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ADDRESSING SECOND AND THIRD GRADE CALIFORNIA
SCIENCE AND SOCIAL SCIENCE CONTENT STANDARDS
THROUGH ENVIRONMENTAL LITERATURE

A Project
Presented to the
Faculty of
California State University
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Environmental Education

by
Denise Truex Hatfield

March 2006

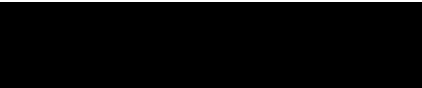
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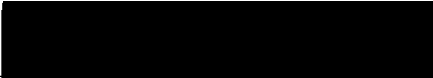
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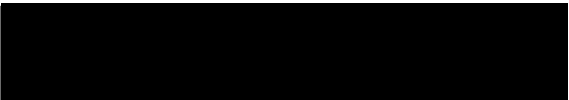


Dr. Darleen Stoner, First Reader

February 6, 2006
Date



Dr Gary Negin, Second Reader



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ABSTRACT

In response to the federal legislation *No Child Left Behind*, schools across the country implemented required reading programs for classroom instruction. *Open Court's Reading* program meets this criterion for many schools. The text in *Open Court Reading* for grades two and three was evaluated for science and social science content standards that would be supportive of environmental education. An annotated bibliography of children's literature was identified. Additional books, not in this series, were selected for enrichment and to provide a scaffold to support all learners. To enhance connections across the curriculum, supplemental lessons from *Project Learning Tree*, *Project WILD*, and *Project WET* are identified.

ACKNOWLEDGMENTS

This project is the result of the tireless and enthusiastic support of Dr. Darleen Stoner. She helped me understand that making connections lies at the heart of teaching.

I want to thank my principal, Susan S. Abel, PhD. for sharing her collection of children's literature and professional readings. She deeply understands the reading/writing process.

Timothy Thelander's support in formatting the project is sincerely appreciated. He is skilled and thoughtful in the process of reflection.

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CHAPTER ONE

INTRODUCTION

To ensure all students meet literacy standards designated by state and federal legislation, new reading programs were implemented as required instruction in classrooms across the state and country. These adoptions were designed to support education in response to *No Child Left Behind Act* of 2001 (Legislative Counsel of the State of California, 2003, para. 3). *Open Court Reading* (Bereiter et al., 2000) meets these criteria. The curriculum provides a researched pedagogy that is supported by many acclaimed reading specialists. "Open Court's authors are at the forefront of educational research. They are experts in how children learn to read and learn to learn" (Bereiter et al., 2000, p. 2).

As an educator, I have realized the potential to make direct and explicit connections to the science and social science California content standards using selections in *Open Court's Reading Anthology*. "No one asks schools to do less, but many special interests groups demand that they do more, curriculum overload is a serious and burgeoning problem in the nation's schools" (Disinger, 1997, p. 39). With that in mind and considering the time constraints

during the school day, integrating the sciences and social sciences into language arts content standards makes sense and enables children opportunities to read to learn, while learning to read.

"Students learn more effectively in all areas if new material is incorporated within the existing knowledge base" (California State Board of Education, 1990, p. 168). Using *Open Court's Reading Anthology* as a means for teaching science and social science standards does this but also requires rethinking how educators present the text. For example, instead of reading *A Picture Book of Martin Luther King, Jr.* and only thinking about his courageous actions as suggested in *Open Court's Reading Anthology*, an educator could consider the selection one of the many biographies that addresses reading biographies about "people that made a difference," thus addressing social science standards while discussing the courageous actions of all those that have made a difference. Additionally, the selection in *Open Court's Reading Anthology, Dragons and Giants* explores the courageous actions of the characters Frog and Toad. Instead of considering only the courageous actions of the characters, the opportunity is present to examine science concepts including the predator/prey relationships, the differences

between frogs and toads, reproduction of offspring, functions of survival, and variations among individuals of one kind within a population.

Children are naturally curious about the world. What excites our students? "Kids observe things like animals, plants, weather, and stars, and they have a natural curiosity about what is happening and why. The linking of science and language arts are natural motivators for children's learning and it makes sense" (Allington & Cunningham, 1999, p. 183). This project addresses this inquisitive curiosity for students to explore the world around them with books and activities to further develop meaning that addresses the science and social science standards. "We can capitalize on children's natural affinity for sciences by integrating our reading and writing instruction with science topics" (Allington & Cunningham, 1999, p. 185).

Education is experiencing an agenda of reforms. "But even the most thoughtful among these many proposals remain remarkably vague about curriculum content" (Hirsh, 1996, p. 13). Students need the background knowledge to build knowledge. The standards for grade two provide the background information required to facilitate grade three content standards. Hirsh noted that if all children are to

be given a fair chance to make steady academic progress, then we need to ensure that each student that enters a class at the beginning of the year is ready to gain the new knowledge and skills to be taught in the coming year.

