating and instructive look at the work and environment of paleontologists and would be most useful for middle-schoolers, but would be of interest as an overview for older students who are considering studying paleontology or archaeology. Younger dinosaur enthusiasts would also enjoy the book, and it would make a valuable addition to a dinosaur unit of study for any age group.
--Patricia H. Sutton, Elementary Education, Emporia State University, Emporia, KS


Dinosaur Tree presents an informational look at the evolving species of the late Triassic period, and is appropriate for ages 10 and above. Henderson's simplistic use of language and life-like illustrations depict a dinosaur tree and multiple reptiles, fish, and dinosaurs of the late Triassic. The tree, which begins as a seed, survives for over 500 years and becomes one of the biggest and fullest trees in the forest. During the tree's long life, it witnesses many species come and go. Eventually, the tree weakens and is uprooted by a strong wind. Many more years pass, and the tree becomes a fossil log. Today, this is all that remains of the old Triassic forest.

Each page is subtitled in bold print, explaining the time changes and age progression of the tree. The text is educational and easy to understand because of Henderson's clear explanations. Each illustration is carefully painted to include life-like details of color, tone, and texture. At the end of the book, a glossary/index is included to define advanced vocabulary.

This book would be very useful in an elementary classroom or other educational center. Readers can marvel at the beautiful life-like illustrations and enter the Triassic world themselves. This scientific story could serve as a supplement to science units and historical journeys into the past.
--Theresa Holderbach, Elementary Education, Emporia State University, Emporia, KS


Ducks, Don't Get Wet is an interesting and factual story. It is very repetitive, which is good for a beginning reader. The book has beautiful pictures that go along with the story. The children learn about
ducks, with new terms to learn. A very simple definition follows these terms. The author also gives many examples to help the children better understand what she is trying to say. In the back of the book, there is an experiment to prove what she says about ducks not getting wet.

This is a very interesting book. The children can learn a lot from it. However, I think it would be best if a child read this with an adult present. The adult could make sure the child looked at the different pictures that go with the different types of ducks and the adult could help the child with the new terms that he or she is learning.

--Jolene Wilcoxson, Elementary Education, Emporia State University, Emporia, KS


Each New Year's Eve, Marisa's family makes dumpling soup to enjoy on New Year's Day. In this story it is the first year that Marisa is old enough to help make the soup. She worries that no one will eat her oddly-shaped dumplings. This book shows many different cultures coming together in one family. It is appropriate for 3rd grade. I would recommend it for making children aware of the many different types of food from different cultures. For science it is good for focusing on plants.

--Amy Wilson, Elementary Education, Emporia State University, Emporia, KS


This classic book, *Earthquake in the Early Morning,* is a part of the collection in the Magic Tree House series. The adventurous story line is about a little boy named Jack and a little girl named Annie. Their mission is to try to save Camelot. To do this they must first find a book to lend. They only have to climb up into their "magic tree house" and make a wish of where they want to visit. They are whisked away to San Francisco, California and land at the biggest earthquake in the city's history. They see the aftermath of an earthquake and try to help. Barely making it back to their magic tree house before it burns, they whisk back to Frog Creek. When they return home they are then whisked to a King's residence in Camelot. Annie and Jack give them their four writings that they collected. These writings will help the King, so they have saved the day.

This literature book was both very interesting and informative. I enjoyed reading the book and also learned factual information. This book had illustrations of the aftermath of the earthquake, which give better visuals to children. After this devastating occurrence the two children, Jack and Annie, were still trying to help others. Thus this book has important moral situations along with the science aspect. This resource could be used in the classroom to integrate science, literature, and history. At the end of the book there are actual facts about earthquakes. It might be beneficial to read this section to the students before reading the rest of the book. This book is definitely one that I will purchase because of its creative plot and factual and interesting science information.

--Stephanie Bronson, Elementary Education, Emporia State University, Emporia, KS


*Edward in the Jungle,* is a book about a boy named Edward who loves to read about Tarzan, Lord of the Jungle. One afternoon he becomes so absorbed in his book that he finds himself deep in Tarzan's jungle, encountering all sorts of jungle animals, such as a crocodile, birds, snakes, monkeys, a leopard, and an antelope. Edward also encounters Tarzan of course, and becomes somewhat of a jungle hero when he saves a crocodile that was going to eat him.

