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A handbook to integrate children's fiction and science benchmarks" in the primary grades "

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A HANDBOOK TO INTEGRATE
CHILDREN'S FICTION AND SCIENCE "BENCHMARKS"
IN THE PRIMARY GRADES

MASTER'S PROJECT

Submitted to the Department of Teacher Education
University of Dayton, in partial fulfillment
of the requirements for the degree
Master of Science in Teaching

by

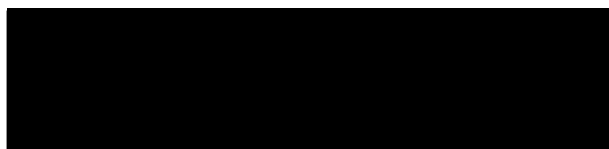
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Dayton, Ohio

July 1995

Approved by:



Official Advisor

DEDICATION

I dedicate this project to my husband, Ken, who has an unending supply of patience and understanding, and my children, Daniel and Molly, whose enthusiasm for children's literature and fascination of science prompted this project.

TABLE OF CONTENTS

CHAPTER ONE - INTRODUCTION

Background.....	1
Problem Statement.....	4
Terms.....	4
Limitations.....	5
Organization.....	5

CHAPTER TWO

Review of Literature.....	7
---------------------------	---

CHAPTER THREE - METHODOLOGY

Motivation.....	13
Objectives.....	13
Organization.....	14
Handbook Development.....	15

CHAPTER FOUR - THE HANDBOOK

Table of Contents.....	18
Introduction.....	20
Section One.....	22
Section Two.....	31

CHAPTER FIVE

Summary.....	171
Conclusions.....	171
Recommendations.....	172

BIBLIOGRAPHY.....	174
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CHAPTER I

INTRODUCTION

Background

Many teachers today are moving away from "traditional" teaching methods and are proclaiming to be "literature-based" or in favor of "whole-language". Ken Goodman describes the whole language classroom:

The teacher motivates, arranges the environment, monitors development, provides relevant and appropriate materials, and invites learners to participate in and plan literacy events and learning opportunities. Ultimately, it is the learner who builds knowledge, knowledge structures, and strategies from the enriched environment the teacher helps create (Goodman, 1986, p. 39).

This type of teaching and learning cannot come only from a textbook. To implement the whole language philosophy, proponents strive to incorporate as much children's literature into the classroom as possible, and decrease the usage of textbooks for some subjects, such as science.

With whole language, the day is no longer divided into segregated, disjuncted lessons, but rather a topic is explored from many different avenues.

Children should simultaneously learn to read for information, ideas, insights, and entertainment. No longer are skills separated into isolated hierarchies, nor are subject areas compartmentalized. Knowledge and learning reach across lines that divide disciplines to create a total learning experience (Butzow & Butzow, 1990, p.29).

To provide students with a variety of experiences and activities, many teachers are creating "thematic units". These teachers take a topic, such as "Dinosaurs", "Grandparents", or "Pioneers" and create lesson plans that incorporate several subjects into a "thematic unit" or theme. Through thematic units, the student is able to discover about the topic through a variety of methods, and the time spent on the topic is lengthened. Students can study a topic in more depth when it is integrated into several subjects, and the students are not required to "change gears" several times a day to study several different subjects.

Science is one area that can easily be taught through thematic units. Children have a natural curiosity about nature and the world around them, and this enthusiasm for science can make a thematic unit interesting. Teachers can use non-fiction children's books to present science concepts and then expand the science idea into everyday life by reading a fiction book about the topic. This allows the teacher to address two subjects at once. The student can be immersed in a book involving science and not realize he is also practicing his reading skills. Similarly, the reading lesson can be enriched by incorporating fiction stories that deal with a science topic. When science is in story form, children are more likely to remember and understand concepts (Butzow & Butzow, 1989). Vibrant photos, colorful illustrations, and text written especially to draw the student into the story, are just a few advantages children's literature offers.

An added benefit of using children's literature is realized by using books that vary in reading levels. By providing an assortment of books, the entire class can read about a particular topic with students using books at their own particular reading level. An under-achieving reading student is not penalized in the subject of science when he can still discover science concepts at his own reading level.

In the past few years, the emphasis in teaching science has become "hands-on". Discovery and exploration are replacing the memorization of science facts. In 1993 the American Association for the Advancement of Science published in *Benchmarks for Science Literacy* new objectives for teaching science (hereafter referred to as "Benchmarks"). The implementation of these "Benchmarks" into the classroom has met with some hesitation from many teachers who do not consider themselves strong in science and are not comfortable guiding students through numerous science activities.

The science proposed in programs such as SCIS (Science Curriculum Improvement Study) SAPA (Science A Process Approach) and ESS (Elementary Science Study) was simply too messy for the classroom. Whereas textbooks could be taken out and put away neatly in a forty-minute time slot, hands-on science was harder to manage or to regulate (Saul, 1991, p. 5).

These teachers still desire the confidence they get from using books. To assist teachers in including both children's literature, with which teachers feel confident and the new "Benchmarks" into their lesson plans, with which teachers may not feel confident, this handbook has been developed.

Problem Statement

This handbook is developed to assist teachers in integrating children's fiction books and the "Benchmarks" into thematic science units for the primary (K-2) grades.

Terms

The following terms are used in this handbook and are briefly described below:

Whole Language - The movement to teaching reading skills by presenting language as a "whole" using books and complete stories rather than isolated words and sounds.

Picture Books - A short story that is illustrated either by photographs or illustrations and can be read in one sitting.

Hands-on - Activities that are based on student participation and promote active learning.

Interdisciplinary - A lesson involving more than one subject area. For example, a lesson that combines reading and science or writing and history.

Thematic Units - A series of lessons based around one particular theme or topic.

Critical Thinking - This type of thinking requires the student to seriously analyze ideas, use inductive and deductive reasoning, and reach conclusions by interpreting data and making inferences.

Limitations

This handbook is targeted towards teachers of the primary grades, specifically grades kindergarten to second grade. Depending on the grade level, some of the fiction books referenced will be appropriate for reading aloud, while others will be appropriate for student reading. "Benchmarks" are based on goals for K-2 from *Benchmarks for Science Literacy*. Teachers of higher grade levels can also create thematic science units by substituting different fiction books and adapting some of the recommended activities to the interests of their students.

Organization

Section One of the handbook is divided into four major areas based on *Benchmarks for Science Literacy* -- "The Physical Setting", "The Living Environment", "The Human Organism", and "The Designed World". These four areas are subdivided into 23 more specific science areas such as "The Universe", "The Earth", and "Processes That Shape the Earth". For each of these topics, "Benchmarks" are given and the appropriate thematic units in Section Two of the handbook are cross-referenced.

Section Two of the handbook is divided into four major areas: "Earth Science", "Life Science", "Physical Science" and "The Human Body". Each of the areas are subdivided into more specific topics which are the basis of the designated thematic units. Thirty-one thematic units are included. Each thematic unit includes relevant

"Benchmarks", recommendations for activities, and descriptions of related fiction books.

CHAPTER II

REVIEW OF LITERATURE

Many schools are striving to increase the "science literacy" of their elementary students. Although the definition of "science literacy" varies from person to person, most educators will agree that elementary students today need a deeper understanding of science. During the past few decades, the National Science Foundation and the National Science Teachers Association have tried to get teachers to rethink the teaching of science. Now teachers are encouraged to promote "hands-on" science, a program that focuses on ongoing student participation. Emphasis is placed on student thought rather than the memorization of facts and the development of student curiosity. In 1993 the American Association for the Advancement of Science released *Benchmarks for Science Literacy*. In this book, new goals or "Benchmarks" are given for teaching science. No longer are facts and ideas to be presented, but students are to learn about science through discovery and generating their own ideas. These models could be considered "revolutionary" by past standards.

The problem arises when elementary teachers are asked to implement this type of model. Many of the developers of "Hands-on science" and "Benchmarks" are formally schooled in science, whereas most elementary teachers are not. During several of her workshops, Vicki Cobb surveyed participants to determine the science background of the teachers present. Her findings showed that of the teachers who taught intermediate grades, 30 percent

had no science in college, 50 percent had perhaps two science courses and 20 percent had significant advanced science training. Of primary grade teachers **95 percent** had only one science course in college! (Cobb, 1991) This lack of science training may help explain why many American elementary schools teach no science whatsoever, and those with science programs tend to offer the subject late in the afternoon two times a week (Saul, 1991).

Many teachers simply do not feel confident in teaching science, and are often overwhelmed by the science programs available. The developers of these programs often viewed science as a subject where speculation and creativity should be encouraged. In the original ESS guides for teachers, answers to questions the materials inspired were conspicuously absent. As Wendy Saul observes:

I am struck by the image of a teacher, himself uncomfortable with science, feeling tossed about in a sea of student-generated questions and longing for the sense of teacherliness a textbook might bring. Scientists secure in their subject knowledge have a much easier time loosing children on materials than a teacher not specially trained in the science, himself awash with his class (Saul, 1991, p 6).

Teachers who desire to include more science in the classroom must feel assured that they can indeed implement a program.

Does this mean then that science can best be presented through science textbooks, a teaching tool that teachers feel comfortable using? Absolutely not! Even though teachers are familiar with using textbooks, a new model that alleviates the use of textbooks should be encouraged. F. James Rutherford, Chief Education Officer of the American Association for the Advancement

of Science, believes that textbooks have become a barrier, and are not a help (Rutherford, 1991). He compares the learning of science to a child's personal experience of his world -- not someone else's interpretation. He relates the idea of learning science as to how a child learns about his neighborhood. Children learn the boundaries of their neighborhood without ever viewing a map. They recognize stores and people, know the difference between streets, sidewalks, and lawns, and gain familiarity with the area. Their knowledge of the neighborhood is incomplete and often wrong, but their familiarity enables them to get around and operate within their own little territory. Children gain this familiarity not by formal study, but by frequent encounters with it, by contacts with the people, and by trying things. Science textbooks do not allow children to discover science in the same manner they discover their neighborhoods. Science textbooks remove the asking of questions and insert answers discovered by others. Children are not finding out, but are being told. They are no longer active learners, but are now passive learners. "A textbook changes the order, emphasizing not discovery but presentation" (Rutherford, 1991, p. 24).

So if science textbooks should be replaced with a more "hands-on" method, and yet teachers are resistant to dive wholehearted into this type of approach, what can be done to stimulate students in science? One possible answer may be the use of children's non-fiction books and the creation of thematic science units that have a whole language philosophy.

By applying this whole language philosophy to science, teachers can surround students with books, posters, and science items to help guide them to "science literacy". Books and activities can be compiled to create thematic units and encourage students to discover about the science topic through a variety of methods. A literature-based science program may be the first step in abandoning textbooks and encouraging hands-on activities.

Children's literature can be divided into two groups -- non-fiction and fiction. Non-fiction reference books can help satisfy student curiosity and the classroom should be full of these! Many of the non-fiction books are filled with vivid color photographs that entice the students to read what is happening. "Science trade books...may be instrumental in helping many children view science personally, as a fascinating subject" (Saul, 1991, p. 12). S. Jeanne Reardon agrees, "Books do more than provide me with content knowledge. They are essential to children's scientific thinking and to their understanding, enjoyment and appreciation of science. I see both children and science as enriched by books" (Reardon, 1991, p. 117). "Today's science books for children should inform and entertain. They should be accurate and inviting" (Jagusch, 1991, p. vii). Fortunately, today many non-fiction books are available that meet these criteria. Vivid illustrations and colorful photography draw the child into the book in an enticing manner.

While students are learning scientific information, they also can be forming concepts and grappling with issues that will have a profound effect on their future in this world....For example, concerns about endangered species and habitats have been heightened after reading book after book that either explores or merely mentions this ever increasing problem, as well as by reading books which actively present the idea of the delicate balance that nature holds (Galda, 1990, p. 316).

As an added benefit, these books are written at a range of reading abilities. If a variety of books are available, students can enjoy discovering the joys of nature, without struggling over vocabulary limitations.

Incorporating fiction books will excite students and teachers alike.

Because literature has a story line, children may find it easier to follow the ideas that are part of a plot than to comprehend facts as presented in a textbook. Science is very abstract for youngsters and must be seen as part of their own personal world if it is to be understood and remembered. The story does this by putting facts and concepts into a form that encourages children to build a hypothesis, predict events, and test to determine whether their ideas are correct. In this way, the lesson becomes relevant and conceptually in tune with the children's abilities (Butzow & Butzow, 1990, p. 29).

For example, children can read about metamorphosis as a caterpillar becomes a butterfly in *The Very Hungry Caterpillar* (Carle, 1969). Books such as Mirra Ginsburg's *The Chick and the Duckling* (1972) demonstrates that ducklings can swim but chicks cannot. In *Just a Dream*, (Van Allsburg, 1990) the reader must reflect on how the future might be affected with the pollution and diminishing resources of today. Many fiction books can bring science into young children's lives.

"Some stories cry out for small experiments or scientific demonstrations" (Manning, 1991, p. 110). Reading *Two Bad Ants* (Van Allsburg, 1988) is an excellent lead-in to experimenting to see what foods really do attract ants. After reading *Great Trash Bash* (Leedy, 1991), students may want to experiment to see what type of trash products are biodegradable. Student curiosity in a science concept can be generated through a fun, fiction book.

Rutherford recommends that a variety of fiction books should be present in the classroom.

There should be storybooks that motivate the student to put down the book and investigate something for himself. The book should not be the end of curiosity, but its starting point, leading the young reader into a personal interaction with nature (Rutherford, 1991, p. 29).

Numerous fiction books can tie into science and most teachers, especially with the whole language movement active, are excited to use books such as these. Children find fiction books exciting and "using good books taps the strength of most elementary school teachers" (Cobb, 1991, p. 63). Therefore, to build on these strengths, and foster confidence in the area of science, this handbook has been developed.

CHAPTER III

METHODOLOGY

Motivation

The idea to develop a handbook to integrate science and children's literature was generated after taking a recent course in children's literature. The surge of vivid, exciting picture books is truly motivational. It is understandable why so many teachers are enthusiastic about using these books in the classroom. It also seems equally important that students be enthusiastic about the learning process. The natural curiosity children have about science, especially in the primary grades, inspired this writer to create thematic units that could focus on science concepts. Coupled with the country's strong emphasis to increase science achievement for students today, the focus of this project quickly became evident.

Objectives

The objective of this handbook is two-fold. For teachers who are "literature-based" and using the whole language philosophy, resources and ideas are provided to encourage the teachers to integrate "Benchmarks" into the thematic unit. For teachers whose strengths are science, suggestions of children's books are given to update the teachers with available children's fiction. Thus the handbook is divided into two sections. Section One examines the different "Benchmarks" for the grades K-2 and suggests

thematic units in Section Two that could be developed to "teach" these concepts. Section Two details 31 thematic science units based on traditional science topics. Each unit (1) outlines "Benchmarks" that could be reinforced in that unit, (2) provides suggestions for activities, and (3) summarizes fiction books that tie into the theme.

Organization

To organize this handbook, the science "Benchmarks" for the primary grade levels were thoroughly reviewed and compared to the current scope and sequence (or "course of study") of a local school system. The objectives from the course of study were already divided into basic topics such as "Animals" or "Plants". These topics were divided into smaller more focused chapters such as "Trees", "Reptiles & Amphibians", and "Birds". The thematic units of the handbook were chosen so that all of the current objectives were included in at least one unit. "Benchmarks" were then cross-referenced to determine which of the thematic units they relate. These thematic units comprise Section Two of the handbook. As a cross-reference, the "Benchmarks" were organized into the different "topics" created by the American Association for the Advancement of Science. For each of these topics the corresponding handbook thematic units were compiled that could be used to support those goals. These are listed in Section One of the handbook.