The project reviewed literature from *Open Court's Reading Anthology* to evaluate and to cite science and social science California content standards for grades two and three. Additional books listed in the bibliography were identified as purposeful for enrichment, and to provide scaffolds to the concepts identified. The reviewed literature provides suggestions for integrating supplemental lessons. These supplemental activities are available through three premier environmental education programs: *Project WILD* (Council for Environmental Education, 2001), *Project WET* (The Watercourse and the Council for Environmental Education, 1995), and *Project Learning Tree* (American Forest Foundation, 2000).

Through reading, listening, discussing, and writing, children start to build strong foundations of knowledge. By integrating the sciences into language arts' curriculum, educators not only teach children how to read, but how to read to learn. The books chosen will expand a student's vocabulary providing the basis of developing a

broad foundation of knowledge on which to build
educational success.

CHAPTER TWO

REVIEW OF THE LITERATURE

"The landscapes of rural America are disappearing, and more people are moving into the urban areas; 90% of California's students live in urban sprawls across the state" (Aschwanden, 2005, p. 8). Thus, students are less likely to develop an innate curiosity or to even experience the outdoors. Class-time once devoted to investigating the natural world has been replaced with the singular emphasis on standardized test scores. Aschwanden asserted that the sciences in the primary grades have become the eliminated "enrichment" curriculum while schools look for a quick fix to address their failures of creating a literate society. The danger in abandoning the sciences is that the issues facing the future are increasingly complex. Additionally, Aschwanden stated that our failures in reading and math are no excuse for allowing the next generation to be woefully ignorant when it comes to the world they must live in.

With mindful consideration of a child's academic successes in school, educators need to carefully consider what they are teaching. "A growing global movement suggests teaching children about sustainability, or living

within the limits of the Earth's resources, is one way we can help the next generation prepare for the best possible future" (Santone, 2004, p. 19).

Our cities are plagued with deteriorating infrastructures, foul air to breathe, water pollution, and overflowing landfills. "These problems are legitimate concerns of community government officials and planners, but the responsibility for their solution rest, to a large extent, with citizens" (Stapp et al., 2001, p. 30). The planet's resources are important to everyone's education.

The planet's population has doubled in the last 50 years and with that comes an array of complex global concerns. Students need the foundations of understanding water as a resource: why the resource is important to them; how resources compete for other resources in an ecosystem; and how the water cycle works. Students should also understand the complex issues related to resources. "Educating children for the future is one of the principal aims of a well-balanced curriculum" (California State Board of Education, 1990, p. 12).

We live in a time when many of our students rarely experience the wilderness. "Within the past 50 years, the United State has become a predominately urban nation, both in thought and in physical character" (Stapp et al., 2001,

p. 30). Stapp continued stating that as we became more urbanized, we have become less aware of our relationship to the earth's resources.

How might educators educate students for the future? For starters, educators should want to consider developing the student's environmental sensitivity. "Environmental sensitivity refers to an empathetic view of the environment and of its problems and issues. It is a view that respects ecological stability and promotes the idea humans must live in harmony with the natural environment" (Volk, 1997, p. 48).

Volk's research on environmental sensitivity indicated that individuals demonstrating an environmental ethic engaged in outdoor activities like fishing, hiking, and hunting. Volk noted programs that promoted outdoor education and field experiences for students have largely been eliminated due to cutbacks. Her research contended that these experiences should be replaced with outdoor experiences like gardening, or focusing on local environmental issues. These outdoor experiences were instrumental in developing a student's environmental sensitivity. "Further research on environmental sensitivity indicates that books, videos, music, and other materials gave a positive attitude toward the environment.

Many learners responded well to biographies of individuals devoted to the environment and nature" (Volk, 1997, p. 49).

The objectives of environmental education represent a model for attaining a sustainable future. "Environmental education is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to solve those problems, and motivated to work toward their solution" (Stapp et al., 2001, p. 30). "Environmental education can be characterized by the development of explicit and implicit interconnections with human health, science and technology, and the environmental, economic, and social issues and problems of society" (Disinger, 1997, p. 26).

The curriculum model is interdisciplinary by its very nature. Reading, writing, science, social science, and mathematics are integrated subjects. However, this paradigm of thinking is in opposition to the current reforms in education.

January 2002, George W. Bush signed the legislation, *No Child Left Behind*, into law. Schools across the country looked to researched based reading programs to solve the crisis of meeting the needs of all students. "Under, *No Child Left Behind*, federal support is targeted to those

educational programs that have been demonstrated to be effective through rigorous scientific research" (U.S. Department of Education, 2005, para. 1).

In response to the legislation, *No Child Left Behind*, many schools required a scripted reading program's use as their primary curriculum. "Legislators and school boards all over the nation are mandating the type and amount of phonics that must be taught to children they have never seen in classrooms they have never entered" (Allington & Cunningham, 1999, p. xiii). Each program comes with undeniable strengths, but one reading program verses another ignores the various learning styles our students bring to the classroom. "The reality is that there is no one reading program that is best. Children learn to read in different ways and differ in the type of instruction that they need to become proficient readers" (Duffy et al. 2003, p. 685).