I would recommend this book for ages 5–10. It contains beautiful illustrations, along with a great story line. I like the way the book encourages daydreaming as well as reading, two things that children should be encouraged to do on a daily basis. The book has excellent pictures of many jungle animals, particularly ones one would not normally see in children's book (such as an antelope and a leopard). This would be a great book to use as an introduction to a jungle theme in a classroom, or a lesson on using imagination. I would recommend this book for a classroom because it has many educational possibilities.

--Jackie Bishop, Elementary Education, Emporia State University, Emporia, KS


The text is well written for young readers, and explains the difficult words.  An elephant fact sheet at the end of the book gives a more in-depth description of elephants.  The watercolor illustrations are detailed and accurate, awesome, and interesting.

This book is a great resource for units on animals, Africa, or zoos.  In the higher grades, when lessons are more specific, it could be a great resource for a student doing a research project on elephants or an African wildlife reserve.

--Jennifer Messick, Elementary Education, Emporia State University, Emporia, KS


This book introduces young children to different barnyard animals and the sounds they make.  I liked this book because it repeats the same thing with the different animals, changing the animal and their sound.  The children will learn the book quickly and be able to read the book along with the adult.  The illustrations are simple and won't distract the young children when they are being read to.

--Trish Batemon, Elementary Education, Emporia State University, Emporia, KS


Off the coast of Maine, in the heart of the Atlantic Ocean, there are many creatures great and small.  Perhaps the most fascinating and diverse are the mammals.

This book, which is best suited for children in grades K–3, gives a detailed look at four of these Atlantic Ocean mammals: the Atlantic White-Sided Dolphin, the Minke Whale, the Humpback Whale, and the Fin Whale.

Along with clear and colorful pictures are diagrams that show readers what they are actually seeing in the photographs.  At the end of the book are a few pages full of facts about these four mammals and a great visual glossary.

--Steven Pearce, Elementary Education, Emporia State University, Emporia, KS


Growing Up Wild: Bears, is a book appropriate for children ages 6–9.  This book mainly focuses on northern bears, including black bears, polar bears, grizzly bears, and brown bears, and tells how bear cubs are born and grow up.

The language is clear and factual.  The author draws from a biologist's research and shares his enthusiasm and expertise.  A glossary in the back of the book helps children with vocabulary.  Color photographs of the different types of bears are very clear and colorful.

This book is an appropriate science curriculum supplement.  I highly recommend this book.

--RaeLynn Hogie, Elementary Education, Emporia State University, Emporia, KS


Here Come Poppy and Max is about a young girl, Poppy, and her dog, Max.  The two are inseparable and they do everything together.  Poppy likes to imitate some of her favorite animals and Max likes to imitate Poppy.

I think that this book is appropriate for grades K–1.  One thing that I like about this book is that the print is large and the words are easy for a child to read.  Another thing that I like is that a child can learn
their animals as they follow Poppy and Max through the book as they are imitating animals. Children will also learn what different animals do. The pictures in the book are very big and colorful. One thing that I did not like about the book is that some of the words are arranged vertically, making it harder for a younger child to read the word.

Overall, I think that this book is an excellent book and I recommend it for kindergartners and first graders who are eager to start reading and learning about animals.

--Christi Clark, Elementary Education, Emporia State University, Emporia, KS


This book is about how chameleons change their color in different environments for survival. But in this book, the chameleon named Clyde changes to the wrong colors for each place. Clyde gets put into a situation where he has to correctly change colors or he will be killed. He really believes that he can change into the right color, and he does. This would be good book to show kids in a classroom that we are all different, but just because we are different doesn't mean we should make fun of other people.

I liked this book there because was a good message behind it and also because it also gives good information about chameleons: how they change colors in different environments, how they live, and why it is important for them to change colors. This book has some great pictures of chameleons.

--Brandon Meuton, Elementary Education, Emporia State University, Emporia, KS


This book contains worksheet activities on topics such as precipitation, tornados, hurricanes, fronts, and clouds. These worksheets (which have the teacher background information provided in the book) allow students to increase their own knowledge of weather through real-life activities and applications. Other science skills learned include: making predictions and observations, forming a hypothesis, working in groups, reading measurement instruments, and creating graphs from data. Most importantly, students learn to apply their knowledge to real-life situations.