Handbook Development

The major obstacles a teacher encounters when creating a thematic unit are finding books to use and knowing what books are available. Non-fiction books are neatly organized by numerical filing systems. Books about the moon are all shelved together and will not be difficult to find. In addition, most computerized library systems will give teachers titles of related non-fiction books when a specific topic is entered. The problem arises when teachers are searching for fiction books. Fiction books are shelved by the author's last name. Teachers will not be able to find all fiction books about spiders together on the shelf. To complicate matters, with many computer systems, if the key word "spiders" is entered, only non-fiction books will be selected. If fiction books are retrieved, it may be only based on the title. *The Very Busy Spider* by Eric Carle (1984) may be listed, but not *Charlotte's Web* by E.B. White (1952). It was then decided that to be most beneficial, this handbook would concentrate on assisting teachers in finding fiction books that can tie into science topics and help integrate the new science "Benchmarks".

Fiction books were reviewed and evaluated as to whether or not they tie into one of the handbook thematic units. This was done by physically reviewing the fiction section of a local public library book by book. If the book was considered pertinent, it was briefly summarized. This summary will give the teacher an idea of what the book is about if he or she is not familiar with the book. The book summary can also help the teacher decide how

to best use it. For example, a book may be a collection of poems and the teacher may want to discuss poetry. A book might be a counting book that illustrates groups of insects from one praying mantis to one thousand butterflies. A teacher may want to use this book with math to demonstrate place value or estimation. These books are listed in Section Two of the handbook.

Recommendations and suggestions were then compiled for activities that a teacher could use when creating a thematic unit. Some activities are science experiments, some may be art ideas, and some are creative writing suggestions. Finally, the fiction books are listed and summarized, providing the teacher with many selections from which to choose. By using these sections of the handbook, teachers should be able to plan science units with very little difficulty.

It is recommended that non-fiction books be incorporated into the classroom, however, descriptions of these books are not included in the handbook. Related non-fiction books can quickly be found in the library, as non-fiction books are shelved by topic. A teacher could obtain these books from the library and check out books of varying difficulty. By using this handbook and library resources, literature-based teachers or whole-language proponents can develop science units that will excite the students and build teacher confidence in discontinuing textbook usage. Once teachers are away from science textbooks it may be easier to include even more science activities and begin thinking like scientists!

A HANDBOOK TO INTEGRATE
CHILDREN'S FICTION AND SCIENCE "BENCHMARKS"
IN THE PRIMARY GRADES

Handbook Table of Contents

Introduction.....	20
Section One.....	22
THE PHYSICAL SETTING	
The Universe.....	23
The Earth.....	23
Processes That Shape the Earth.....	23
The Structure of Matter.....	24
Energy Transformations.....	24
Motion.....	24
THE LIVING ENVIRONMENT	
Diversity of Life.....	24
Heredity.....	25
Cells.....	25
Interdependence of Life.....	25
Flow of Matter and Energy.....	26
Evolution of Life.....	26
THE HUMAN ORGANISM	
Human Identity.....	26
Human Development.....	27
Basic Functions.....	27
Learning.....	27
Physical Health.....	28
Mental Health.....	28
THE DESIGNED WORLD	
Agriculture.....	28
Materials and Manufacturing.....	29
Energy Sources and Use.....	29
Communication.....	29
Health Technology.....	30
Section Two.....	31
EARTH SCIENCES	
The Sun.....	32
The Moon.....	35
Space.....	38
Rocks.....	40
The Seasons.....	42
Water.....	44

LIFE SCIENCES

Plants.....	48
Trees.....	51
Insects and Spiders.....	53
Birds.....	57
Fish and Mollusks.....	63
Reptiles and Amphibians.....	66
Mammals.....	71
Dinosaurs.....	86
Sea Life.....	90
Deserts.....	95
Polar Regions.....	97
Tropical Rainforests.....	100
Grasslands.....	105
Woodlands and Ponds.....	109
Ecology.....	114
Endangered Animals.....	120

PHYSICAL SCIENCES

Light and Heat.....	123
Sound and Communications.....	126
Simple Machines.....	128
Physical and Chemical Changes.....	131
Mass and Measurement.....	136

THE HUMAN BODY / HEALTH

The Senses.....	140
Body Systems.....	146
Nutrition and Exercise.....	156
Diseases, Disorders and Drugs.....	166

A Handbook to Integrate Children's Fiction and Science "Benchmarks" In the Primary Grades

Introduction

This handbook is divided into two sections to assist teachers in planning thematic science units. In Section One, "Benchmarks" are given for a variety of science topics. These "Benchmarks" are cross-referenced to the thematic units in Section Two that could be used to teach these goals. This section will be especially helpful to teachers who feel overwhelmed by some of the new concepts presented and would like to meet these new goals by developing thematic units based on traditional topics.

In Section Two, teachers can acquaint themselves with some of the children's fiction books available that can be the part of a thematic unit. Teachers are encouraged through the "Recommendations & Comments" section to integrate other subjects into the thematic unit, making it even more interdisciplinary. For example, a teacher may plan a thematic unit on insects by reading fiction books relating to the topic such as *Two Bad Ants* by Chris Van Allsburg (1989) and *The Very Hungry Caterpillar* by Eric Carle (1969). Non-fiction books that give facts on the topic, such as *An Ant Colony* by Heiderose and Andreas Fischer-Nagel (1989), *Insect Metamorphosis* by Ron and Nancy Goor (1990), and *Monarch Butterfly* by Gail Gibbons (1989) can be shared. Science activities involving the topic, such as experimenting to see what foods really do attract ants or creating a Venn diagram to compare

butterflies and moths add student participation. Encouraging writing assignments about the topic, such as describing what it might be like to be a 17-year locust and emerging in the year 2012, or creating a menu for caterpillars can tie in writing. The unit can even include creative expression through art projects, such as designing the ultimate insect (how many legs will it have?) or making waxed paper and crayon butterflies. The migration pattern of the Monarch butterflies can be traced on the map, reinforcing map skills. Music can be included by listening to "The Flight of the Bumblebee" by Rimsky-Korsakov. Journal entries can be made to record observations on how the class ant farm is changing. By using a variety of activities, children are experiencing the science topic through a range of learning methods, and are exposed to the topic for a longer period of time.

SECTION ONE

**Integrating "Benchmarks"
into Thematic Units**

THE PHYSICAL SETTING

The Universe

Benchmarks (p.62):

- "There are more stars in the sky than anyone can easily count, but they are not scattered evenly, and they are not all the same in brightness or color."
- "The sun can be seen only in the daytime, but the moon can be seen sometimes at night and sometimes during the day. The sun, moon and stars all appear to move slowly across the sky."
- "The moon looks a little different every day, but looks the same again about every four weeks."

Related Thematic Units: "The Sun", "The Moon", "Space"

The Earth

Benchmarks (p. 67):

- "Some events in nature have a repeating pattern. The weather changes some from day to day, but things such as temperature and rain (or snow) tend to be high, low, or medium in the same months every year."
- "Water can be a liquid or a solid and can go back and forth from one form to the other. If water is turned into ice and then the ice is allowed to melt, the amount of water is the same as it was before freezing."
- "Water left in an open container disappears, but water in a closed container does not disappear."

Related Thematic Units: "Water", "The Seasons", "Physical and Chemical Changes"

Processes That Shape The Earth

Benchmarks (p. 72):

- "Chunks of rocks come in many sizes and shapes, from boulders to grains of sand and even smaller."
- "Change is something that happens to many things."
- "Animals and plants sometimes cause changes in their surroundings."

Related Thematic Units: "Rocks", "Landforms and Geological Processes", "Physical and Chemical Changes"

The Structure of Matter

Benchmarks (p. 76):

- "Objects can be described in terms of the materials they are made of (clay, cloth, paper, etc.) and their physical properties (color, size, shape, weight, texture, flexibility, etc.)"
- "Things can be done to materials to change some of their properties, but not all materials respond the same way to what is done to them."

Related Thematic Units: "Physical and Chemical Changes", "Mass and Measurement"

Energy Transformations

Benchmarks (p. 83):

- "The sun warms the land, air and water."

Related Thematic Units: "The Sun", "Light and Heat"

Motion

Benchmarks (p. 89):

- "Things move in many different ways, such as straight, zigzag, round and round, back and forth, and fast and slow."
- "The way to change how something is moving is to give it a push or a pull."
- "Things that make a sound vibrate."

Related Thematic Units: "Sound", "Machines"

THE LIVING ENVIRONMENT

Diversity of Life

Benchmarks (p. 102):

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another."
- "Plants and animals have features that help them live in different environments."
- "Stories sometimes give plants and animals attributes they really do not have."

Related Thematic Units: "Insects and Spiders", "Reptiles and Amphibians", "Birds", "Fish", "Mammals", "Dinosaurs", "Sea Life", "Polar Regions", "Deserts", "Tropical Rainforests", "Grasslands", "Woodlands and Ponds"

Heredity

Benchmarks (p. 107):

- "There is variation among individuals of one kind within a population."
- "Offspring are very much, but not exactly, like their parents and like one another."

Related Thematic Units: "Insects and Spiders", "Reptiles and Amphibians", "Birds", "Fish", "Mammals"

Cells

Benchmarks (p. 111):

- "Magnifiers help people see things they could not see without them."
- "Most living things need water, food and air."

Related Thematic Units: "Plants", "Insects and Spiders", "Reptiles and Amphibians", "Birds", "Fish", "Mammals", "Diseases, Disorders and Drugs"

Interdependence of Life

Benchmarks (p. 116):

- "Animals eat plants or other animals for food and may also use plants (or even other animals) for shelter and nesting."
- "Living things are found almost everywhere in the world. There are somewhat different kinds in different places."

Related Thematic Units: "Sea Life", "Polar Regions", "Deserts", "Tropical Rainforests", "Grasslands", "Woodlands and Ponds", "Plants", "Insects and Spiders", "Reptiles and Amphibians", "Birds", "Fish", "Mammals"

Flow of Matter and Energy

Benchmarks (p. 119):

- "Plants and animals both need to take in water, and animals need to take in food. In addition, plants need light."
- "Many materials can be recycled and used again, sometimes in different forms."

Related Thematic Units: "Plants", "Insects and Spiders", "Reptiles and Amphibians", "Birds", "Fish", "Mammals", "Diminishing Resources"

Evolution of Life

Benchmarks (p. 123):

- "Different plants and animals have external features that help them thrive in different kinds of places."
- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today."

Related Thematic Units: "Plants", "Insects and Spiders", "Reptiles and Amphibians", "Birds", "Fish", "Mammals", "Dinosaurs", "Sea Life", "Polar Regions", "Deserts", "Tropical Rainforests", "Grasslands", "Woodlands and Ponds", "Endangered Animals"

THE HUMAN ORGANISM

Human Identity

Benchmarks (p. 128):

- "People have different external features, such as the size, shape, and color of hair, skin and eyes, but they are more like one another than like other animals."
- "People need water, food, air, waste removal, and a particular range of temperatures in their environments, just as other animals do."
- "People tend to live in families and communities in which individuals have different roles."

Related Thematic Units: "The Senses", "Body Systems", "Nutrition and Exercise"

Human Development

Benchmarks (p. 132):

- "All animals have offspring, usually with two parents involved. People may prevent some animals from producing offspring."
- "A human baby grows inside its mother until its birth. Even after birth, a human baby is unable to care for itself, and its survival depends on the care it receives from adults."

Related Thematic Units: "Body Systems", "Insects and Spiders", "Reptiles and Amphibians", "Fish", "Birds", "Mammals"

Basic Functions

Benchmarks (p. 136):

- "The human body has parts that help it seek, find and take in food when it feels hunger - eyes and noses for detecting food, legs to get to it, arms to carry it away, and a mouth to eat it."
- "Senses can warn individuals about danger; muscles help them to fight, hide or get out of danger."
- "The brain enables human beings to think and sends messages to other body parts to help them work properly."

Related Thematic Units: "The Senses", "Body Systems"

Learning

Benchmarks (p. 140):

- "People use their senses to find out about their surroundings and themselves. Different senses can give different information. Sometimes a person can get different information about the same thing by moving closer to it or further away from it."
- "Some of the things people do, like playing soccer, reading, and writing, must be deliberately learned. Practicing helps people to improve. How well one learns sometimes depends on how one does it and how often and how hard one tries to learn."
- "People can learn from each other by telling and listening, showing and watching, and imitating what others do."

Related Thematic Units: "The Senses", "Body Systems", "Diseases, Disorders and Drugs"

Physical Health

Benchmarks (p. 144):

- "Eating a variety of healthful foods and getting enough exercise and rest help people to stay healthy."
- "Some things people take into their bodies from the environment can hurt them."
- "Some diseases are caused by germs, some are not. Diseases caused by germs may be spread by people who have them. Washing one's hands with soap and water reduces the number of germs that can get into the body or that can be passed on to other people."

Related Thematic Units: "Nutrition and Exercise", "Pollution",
"Diseases, Disorders and Drugs"

Mental Health

Benchmarks (p. 148):

- "People have many different feelings - sadness, joy, anger, fear, etc. -- about events, themselves and other people."
- "People react to personal problems in different ways. Some ways are more likely to be helpful than others."
- "Talking to someone (a friend, relative, teacher, or counselor) may help people understand their feelings and problems and what to do about them."

Related Thematic Units: "Body Systems"

THE DESIGNED WORLD

Agriculture

Benchmarks (p. 184):

- "Most food comes from farms either directly as crops or as the animals that eat the crops. To grow well, plants need enough warmth, light, and water. Crops also must be protected from weeds and pests that can harm them."
- "Part of a crop may be lost to pests or spoilage."
- "A crop that is found when harvested may spoil before it gets to consumers."

- "Machines improve what people get from crops by helping in planting and harvesting, in keeping food fresh by packaging and cooling, and in moving it long distances from where it is grown to where people live."

Related Thematic Units: "Plants", "Machines", "Nutrition and Exercise"

Materials and Manufacturing

Benchmarks (p. 188):

- "Some kinds of materials are better than others for making any particular thing. Materials that are better in some ways (such as stronger or cheaper) may be worse in other ways (heavier or harder to cut)."
- "Several steps are usually involved in making things."
- "Tools are used to help make things, and some things cannot be made at all without tools. Each kind of tool has a special purpose."
- "Some materials can be used over again."

Related Thematic Units: "Machines", "Ecology"

Energy Sources and Uses

Benchmarks (p. 193):

- "People can save money by turning off machines when they are not using them."
- "People burn fuels such as wood, oil, coal, or natural gas, or use electricity to cook their food and warm their houses."

Related Thematic Units: "Light and Heat", "Ecology"

Communication

Benchmarks (p. 197):

- "Information can be sent and received in many different ways. Some allow answering back and some do not. Each way has advantages and disadvantages."
- "Devices can be used to send and receive messages quickly and clearly."

Related Thematic Unit: "Sound and Communications"

Health Technology

Benchmarks (p. 201):

- "Vaccinations and other scientific treatments protect people from getting certain diseases, and different kinds of medicines may help those who do become sick to recover."

Related Thematic Unit: "Diseases, Disorders and Drugs"

SECTION TWO

Creating Thematic Units

EARTH SCIENCE

THE SUN

"Benchmarks":

- "The sun can be seen only in the daytime, but the moon can be seen sometimes at night and sometimes during the day. The sun, moon and stars all appear to move slowly across the sky." (*Benchmarks*, p. 62)
- "The sun warms the land, air and water." (*Benchmarks*, p. 83)

Recommendations/Comments:

Many picture books are available that involve the sun. Some reflect on the warmth the sun provides, some playfully address the concept that the sun appears to move across the sky, and others center around the sun and the changes that come with the different seasons. These fun stories can easily integrate reading with the above science goals. In addition, some of these books depict the sun with "human" characteristics -- another goal can be to discuss the reality of this feature. To integrate writing and science try writing a story about a day when the sun didn't rise, or your own tale of where the sun goes at night.