Children learn how to read differently and effective instruction should include science and social science content. "Infusing the language arts curriculum with rich content in many genres increases the sophistication of the language students use and expands their interest " (Fountas & Pinnell, 2001, p. 13). Fountas and Pinnell's research revealed that engaged students participate in

literacy activities to gain knowledge, perform tasks and enjoy literary experiences.

"Children who are successful at becoming literate view reading and writing as authentic activities from which they get information and pleasure, and by which they communicate with each others" (Allington & Cunningham, 1999, p. 21). Providing blocks of time for reading aloud to students, engaging students in shared readings, teaching reading strategies, allowing for time to write, and discussing are the hallmarks of literacy rich classrooms. "The most basic component of classroom instruction is offering children a variety of real reading and writing opportunities" (Allington & Cunningham, 1999, p. 21).

"The books read aloud to students should be connected to social studies, science and other content areas" (Pinnell & Scharer, 2003, p. 41). Pinnell and Scharer noted that when students hear texts read aloud, they learn that the expectation is for them to think about the reading and learn from it. "Through read-alouds, you foster conditions for meaning-making through your phrased, fluent, and expressive reading" (2003, p. 151). Students will become familiar with the sounds of written language,

a variety of genres, and experience opportunities to discuss the text in terms of the text itself.

Shared reading supports students because the teacher and the students are engaged. The teacher reads the text aloud using big books, shared writings, transparencies on the overhead, and charts. Shared reading provides opportunities for students to recognize words and letter sound relationships. They notice how pictures and illustrations support their understanding of the context within the text. Additionally, it provides literacy experiences for those children who come to the classrooms without these early reading opportunities. "A major challenge facing our primary grade programs is in adapting instructional organization in ways that allow those children with limited experiences to fully participate in early literacy lessons. Shared reading is just about the most powerful opportunity possible" (Allington & Cunningham, 1999, p. 51).

Guided reading provides opportunities to scaffold reading experiences to help the child construct meaning. "The whole purpose of providing children with guided reading experiences is to help them become independent readers" (Ford & Opitz, 2001, p. 2). The hallmarks of guided reading instruction do not necessarily mean

labeling and grouping children based on the accuracy with which they read a book. Instead, guided reading is intended as a means for supporting a child's reading experiences. When educators use nonfiction information text for guided instruction, they draw upon the natural interests and curiosity of the students. "This instruction unifies the curriculum and support learners in understanding that they can transfer their learning across all curricular areas" (Hoyt, 2002, p. 164).

Children with diverse background and language experiences benefit from integrating content knowledge. "The interactions that produce the greatest rates of both content and language acquisition include hands-on experiences, activating prior knowledge, and speaking to clarify their intended meanings" (Hoyt, 2002, p. 52). Guided reading, shared readings, and a read aloud of nonfiction text provide opportunities to scaffold learners with a range of language experiences.

Not only do students need text to understand the world, they need opportunities to investigate. Writing and drawing about what they are learning supports the student's ability to make meaning of the content. Educators need to connect the student's passions, knowledge and voice to writing about the text. "Children

who read something, knowing they will write something, are more likely to read with a clear sense of purpose"

(Allington & Cunningham, 1999, p. 110).

The standards in education were written to state what a child should learn in grades K-12. "Although obviously written to address the needs of specific discipline based areas, these standards do to one degree or another, address environmental education interests" (Simmons, 2001, p. 65). Simmons asserted that the strength of environmental education can be effectively used as a way of meeting educational reform. Well constructed environmental education is learner-centered, providing students with opportunities to construct their own understandings through hands-on, minds-on investigations. "Language arts, social studies, sciences, home economics, health, agriculture, and other courses are ideal vehicles for infusing environmental content without threatening course integrity" (Volk, 1993, p. 132).

CHAPTER THREE

METHODOLOGY

The project evaluated *Open Court's Anthology*, grades two and three, to address History-Social Science, Earth Science, and Life Science content standards. Annotated bibliographies of children's literature that align with identified content standards were cited. Additionally, activities from *Project WILD* (Council for Environmental Education, 2001), *Project WET* (The Watercourse and the Council for Environmental Education, 1995), and *Project Learning Tree* (American Forest Foundation, 2000) were listed to support the identified standards that correlated with the text. Additional books, not in this reading series, were selected for enrichment and to provide a scaffold to support all learners. The project design cites content standards addressed for referencing in each appendix. Appendix A addresses Life Science Content Standards for grades two and three. Appendix B addresses Earth Science Content Standards for those grades. Appendix C addresses History-Social Science Content Standards addressed for grades two and three.

APPENDIX A
LITERATURE CORRELATED TO LIFE SCIENCE
STANDARDS GRADES TWO AND THREE

Life Science Content Standards

2. Plants and animals have predictable life cycles.
 - a. Students know organisms reproduce offspring of their own kind and the offspring resemble their parents and one another.
 - b. Students know the sequential stages of life cycles are different for different animals. Some characteristics are caused or influenced by environment.
 - c. Students know many characteristics of an organism are inherited from the parents.
 - d. Students know there is variation among individuals of one kind of population.
 - e. Students know light, gravity, touch, or environmental stress can affect the germination, growth, and development of plants.
 - f. Students know flowers and fruits are associated with the reproduction of plants (California Department of Education, 2005a, para. 2).