I really liked the way the book was set up. The activities are accompanied by a teacher guide, which thoroughly explains the activity and tells the teacher what supplies are needed. Although the pictures are in black and white, they accompany what is occurring in the activity. Perhaps the best feature in the book was the performance-based assessment found at the end of the book. This lists all the skills and activities to be completed by students, as well as a grading rubric to score each student's progress. This allows the teacher to see which activities need more explanation, and which have been mastered, without having to create his/her own rubric. For each lesson, the teacher guide gives a real world application for the activity, as well as the process skills students use to complete the activity. These are the skills listed in the performance-based assessment in the back of the book. This would be useful in a classroom as a unit on weather, or as fun experiments for the school science fair.

--Melanie Magathan, Elementary Education, Emporia State University, Emporia, KS


This is a fun book about a rabbit named Fern and his brother, Bracken, playing hide-and-seek. While they are playing, winter starts and Bracken disappears under the snow. There is a lot in this story that could capture the children's attention. At the 2nd to 3rd grade level, children generally like animals and love to play with and/or chase them. This book discusses a lot of animals from rabbits (the main characters), to squirrels and beetles. Not only does this book mention a handful of animals, but it also talks about these animals' homes and show pictures of what they look like.

This book could be used in a unit about different animals and their habitats. This book could also be read about animals and their different behaviors. For example, just like people, animals play games too. They might not play hide-and-seek, but if one were to sit and observe animals, they would notice that animals have their own way of playing. Another behavior discussed throughout the book hibernation. This book also talks about how squirrels hoard their nuts in the trees when preparing for the cold season.
I really liked this book because even though this looks like a simple book, there is a lot that can be drawn from it.
--Crystal Piper, Elementary Education, Emporia State University, Emporia, KS


Nature's Fury—Eyewitness Reports of Natural Disasters is an intense and interesting book that is appropriate for 4th grade and above. It is a collection of real life accounts of natural disasters that took place in the United States and is separated into three parts. The first, called On Shaky Ground introduces earthquakes, tsunamis, and volcanoes. The second part, Monster Storms, discusses hurricanes, tornados, and blizzards. The last part is called Water: Too Much, Too little, and includes the dust bowl, fires, and floods. In each section, facts are given about the different disasters, as well as comments by people who lived through them.

The text in this book is used very effectively. Some of the words could be difficult for younger students to understand, so the author puts in an explanation for these; this helps make the reading easier. The illustrations are used very effectively also. Within each individual account, there are several accurate pictures of the actual disasters showing the power and results of that disaster.

This book is an appropriate aid to a weather or disaster unit. There is an index and a table of contents that make it extremely useful for quick reference. I find this book very enjoyable and I recommend its use for older elementary and middle school students.
--Marcia Cates, Elementary Education, Emporia State University, Emporia, KS


No Sweat Projects Hairy Science is a superb book dealing with science for all ages and hair types. It is full of helpful hints for projects and research. Also, it contains interesting facts dealing with genetics, anatomy, evolution, and zoology of hair types. Following the "hairy" information are the experiments and activities that are perfect for the classroom, science fairs or even at home. The students will enjoy completing these activities and experiments in groups, as a class, or individually. The bookends by listing several additional sources and other No Sweat Science Project books.

The colorful illustrations and drawings add character to the book and draw interest. The layout is well-thought-out, giving the interesting information and facts first; this encourages students to go on and learn more through the experiments and activities. This book will stimulate children's interest in science and they will find it interesting and enjoyable.
--Alicia Klucas, Elementary Education, Emporia State University, Emporia, KS


Need to do a science report or project? This book gives the reader thumbs up for an idea, and explains how to set up a research project. Sample research information is included. After collecting the needed basic information and choosing an experiment such as "Thumb Printing," "Thumb Obstacle Course," or "Sign Language," the book gives instructions on how to do each of them. Other helpful information and "fun stuff," is added at the end of the book.

This is a great way to help students get excited about science. Not only are they learning about the human thumb, but they are also having fun. This book is full of helpful, fun, and interesting facts. The illustrations of this book are aimed toward younger students and are multicultural. However, this book could be used for any age group.
--Jennifer Crawford, Elementary Education, Emporia State University, Emporia, KS

Shadowy Science is an engaging but simple book of self-guided science activities that are appropriate for 3rd grade and up. It could also be used by teachers for ideas to do in classrooms younger than 3rd grade.

The No Sweat Projects series is dedicated to helping students find projects that are simple, interesting, and inexpensive. The ideas are perfect for science fairs or class presentations. The first half of the book describes the research procedures, including using note cards, and organization. This is followed by eight experiments and activities, all of which can be done with things found around the house. No special equipment is necessary.