Related Children's Fiction:

SUN'S UP, by Teryl Euvremer (Crown Publishers)

The sun rises from his bed in the morning, spends the day moving across the sky while engaged in different activities, and goes to sleep as night falls. This book contains no words, only illustrations.

THE SUN'S DAY, by Mordicai Gerstein (Harper & Row)

An hour-by-hour description of the activities that take place as the sun rises, moves through the sky, and finally sets. This book has large print and few words.

THE SUN'S ASLEEP BEHIND THE HILL, by Mirra Ginsburg (Morrow & Company)

The sun, the breeze, the leaves, the bird, the squirrel, and the child all grow tired after a long day and go to sleep. This book has large text, few words, and beautiful illustrations.

THE WAY TO START A DAY, by Byrd Baylor (Scribner Publishing)

Text and illustrations describe how people all over the world celebrate the sunrise.

SHINE, SUN!, by Carol Greene (Childrens Press)

As a child talks to the Sun, the reader can see some of the Sun's happy effects.

WAKE UP, SUN!, by David Lee Harrison (Random House)

When Dog wakes up early, in the middle of the night, he launches all the other farm animals in a worried search for the missing sun.

THE MISER WHO WANTED THE SUN, by Jurg Obrist (Atheneum)

Two children teach a greedy miser that he must share certain things.

UNDER THE SUN, by Ellen Kandoian (Dodd & Mead)

Molly's mother answers her question about where the sun goes each night by taking her on a visual journey around the world.

ONE SUN: A BOOK OF TERSE VERSE, by Bruce McMillan (Holiday House)

Describes a day at the beach in a series of terse verses (verses made up of two monosyllabic words that rhyme) accompanied by photographs.

CLAUDE AND SUN, by Matt Novak (Bradbury Press)

From morning till night, Claude and Sun have a wonderful time together.

THE MORNING THE SUN REFUSED TO RISE, by Glen Rounds (Holiday House)

When the sun doesn't rise one morning, the King of Sweden contacts Paul Bunyan and asks him to find the cause of the catastrophe.

THE BOY WHO PAINTED THE SUN, by Jill Morris (Penguin Books)

A boy misses his colorful farm when he moves to the city and finds a way to make the city more colorful and make the people smile.

LOUHI, WITCH OF NORTH FARM, by Toni Gerez (Viking Press)

Louhi's plan to steal the sun and moon backfires when the gods learn of her mischievous scheme.

I HAVE A FRIEND, by Keiko Narahashi (McElderry Books)

A small boy tells about his friend who lives with him, who follows him, who sometimes is very tall, but who disappears when the sun goes down -- his shadow.

WHERE DOES THE SUN GO AT NIGHT?, by Mirra Ginsburg (Mulberry Books)

Every night the sun goes to the house of his grandma, the deep blue sky, is tucked in bed by his grandpa, the wind, and is awakened the following day by the morning.

LITTLE DAYLIGHT, by George MacDonald (North-South Books)

At her christening, the princess, Little Daylight, receives a curse from a wicked fairy that she shall never see the sun and shall be affected by the changing moon until kissed by a prince.

A YEAR OF BEASTS, by Ashley Wolff (E. P. Dutton)

Cronicles the seasons month by month and shows which creatures come out with each new month.

ANIMAL SEASONS, by Brian Wildsmith (Oxford University Press)

Follows what happens to different animals with each season change.

DO YOU KNOW WHAT I'LL DO?, by Charlotte Zolotow (Harper & Row)

A story of the seasons and the holidays from a child's point of view.

FIRST COMES SPRING, by Anne Rockwell (Thomas Y. Crowell)

A bear child notices that the clothes he wears, the things everyone does at work and play, and other parts of his world all change with the seasons.

MY FAVORITE TIME OF YEAR, by Susan Pearson (Harper & Row)

A little girl tries to determine what her favorite time of year is.

SEASONS, by Brian Wildsmith (Oxford University Press)

A look at the lives of several different animals during each of the seasons.

SUMMER IS ..., by Charlotte Zolotow (Thomas Y. Crowell)

Captures some of the joys and beauties of each season through colorful illustrations.

THIS YEAR'S GARDEN, by Cynthia Rylant (Bradbury Press)

Follows the seasons of the year through the growth, life, and death of a rural family's garden.

ON A HOT, HOT DAY, by Nicki Weiss (G. P. Putnam)

A mother and young son enjoy activities together during each season of the year.

COLD STARS AND FIREFLIES: POEMS OF THE FOUR SEASONS,

by Barbara Juster Esbensen (Thomas Y. Crowell)

A collection of poems about nature and the changing seasons.

EARTH SCIENCE

THE MOON

"Benchmarks":

- "The sun can be seen only in the daytime, but the moon can be seen sometimes at night and sometimes during the day. The sun, moon and stars all appear to move slowly across the sky." (*Benchmarks*, p. 62)

- "The moon looks a little different every day, but looks the same again about every four weeks." (*Benchmarks*, p. 62)

Recommendations/Comments:

A unit on the moon can easily integrate science and literature. Many wonderful fiction books exist that involve the moon, and they can both reinforce the above goals and tie in reading. To integrate writing, students can write an imaginary story of what it might be like to live on the moon, write a tall tale to explain why the moon is in the sky, or write and illustrate a book of colors similar in style to the book WHITE IS THE MOON. (See below) You may even want to release excess energy by having the class "dance by the light of the moon" or dance as if you were on the moon with no gravity!

At this primary age, students are often fascinated by actual pictures of the moon and it would be enriching to have several non-fiction books around for the children to read. The books below are written at the primary reading level and have great illustrations.

What the Moon is Like by Franklyn Branley (Thomas Y. Crowell)
The Moon by Seymour Simon (Four Winds Press)
Let's Find Out About the Moon by Martha Shapp (Franklin Watts)

Related Children's Fiction:

THE TRUTH ABOUT THE MOON, by Clayton Bess (Houghton Mifflin)

An African child is told several stories about the moon, but he still feels he has not learned the truth.

STAR TALES: NORTH AMERICAN INDIAN STORIES ABOUT THE STARS,
by Gretchen Mayo (Walker & Company)

A collection of Indian legends about stars, moon, and the nighttime sky.

THE BURIED MOON, by Amanda Walsh (Houghton Mifflin)

The moon is held prisoner in the bog by the Hidden Folk, until the townspeople miss her light and go in search of her.

BURIED MOON, by Margaret Hodges (Little, Brown & Company)

Who will rescue the moon after she is buried in a deep pool by witches and goblins who have always resented her light?

THE MAN IN THE MOON: SKY TALES FROM MANY LANDS,

by Alta Jablow (Rinehart & Winston)

Stories from many lands about the enchantment and magic of the moon, sun, and stars.

WHITE IS THE MOON, by Valerie Greeley (Macmillan)

A variety of colors are illustrated with poems for each color.

THE MOON COMES HOME, by Mary Jo Salter (Alfred A. Knopf)

On the trip home by car from Grandmother's house, a young child observes the moon.

UNDER THE MOON, by Joanne Ryder (Random House)

Mama mouse teaches her little mouse how to tell where home is by reminding her of its special smells, sounds, and textures.

THE MOON LAKE, by Ivan Gantschev (Neugebauer Press)

The moon lake helps a young boy keep the moon's bathing spot a secret from the greedy mayor and constables.

MAGGIES MOON, by Martha Alexander (Dial Press)

A little girl and her dog set out to capture the moon and bring it home with them.

HAPPY BIRTHDAY, MOON! by Frank Asch (Prentice-Hall)

When a bear discovers that the moon shares his birthday, he buys the moon a beautiful hat as a present.

GRANDFATHER TWILIGHT, by Barbara Berger (Philomel Books)

At the day's end, Grandfather Twilight walks in the forest to perform his evening task, bringing the miracle of night to the world.

WAIT TILL THE MOON IS FULL, by Margaret Wise Brown (Harper & Row)

A little raccoon wants to see the night but his mother makes him wait until the moon is full.

PAPA, PLEASE GET THE MOON FOR ME, by Eric Carle (Alphabet Press)

Monica's father fulfills her request for the moon by taking it down after it is small enough to carry, but it continues to change in size.

BUFFALO GIRLS, by Bobette McCarthy (Crown Publishers)

An illustrated version of the traditional folk song, in which the Buffalo girls sing by starlight and dance by the light of the moon.

TOWSER AND SADIE'S BIRTHDAY, by Tony Ross (Pantheon Books)

Sadie wants the moon for her birthday, and Towser does his best to get it for her.

THE DANCING CAT, by Justine Rendal (Simon & Schuster)

By the light of the moon, a toy cat realizes her dream of becoming a dancer.

STEP INTO THE NIGHT, by Joanne Ryder (Four Winds Press)

A child stands outside her moonlit home and imagines the lives of many night creatures as they move silently in the unseen world of darkness.

THE MAN IN THE MOON AS HE SAILS THE SKY AND OTHER MOON VERSE,
by Ann Schweninger (Dodd, Mead & Co.)

Poems about the moon from sources such as: Mother Goose, Vachel Lindsay, Edward Lear, William Wordsworth, and R. L. Stevenson.

LITTLE DAYLIGHT, by George MacDonald (North-South Books)

At her christening, the princess, Little Daylight, receives a curse from a wicked fairy that she shall never see the sun and shall be affected by the changing moon until kissed by a prince.

MANY MOONS, by James Thurber (Harcourt Brace Jovanovich)

Although many try, only the court jester is able to fulfill Princess Lenore's wish for the moon.

THE MOON JUMPERS, by Janice May Udry (Harper & Row)

A group of children enjoy playing in the moonlight.

MOON WHALES AND OTHER MOON POEMS, by Ted Hughes (Viking Press)

A poet's evocation of animals and plants which live on the moon of his imagination.

MOON SONG, by Chris Conover (Morrow Junior Books)

A lullaby in which a moon man goes fishing the seas for many treasures.

THE FARMER AND THE MOON, by Anneliese Lussert (North-South Books)

A poor farmer receives help from an unexpected source to teach a neighbor that greed has its price.

BUILDER OF THE MOON, by Tim Wynne-Jones (McElderry Books)

Brave block-builder David Finebloom receives a message from the moon that it is falling apart and rushes off to help.

DESTINATION MOON, by Herg'e (Little, Brown & Company)

Tintin, Snowy, and Captain Haddock join Professor Calculus' moon expedition.

EXPLORERS ON THE MOON, by Herg'e (Little, Brown & Company)

Tintin and his friends are involved in the first manned flight to the moon which proves perilous.

MOONCAKE, by Frank Asch (Prentice-Hall)

Bear builds a rocket to take him to the moon so he can taste it.

THE BERENSTAIN BEARS ON THE MOON, by Stan Berenstain (Beginner Books)

Two Berenstain Bears and their pup take a rocket ship to the moon.

THE CHURCH MICE AND THE MOON, by Graham Oakley (Atheneum)

Arthur and Humphrey are kidnapped to undergo crash training as astromice.

REGARDS TO THE MAN IN THE MOON, by Ezra Jack Keats (Four Winds Press)

With the help of his imagination, his parents, and a few scraps of junk, Louie and his friends travel through space.

EARTH SCIENCE

SPACE

"Benchmarks":

- *"The sun can be seen only in the daytime, but the moon can be seen sometimes at night and sometimes during the day. The sun, moon and stars all appear to move slowly across the sky."* (*Benchmarks*, p. 62)

Recommendations/Comments:

Stars have played a part in many historical events -- a star led the wisemen to Jesus, stars were used for navigation by explorers like Columbus, and the stars helped guide runaway slaves on the Underground Railroad. A lesson on stars could integrate an historical event right along with the science goal of observing how stars change during the year. The vast amount of resources and science materials on the constellations makes this a great opportunity to challenge students of all abilities. Try designing your own constellations by using black construction paper and a thumbtack/push pin. Poke holes in the paper and hand the creation in the window. Writing activities can include "What would you wish for if you saw the first star tonight?" or "If you were a "star", what would you be famous for?".

Related Children's Fiction:

OTTIE AND THE STAR, by Laura Jean Allen (Harper & Row)

A little otter encounters a shark, a dolphin, and a starfish while trying to catch a star.

THE NIGHT STELLA HID THE STARS, by Gail Radley (Crown Publishers)

After millions of years of dusting the stars all day to have them ready for the night sky, Stella decides she needs time to enjoy the day.

FOR EVERY CHILD A STAR, by Thomas Yeomans (Holiday House)

On a particularly brilliant starlit night, an old man finds his sleep interrupted several times by the unusual activity outside his window.

FOLLOW THE DRINKING GOURD, by Jeanette Winter (Alfred A. Knopf)

By following directions in a song taught them by a sailor and watching the night sky, runaway slaves journey along the Underground Railway.

SKY ALL AROUND by Anna Grossnickle Hines (Clarion Books)

A father and daughter share a special time when they go out on a clear night to watch the stars.

HOW MANY STARS IN THE SKY, by Lenny Hort (Tamborine Books)

One night when Mama is away, Daddy and child seek a good place to count the stars in the night sky.

PANCHO'S PINATA, by Stefan Czernecki (Hyperion Books For Children)

On Christmas Eve, Pancho rescues a star from a cactus and receives the gift of happiness.

HER SEVEN BROTHERS, by Paul Goble (Bradbury Press)

Retells the Cheyenne legend in which a girl and her seven chosen brothers become the Big Dipper.

THE HEAVENLY ZOO: LEGENDS AND TALES OF THE STARS,

by Alison Lurie (Farrar, Straus & Giroux)

Sixteen legends of the constellations and how they got their names taken from varied sources such as: Ancient Greece, the Bible, Norway, and the American Indians.

THEY DANCE IN THE SKY: NATIVE AMERICAN STAR MYTHS,

by Jean Guard Monroe (Houghton Mifflin)

A collection of legends about the stars from various North American Indian cultures.

A SONG OF STARS, by Tom Birdseye (Holiday House)

Although banished to opposite sides of the Milky Way, the princess weaver and the herdsman reunite each year on the seventh day of the seventh month.

SPACEY RIDDLES, by Katy Hall (Dial Books For Young Readers)

Riddles about the sun, stars, moon, planets, and space travel.

SPACE SONGS, by Myra Cohen Livingston (Holiday House)

An illustrated collection of poems about various aspects of outer space.

STAR TALES: NORTH AMERICAN INDIAN STORIES ABOUT THE STARS,

by Gretchen Mayo (Walker & Co.)

A collection of Indian legends about stars, moon, and nighttime sky.

WATCH THE STARS COME OUT, by Riki Levinson (E. P. Dutton)

Grandma tells about her mama's journey to America by boat, years ago.

DRAW ME A STAR, by Eric Carle (Putnam Books)

This is a dreamy story of an artist, who, in drawing a star, a sun, a tree, a house, flowers, and people, discovers not only his art but his life. In the end, it is the star who shows him the universe.

MY PLACE IN SPACE, by Robin Hirst

Henry tells the bus driver exactly where he lives, positioning himself precisely in the universe.

EARTH SCIENCE

ROCKS

"Benchmarks":

- "Chunks of rocks come in many sizes and shapes, from boulders to grains of sand and even smaller." (*Benchmarks*, p. 72)

Recommendations/Comments:

A study of rocks can easily become a hands-on unit. Generate interest by having students bring in rocks and then together or in small groups look at different ways they can be classified. Rocks can be used as manipulatives for math and different rocks can be weighed and measured. Fiction stories can lead into related writing activities such as "If you had a magic pebble, what would you wish for?" (*Sylvester and the Magic Pebble*) or "You've just found a glowing rock, what special powers does it possess?" (*The Wretched Stone*). (See below for book descriptions.)