Grade Three Life Science Content Standards

3. Adaptations in physical structure or behavior may improve an organism's chance for survival.
 - a. Students know plants and animals have structures that serve different functions in growth, survival, and reproduction.
 - b. Students know examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands.
 - c. Students know living things cause change in the environment in which they live: some of these changes are detrimental to the organism or other organisms, some are beneficial.
 - d. Students know when the environment changes, some plants and animals survive and reproduce; others die or move to new locations.
 - e. Students know that some kinds of organisms that once lived on Earth have completely disappeared and that some of those resembled others that are alive today. (California Department of Education, 2005b, para. 3).

Children's Literature

Æsop. (1981). The country mouse and the city mouse. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 284-291). Columbus, OH: McGraw-Hill Companies.

Explore the differences in this tale of life in the city, to life in the country. Readers will explore the differences in the simple, quiet life in the country, to the hustle, bustle life in the city.

Standards addressed: 3.b

Project Learning Tree activity: People, Places, Things

Arnosky, H. (1995). I see animals hiding. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 278-289). Columbus, OH: McGraw-Hill Companies.

Readers will learn how animals in the wild hide to protect themselves from predators. Their protective coloration is called camouflage. This protects animals. You will discover many creatures in the wild in Arnosky's expository text.

Standards addressed: 2.c, 3.a, 3.b, 3.c

Project WILD activity: Adaptation Artistry

Project WILD activity: Animal Charades

Baldwin, A. (1970). Sunflowers for Tina. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 196-211). Columbus, OH: McGraw-Hill Companies.

Tina wants to grow a garden in a small patch of dirt in her backyard in New York City. While Tina's garden is not developed in the story, Tina discovers that plants do thrive in the city.

Standards addressed: 2.f, 3.a, 3.d

Project Learning Tree activity: School Yard Safari

Bash, B. (1990). Urban roosts: Where birds nest in the city. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 158-175). Columbus, OH: McGraw-Hill Companies.

There are many kinds of birds roosting in the city. Your students will learn about urban habitats for birds. Additionally, the text has information about bird behaviors. A beautifully illustrated text.

Standards addressed: 2.d, 3.a, 3.d

Project WILD activity: Environmental Barometer

Bloxan, F. (2001). *Antlers forever*. Rockport, ME: Down East Books.

The lively stanzas reveal the misguided efforts of a young moose trying to save his antlers from falling off as winter arrives. The story ends with the answers to many of the questions your students may have about antlers.

Standards addressed: 2.a; 2.c, 2.d, 3.a, 3.b, 3.c, 3.e

Project WILD activity: Learning To Look, Looking To See

Busch, P. (1970). City lots: Living things in vacant spots. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 132-143). Columbus, OH: McGraw-Hill Companies.

Vacant locations in the city are anything but vacant. Life flourishes in the most reclusive and abandoned places of the city. Meet the wildlife that lives in the city.

Standards addressed: 2.a, 2.c, 3.a, 3.c

Project Learning Tree activity: Are Vacant Lots Vacant?

Chevat, R. (1988). City critters: Wild animals live in the city, too. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 124-131). Columbus, OH: McGraw-Hill Companies.

There are creatures in the most unusual habitats found in the city. You will soon discover that these animals can help us understand the effects of urban living on human city-dwellers too.

Standards addressed: 2.c, 3.a, 3.c

Project WILD activity: Classroom Carrying Capacity

Clifton, L. (1973). The boy who didn't believe in spring. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 144-157). Columbus, OH: McGraw-Hill Companies.

A young boy in the city discovers the characteristics of spring in the most unlikely places.

Standards addressed: 2.e, 3.a

Project Learning Tree activity: Bursting Buds

Cowly, J. (1999). *Red-eyed tree frog*. New York: Scholastic Press.

This book takes you on a photographic journey through the rainforest with the red-eyed tree frog from dusk to dawn. The repetitive language throughout the story is followed by informative text bringing into vibrant focus the wonder of one of earth's little creatures.

Standards addressed: 2.b, 3.b, 3.c

Project WILD activity: Color Crazy

Dragonwagon, C. (1990). Home place. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 84-95). Columbus, OH: McGraw-Hill Companies.

Take a walk in the woods and discover the past. Visit a place that was once the home of a family. A place that now flourishes with wildlife and a families' past history.

Standards addressed: 2.e, 3.a

Project WILD activity: Time Lapse

Gibbons, G. (1997). *Gulls...gulls...gulls*. New York: Holiday House. Inc,

This book explores the gulls' lifecycle, behaviors, and habitats of various species; primarily those found in the North America.

Standards addressed: 2.a, 2.c, 2.d, 3.b, 3.d

Project WET activity: Adaptation Artistry

Ginsburg, M. (1971). Mushroom in the rain. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 150-159). Columbus, OH: McGraw-Hill Companies.