This book is the perfect blend of information and fun. The language and explanations are simple enough for younger children to comprehend. The illustrations enhance the book by visually showing each experiment step by step and children doing the activities, which can serve to reassure those who are intimidated by science.

Shadowy Science could be especially useful for children who need a little extra guidance doing a project on their own. The text and illustrations are very supportive and include many helpful hints and examples. For example, the section on using note cards for research is followed by fifteen example pages. I would recommend this book to children of all ages. I also believe it allows us to discover answers to questions everyone has about shadows.

--Christina M. Kerns, Elementary Education, Emporia State University, Emporia, KS


Learning about science is not always easy; however, after reading No Sweat Projects Shadowy Science, presenting a science project in any area will be no problem. The material is laid out in an easy-to-read manner. It discusses various types of project presentations, including an oral report, a written report, and a science exhibit or group project. The author thoroughly shows how to collect and research the project idea and goes even further to show organization techniques. This is definitely a plus for the unorganized or uneasy student. There are many activities given so that the student can possibly create his or her own experiment after reading these ideas. Some of the activity ideas include: wall shadows using flashlights, cloud or sun shadows, distorted shadows, and shadows with clarity.

I confess that after reading the material, I set up a test area in my home to examine many of the ideas described in the book. I had heard of some of them before, but others I had not, so I was curious to try them out. I could definitely see doing these experiments in my classroom when discussing shadows or even the solar system, because the book mentions several ideas such as solar system shadows, cloud shadows, and sun shadows. How about adding a topic about the solar eclipse? That is a shadow, too. I enjoyed the step-by-step procedures given. The project ideas start with a broad range and are narrowed down to a more focused topic, which is the natural progression for any project. The material is presented in a light and refreshing manner, making the book easy to read for the students. I recommend this material for any students from 3rd grade up. The material is not limited to teaching students how to prepare a science project, but can be applied to any subject matter where a written, oral, or group project is required. The activities discussed are clearly explained, interesting, and fun to explore. The projects, their illustrations, and the facts were sometimes comical, but remained factual. The book was informative, and activities were simple to perform after reading the directions. For teachers or students on a budget, this material would be beneficial because of the minimal materials costs.

--Teresa Morgan, Elementary Education, Emporia State University, Emporia, KS


Nose to Toes is a great book to teach young kids about different body parts and different animals. This book compares a human’s way of doing something to an animal’s way of doing the same task. I would recommend using this book in a kindergarten or 1st grade classroom. It is a good brief introduction about the human body and to different animals, and could be built on throughout the school year and in

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years to come. I liked it that the kids can relate to many of the actions both the children and animals are doing. The pictures also add great details and understanding to the book.

--Traci Shelton, Elementary Education, Emporia State University, Emporia, KS


Oak Tree is an excellent book for 2nd, 3rd, and 4th graders. This story tells how an oak tree is affected by the four seasons. From the beginning of spring to the end of winter, the oak tree changes in many different ways. However, the tree isn't the only one that changes. Animals and insects that depend on the tree also change their habits.

The book is an intriguing device that allowing children to learn about life in the forest. Throughout the book, Morrison shows the story of the tree and its occupants. Beneath the text and illustrations he lists characteristics about the animals and insects. Even though the illustrations are simple, they are accurate. The illustrator takes each part of the tree and shows it in a new light.

I recommend using Oak Tree in a science class. This book has an excellent way of showing how each creature depends on others to live and reproduce. The book Oak Tree takes the reader through the life of the Mourning cloak butterfly, the transportation of pollen, and the characteristics of many other animals and insects.

--Sarah Koch, Elementary Education, Emporia State University, Emporia, KS


Out of Sight presents a variety of different images unseen by the unaided eye for readers of all ages. The first half of the book includes pictures of objects too small or fast for the human eye to see. One picture is of a virus, which looks like an exploding star. Another picture shows a white blood cell or macrophage as it uses its long tentacle-like arms to attach and suck in the E. coli bacterium also shown in the picture. A paragraph for each photograph explains the what the picture is and how it was produced. The second half of the book deals with things that are too big for us to see. It includes a wonderful shot of the Eagle Nebula, a star-forming region in the Milky Way galaxy, as it forms new stars. This particular shot was taken by the Hubble Space Telescope.

The text is very helpful, and includes information about how the photographs were taken. Each illustration is very detailed, depending on the instrument used. Some colors are added to highlight particular features in some photographs.