Related Children's Fiction:

IF YOU ARE A HUNTER OF FOSSILS, by Byrd Baylor (Atheneum)

A fossil hunter describes how the earth may have appeared in prehistoric times.

THE MAGIC SCHOOL BUS INSIDE THE EARTH, by Joanna Cole (Scholastic, Inc.)

Ms. Frizzle takes her class on a special field trip to learn about rocks and the formation of the earth.

STONE SOUP, by Tony Ross (Dial Books for Young Readers)

Mother Hen keeps The Big Bad Wolf from eating her by making him a pot of her grandmother's famous stone soup.

THE NIGHT FLIGHT, by Joanne Ryder (Macmillan Publishing)

Anna is taken to a secret waterfall by a stone lion who comes alive in the park after dark.

ROCKS IN MY POCKET, by Marc Harshman (Cobblehill Books)

A family in the mountains use rocks they find around their farm for all sort of useful purposes.

SYLVESTER AND THE MAGIC PEBBLE, by William Steig (Wanderer Books)

A donkey with a magic pebble asks it to turn him into a rock and then cannot hold the pebble to turn back to normal.

ANGELINA'S BIRTHDAY SURPRISE, by Katharine Holabird (Clarkson N. Potter)

Angelina loves to race her bicycle until she crashes into a rock.

FIRE AND STONE, by Ursula K. Le Guin (Atheneum)

Min and Podo help stop the fire-breathing dragon by feeding him stones.

THE HILL AND THE ROCK, by David McKee (Clarion Books)

After the Quests move the rock that blocks the view from their house on top of the hill, the hill deflates, and they find themselves living in a valley instead of on a hill.

MCGOOGAN MOVES THE MIGHTY ROCK, by Dick Gackenbach (Harper & Row)

McGoogan helps a rock that desperately wishes to see the sea.

THE ROCK HUNTERS, by Lorraine Henriod (G. P. Putnam's Sons)

Two boys who are hunting rocks make an important geological discovery.

LOST KINGDOM OF KARNICA, by Richard Kennedy (Scribner's)

Farmer Erd finds a valuable red stone in his field which changes life in Karnica forever.

FROM AFAR IT IS AN ISLAND, by Bruno Munari (World Publishers)

Text and illustrations show many different stones and show pictures that can be painted on them.

THE ROCK, by Peter Parnall (Collier Macmillan)

As years pass, a rock provides shelter, food, and a resting place for people and animals.

ANANSI AND THE MOSS-COVERED ROCK, by Eric Kimmel (Holiday House)

Anansi, the spider, uses a strange moss-covered rock in the forest to trick all the other animals, until Little Bush Deer decides to teach Anansi a lesson.

THE WRETCHED STONE, by Chris Vans Allsburg (Houghton Mifflin)

A glowing stone has a transforming effect on the crew of a ship.

ZEKMET, THE STONE CARVER, by Mary Stolz (Harcourt, Brace, Jovanovich)

A tale of a stone cutter who designs and begins work on the Egyptian Sphinx.

EARTH SCIENCE

THE SEASONS

"Benchmarks":

- "Some events in nature have a repeating pattern. The weather changes some from day to day, but things such as temperature and rains (or snow) tend to be high, low, or medium in the same months every year."
(*Benchmarks*, p. 67)

- "Change is something that happens to many things". (*Benchmarks*, p. 72.)

Recommendations/Comments:

A unit on the seasons can combine several areas of science. Not only can the earth be studied with its weather patterns, but areas of life science can be discussed. How do animals react as the seasons change? How do plants and trees change? How do our attitudes and daily activities change with the seasons?

Critical thinking skills can be used to hypothesize how a change in weather could have changed historical events -- What if it had rained the day Kennedy was assassinated? What if the winter at Valley Forge had been mild? etc.

Math skills can be integrated with the reading of The Seasons of Arnold's Apple Tree by Gail Gibbons and making apple pie. What do the apples weigh before the skin and seeds are removed? What do they weigh after? What is the diameter of the pie pan? How would you determine the area of pie crust? etc.

Related Children's Fiction:

A YEAR OF BEASTS, by Ashley Wolff (E. P. Dutton)

Cronicles the seasons month by month and shows which creatures come out with each new month.

ANIMAL SEASONS, by Brian Wildsmith (Oxford University Press)

Follows what happens to different animals with each season change.

AUTUMN HARVEST, by Alvin Tresselt (Lothrop, Lee & Shepard)

A journey through a country town during autumn and harvest time.

DO YOU KNOW WHAT I'LL DO?, by Charlotte Zolotow (Harper & Row)

A story of the seasons and the holidays from a child's point of view.

FIRST COMES SPRING, by Anne Rockwell (Thomas Y. Crowell)

A bear child notices that the clothes he wears, the things everyone does at work and play, and other parts of his world all change with the seasons.

MY FAVORITE TIME OF YEAR, by Susan Pearson (Harper & Row)

A little girl tries to determine what her favorite time of year is.

SEASONS, by Brian Wildsmith (Oxford University Press)

A look at the lives of several different animals during each of the seasons.

SUMMER IS ..., by Charlotte Zolotow (Thomas Y. Crowell)

Captures some of the joys and beauties of each season through colorful illustrations.

THE SEASONS OF ARNOLD'S APPLE TREE, by Gail Gibbons (Harcourt Brace Jovanovich)

As seasons pass, Arnold enjoys a variety of activities as a result of his apple tree. Includes a recipe for apple pie and a description of how an apple cider press works.

THIS YEAR'S GARDEN, by Cynthia Rylant (Bradbury Press)

Follows the seasons of the year through the growth, life, and death of a rural family's garden.

ON A HOT, HOT DAY, by Nicki Weiss (G. P. Putnam)

A mother and young son enjoy activities together during each season of the year.

COLD STARS AND FIREFLIES: POEMS OF THE FOUR SEASONS,

by Barbara Juster Esbensen (Thomas Y. Crowell)

A collection of poems about nature and the changing seasons.

OX CART MAN, by Donald Hall (Puffin Books)

Describes the life of a nineteenth-century New England family throughout the seasons.

DAKOTA DUGOUT, by Ann Turner (Macmillan)

A woman describes her experiences living with her husband on the Dakota prairie and the effects of the seasons on their lives.

THE FOUR SEASONS OF BRAMBLY HEDGE, by Jill Barklem (Philomel Books)

Four short stories about the four seasons as they are spent by the occupants of Brambly Hedge.

EARTH SCIENCE

WATER

"Benchmarks":

- "Water can be a liquid or a solid and can go back and forth from one form to the other. If water is turned into ice and then the ice is allowed to melt, the amount of water is the same as it was before freezing." (*Benchmarks*, p. 67)
- "Water left in an open container disappears, but water in a closed container does not disappear." (*Benchmarks*, p. 67)
- "Change is something that happens to many things." (*Benchmarks*, p. 72)
- "Things can be done to materials to change some of their properties, but not all materials respond the same way to what is done to them." (*Benchmarks*, p. 76)

Recommendation/Comments:

Water is the one resource that can be used to teach so much and costs nothing. Many experiment books exist that demonstrate evaporation and condensation such as WATER: EXPERIMENTS TO UNDERSTAND IT, by Boris Arnov (Lothrop, Lee & Shepard). This is one topic that begs for hands-on activities and has no messy clean-up! One fun activity is to go on a "water" hunt. Search the school for evidence of condensation, such as in the bathroom, utility rooms and the kitchen. Have races to see who can dry their wet paper towel the fastest. Graphing skills can easily be integrated as precipitation patterns are studied in different countries.

Water activities can be tied into art. Make soap snow by mixing 1 and 1/2 cups white soap flakes with one cup hot water and beating with an egg beater to create snow. Create snow scenes on black paper. Cut out snowflakes (try to actually make them with six sides for an additional challenge!). Draw with white chalk on colored paper. The possibilities are endless!

Related Children's Fiction:

WATER'S WAY, by Lisa Westberg Peters (Arcade Publishing)

Introduces the different forms that water can take from clouds, to bodies of water, to fog and steam.

A HOUSE OF LEAVES, by Kyoshi Soya (Philomel)

When rain begins to fall, Sarah finds a house of leaves to hide in. Soon she finds she is not alone.

BRINGING THE RAIN TO KAPITI PLAIN, by Verna Aardema (Dial Press)

A cumulative rhyme relating how Ki-pat brought rain to the drought-stricken Kapiti Plain.

IT CHANCED TO RAIN, by Kathleen Bullock (Simon & Schuster)

Out for a walk, Ms. Pig's class gets caught in the rain. Not everyone is upset.

PETER SPIER'S RAIN, by Peter Spier (Doubleday)

Two children play in their backyard during a rainy day. This book contains pictures only.

SNOW PARTY, by Beatrice Schenk De Regniers (Lothrop, Lee & Shepard)

On a snowy, windy night at a Dakota farm, a lonely woman wishes for company, music, and a party. Suddenly, all her wishes start to come true.

THAT SKY, THAT RAIN, by Carolyn Otto (Thomas Y. Crowell)

As a rainstorm approaches, a young girl and her grandfather take the farm animals into the shelter of the barn and then watch the rain begin.

RAINY DAY KATE, by Lenore Blegvad (McElderry Books)

A little boy looks forward to playing with his friend, Kate. When rain cancels their plans, he decides to create his own playmate. (Rhymed text.)

RAIN, RAIN RIVERS, by Uri Shulevitz (Farrar, Straus & Giroux)

A child indoors watches the rain on the window and in the streets and tells how it falls on the fields, hills, and seas.

RAIN, by Robert Kalan (Wm. Morrow & Co.)

Brief text and illustrations describe a rainstorm.

LISTEN TO THE RAIN, by Bill Martin, Jr. & John Archambault (Henry Holt & Co.)

Describes the changing sounds of the rain: the slow, soft sprinkle, the drip-drop tinkle, the sounding, pounding, roaring rain, and the fresh, wet, silent after-time of rain. (Poem form.)

THE BLACK SNOWMAN, by Phil Mendez (Scholastic)

A piece of African cloth draped over a sooty snowman brings him to life in time to save two brothers from a fire.

FIRST SNOW, by Emily Arnold McCully (Harper & Row)

A timid, little mouse discovers the thrill of sledding in the first snow of the winter. (No words.)

THE FIRST SNOWFALL, by Anne & Harlow Rockwell (Macmillan)

A child enjoys the special sights and activities of a snow-covered world.

ICE CREAM IS FALLING!, by Shiegeo Watanabe (Philomel)

Bear and his friends have a wonderful time playing when they see snow for the first time.

SNOW COUNTRY, by James Skofield (Harper & Row)

Two children and their grandparents wake to a snowy day on a farm.

THE SNOW PARADE, by Barbara Brenner (Crown Publishers)

An increasing number of animals and people join Andrew Barclay in his parade through the snow.

THE BIG SNOW, by Bertha & Elmer Hader (Macmillan)

Animals are hurrying to prepare for winter. When the big snow arrives, the animals find one house has left them food.

THE DAY IT SNOWED, by Barbara Harmeyer (St. Martin's Press)

A look at the activities of people and animals when it snows.

CITY STORM, by Mary Jessie Parker (Scholastic)

A chorus of school girls in a city park scurry for shelter when it begins to rain and gleefully watch the sun come back out.

CLOUDY WITH A CHANCE OF MEATBALLS, by Judi Barrett (Atheneum)

Life is delicious in the town of Chewandswallow where it rains soup and juice, snows mashed potatoes, and blows storms of hamburgers -- until the weather takes a turn for the worse.

THE SNOWY DAY, by Ezra Jack Keats (Viking Press)

The story of a little boy's adventures in the snow.

RAIN TALK, by Mary Serfozo (Macmillan)

A child enjoys a glorious day in the rain, listening to the varied sounds it makes as it comes down.

A WALK IN THE RAIN, by Ursel Scheffler (G. P. Putnam's Sons)

Josh goes for a walk in the rain with his grandmother and wears his new rainwear.

THE CLOUD, by Deborah Kogan Ray (Harper & Row)

A girl struggles to climb a mountain in hopes of seeing a beautiful cloud.

DREAMS, by Peter Spier (The Trumpet Club)

Two children look at the clouds and see wondrous things. This book has very few words and wonderful pictures.

FOG DRIFT MORNING, by Deborah Kogan Ray (Harper & Row)

A mother and daughter pick blueberries in the early morning fog.

HELLO CLOUDS!, by Dalia Hardof (Harper & Row)

A child imagines familiar shapes and exciting adventures in the clouds overhead.

IT LOOKED LIKE SPILT MILK, by Charles Shaw (Harper & Row)

White images remind the reader of different objects, but turn out to actually be clouds.

HI, CLOUDS, by Carol Greene (Childrens Press)

Two children watch clouds become fat and thin, white and gray, then turn into dogs, sheep, dragons, and castles.

HIDE AND SEEK FOG, by Alvin Tresselt (Mulberry Books)

A fog takes over a small village for three days.

JONATHAN'S CLOUD, by Gardner McFall (Harper & Row)

Jonathan wants to keep the cloud that floats into his room, but he doesn't know how to take care of it.

LITTLE TIM AND THE BRAVE SEA CAPTAIN, by Edward Ardizzone (Puffin Books)

Tim stows away on a great steamer going out to sea. When a storm hits, his adventures turn out to be more than he bargained for.

WHY THE TIDES EBB AND FLOW, by Joan Bowden (Houghton Mifflin)

A folktale in which an old woman threatens to pull the rock from the hole in the ocean floor.

HOW THE SEA BEGAN, by George Crespo (Houghton Mifflin)

A folktale of the Taino people of Puerto Rico that explains how the sea came into being.

PAGOO, by Holling C. Holling (Houghton Mifflin)

A study of tide pools as seen through the eyes of Pagoo, a hermit crab.

WHERE THE RIVER BEGINS, by Thomas Locker (Dial Books)

When two young boys and their grandfather go on a camping trip, they try to find the source of the river that runs by their home.

THE FROG WHO DRANK THE WATERS OF THE WORLD, by Patricia Montgomery Newton (Atheneum)

An old Indian tale about a frog who, for revenge, decides to drink all of the water that exists in the forest.

TIDDALICK THE FROG, by Susan Nunes (Atheneum)

The retelling of a folktale about a frog who awakes one morning, grumpy and thirsty, and drinks all of the fresh water of the world.

LETTING SWIFT RIVER GO, by Jane Yolen (Little, Brown & Company)

A small village sacrifices its town so that a reservoir can be made to furnish water for the city people.

FOLLOW THE RIVER, by Lydia Dabovich (E. P. Dutton)

Follows a stream through its travels through the mountains and countryside until it becomes a river and flows to the ocean.

CANOEING, by Laura Lattig-Ehlers (Picture Book Studios)

Describes the sights and sounds while journeying down the river at dusk.

LIFE SCIENCES

PLANTS

"Benchmarks":

- "Plants and animals have features that help them live in different environments." (*Benchmarks*, p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (*Benchmarks*, p. 102)
- "Most living things need water, food and air." (*Benchmarks*, p. 111)
- "Living things are found almost everywhere in the world. There are somewhat different kinds in different places." (*Benchmarks*, p. 116)
- "Plants and animals both need to take in water, and animals need to take in food. In addition, plants need light." (*Benchmarks*, p. 119)
- "Many materials can be recycled and used again, sometimes in different forms." (*Benchmarks*, p. 119)
- "Different plants and animals have external features that help them thrive in different kinds of places." (*Benchmarks*, p. 123)
- "Most food comes from farms either directly as crops or as the animals that eat the crops. To grow well, plants need enough warmth, light, and water. Crops also must be protected from weeds and pests that can harm them." (*Benchmarks*, p. 184)
- "Part of a crop may be lost to pests or spoilage." (*Benchmarks*, p. 184)
- "A crop that is fine when harvested may spoil before it gets to consumers." (*Benchmarks*, p. 184)

Recommendations/Comments:

Although the topic of "plants" does not need to be covered every year, it is probably one of the favorite science topics of teachers. Many experiments can be done involving plants, and watching those seeds grow give us a sense of accomplishment. Try to expand beyond the basic plants needs to include changes in technology -- look at hydroponics, improvements in pesticides, how foods are transported. Foods can also be used for math/critical thinking skills. Predict how many seeds might be in a pumpkin, an apple, a strawberry. Does the weight of foods change when it's cooked? etc. Look at plant classifications -- what makes a food a fruit or a vegetable? How do different varieties of apples compare? What parts of the plant do we eat? etc.