The forest creatures look for shelter from the rain. Learn what really happens to a mushroom when it rains in this charming Russian tale.

Standards addressed: 2.c, 3.a, 3.b, 3.c

Project WET activity: Thunderstorm

Project WILD activity: Stormy Weather

Guiberson, B. (1991) *Cactus hotel*. New York: Henry Holt and Company, Inc.

The Cactus Hotel describes the lifecycle of the saguaro cactus and those desert dwellers that call it home.

Standards addressed: 2.a, 2.c, 2.d, 3.a, 3.b., 3.c, 3.e

Project WET activity: Water Address

Herberman, E. (1989). City superheroes. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 186-195). Columbus, OH: McGraw-Hill Companies.

This informational text describes rats and racoons. The rat's innate survival skills will amaze the readers. You will meet the nocturnal racoon who may be responsible for the strewn trash all over the yard. Readers will be facinated when they discover the racoons forepaw is similar to a child's hand.

Standards addressed: 2.c, 3.a, 3.c

Project WILD activity: Beautiful Basics

Knutson, B. (1990). How the guinea fowl got her spots. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 360-377). Columbus, OH: McGraw-Hill Companies.

A Swahili folk tale of a Guinea fowl that acquires her spots one adventurous day. This tale of friendship explores the concept of camouflage too.

Standards addressed: 2.c, 3.a, 3.b, 3.c

Project WILD activity: Adaptation Artistry

Lobel, A. (1971). Dragons and giants. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 106-113). Columbus, OH: McGraw-Hill Companies.

Frog and Toad's adventure into the wild places will captivate the most reluctant reader. Great opportunity to introduce the concept of predator/prey relationship, and the food chain.

Standards addressed: 2.d, 3.a, 3.b

Project WILD activity: Owl Pellets

Lowery, L. (1990). The tree house. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 86-99). Columbus, OH: McGraw-Hill Companies.

Two young girls learn about friendship in their neighboring tree houses.

Standards addressed: 2.d, 3.a

Project Learning Tree activity: Get In Touch With Trees

McLerran, A. (1971). Roxaboxen. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 258-269). Columbus, OH: McGraw-Hill Companies.

The desert rocks and plants are used to create an imaginary city called Roxaboxen. Readers will discover the beauty found in the most unlikely places.

Standards addressed: 3.b

Project Learning Tree activity: How Plants Grow

McCloskey, R. (1941). Make way for ducklings. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 176-185). Columbus, OH: McGraw-Hill Companies.

This selection is a fantasy. A family of talking ducks discover the city can be a dangerous place to live. Discover how they manage to survive.

Standards addressed: 2.a, 2.c, 3.a, 3.c

Project WET activity: Humpty Dumpty

McDonnell, J. (1998). Animal camouflage. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 292-315). Columbus, OH: McGraw-Hill Companies.

Playing hide-and-seek is not always an easy task. Animals do not have the same problems. The animal's patterns and colors help them hide in their habitat. Discover how these animals protect themselves from hidden dangers.

Standards addressed: 2.c, 3.a, 3.b, 3.c

Project WILD activity: Surprise Terrarium

Mcfarland, C. (1981). Cows in the parlor: A visit to a dairy farm. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 224-235). Columbus, OH: McGraw-Hill Companies.

This article describes life on a dairy farm. The reader experiences an ordinary day caring for 50 cows, including a Jersey cow with a new born calf.

Standards addressed: 2.a, 3.a

Project WILD activity: What's Wild?

Otto, C. (2000). What color is camouflage? In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 318-339). Columbus, OH: McGraw-Hill Companies.

Learn about the ways different animals use their colors. Explore many habitats where animals live in the grassy foothills below the mountain range. Meet several creatures not often seen in the wild.

Standards addressed: 2.c, 3.a, 3.b, 3.c

Project WILD activity: Graphananimal

Rosen, M. (1994). All eyes on the pond. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 380-395). Columbus, OH: McGraw-Hill Companies.

This poetic, rhythmic view of life on a pond is wonderfully illustrated. The reader will view many habitats when all eyes are on the pond.

Standards addressed: 2.b, 3.a, 3.b

Project WILD activity: Wildlife Is Everywhere!

Ryder, J. (2002). *Little panda*. New York: Simon & Schuster Children's Publishing Division.

Photo images of, Hua Mei, the little panda's first year; born at the San Diego. Discover how the zoo's doctors and keepers care for the young panda during his first year.

Standards addressed: 2.a, 3.a

Project WILD activity: Bearly Growing

Sheldon, D. (1990). The whale's song. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 242-257). Columbus, OH: McGraw-Hill Companies.

This realistic fiction is enchanting. Readers will love reading about one of the oceans' most wondrous creatures.

Standards addressed: 2.d, 3.a, 3.b

Project Learning Tree: Sounds Around

Watson, M. (1995). Butterfly seeds. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 298-313). Columbus, OH: McGraw-Hill Companies.