--Gregory Rice Yunker, Elementary Education, Emporia State University, Emporia, KS


Outside and Inside Dinosaurs is a very informative and captivating book for children ages 5 to 9. It is full of wonderful pictures and useful facts about dinosaurs. This book would be appropriate for the older ages as well.

The reader is introduced to the book by a comparison of dinosaurs to the reptiles of today (e.g., the alligator). It does this by showing some X-rays of both to show the similarities of their bone structures. It then moves to a discussion about the skin of the dinosaurs. Some had rough, leather like skin and others are believed to have had feathers. The next part discusses how scientists determine what the dinosaurs ate by looking at their teeth. In the last part of the book, there are some wonderful pictures of actual eggs that have been found, which naturally leads to a discussion about how these animals change throughout their lives, going from a small egg to an animal bigger than any found on Earth today.

This book will be an excellent resource for research papers or studying this part of Earth's history in science class. Although this book gives a lot of wonderful information, it still leaves the children wanting to know more. It would be a wonderful book to add to any school library so children who are interested in learning about dinosaurs can have that opportunity.

--Jennifer Laudermilk, Elementary Education, Emporia State University, Emporia, KS

This book contained factual information about the history of dinosaurs. It explains that scientists can find new information through fossils, which come from the remains of bones, eggs, droppings, skin, and footprints. The author gives many examples of how scientists piece the dinosaurs together. For example, when they put the dinosaur bones together, they look at an alligator’s X-rays because of the similarities of bone structure. Scientists also can figure out where to correctly place the legs by looking at their footprints, whether they had two or four legs, and how large they were. Another topic covered is the rings found in the bones of the dinosaur. These rings were used for soaking up heat energy. The author also discusses how researchers use a microscope to examine dinosaur droppings to see if the dinosaur ate meat or plants. Scientists also examine the teeth to give them clues about what kind of creature it was. The book also explores other topics, including the digestive system, leathery scales, the flight of the bird, and eggs. Scientists use many different methods to examine these fossils, and new ideas and new technology are used to get more information about these million old dinosaurs.

This book has a lot of good information about dinosaurs. It would be good for students who are just beginning to learn about dinosaurs, and who want to learn how the remains of the dinosaur are pieced together. Many dinosaur books throw a lot of information and big words at the reader, but this book takes the information and puts it into an interesting and accessible form. This book is well written and would not too be complicating for a 3rd or 4th grade student to read or understand.
--Caley Moddelmog, Elementary Education, Emporia State University, Emporia, KS


Birds of Prey presents good information for the young or beginning bird watcher in North America. The book highlights most common birds of prey found in North America, their habitat, eating habits, and details on how to recognize their call. The book covers 21 birds of prey, including the Bald Eagle, Golden Eagle, Turkey Vulture, Osprey, Red-Tailed Hawk, Snowy Owl, and Screech-Owl.

Illustrations show several variations of the same species of bird, including distinctions between male and female and between young to adult. The illustrations also include a ventral view of the bird in flight. This allows the reader to learn to distinguish the bird in flight as well as on the ground. There are also photographs of the birds in the wild.

This book would be an appropriate aid in the classroom for biology instruction for primary students. It has information on feather design, color, and texture. The author also has included a table that encourages field observations by allowing the student to keep track of when and where they spotted each of the birds listed in the book.
--Cindy Weatherred, Elementary Education, Emporia State University, Emporia, KS


This wonderful book from the Peterson's Field Guides For Young Naturalists Collection, Butterflies is a brilliant information guide that provides the reader with information about 9 different types of stunningly beautiful butterflies. There are detailed photos with body parts labeled. The book even explains where a butterfly's color comes from, and provides the reader with a "Life List". This list encourages the reader to keep track of which butterflies they have seen and when. The book is intended for students in the 3rd to 4th grades, but with assistance could be enjoyed by younger readers as well.
--Danielle Wornkey, Elementary Education, Emporia State University, Emporia, KS

Quack, Daisy, Quack is a book about ducks with a brief introduction to other animals. Daisy Duck and Pip enjoy playing with the other animals, but their loud quacks always scare the animals off. They visit the duck's feeding pond where they can have fun and be as loud as they want without disturbing anyone. I feel the book really doesn't teach a concept or have a point to the storyline. Younger kids K—2nd grade would enjoy the book, based on its pictures, different animals, and different animal noises.