Integrate language arts by looking at several variations of "Jack and the Beanstalk" (See below for examples) How do the setting, characters and plot compare? Read Amanda and Her Magic Garden and write a story of your magic seeds. Don't forget the illustrations!

Related Children's Fiction:

AMANDA AND HER MAGIC GARDEN, by John Himmelman (Viking Penguin)

Amanda has great success growing vegetables from magic seeds, until the animals who eat the vegetables grow, too.

JACK AND THE BEAN TREE, by Gail Haley (Crown Publishing)

A boy climbs to the top of a giant beanstalk where he uses his quick wits to outsmart a giant and make his fortune.

ORANGES, by Zack Rogrow (Orchard Books)

Traces the journey of an orange from the tree to the table.

PLANTING A RAINBOW, by Lois Ehlert (Harcourt Brace Jovanovich)

A mother and child plant a rainbow of flowers in the family garden.

MCCREPHY'S FIELD, by Christopher A. Myers and Lynne Born Myers (Houghton Mifflin)

Describes how, over the course of 50 years, the plants and animals change.

PUMPKIN, PUMPKIN, by Jeanne Titherington (Greenwillow Books)

After planting a pumpkin seed and watching it grow, Jamie carves the grown pumpkin and saves seeds to plant next spring.

THIS YEAR'S GARDEN, by Cynthia Rylant (Bradbury Press)

The effects of the different seasons are evidenced in the plants of the garden.

APPLES AND PUMPKINS, by Anne Rockwell (Macmillan)

In preparation for Halloween night, a family visits Mr. Comstock's farm to pick apples and pumpkins.

FLOWERS FOR THE SNOWMAN, by Gerda Marie Scheidl (North-South Books)

A snowman, tired of seeing only white snow, sets out on a journey to find colorful flowers.

GROWING VEGETABLE SOUP, by Lois Ehlert (Harcourt Brace Jovanovich)

A father and child grow vegetables and then make them into a soup.

MCBROOM AND THE BEANSTALK, by Albert Sidney Fleischman (Little, Brown & Co.)

McBroom prepares his far-fetched stories for the World Champion Liar's contest, but is disqualified for telling the truth.

A HOUSE OF LEAVES, by Kiyoshi Soya (Philomel Books)

A little girl finds shelter from the rain in a house of leaves and soon learns she is not alone.

GARDEN PARTNERS, by Diane Palmisciano (Macmillan)

A child and her grandmother enjoy gardening. They plant seeds, care for the plants, and share the harvest.

BLACKBERRY RAMBLE, by Thatcher Hurd (Crown Publishers)

Baby Mouse explores the changes of the farm when spring comes.

HOW MY GARDEN GREW, by Anne and Harlow Rockwell (Macmillan)

With pride and pleasure, a little girl describes growing a garden all by herself.

FAMILY FARM, by Thomas Locker (Dial Books)

A family saves their farm by growing pumpkins and flowers to supplement their income.

THE LEGEND OF THE BLUEBONNET, by Tomie De Paola (G. P. Putnam's Sons)

The legend of how a little Indian girl's sacrifice brought the bluebonnet flower to Texas.

THE LEGEND OF THE INDIAN PAINTBRUSH, by Tomie de Paola (G. P. Putnam's Sons)

A legend explaining the beautiful colors of the Indian Paintbrush.

JACK AND THE BEANSTALK, by Eric Metaxas (Picture Book Studios)

The classic story of a boy who climbs a giant beanstalk and outwits a giant to make his fortune.

MRS. MCGINTY AND THE BIZARRE PLANT, by Gavin Bishop
(Oxford University Press)

A small cucumber plant grows into a neighborhood spectacle.

LIFE SCIENCES

TREES

"Benchmarks":

- "Plants and animals have features that help them live in different environments." (*Benchmarks*, p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (*Benchmarks*, p. 102)
- "Most living things need water, food and air." (*Benchmarks*, p. 111)
- "Living things are found almost everywhere in the world. There are somewhat different kinds in different places." (*Benchmarks*, p. 116)
- "Plants and animals both need to take in water, and animals need to take in food. In addition, plants need light." (*Benchmarks*, p. 119)
- "Many materials can be recycled and used again, sometimes in different forms." (*Benchmarks*, p. 119)
- "Different plants and animals have external features that help them thrive in different kinds of places." (*Benchmarks*, p. 123)

Recommendations/Comments:

Even when the topic of "Trees" is not formally presented, we all receive a science lesson each fall! Even at an early age, children realize that most green leaves turn into different colors and fall. Trees are an excellent example of how things change and of cycles. Leaf collections demonstrate how similar many varieties are, and yet how diverse the tree population is.

Language arts can again be easily integrated with this topic. It can be fun to discuss other types of trees -- family trees, hat trees, etc. Bring in old hats and write a story about someone who might wear that hat! Write a letter to a fictional neighbor to convince him not to cut down a large oak tree. Research different products we receive from trees.

Related Children's Fiction:

A TREE IS NICE, by Janice May Udry (Harper Collins)

A child gives many wonderful and funny reasons why a tree is nice to have.

THE GREAT KAPOK TREE, by Lynne Cherry (Harcourt Brace Jovanovich)

The many different animals that live in a great Kapok tree in the Brazilian rain forest try to convince a man with an axe of the importance of not cutting down their home.

MY FATHER DOESN'T KNOW ABOUT THE WOODS AND ME, by Dennis Haseley (Macmillan)

On a walk with his father, a child relates to the animals in the woods and enjoys the freedom of nature.

THE TALKING TREE, by John Himmelman (Viking Penguin)

A tree appears to talk, but in reality it is only Skylar who is stuck in a hollow tree trunk.

ONCE THERE WAS A TREE, by Spirin Gennady (Dial Books)

Many creatures, including man, are attracted to a tree stump. When the stump is gone, a new tree attracts the same creatures.

I WISH I HAD A BIG, BIG TREE, by Satoru Sato (Lothrop, Lee & Shepard)

A boy dreams of building a treehouse to visit the squirrels and birds, but needs a big, big tree.

IN MY TREEHOUSE, by Alice Schertle (Lothrop, Lee & Shepard)

A child shares the real and imaginary adventures of a treehouse.

THE LEGEND OF JOHNNY APPLESEED, by Reeve Lindbergh (Little, Brown & Co.)

The life of John Chapman (Appleseed) is told through rhymed text.

UNCLE FOSTER'S HAT TREE, by Doug Cushman (E. P. Dutton)

Merle hears four entertaining stories about the hats on his uncle's hat tree and then gets to try the hats on.

BIRCHES, by Robert Frost (Henry Holt)

A poem which gives the author's impressions of what a birch tree says to him.

NIGHT TREE, by Eve Bunting (Harcourt Brace Jovanovich)

A family makes its annual pilgrimage to decorate an evergreen tree with food for the forest animals at Christmas time.

LEAVES FROM A CHILD'S GARDEN OF VERSES, by Robert Louis Stevenson (Smithmark Publishers)

A collection of Stevenson's poems softly illustrated.

CHICKA CHICKA BOOM BOOM, by Bill Martin, Jr. and John Archambault (Simon & Schuster)

An alphabet rhyme/chant that relates what happens when the whole alphabet tries to climb a coconut tree.

TREES, by Harry Behn (Henry Holt)

A simple poem describing the benefits of trees.

TREE OF LIFE, THE WORLD OF THE AFRICAN BAOBAB, by Barbara Bash (Sierra Club Books)

A folktale describing the baobab tree and how the people and animals use the tree.

SONG OF THE TREES, by Mildred D. Taylor (Dial Press)

A rural family tries to save the forest on their land when an unscrupulous man tries to cut it down.

LIFE SCIENCES

ANIMALS - INSECTS AND SPIDERS

"Benchmarks":

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another." (Benchmarks, p. 102)
- "Plants and animals have features that help them live in different environments." (Benchmarks p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (Benchmarks, p. 102)
- "There is variation among individuals of one kind within a population." (Benchmarks, p. 107)
- "Offspring are very much, but not exactly, like their parents and like one another." (Benchmarks, p. 107)
- "Most living things need water, food and air.", (Benchmarks, p. 111)
- "Magnifiers help people see things they could not see without them." (Benchmarks, p. 111)
- "Animals eat plants or other animals for food and may also use plants (or even other animals) for shelter and nesting." (Benchmarks, p. 116)
- "Living things are found almost everywhere in the world. There are somewhat different kinds in different places." (Benchmarks, p. 116)
- "Plants and animals both need to take in water, and animals need to take in food. In addition, plants need light." (Benchmarks, p. 116)
- "Different plants and animals have external features that help them thrive in different kinds of places." (Benchmarks, p. 123)
- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (Benchmarks, p. 123)
- "All animals have offspring, usually with two parents involved. People may prevent some animals from producing offspring." (Benchmarks, p. 132)

Recommendations/Comments:

What's more interesting than watching a group of ants dig tunnels through their ant farm or wait for a cocoon to hatch? The topic of insects will excite most of your students! Try reading Two Bad Ants followed by a discussion of real ants. What foods would they be attracted to most? Set up a class experiment by setting out different foods (outside!) and watching the results. A great way to reinforce graphing skills and the scientific process!

After reading Berloiz the Bear you will definitely want to play "Flight of the Bumblebee" for the class. While discussing bees, dissect honeycomb. Are all of the combs the same size? What shape are they? Do all honeys taste the same?

This is a great time to do an author study on Eric Carle (The Very Hungry Caterpillar, The Very Busy Spider, The Grouchy Ladybug, The Honeybee and the Robber, and The Very Quiet Cricket.) This is also a great topic for creating poetry books. Many cute poems about bugs exist.

Related Children's Fiction:

TWO BAD ANTS, by Chris Van Allsburg (Houghton Mifflin)

When two bad ants decide to leave their colony, they experience a dangerous adventure that convinces them to return home.

BERLIOZ THE BEAR, by Jan Brett.

A group of musicians will be late for the concert if they can't get their donkey to move. And why does the violin sound strange?

SPIDERS IN THE FRUIT CELLAR, by Barbara Joosse (Random House)

Even though Elizabeth is old enough to go to the fruit cellar, she finds she is afraid of the spiders lurking there.

THERE'S AN ANT IN ANTHONY, by Bernard Most (Wm. Morris & Co.)

Anthony discovers an "ant" in his name and then looks for "ant" in other words.

THE CATERPILLAR AND THE POLLIWOG, by Jack Kent (Prentice-Hall)

A polliwog longs to become a beautiful butterfly and tries to imitate the caterpillar.

I WATCH FLIES, by Gladys Plemon Conklin (Holiday House)

The activities and appearances of a variety of flies are described by a child.

I WISH I WERE A BUTTERFLY, by James Howe (Harcourt Brace Jovanovich)

A wise butterfly helps a cricket discover his own uniqueness and that he is special in his own way.

THE BEE, by Lisa Campbell Ernst (Lothrop, Lee & Shepard)

A bee discovers many colors as he flies out of his hive.

GRASSHOPPER TO THE RESCUE, by Bonnie Carey (Wm. Morrow & Co.)

The grasshopper must meet the demands of several animals to save his friend, the ant.

ANTS CAN'T DANCE, by Ellen Jackson (Macmillan)

No one believes that Jonathan has an ant that dances, a peanut that talks, and a stone that whistles.

ANTS DON'T GET SUNDAY OFF, by Penny Pollock (G. P. Putnam's Sons)

Anya, a hard-working ant, longs for adventure but, when a heavy rain destroys the ant nest, Anya gets more than she hoped for.

THE ANTS GO MARCHING, by Berniece Freschet (Scribner Publishing)
The ants march in formation out of the dirt, up a hill, and across a meadow to a picnic.

SAM'S SANDWICH, by David Pelham (Dutton Childrens Books)
When Sam's sister asks for a sandwich with "everything" on it, Sam decides to slip in some little surprises.

BLUE BUG'S SURPRISE, by Virginia Poulet (Childrens Press)
Blue Bug surprises his friend by giving her many kinds of flowers, and then she surprises Blue Bug. (Other "Blue Bug" books available.)

DARKNESS AND THE BUTTERFLY, by Ann Grafalconi (Little, Brown & Co.)
Osa is fearful of the dark until a wise woman convinces her that she can be as brave as the butterfly.

THE VERY BUSY SPIDER, by Eric Carle (Philomel Books)
The farm animals try to divert a busy little spider from spinning a web, but she persists and produces a beautiful web.

THE VERY QUIET CRICKETT, by Eric Carle (Philomel Books)
A very quiet cricket, who wants to rub his wings together and make a sound, finally gets his wish.

THE GROUCHY LADYBUG, by Eric Carle (Philomel Books)
A grouchy ladybug is looking for a fight, challenging everyone she meets, regardless of size or strength.

THE VERY HUNGRY CATERPILLAR, by Eric Carle (Thomas Y. Crowell)
A hungry caterpillar eats a large amount of food until, once full, it forms a cocoon and becomes a butterfly.

THE HONEYBEE AND THE ROBBER, by Eric Carle (Philomel Books)
A honeybee saves the day when a bear attacks the hive.

FLIT. FLUTTER. FLY, by Lee Bennett Hopkins (Doubleday)
A collection of poems about bugs and other creatures that crawl or fly. Composed by a variety of authors.

REMEMBER THE BUTTERFLIES, by Anna Grossnickle Hines (Dutton Childrens Books)
When Grandpa can't revive a dead butterfly, they stop and celebrate the butterfly's life. When Grandpa dies, Holly and Glen remember the special times with Grandpa.

ANANSI THE SPIDER: A TALE FROM ASHANTI, by Gerald McDermott (Henry Holt)
Anansi must decide which of his sons to reward for saving his life, and becomes responsible for placing the moon in the sky.

BILLIONS OF BUGS, by Haris Petie (Prentice-Hall)
Different bugs reinforce counting skills by counting from one praying mantis to 1000 butterflies.

BUGGY RIDDLES, by Katy Hall and Lisa Eisenberg (Dial Press)

An illustrated collection of insect riddles.

BUZZ, BUZZ, BUZZ, by Byron Barton (Macmillan)

When the bee stings the bull, a disastrous chain of events begins.

GOING BUGGY, by Peter and Connie Roop (Lerner Publishing)

A collection of jokes and riddles about bugs.

THE LADY AND THE SPIDER, by Faith McNulty (Harper & Row)

A lady saves a spider living in a head of lettuce when she finds it and puts it back in the garden.

THE CRICKET IN TIMES SQUARE, by G. Selden (Cornerstone Books)

The adventures of a country cricket who arrives in New York and is befriended by a mouse and a cat. (Chapter Book)

WHERE BUTTERFLIES GROW, by Joanne Ryder (E. P. Dutton)

Describes what it feels like to turn into a butterfly from a caterpillar.

THE LAMB AND THE BUTTERFLY, by Arnold Sungaard (Orchard Books)

An independent butterfly and a secluded lamb compare life styles.