Readers will discover the butterflies' attraction to plants in this realistic fiction.

Standards addressed: 2.f, 3.a, 3.d

Project Learning Tree activity: Have Seeds Will Travel

APPENDIX B
LITERATURE CORRELATED TO EARTH SCIENCE
STANDARDS GRADES TWO AND THREE

Grade Two Earth Science Content Standards

3. Earth is made up of materials that have distinct properties and provide resources for human activities.
 - a. Students know how to compare the physical properties of different kinds of rocks and know rocks are composed of different combinations of minerals.
 - b. Students know smaller rocks come from the breakage and weathering of larger rocks.
 - c. Students know that soil is made partly from weathered rock and partly from organic material. Soils differ in color, texture, capacity to retain water, and ability to support the growth of plants.
 - d. Students know that fossils provide evidence about the plants and animals that lived long ago. Scientists learn about the past history of the Earth by studying fossils.
 - e. Students know rock, water, plants, and soil provide many resources, including food, fuel, and materials humans use. (California Department of Education, 2005a, p. 2).

Grade Three Earth Science Content Standards

4. Objects in the sky move in regular and predictable patterns.
 - a. Students know the patterns of stars stay the same, and different stars can be seen in different seasons.
 - b. Students know the way in which the Moon's appearance changes during the four week lunar cycle.
 - c. Students know telescopes magnify the appearance of some distant objects in the sky.
 - d. Students know that the Earth is one of several planets that orbit the Sun, and that the Moon orbits Earth.
 - e. Students know that the position of the Sun in the sky changes during the course of the day and from season to season. (California Department of Education, 2005b, p. 2).

Children's Literature

Bruno, B. (1991). *Monster tracks*. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 66-73). Columbus, OH: McGraw-Hill Companies.

This lively expository text engages the most reluctant readers. No additional activities needed here. The text is the activity. Take a walk and collect some rocks and feathers. Back to the science lab to whip up some plaster of Paris, mold the artifacts into sand, and your students are having a blast.

Standards addressed: 3.a, 3.b, 3.c, 3.d

Project WILD activity: Tracks!

Granowsky, A. (1992). *Dinosaur fossils*. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 14-31). Columbus, OH: McGraw-Hill Companies.

Learn about fossils in this expository text written for younger students.

Standards addressed: 3.d

Project Learning Tree activity: Earth Manners

Green, N. (1974). *The hole in the dike*. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 118-131). Columbus, OH: McGraw-Hill Companies.

A young Dutch boy living in Holland discovers a leak in the dike that protects his lowland village from the mighty oceans.

Standards addressed: 3.c

Project Learning Tree activity: Did You Notice?

Hennessey, B.G. (1988). The dinosaur who lived in my backyard. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 36-43). Columbus, OH: McGraw-Hill Companies.

A young child fantasizes how life would look with a dinosaur living in his back yard.

Standards addressed: 3.d

Project Learning Tree activity: Here Today, Gone Tomorrow

Ruurs, M. (1996). *A mountain alphabet*. Toronto, Ontario: Tundra Books.

Explore the mountains of the west while browsing for berries with bears, and laughing with the loons. Meet the creatures that bring to life their habitats in the mountains.

Standards addressed: 3.a, 3.b

Project Learning Tree activity: I'd Like To Visit A Place Where...

Sapp, K. (2000). Why did the dinosaurs disappear? In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 48-61). Columbus, OH: McGraw-Hill Companies.

This engaging expository text considers several scientific theories that may explain why the dinosaurs disappeared.

Standards addressed: 3.d

Project WILD activity: Here Today, Gone Tomorrow

Siebert, D. (1991). *Sierra*. U.S.A.: Harper Collins Publishers.

Poetic voice and illustrations share a glimpse of the spectacular beauty and timelessness in the Sierra Nevada Mountains. The diverse landscapes and wildlife living in the Sierra Nevada Mountains come alive.

Standards addressed: 3.a, 3.c, 3.e

Project Learning Tree activity: Everybody Needs A Home

Siebert, D. (1988). *Mojave*. New York: Thomas Y. Crowell.

An extraordinary picturesque and poetic view of the vast and ever-changing landscape of the Mojave Desert is introduced in this text. The wildlife of this ecosystem roam, creep, and glide across the ever changing landscape.

Standards addressed: 3.a, 3.c, 3.e

Project WILD: Habitacks

Yolan, J. (1993). *Welcome to the green house*. New York: G.P. Putnam's Sons.

The mysterious sounds in the tropical rainforest are just a few of the surprises you will find in this illustrated text. The forest is teeming with colorful wildlife. Descriptive, poetic stanzas will engage the most reluctant readers.

Standards addressed: 3.a, 3.c., 3.e

Project Learning Tree activity: Tropical Treehouse

Yolan, J. (1996). *Welcome to the sea of sand*. New York: G.P. Putnam's Sons.

Photographic illustrations invite the reader to explore the Sonora Desert's landscapes, flora, and fauna. Descriptive, poetic stanzas will engage the most reluctant readers.