--Traci Shelton, Elementary Education, Emporia State University, Emporia, KS


Quakes started out with a story taking place in 1994 in California. The main character is starting out his day his usual way, when all of a sudden the entire room begins to shake, and he realizes that an earthquake is happening. At this point, the book breaks from the story and discusses other earthquakes that have happened in the past, dating back to the early 1920s in California. These brief stories give facts about what happened during that time, such as the events before and after the quake, and the Richter scale measurement of the quake. The book then goes back to the original story line and mentions a few safety tips to help children who read this book. At the end there are facts such as what states in the U.S. have earthquakes, and what was the largest earthquake recorded in the U.S.

I liked this book very much. It is not long and has pictures to give the children a glimpse of of the events. It also will help the children have a better understanding of what goes on during an earthquake. I was impressed with the words used in the book; they were easy enough for a child to read and understand. They were also well chosen to help the children better understand the picture. The book did a very good job of giving a brief storyline of past earthquakes. This helps children to realize that earthquakes have been around for a long time and also gives them some security, knowing that we have improved some things since then. I think this book is a great way for children to get excited about earthquakes.

--Pamela Munoz, Elementary Education, Emporia State University, Emporia, KS


Each page in Rain Forest Animals is illustrated with photographs of the animal it is described, a fact about that animal, and a computer illustration of the animal. The book is broken into two main parts: What's in the trees, and What's on the rainforest floor? The first twelve pages talk about animals that live in trees, including monkeys, sloths, bats, and colorful birds. A two-page illustration shows each of these animals is their natural habitat and asks questions of the reader. The second half the book focuses on frogs, a jaguar, snakes, crocodiles, insects, and spiders. There is another illustration of these animals in their natural habitat and some questions. The last two pages have a creative and colorful puzzle and quiz. I would definitely use this book with any project involving the rain forest. It is an easy read for children in 4th and 5th but gives enough information and pictures on each page to hold their attention. It even had a box called Words, integrating spelling for younger children in 1st and 2nd grades.

--Cheryl Bolz, Elementary Education, Emporia State University, Emporia, KS


Safari Adventure is a well-written, wonderful book about the African Safari, and is appropriate for kids 5–10 years old. The book details the many animals of the Safari, from the giraffe to the zebra. It describes what they eat and drink, how they move around, and how they defend themselves. Young readers will learn the similarities and differences among the animals seen on the Safari. Also, readers will learn how some of these animals reproduce.

Safari Adventure would be an excellent book to read aloud to a class of young students. There are great photographs which are very helpful and descriptive. The photographs are as valuable as the text.
I strongly recommend this book. It would be very helpful if used in a science unit on the animals of Africa.

--Andrew W. Carter, Elementary Education, Emporia State University, Emporia, KS


*Earthquakes* is one book in a series called *Scholastic Science Readers*. It is a level three book for ages 7–8. This book tells about what happens in an earthquake, and it has a lot of terms to describe how and why an earthquake occurs. It starts at the center of the earth and works its way out, describing why an earthquake happens. The author does a good job of explaining all the terms and reassures the reader that he or she should not be scared. It has big print and moderately simple words, with a glossary and index at the end of the book for easy access of the main ideas. It has many pictures that illustrate and help describe earthquakes.

This book was very interesting and well written. What I liked about it is that it tells the reader about a horrible disaster of nature, but and then says that that an earthquake does not happen very often. It gives advice on how to prepare for and deal with an earthquake. It also discusses new methods being used by scientists to figure out how and why earthquakes happen. This book uses bold print and under every picture it has captions to explain the picture. I think this is a great book for the classroom so a student can read about earthquakes or a teacher can use it to help teach about earthquakes.

--Joe Myers, Elementary Education, Emporia State University, Emporia, KS


This resource book with experiments is divided into three sections: life science, physical science, and earth science. For each experiment, there is a page of teacher information, which includes the amount of time the experiments will require, some teaching strategies, and information on setup. The next page has background information for the students to read, and pre-lab questions to answer to check the student’s reading comprehension. The last page is for the student to use during the experiment. There are spaces for the student’s experimental plans, materials needed, procedures, tables, and results. There are also some ending questions about their experiment to help tie it all together.

The experiments included in this book are well designed and interesting. They also use safe and inexpensive materials. If you are on a tight budget, this book is a must!

--Teresa Wagoner, Elementary Education, Emporia State University, Emporia, KS