THE NAPPING HOUSE, by Audrey Wood (Harcourt Brace Jovanovich)

The entire household gathers for a nap, but when a flea joins the group, the restful situation is disrupted.

MAGGIE AND THE PIRATE, by Ezra Jack Keats (Scholastic, Inc.)

Maggie goes off in search of "the pirate" after he kidnaps her prized pet cricket.

WHY MOSQUITOES BUZZ IN PEOPLE'S EARS, by Verna Aardema (Scholastic, Inc.)

Retells the folk tale from West Africa of a series of animals trying to discover who killed an owlet causing Mother Owl great sadness. Because of this, she wouldn't wake the sun.

I KNOW AN OLD LADY, by Rose Bonne (Scholastic, Inc.)

Depicts a popular folk song with pictures. Music is also provided.

QUICK AS A CRICKET, by Audrey Wood (Child's Play Ltd.)

Creates metaphors, using common animal traits, to describe a boy's characteristics. Beautiful illustrations.

LIFE SCIENCES

ANIMALS - BIRDS

"Benchmarks":

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another." (Benchmarks, p. 102)
- "Plants and animals have features that help them live in different environments." (Benchmarks p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (Benchmarks, p. 102)
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- "Offspring are very much, but not exactly, like their parents and like one another." (Benchmarks, p. 107)
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- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (Benchmarks, p. 123)
- "All animals have offspring, usually with two parents involved. People may prevent some animals from producing offspring." (Benchmarks, p. 132)

Recommendations/Comments:

The diversity of birds makes this a fun topic. Study the penguins in their cold areas and the brightly-colored birds of the rainforest. Look at bird feathers under a microscope and compare sizes and colors. Dissect an owl pellet and discuss the food chain. And for a real "eggciting" project create a shell-less egg by placing an egg in vinegar for 2-3 days!

To tie in language arts write a story of how "chicken pox" got its name, a story of an owl who wasn't wise, or a story of a time when you were a real "bird brain". Many art projects use feathers, and bird mobiles add atmosphere to a classroom. Don't forget to make an origami bird for good luck!

Related Children's Fiction:

HERE A CHICK, THERE A CHICK, by Bruce McMillan (Lothrop, Lee & Shepard)

Photographs of baby chicks are used to demonstrate opposites.

PIGEON, PIGEON, by Caron Lee Cohen (Dutton Childrens Books)

A child and her parents view several different animals at the zoo.

THE WIZARD, THE FAIRY, AND THE MAGIC CHICKEN, by Helen Lester (Houghton Mifflin)

When three magicians try to out-do each other, they create a dilemma that can only be solved through cooperation.

ITCHY, ITCHY CHICKEN POX, by Grace Maccarone (Scholastic, Inc.)

A humorous look at having the chicken pox.

THE LITTLE RED HEN, by Paul Galdone (Clarion Books)

The Little Red Hen finds that none of her lazy friends want to help make her cake, but all are willing to eat it.

LITTLE PENGUIN'S TALE, by Audrey Wood (Harcourt Brace Jovanovich)

A little penguin, who ignores the rules he's been taught and ventures out by himself, discovers that it is important to be careful.

TACKY THE PENGUIN, by Helen Lester (The Trumpet Club)

Tacky's behavior seems out of place, until it saves his and his friends' lives.

FEATHERS FOR LUNCH, by Lois Ehlert (The Trumpet Club)

A cat stalks several types of birds for lunch, but his bells warn the birds.

WINGS - A TALE OF TWO CHICKENS, by James Marshall (Viking Kestrel)

Winnie, a chicken who never reads, is unaware of the potential dangers of traveling with a fox.

LITTLE CHICK'S MOTHERS AND ALL THE OTHERS, by Mildred Luton (Viking Press)

A poem tells of farm animals and the names of their young.

FARMER DUCK, by Martin Waddell (Candlewick Press)

Farmer Duck must do all the farm chores, as the owner is too lazy to do them himself. But the owner gets his just desserts.

QUACK-QUACK, by Frederic Stehr (Farrar, Straus & Giroux)

Baby Quack-Quack searches the forest for its mother, and is found just in time!

FISH AND FLAMINGO, by Nancy White Carlstrom (Little, Brown & Company)

Two unlikely friends tell about their lives, help each other out, and enjoy their time together.

IN SEARCH OF THE LAST DODO, by Ann and Reg Cartwright (Little, Brown & Co.)

A greedy king hurries to eat the rare dodo egg, only to have a change of heart.

EMILY AND THE CROWS, by Elaine Greenstein (Picture Book Studios)

Ivy is curious as to why all the crows surround Emily, the crow, and finally learns the secret.

EGG STORY, by Anca Hariton (Duttons Childrens Books)

The farm animals watch a new egg the hen has just laid. The book shows how an egg develops into a chick.

THE TALE OF THE MANDARIN DUCKS, by Katherine Paterson (Lodestar Books)

A compassionate couple rescues a drake from an evil lord, who wants the duck for its beauty, and reunites it with its mate.

OWL LAKE, by Keizaburo Tejima (Philomel Books)

As the sun sets and dusk approaches, Father Owl hunts to feed his hungry family.

SWAN SKY, by Keizaburo Tejima, (Philomel Books)

A young swan is unable to accompany her family on the journey to their summer home.

TRUMPET OF THE SWAN, by E. B. White (Harper & Row)

After learning to read and write, Louis, a voiceless Trumpeter Swan, is determined to learn to play a stolen trumpet.

DANIEL'S DUCK, by Clyde Robert Bulla (Harper & Row)

A wood carver is temporarily depressed when the result of a winter's work is mocked.

NICOLAS. WHERE HAVE YOU BEEN?, by Leo Lionni (Alfred A. Knopf)

A young mouse learns that birds aren't the horrible creatures he thought they were.

CHICKEN TRICKS, by Megan Lloyd (Harper & Row)

Mischievous hens, expected to lay eggs, substitute innovative "eggs" for the real ones. When Christmas comes, the chickens see what the farmer has done with the eggs.

RAINBOW CROW, by Nancy Van Laan (Alfred A. Knopf)

A legend of a crow who flies up to receive the gift of fire to save the animals from the threatening snow.

THE MOUNTAIN THAT LOVED A BIRD, by Alice McLerran (Picture Book Studios)

A barren mountain benefits by a beautiful bird.

ALONG CAME A BLACKBIRD, by Elizabeth Wild (J. P. Lippincott)

Three young sisters and their pet crow discover some of the harsher realities of life when they befriend a lonely farm boy.

DABBLE DUCK, by Anne Leo Ellis (Harper & Row)

A lonesome duck befriends a scraggy dog.

DUCK TAKES OFF, by Susanna Gretz (Four Winds Press)

With different skills, Duck, Rabbit, and Frog have trouble playing school.

BABY NIGHT OWL, by Leslie McGuire (Random House)

A baby owl stays awake to see what it is like in the daytime.

THE DUCK AND THE OWL, by Hanna Johansen (Dutton Childrens Books)

Despite their differences, a duck and an owl decide to become friends.

GOOD NIGHT, OWL, by Pat Hutchins (Macmillan)

When all the other animals keep Owl from sleeping, he decides to take revenge.

IF THE OWL CALLS AGAIN, by Myra Cohn Livingston (Macmillan)

A collection of poems about owls (by different authors).

LITTLE OWL, KEEPER OF THE TREES, by Ronald and Ann Himler (Harper & Row)

Little Owl makes a new friend, learns to fly, and celebrates his birthday.

GOOD MORNING CHICK, by Mirra Ginsburg (Greenwillow Books)

A newly-hatched chick tries to imitate a rooster and falls into a puddle.

THE BLACK FALCON, by William Wise (Orchard Books)

A peasant sacrifices his beloved falcon to honor the woman he loves.

THE DOVE'S LETTER, by Keith Baker (Harcourt Brace Jovanovich)

As a dove tries to deliver an unaddressed letter to its rightful owner, she brings great pleasure to those who read it.

THE PAPER CRANE, by Molly Bang (Mulberry Books)

A paper crane is given as payment for dinner in a restaurant, and it magically comes to life.

**WATCH OUT FOR THE CHICKEN FEET IN YOUR SOUP, by Tomie de Paola
(Simon and Schuster)**

A young boy is dreading introducing his friend to his Italian grandmother and gains new respect for her as she and his friend get along wonderfully.

QUACK?, by Mischa Richter (Harper & Row)

A lonely duck searches for another duck and meets many other animals along the way.

OWL AT NIGHT, by Ann Whitford Paul (General Publishing)

An owl's nighttime activities are followed, describing his busy routine that occurs while people are asleep.

AN OWL AND THREE PUSSYCATS, by Alice Provensen (Connecticut Printers)

A tiny owl and three kittens benefit from a little help.

BIRDSONG LULLABY, by Diane Stanley (Wm. Morrow & Company)

A little girl pretends to be a bird and imagines all the different things she can do.

KENJI AND THE MAGIC GEESE, by Ryerson Johnson (Simon & Schuster)

One of the geese in the picture on Kenji's wall flies off to join wild geese and then returns.

THE DAY THE GOOSE GOT LOOSE, by Reeve Lindbergh (Dial Books)

It becomes chaotic on the farm when the goose gets loose.

A MOTHER FOR CHOCO, by Keiko Kasza (G. P. Putnam's Sons)

Choco, a tiny, lonely bird, looks for its mother.

ALL MY LITTLE DUCKLINGS, by Monica Wellington (E. P. Dutton)

A group of ducklings enjoy their day in the water and on the shore.

FIVE LITTLE DUCKS, by Raffi (Crown Publishers)

When five little ducks go out to play, they disappear one-by-one, causing Mother Duck to search for them.

FLOCKS OF BIRDS, by Ruth Lercher Bornstein (Thomas Y. Crowell)

The descriptions of birds flying across mountains, lakes, and cities soothes a youngster to sleep.

A YEAR OF BIRDS, by Ashley Wolff (McClelland & Stewart, Ltd.)

A monthly account of the different birds that visit a child's home.

DUCK GOES FISHING, by Judy Delton (General Publishing)

Duck's mishaps add commotion to Owl and Fox's fishing trip.

WHITE SNOW, BLUE FEATHER, by Julie Downing (Bradbury Press)

A little boy finds a blue feather amid the winter snow while on a walk in the woods.

WHO KILLED COCKATOO?, by W. A. Cawthorne (Farrar, Straus & Giroux)

An Australian version of "Who Killed Cock Robin?"

THE STORY ABOUT PING, by Marjorie Flack and Kurt Wiese (Viking Press)

A little duck finds adventure on the Yangtze River when he is late in trying to board his master's boat one evening.

THE PARROT IN THE GARRET, by Lenore Blegvad (Atheneum)

A collection of poems regarding animals or people and their dwellings.

THE CHICK AND THE DUCKLING, by Mirra Ginsburg (Macmillan)

A chick learns it has many similarities to a newly-hatched duckling, but discovers one difference.

ANIMALS, ANIMALS, by Eric Carle (Philomel Books)

A collection of poems, by various authors, on pets, wild animals, and birds.

OWL MOON, by Jane Yolen (Scholastic, Inc.)

The story of the adventures of a boy and his father when they go owling one night.

THE WINTER WREN, by Brock Cole (Farrar, Straus & Giroux)

When his village suffers from a hard winter, Simon goes in search of spring.

NORA'S DUCK, by Satomi Ichikawa (Philomel Books)

Nora finds a duckling in the woods and takes it to Dr. John who provides love and care for many animals who are in trouble.

BIRDS, BEASTS, AND FISHES, by Anne Carter (Macmillan)

A collection of animal poems from around the world.

HAVE YOU SEEN BIRDS?, by Joanne Oppenheim (Scholastic, Inc.)

The sounds and activities of several birds are simply described and illustrated.

CHICKEN LITTLE, by Steven Kellogg (Wm. Morrow & Co.)

A humorous retelling of a chicken's misconception that the sky is falling.

PELICAN, by Brian Wildsmith (Pantheon Books)

When the egg that Paul finds hatches into a pelican, Paul must teach the bird how to fish.

**THE PELICAN CHORUS & THE QUANGLE WANGLE'S HAT, by Edward Lear
(Viking Press)**

Two poems tell of a King and Queen who live on the bank of the Nile, and a vast hat that attracts many different nesters.

THE OWL AND THE PUSSYCAT, by Edward Lear (G. P. Putnam's Sons)

Owl and Pussycat take a courtship voyage for one year and a day and then are blissfully married.

JONATHAN LIVINGSTON SEAGULL, by Richard Bach (Macmillan)

Jonathan Livingston Seagull spends so much time trying to perfect his flying technique, and not on finding food, that he is ostracized by the rest of the seagulls.

LIFE SCIENCES

ANIMALS - FISH AND MOLLUSKS

"Benchmarks":

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another." (Benchmarks, p. 102)
- "Plants and animals have features that help them live in different environments." (Benchmarks p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (Benchmarks, p. 102)
- "There is variation among individuals of one kind within a population." (Benchmarks, p. 107)
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- "Different plants and animals have external features that help them thrive in different kinds of places." (Benchmarks, p. 123)
- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (Benchmarks, p. 123)
- "All animals have offspring, usually with two parents involved. People may prevent some animals from producing offspring." (Benchmarks, p. 132)

Recommendations/Comments:

Create a submarine out of a cardboard refrigerator box and let the voyage begin! Cut out peep holes and place books about fish inside the sub. Create a display of shells and set up an aquarium. There are many hands-on ideas that can be done with this topic!

Write an adventure story where you ride on a seahorse. Write a detective story where an alibi "sounds fishy". Pretend you have eight arms like an octopus. Let the creative juices flow. Draw fish that look like their names (catfish, angelfish, jellyfish, swordfish, etc.). Draw pictures

of fish using crayons and then paint the picture with blue watercolor. For those really adventuresome teachers, try the Japanese art of fish printing (Gyota Ku)!

Related Children's Fiction:

MR. BOHM AND THE HERRING, by Peter Cohen and Olof Landstrom (Raben & Sjogern Books)

Mr. Bohm's curiosity leads him to try to train a fish.

A HOUSE FOR HERMIT CRAB, by Eric Carle (Picture Book Studios)

A hermit crab outgrows his old shell and moves into a new shell, which he enhances as he meets various sea creatures.

FISHY RIDDLES, by Katy Hall and Lisa Eisenberg (Dial Books)

A simple collection of riddles about fish.

NESSA'S FISH, by Nancy Luenn (Atheneum)

Nessa protects her grandmother and the fish caught for the Eskimo village from a fox, a pack of wolves, and a bear.

THE CARP IN THE BATHTUB, by Barbara Cohen (Lothrop, Lee & Shepard)

Two children try to rescue the fish their mother plans on cooking for dinner.

FISH IS FISH, by Leo Lionni (Pantheon Books)

When a tadpole grows up and leaves the pond, a little fish decides that he doesn't need to remain in the pond either.

LEND ME YOUR WINGS, by John Agard (Little, Brown & Company)

A fish who wants to fly and a bird that longs to swim trade fins and wings for a new look at life.

LOUIS THE FISH, by Arthur Yorinks (Farrar, Straus & Giroux)

An unhappy butcher finally achieves happiness.

WHERE'S THE FISH?, by Taro Gomi (Morrow Junior Books)

Fish are well camouflaged in pictures, and the reader is invited to find them.

WHISPERING IN THE PARK, by Fred Burstein (Bradbury Press)

Two girls try a clever plan to call the goldfish in the park pond.

THE BIG FISH: AN ALASKAN FAIRY TALE, by Marcia A. Wakeland (Misty Mountain)

Lena learns from a King Salmon that she can do anything if she believes in herself.

THE FISH OF GOLD, by Grimm Brothers, adapted by M. Eulalia Valeri (Silver Burdett)

A poor fisherman catches a golden fish that grants wishes until his wife's preposterous wishes cause a reversal of their fortune.