Standards addressed: 3.a, 3.c, 3.e

Project WILD: Everybody Needs A Home

APPENDIX C

LITERATURE CORRELATED TO HISTORY-SOCIAL
SCIENCE STANDARDS GRADES TWO AND THREE

Grade Two History-Social Science Standards

- 2.1 Students differentiate between things that happened long ago and things that happened yesterday.
- 2.2 Students demonstrate map skills by describing the absolute and relative location of people, places, and environments.
- 2.3 Students explain governmental institutions and practices in the United States and other countries.
- 2.4 Students understand basic economic concepts and their individual roles in the economy and demonstrate basic economic reasoning skills.
- 2.5 Students understand the importance of individual actions and character and explain heroes from long ago and recent past have made a difference in others lives. (California Department of Education, 2005a, p. 2).

Grade Three History-Social Science Standards

- 3.1 Students describe the physical and human geography and use maps, tables, graphs, photographs, and charts to organize information about people, places, and environments in a spatial context.
- 3.2 Students describe the American Indian nations in their local region long ago and in the recent past.
- 3.3 Students draw from historical and community resources to organize the sequence of local historical events and describe how each period of settlement left its mark on the land.
- 3.4 Students understand the role of rules and laws in our daily lives and the basic structure of the U.S. Government.
- 3.5 Students demonstrate basic economic reasoning skills and an understanding of the economy of the local region. (California Department of Education, 2005b, p. 2).

Children's Literature

Alder, D. (1980). A picture book of Martin Luther King, Jr. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 136-151). Columbus, OH: McGraw-Hill Companies.

This biography of King's life examines how this extraordinary man brought about profound change for all Americans. A must read aloud, on, or around King's birthday, January 16th.

Standards addressed: 2.1, 2.3, 3.4

Suggested activity: Timelines

Cherry, L. (1992). *A river ran wild*. Orlando, FL: Harcourt Brace Jovanovich, Publishers.

Learn about history of the Nashua River, from its discovery by the Indians, to the polluting occurring with the Industrial Revolution, to river's restoration.

Standards addressed: 2.1, 2.2, 2.4, 3.1, 3.2, 3.3

Project WET activity: Water Log

Project WET activity: A-maze-ing Water

Ennis, J. (1989). Growing up Amish. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 236-247). Columbus, OH: McGraw-Hill Companies.

This informational text introduces the reader to the lifestyles, beliefs, and customs of the Amish culture. Discover their relationship to the land, family, and God.

Standards addressed: 2.1, 2.4, 3.2

Golenbock, P. (1990). Teammates. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 108-119). Columbus, OH: McGraw-Hill Companies.

Jackie Robbison was the first African American to play ball in major leagues. The reader will discover the courageous actions of two men who went to bat for Reggie.

Standards addressed: 2.5, 3.4

Gross, B. (1971). Money, money, money. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 112-131). Columbus, OH: McGraw-Hill Companies.

A concise and comprehensive history explores the forms and uses of money by several cultures.

Standards addressed: 2.4, 3.5

Haley, G. (1970). A story, a story. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 14-23). Columbus, OH: McGraw-Hill Companies.

This traditional African folktale explains how Ananse, the Spider Man came to be. The characterization and setting in the story are teeming with wildlife.

Standards addressed: 3.2

Project WILD activity: Interview A Spider

Hall, D. (1979). Ox-cart man. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 204-213). Columbus, OH: McGraw-Hill Companies.

This realistic fiction characterizes a New England farm family living in the 1800s. The readers explore the lifestyle and hard work associated with seasons in the coming year. Rhythmic and repetitive high frequency words make this an extremely valuable text for reinforcement and teaching of high frequency words.

Standards addressed: 2.4, 3.5

Project Learning Tree: In The Good Old Days

Hoyt-Goldsmith, D. (1990). Carving the pole. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 38-47). Columbus, OH: McGraw-Hill Companies.

This factual narrative introduces a young boy of the Tsimshian Indians from the state of Washington. His father is an artist, a wood-carver who has been asked by the Klallam Indians to carve a totem pole. Readers will learn about the traditions of the totem pole, and the mystery of the animal shapes and faces carved into the pole.

Standards addressed: 2.4, 3.2

Project Learning Tree activity: Trees For Many Reasons

Kimmel, E. (1989). Four dollars and fifty cents. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 168-183). Columbus, OH: McGraw-Hill Companies.

This tall tale characterizes a cowboy and a widow set in the old west. When Old Shorty plays dead to avoid paying a debt, the Widow Macrae surprises him with a burial.

Standards addressed: 2.4, 3.4, 3.5

Kryst, T. (2000). Oral history. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 48-57). Columbus, OH: McGraw-Hill Companies.

In this nonfiction text, readers learn about oral history's significance in keeping cultures alive around the world.

Standards addressed: 2.1, 3.2

Project Learning Tree activity: Paper Civilizations

Johnston, T. (1994). Amber on the mountain. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 90-109). Columbus, OH: McGraw-Hill Companies.