HOORAY FOR SNAIL, by John Stadler (Trumpet Club)

Slow Snail hits the ball so hard during a baseball game that it flies to the moon and back. Will Snail have time to slide in for a home run?

THE MAGIC FISH, by Freya Littledale (Scholastic, Inc.)

A fisherman is granted a wish from a magic fish and enjoys wealth and riches until his wife's greeds ruins the magic.

HERMAN THE HELPER, by Robert Kraus (Windmill Books)

Herman, the octopus, is always willing to help -- old or young, friend or foe.

JONAH AND THE GREAT FISH, by Warwick Hutton (Atheneum)

Retells the Biblical story of how Jonah was swallowed by the whale.

ONE FISH. TWO FISH. RED FISH. BLUE FISH, by Dr. Seuss (Random House)

Dr. Seuss explores the world of the sea in his clever, rhyming way.

BIRDS, BEASTS, AND FISH, by Anne Carter (Macmillan)

A collection of animal poems from around the world.

FISH AND FLAMINGO, by Nancy White Carlstrom (Little, Brown & Company)

Two unlikely friends tell about their lives, help each other out, and enjoy their time together.

WHY THE CRAB HAS NO HEAD, by Barbara Knutson (Carolrhoda Books)

An African legend in which the creator is concerned with Crab's pride, and makes him "headless" to instill humility.

IS THIS A HOUSE FOR HERMIT CRAB?, by Megan McDonsals (Orchard Books)

A crab outgrows his shell and looks for a new home.

FISH EYES, by Lois Ehlert (Harcourt Brace Jovanovich)

A colorful counting book based on neon fish.

THE GREAT, WHITE, MAN-EATING SHARK, by Margaret Maky (Dial Books)

Norvin pretends to be a shark and scare away swimmers in order to have the cave to himself. But, he's soon joined by an amorous female shark.

LIFE SCIENCES

ANIMALS - REPTILES AND AMPHIBIANS

"Benchmarks":

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- "Plants and animals have features that help them live in different environments." (Benchmarks p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (Benchmarks, p. 102)
- "There is variation among individuals of one kind within a population." (Benchmarks, p. 107)
- "Offspring are very much, but not exactly, like their parents and like one another." (Benchmarks, p. 107)
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- "Animals eat plants or other animals for food and may also use plants (or even other animals) for shelter and nesting." (Benchmarks, p. 116)
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- "Plants and animals both need to take in water, and animals need to take in food. In addition, plants need light." (Benchmarks, p. 116)
- "Different plants and animals have external features that help them thrive in different kinds of places." (Benchmarks, p. 123)
- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (Benchmarks, p. 123)
- "All animals have offspring, usually with two parents involved. People may prevent some animals from producing offspring." (Benchmarks, p. 132)

Recommendations/Comments:

Children find reptiles and amphibians totally fascinating! Add a chameleon to your classroom and watch him change colors. Study the brightly colored poisonous frogs found in the tropical rainforests. Watch a snake swallow something much larger than its mouth. These animals truly are amazing!

Discuss the literary inference that snakes or serpents are often portrayed as the "bad" guys and then write stories about a nice snake. Pretend that, like a chameleon, your skin changed color so that you blended in

with your surroundings and were hard to see. What advantages/disadvantages would this create? Write a story about a child whose skin keeps turning the color of his surroundings.

For art, paint a picture of an alligator on a piece of sandpaper. Cut out the alligator and glue it on to a picture of a swamp that you painted on white paper. Make snakes out of old ties or create paper mache snakes by taping crumpled newspaper around a bent coat hanger and applying the paper mache. Dry and paint as desired.

Related Children's Fiction:

BOX TURTLE AT LONG POND, by William George (Greenwillow Books)

A box turtle spends a day at Long Pond searching for food, basking in the sun, and escaping from a raccoon.

FROG IN THE MIDDLE, by Susanna Gretz (Four Winds Press)

Three friends find a game they all can play, so no one is left out.

TURTLE DAY, by Douglas Florian (Thomas Y. Crowell)

The events of Turtle's day are described, including how he hides in his shell when frightened by a snake.

HOW TO HIDE A CROCODILE, by Ruth Heller (Grosset & Dunlap)

Different reptiles are shown individually and again hiding in their environment. For beginning readers.

THE MONKEY AND THE CROCODILE, by Paul Galdone (Clarion Books)

A hungry crocodile tries his best to catch a monkey for dinner, but must use his wits to do it.

SWAMPY ALLIGATOR, by Jack Gantos (Windmill/Wanderer)

An alligator, who prefers playing in the mud and being dirty, is given a much needed bath, only to discover getting clean can be fun.

THE TURTLE AND THE MONKEY, by Paul Galdone (Clarion Books)

A turtle offers to share a banana tree with a greedy monkey, but must outsmart the monkey to get her share.

TAMMY TURTLE, by Suzanne Tate (Coastal Wildlife Refuge Society)

The life story of a turtle who is often assisted by the "helpful humans".

THE WIDE-MOUTHED FROG, by Rex Schneider (Delmar Printing)

A wide-mouthed frog is curious about the diets of the swamp animals until he meets an alligator who eats only wide-mouthed frogs.

TIDDALICK THE FROG, by Susan Nunes (Macmillan)

Retells the legend of Tiddalick, the giant frog, who was so thirsty he drank all of the fresh water in the world.

THE STORY OF THE DANCING FROG, by Quentin Blake (Random House)

Great Aunt Gertrude and her dancing frog travel the world in search of fame and fortune.

ONE FROG TOO MANY, by Mercer Mayer (Dial Books)

A pet frog becomes jealous when a little boy receives a second frog.

FROG AND TOAD ALL YEAR, by Arnold Lobel (Harper & Row)

As the seasons change, two friends share different experiences. (Other "Frog and Toad" books available.)

FROG AND TOAD ARE FRIENDS, by Arnold Lobel (Harper & Row)

Two friends enjoy several activities together. (Other "Frog and Toad" books available.)

SEVEN FROGGIES WENT TO SCHOOL, by Kate Duke (E. P. Dutton)

Master Bullfrog teaches some important lessons to seven little frogs who arrive at school.

THE MYSTERIOUS TADPOLE, by Steven Kellogg (Dial Books)

Louis's pet tadpole does not seem to be growing into an ordinary frog.

A BOY, A DOG, A FROG, AND A FRIEND, by Mercer Mayer (Dial Books)

When something unusual bites on the fishing line, a quiet fishing adventure changes.

LYLE, LYLE, CROCODILE, by Bernard Waber (Houghton Mifflin)

A grumpy neighbor sends Lyle to the zoo, but Lyle's bravery wins Mr. Grump's acceptance and permission to return home.

LOVABLE LYLE, by Bernard Waber (Houghton Mifflin)

A little girl's mother forbids her to play with Lyle, until she evidences how kind and brave he is.

WHAT A CATASTROPHE!, by Wayne Campbell (Bradbury Press)

A young boy brings a frog home for breakfast. What happens is determined by the reader, who can choose the ending.

THE TURTLE AND THE ISLAND, by Barbara Ker Wilson (J. P. Lippincott)

A legend of a sea turtle who creates an island and brings humans to it, explaining the origin of New Guinea.

ELIZABETH AND LARRY, by Marilyn Sadler (Simon & Schuster)

Elizabeth and an alligator named Larry are content as friends until the neighbors protest having an alligator around.

THERE'S AN ALLIGATOR UNDER MY BED, by Mercer Mayer (Dial Books)

Bedtime is challenging for a boy with an alligator under his bed, until he lures it out of his room and into the garage.

TRICKY TORTOISE, By Mwenye Hadithi (Little, Brown & Company)

An elephant is out-witted by a tortoise who shows he can jump over the elephant's "tiny and stupid" head.

CRAFTY CHAMELEON, by Mwenye Hadithi (Little, Brown & Company)

A chameleon must out-smart a leopard and a crocodile in order for them to leave him alone.

THE DAY JIMMY'S BOA ATE THE WASH, by Trinka Noble (Dial Books)

A field trip becomes chaotic when Jimmy brings along his boa.

THE ENORMOUS CROCODILE, by Roald Dahl (Alfred A. Knopf)

An enormous crocodile tries several attempts to secure lunch, only to be foiled by neighbors.

THE MIXED UP CHAMELEON, by Eric Carle (Thomas Y. Crowell)

A chameleon wishes to be like the other animals it sees, but soon realizes it's better to be yourself.

BILL AND PETE GO DOWN THE NILE, by Tomie de Paola (G. P. Putnam's Sons)

Pete and his crocodile friend, Bill, encounter a jewel thief at the museum in Cairo.

FROG WHERE ARE YOU?, by Mercer Mayer (Dial Books)

A wordless book depicting a boy who searches the woods for his frog, and experiences several mishaps along the way.

FROG ON HIS OWN, by Mercer Mayer (Dial Books)

Frog ventures away from his friends for an adventure on his own.

GILA MONSTERS MEET YOU AT THE AIRPORT, by Marjorie Weinman Sharmat (Macmillan)

A New York City boy's ideas of life in the West make him worried about his family's plans to move there.

LIZARD'S SONG, by George Shannon (Greenwillow Books)

A lizard repeatedly teaches his song to Bear, who, when distracted, forgets the words.

A BOY, A DOG, AND A FROG, by Mercer Mayer (Dial Books)

Tells, in pictures, a boy's unsuccessful attempts to catch a frog.

ALICE AND THE BOA CONSTRICTOR, by Laurie Adams (Houghton Mifflin)

After learning in science class that boa constrictors make excellent pets, Alice saves her money to buy Sir Lancelot.

CLIVE EATS ALLIGATORS, by Alison Lester (Houghton Mifflin)

Each group of children is different in a special way -- when eating or dressing, at play, and at bedtime.

TURTLE KNOWS YOUR NAME, Ashley Bryan (Atheneum)

A grandmother of a boy with a very long name challenges him to discover her real name.

FRANKLIN FIBS, by Paulette Bourgeois (Scholastic, Inc.)

Franklin, the turtle, has to live with the results of a fib he tells his friends. (Other "Franklin" books available.)

HURRY UP, FRANKLIN, by Paulette Bourgeois (Scholastic, Inc.)

Franklin the turtle learns to be happy with what he is and find the good in it. (Other "Franklin" books available.)

A CROCODILE'S TALE, by Jose and Ariane Aruego (Scholastic, Inc.)

A boy saves a crocodile's life only to have the animal threaten to eat him.

TO BATHE A BOA, by C. Imbior Kudrna (Carolrhoda Books)

A youngster finds its not easy to bathe an uncooperative boa.

APPLES, ALLIGATORS AND ALSO ALPHABETS, by Odette & Bruce Johnson (Oxford University Press)

An alphabet book of different animals.

THE FROG PRINCE CONTINUED, by Jon Scieszka (Viking Penguin)

The Frog Prince finds life with the Princess unfulfilling and seeks out a witch to tun him back into a frog. However, finding the right witch can be difficult, giving the Frog Prince time to re-think his decision.

GATOR PIE, by Louise Mathews (Dodd, Mead & Company)

Two alligators face a dilemma when they try to share a pie, dividing it into halves, thirds, fourths, eighths, and, eventually, hundredths.

JIMMY'S BOA BOUNCES BACK, by Trinka Hakes Noble (Dial Books)

Jimmy's boa adds chaos to a posh garden club meeting.

A NICE WALK IN THE JUNGLE, by Nan Bodsworth (Viking Kestrel)

Miss Jellaby takes her class for a walk in the jungle and must confront a hungry boa constrictor to get her class back.

LIFE SCIENCES

ANIMALS - MAMMALS

"Benchmarks":

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- "Plants and animals have features that help them live in different environments." (*Benchmarks* p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (*Benchmarks*, p. 102)
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Recommendations/Comments:

For many students, when the word "animals" is mentioned, mammals are what come to mind. To introduce the students to different classifications of mammals, try a game of "20 questions". Have a student select an animal (from a given list) and have students ask "yes/no" questions regarding the animal. Use their questions to relate their thinking process with the scientific approach to classifying animals. Deduce what characteristics they all have in common. Investigate all the products we get from animals.

For language arts, compare realistic animal traits to those traits given to animals in stories. Write a tall tale to explain an animal trait (i.e. why a pig's tail is curly). Pretend you are a kangaroo -- what items do you keep in your pouch? Create poetry books about different animals. Add cut-out pictures or draw illustrations for each poem. Many animals (Tony the Tiger, Toucan Sam, McGruff the Anti-Crime Dog, Elsie the Cow) are used in advertising. Choose an animal and design an advertisement around it. Make a list of animal phrases and compile into a book. ("Your room looks like a pig sty", "He made such a pig of himself at dinner", "That's a bunch of hogwash". "That's a horse of a different color".) Illustrate for a humorous book!

Related Children's Fiction:

THE STORY OF NOAH'S ARK, by Erma Emhardt (Crown Publishing)

God directs the only good man left on earth, Noah, to build an ark to save his family and two of every species of animal found on earth from the great flood.

NOAH'S ARK, by Peter Spier (Doubleday)

A word-less picture book depicting the many joys and struggles of collecting all of the various animals and keeping them in the ark for such a long time.

GOBBLE, GROWL, GRUNT, by Peter Spier (Doubleday)

Contains illustrations of over 600 animals and the different sounds they make.

TAIL, TOES, EYES, EARS, NOSE, by Marilee Robin Burton (Harper & Row)

Body parts of animals are presented for the reader to determine what the whole animal is.

ANIMALS, ANIMALS, by Eric Carle (Philomel Books)

A collection of poems describing domestic and wild animals.

JUST SO STORIES, by Rudyard Kipling (Henry Holt)

Several short tales that explain how different members of the animal kingdom became as they are today.

CATS

THE TAPESTRY CATS, by Ann Turnbull (Little, Brown & Company)

A lonely princess lives just as the Queen wishes until her Fairy Godmother grants her wish for "Gold" and "Silver".

CAT, by Sara Bonnett Stein (Harcourt Brace Jovanovich)

The activities of a family's cat are observed.

THE CAT WHO WORE A POT ON HER HEAD, by Jan Slepian and

When Bendemolena misunderstands her mother's job assignments, the children do strange chores.

CATS SLEEP ANYWHERE, by Eleanor Farjean (Oxford University Press)

A look around the house shows that the cats have many places to snooze.

THE CAT IN THE HAT, by Dr. Seuss (Houghton Mifflin)

Two children are put in quite a predicament when they are visited by a strange cat while their mother is not at home.

ANDROCLES AND THE LION, by Janet Stevens (Holiday House)

The Aesop fable of Androcles and a wounded lion is retold.

DRAGON'S FAT CAT, by Dav Pilkey (Orchard Books)

Dragon gets an unexpected surprise when he finds a fat cat and brings it home.

HAVE YOU SEEN MY CAT?, by Eric Carle (Franklin Watts)

A young boy searches for his cat and finds many other types of cats.

CATCH THAT CAT!, by Fernando Krahm (E. P. Dutton)

A little boy who is chasing his runaway cat has several encounters.

WILDERNESS CAT, by Natalie Kinsey-Warnock (Duttons Childrens Books)

Serena's family fears they have left Moses, the cat, behind when they move, but a surprise is in store.

THE WINGED CAT, by Deborah Nourse (Harper Collins)

A young servant girl in ancient Egypt works with a High Priest to find the correct magic spells that open the twelve gates of the Netherworld. This is done to determine who is telling the truth regarding the death of her cat.

OH KOJO! HOW COULD YOU?, by Verna Aardema (Dial Books)

Kojo finally gets the best of the mischeivous Anansi.

TWO FOOLISH CATS, by Yoshiko Uchida (McElderry Books)

Two foolish cats try to settle their quarrel by visiting the old monkey of the mountain.