This realistic fiction examines how life in the remote regions of the mountains was different from life found in the city. When mountain roads are finally built in this remote region, Amber meets Anna. Anna teaches Amber to read because there were no schools in the mountains.

Standards addressed: 2.2, 3.3

Project Learning Tree activity: Then And Now

Lyon, G. (1993). Dreamplace. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 238-245). Columbus, OH: McGraw-Hill Companies.

Tour the ancient cliff-dwellings of the Pueblo people. Learn about the old ways of the Anasazi. The illustrations are stunning. The lyrical text is great for teaching and practicing fluency.

Standards addressed: 2.1, 2.4, 3.2, 3.4

Project Learning Tree activity: Then And Now

Maestro, B. (1986). The story of the Statue of Liberty. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 262-275). Columbus, OH: McGraw-Hill Companies.

This expository text provides amazing facts about the Statue of Liberty. The reader will learn about the artist and the making of the statue. Students will know why, and how the statue came to America in 1885.

Standards addressed: 2.5, 3.4

Polacco, P. (1988). The keeping quilt. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 74-83). Columbus, OH: McGraw-Hill Companies.

Patricia Polacco shares the story of her family's heirloom quilt. Stitched by her grandmother in Russia of old, worn cloth, the blanket remains a family treasure for the memories of shared family celebrations.

Standards addressed: 2.1, 3.3

Polacco, P. (1990). Just plain fancy. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 248-259). Columbus, OH: McGraw-Hill Companies.

The captivating characters in the realistic fiction provide readers with a close-up look at the lifestyles of the Amish.

Standards addressed: 2.3, 3.2

Ross, P. (1976). What ever happened to the Baxter place? In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 260-283). Columbus, OH: McGraw-Hill Companies.

A quaint family farm decides to sell parcels of their land holdings to a friend, then realtors, who in turn sell to corporations and developers, which in turn change the atmosphere of this once charming and quiet community.

Standards addressed: 2.4, 3.5

Project Learning Tree: Did You Notice?

Sanders, S. (1997). A place called freedom. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 248-259). Columbus, OH: McGraw-Hill Companies.

A historical fictional account of a family freed from slavery finding refuge in the Ohio Valley. Over time the community grows as more and more freed slaves are led to Freedom Town.

Standards addressed: 2.1, 2.3, 3.3, 3.4

Shaughnessy, D. & Carpenter, J. (1997). Sequoyah: Inventor of the Cherokee language. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 114-143). Columbus, OH: McGraw-Hill Companies.

This biography explores the life of Sequoyah; the inventor of the Cherokee written language. Sequoyah knew that inventing a written language would preserve the Cherokee's cultural traditions and history.

Standards addressed: 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4

Project Learning Tree activity: Tale of the Sun

Siebert, D. (1989). Heartland. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 214-223). Columbus, OH: McGraw-Hill Companies.

Poetic language explores the nation's heartland. It is about the relationship between the land, and the hardworking farmers, the corn, the rails, the cities, the seasons, the weather, and being an American.

Standards addressed: 2.4, 3.5

Project Learning Tree activity: Signs Of Fall

Sourensen, H. (1995). New hope. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 280-293). Columbus, OH: McGraw-Hill Companies.

This historical fiction recounts the lives of a family who immigrated to America from Denmark in the late 1800s. These pioneers homesteaded on fertile soil along a river abundant with fish.

Standards addressed: 2.4, 3.3

Project WET activity: Stream Sense

Thompson, G. (1997). Immigrants coming to America. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 208-235). Columbus, OH: McGraw-Hill Companies.

Who were the immigrants? They were American Indians, explorers in search of gold, the pilgrims, the Dutch, and Africans brought to America against their will. They were the Jewish, the Germans, the Asians, the Spaniards, and our neighbors to the south in Mexico.

Standards addressed: 2.1, 2.2, 2.5, 3.2, 3.3, 3.4

Venezia, M. (1988). Picasso. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 248-257). Columbus, OH: McGraw-Hill Companies.

This biography of the famous artist, Picasso, explores several of the styles unique to the artist's work.

Standards addressed: 2.5, 3.4

Whittell, G. (1988). The story of the three whales. In C. Bereiter (Ed.), *Open court reading level 2: Teacher's edition* (pp. 220-239). Columbus, OH: McGraw-Hill Companies.

The Artic comes alive during the summer months. But danger lurks as summer comes to a close for a family of California Gray whales. The whales become lost, and the local Inuit try to save the whales. With the help of Russian Admiral Makarov's ice breaker, two of the three whales were saved.

Standards addressed: 2.5, 3.1, 3.2, 3.4

Project WET activity: Molecules in Motion

Ziefert, H. (1986). A new coat for Anna. In C. Bereiter (Ed.), *Open court reading level 3: Teacher's edition* (pp. 100-111). Columbus, OH: McGraw-Hill Companies.

Based on a true story, this retelling of a family's resourcefulness post World War II, in a small European village, is charming.

Standards addressed: 2.4, 3.5

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