DANDELION, by Don Freeman (Viking Press)

Dandelion is invited to a party, but when he overdresses, the hostess does not recognize him and turns him away.

NOBODY'S CAT, by Barbara Joosse (Harper Collins)

A stray cat finds homes for her kittens and herself, with the help of a disabled boy.

THAT OLIVE!, by Alice Schertle (Lothrop, Lee & Shepard)

A house cat enjoys hiding from Andy, but Andy devises a plan to draw out Olive while he hids himself.

PUSS IN BOOTS, by Paul Galdone (Houghton Mifflin)

When his cat outwits a giant, a poor man gains fortune and meets a beautiful princess.

THE CAT'S PURR, by Ashley Bryan (Atheneum)

A fable of a protective cat who swallows a drum, which gives him his purr.

FOUR FIERCE KITTENS, by Joyce Dunbar (Scholastic, Inc.)

Four little kittens try, unsuccessfully, to frighten the barnyard animals and end up frightened themselves.

LAZY LION, by Mwenye Hadithi (Little, Brown & Company)

A lazy lion demands that the animals of his kingdom build him a house before the Big Rain comes.

THE HAPPY LION, by Louise Fatio (McGraw-Hill)

A lion is visited often at the zoo by happy, friendly people, who view the lion differently when he is loose and goes to visit the people.

FIERCE THE LION, by Evaline Ness (Holiday House)

Fierce, the lion, wants to leave the circus in search of a new job.

DOGS, FOXES, WOLVES

NEWE, by Marie Killilea (Philomel Books)

A large Newfoundland dog meets a small white kitten in a deserted house. The two become good friends with Newf saving the kitten on more than one occasion.

I WANT A DOG, by Dayal Kaur Khalsa (Clarkson Potter Publishers)

May creates an imaginary dog out of a rollerskate when her parents won't let her get a real one.

THE BIGGEST, MEANEST, UGLIEST DOG IN THE WHOLE WIDE WORLD,

by Rebecca C. Jones (Macmillan)

To Jonathan, the dog next door seems big, mean, and ugly, until a ball changes their relationship.

CLIFFORD, THE SMALL RED PUPPY, by Norman Bridwell (Scholastic, Inc.)

Tells the story of a tiny, sickly puppy who becomes larger than life because of a little girl's love. (Other "Clifford" books available.)

WHERE'S SPOT?, by Eric Hill (G. P. Putnam's Sons)

A mother dog finds many other animals hiding throughout the house before she finds her lost puppy. (Other "Spot" books available.)

SPOT'S BIRTHDAY PARTY, by Eric Hill (G. P. Putnam's Sons)

Spot plays hide-and-seek with his guests at his birthday party. (Other "Spot" books available.)

WHAT'S IN FOX'S SACK?, by Paul Galdone (Clarion Books)

A fox replaces a bumblebee that escaped from his sack, with a rooster, a pig, and finally a boy who outwits the fox.

VALENTINE FOXES, by Clyde Watson (Orchard Books)

Four little foxes plan a surprise for their parents, while the parents plan surprises, too.

FANTASTIC MR. FOX, by Roald Dahl (Alfred A. Knopf)

Three mean farmers declare war on a fox and his family.

THE FOX WENT OUT ON A CHILLY NIGHT, by Peter Spier (Doubleday)
An old song is illustrated of a fox who hunts and finds a goose for dinner. Music is included.

FLOSSIE AND THE FOX, by Patricia C. McKissack (Dial Books)
A notorious fox meets his match when a bold girl refuses to be frightened.

RED FOX, by Hannah Giffard (Dial Books)
After searching all night for food, Red Fox finds a surprise back in his den.

MICE

WHOSE MOUSE ARE YOU?, by Robert Kraus (Macmillan)
A mouse reunites his family and is surrounded by love.

MOUSEKIN'S LOST WOODLAND, by Edna Miller (Simon & Schuster)
When a new house is built in the woods, many trees are removed, and the animals' homes are destroyed. Luckily, Mousekin finds one home that respects nature.

NEED A HOUSE? CALL MS. MOUSE!, by George Mendoza (Grosset & Dunlap)
Henrietta Mouse custom-designs homes for her animal friends.

THE PROVERBIAL MOUSE, by Moira Miller and Ian Deuchar (Dial Books)
A mouse in a toy shop is consoled with proverbs as he is consistently disappointed as the foods he tries to acquire are really toys.

FREDERICK, by Leo Lionni (Partheon Books)
As the mice gather food for winter, Frederick collects a different type of "provisions".

TWO TINY MICE, by Alan Baker (Dial Books)
The story of two mice exploring the fields and woodlands outside of their nest.

A SURPRISE FOR MITZIE MOUSE, by Kathleen Bullock (Simon & Schuster)
A new baby sister is unwanted by Mitzi Mouse, until she discovers a sister may be nice to have around.

SEVEN BLIND MICE, by Ed Young (Philomel Books)
Retells the Indian legend where seven blind people (depicted as mice) argue over the appearance of an elephant.

IF YOU GIVE A MOUSE A COOKIE, by Laura Joffe Numeroff (Harper & Row)
Recounts the cycle of requests a mouse makes after receiving a cookie; takes you through a young child's day.

NICOLAS, WHERE HAVE YOU BEEN?, by Leo Lionni (Alfred A. Knopf)
A young mouse learns that birds are not the enemy, as he thought, after he spends time with a bird and gets to know him.

TILLIE AND MERT, by Ida Luttrell (Harper & Row)

Tillie and Mert share many experiences such as going to garage sales, opening their own grocery store, and telling fortunes.

CHESTER'S WAY, by Kevin Henkes (Greenwillow Books)

Two mice have very specific ways of doing things, until Lilly opens their eyes to new experiences.

NOISY NORA, by Rosemary Wells (Dial Books)

Nora feels neglected and tries to capture the attention of her parents by making more and more noise.

MOTHER, MOTHER, I WANT ANOTHER, by Maria Polushkin (Crown Publishing)

Mrs. Mouse anxiously tries to get her son to sleep.

THE CHURCH MICE AT BAY, by Graham Oakley (Atheneum)

The church mice, along with Sampson the cat, try to run the substitute vicar from the church.

A MOUSE'S DIARY, by Michelle Cartlidge (Lothrop, Lee & Shepard)

A young mouse writes about the events in her life.

Bears

CAN'T YOU SLEEP, LITTLE BEAR?, by Martin Waddell (Discovery Toys)

Little Bear can't sleep with the darkness around. Big Bear lights up the cave little by little until they reach outside.

WE'RE GOING ON A BEAR HUNT, by Michael Rosen (Macmillan)

The tale of a bear hunt is retold with the hunters encountering grass, the river, mud, a forest, and other obstacles.

BIG TIME BEARS, by Stephen Krensky (Little, Brown & Company)

Time measurements such as minute, hour, day, and year are demonstrated by the bear family.

WHEN PANDA CAME TO OUR HOUSE, by Helen Zane Jensen (Dial Books)

A panda bear visits a little girl and shares his Chinese customs with her.

THE BEAR'S TOOTHACHE, by David McPhail (Little, Brown & Company)

A little boy tries to help a bear remove an aching tooth.

LITTLE BEAR, by Else Holmelund Minarik (Harper & Row)

Four stories which relate different events in the life of Little Bear. (Other "Little Bear" books available.)

HOLD TIGHT, BEAR!, by Ron Maris (Delacorte Press)

When Bear gets spooked in the woods, he gets himself in a predicament and must count on his friends for help.

WHO WANTS AN OLD TEDDY BEAR?, by Ginnie Hofmann (Random House)

Andy is, at first, disappointed in the teddy bear he receives from his grandmother, but later learns to love it.

BEAR, by John Schoenherr (Philomel Books)

A young bear finds independence while searching for his mother.

THE BEAR WHO HAD NO PLACE TO GO, by James Stevenson (Harper & Row)

When a circus bear loses his job, he searches for a new lifestyle.

LITTLE POLAR BEAR, by Hans de Beer (North-South Books)

A young polar bear gets separated from his father and drifts to a jungle, where a friendly hippo helps him out.

POLAR BEAR, POLAR BEAR, WHAT DO YOU HEAR?, by Bill Martin, Jr.
(Henry Holt)

Zoo animals make their distinctive sounds for each other, while children try to imitate them.

THE BIGGEST BEAR, by Lynd Ward (Houghton Mifflin)

Johnny wants to hang a bearskin of his own on the family barn, but he returns from a hunting trip with more than he bargained for.

OLD BEAR, by Jane Hissey (Philomel Books)

The toy animals try to rescue Old Bear from the confines of the attic.

BEDTIME FOR BEAR, by Sandol Stoddard (Houghton Mifflin)

Small bear uses every excuse to delay bedtime.

SLEEPY BEAR, by Lydia Dabovich (E. P. Dutton)

A story of an expressive bear who prepares for a winter's nap and then wakes up at the signs of spring.

JESSE BEAR, WHAT WILL YOU WEAR?, by Nancy White Carlstrom
(Macmillan)

A rhyming story of a bear who changes clothes for different times of the day.

JAMBERRY, by Bruce Degen (Harper & Row)

A boy and a bear enjoy collecting all kinds of berries together.

THE TEDDY BEARS' PICNIC, by Jimmy Kennedy (Green Tiger Press)

Teddy bears from all over gather for the annual picnic, but what will happen if humans try to join the fun?

RUNNING BEAR, by Jez Alborough (Alfred A. Knopf)

A polar bear decides it is time to begin an exercise program.

THE VALENTINE BEARS, by Eve Bunting (Clarion Books)

A surprise Valentine celebration is planned for Mr. Bear, despite the fact that it's hibernating time.

TEDDY BEARS STAY INDOORS, by Susanna Gretz (Four Winds Press)

A rainy day keeps five teddy bears indoors where their imagination takes them on a trip to space.

BROWN BEAR, BROWN BEAR, WHAT DO YOU SEE?, by Bill Martin, Jr.
(Henry Holt)

A pattern book involving the reader and several colorful animals.

ASK MR. BEAR, by Marjorie Flack (Macmillan)

A boy questions several animals on finding the perfect present for his mother's birthday. Only Mr. Bear suggests a gift that only Danny can give.

BERLIOZ THE BEAR, by Jan Brett (G. P. Putnam's Sons)

Berlioz and his musician friends are going to the town ball to play, when the mule refuses to pull their bandwagon.

Sheep and Goats

SHEEP IN A SHOP, by Nancy Shaw (Houghton Mifflin)

While shopping for a birthday present, sheep find the day does not go as planned. (Other Nancy Shaw "Sheep" books available.)

SHEEP IN A JEEP, by Nancy Shaw (Houghton Mifflin)

A group of sheep go for an adventure in a jeep. (Other Nancy Shaw "Sheep" books available.)

THE LAMB AND THE BUTTERFLY, by Arnold Sundgaard (Orchard Books)

A lamb and an adventurous butterfly compare life styles.

WHEN SHEEP CANNOT SLEEP, by Satoshi Kitamura (Farrar, Straus & Giroux)

A counting book involving a sheep who has trouble falling asleep.

FRISKA, THE SHEEP THAT WAS TOO SMALL, by Rob Lewis (Farrar, Straus & Giroux)

Friska was mocked for being small, until the other sheep are saved due to Friska's small size.

TEN SLEEPY SHEEP, by Holly Keller (Greenwillow Books)

When Lewis can't sleep, he counts sheep, only to create a room full of noisy sheep.

WHILE THE SHEPHERD SLEPT, by Matt Novak (Orchard Books)

When a shepherd boy falls asleep, the sheep sneak into town to perform on stage.

THE BLACK SHEEP, by Elisabeth Heck (Little, Brown & Company)

A black sheep doesn't want to be part of the flock, and later discovers a more fulfilling "job".

EMMA'S LAMB, by Kim Lewis (Four Winds Press)

Emma cares for a lost lamb and realizes even a lamb needs a mother.

HAIRCUTS FOR THE WOOLSEYS, by Tomie de Paola (G. P. Putnam's Sons)

A family of sheep get spring haircuts, only to be surprised by a snowstorm. Luckily, Granny has planned ahead!

CHARLIE NEEDS A CLOAK, by Tomie de Paola (Prentice-Hall)

A shepherd shears his sheep and, from the wool, makes cloth for a new red cloak.

THE QUEEN'S GOAT, by Margaret Maky (Dial Books)

When her goat gets too rambunctious, a young queen and her pet win an unexpected prize at the fair.

GREGORY, THE TERRIBLE EATER, by Mitchell Sharmat (Four Winds Press)

As a very picky eater, Gregory prefers healthy foods, instead of the usual goat diet of shoes, tin cans, and junk.

THE THREE BILLY GOATS GRUFF, by Janet Stevens (Harcourt Brace Jovanovich)

Three billy goats must outsmart a troll in order to cross the bridge.

Pigs

THE PIGS' WEDDING, by Helme Heine (Macmillan)

The guests at the pigs' wedding have a great time painting on clothes, eating a big feast, and wallowing in the mud.

PIG PIG AND THE MAGIC PHOTO ALBUM, by David McPhail (E. P. Dutton)

While waiting for the photographer, Pig Pig practices saying "cheese" and looks through a photo album. In doing so, he encounters many surprises. (Other "Pig Pig" books available.)

PIG PIG GROWS UP, by David McPhail (E. P. Dutton)

Pig Pig insists on acting like a child, until an emergency causes him to act like a grown-up. (Other "Pig Pig" books available.)

THE AMAZING PIG, by Paul Galdone (Houghton Mifflin)

A king is intrigued over the stories a farm boy tells of his amazing pig.

PIGS IN HIDING, by Arlene Dubanevich (Four Winds Press)

Ninety-nine pigs are hidden around the house. Who can find them?

BORIS THE BORING BOAR, by Ellen Jackson (Macmillan)

A chatty, talkative boar finds that being a good listener can be very important.

THIS LITTLE PIG, by Leonard B. Lubin (Lothrop, Lee & Shepard)

An illustrated story of the Mother Goose poem beginning with "This little pig went to market."

THE THREE LITTLE PIGS, by James Marshall (Dial Books)

The classic story of three pigs and a wolf who tries to outsmart them.

THE TRUE STORY OF THE THREE LITTLE PIGS, by Jon Scieszka (Viking Press)

The wolf gives his version of what happened the day he visited the three pigs.

IF I HAD A PIG, by Mick Inkpen (Little, Brown & Company)

A boy speculates how he would spend time with a pig.

Kangaroos

WHAT DO YOU DO WITH A KANGAROO?, by Mercer Mayer (Four Winds Press)

A little girl manages several demanding animals.

JOEY, by Jack Kent (Prentice-Hall)

An overly-protective mother concludes that it may be okay to "let go" and allow Joey to go out to play.

Horses, Zebras, Llamas and Donkeys

JO JO THE MELON DONKEY, by Michael Morpurgo (Prentice-Hall)

A lowly donkey finds self-respect when he saves the town from a flood.

FRITZ AND THE BEAUTIFUL HORSE, by Jan Brett (Houghton Mifflin)

A horse is excluded when his appearance doesn't measure up, but when he saves the children, his skills and dependability earn him respect.

SYLVESTER AND THE MAGIC PEBBLE, by William Steig (Windmill Books)

In a panic situation, Sylvester asks the magic pebble to turn him into a rock, and then cannot hold the pebble to turn himself back to normal.

GREEDY ZEBRA, by Mwenye Hadithi (Little, Brown & Company)

A zebra's stripes are explained through the legend of a greedy zebra.

IS YOUR MAMA A LLAMA?, by Deborah Guarino (Scholastic, Inc.)

Baby llama Lloyd tries to guess what kind of animal everyone's mother is.

MILDRED, MAUDE, AND MR. GOOSE, by Fred Harsh (Abingdon Press)

The story of Mildred, the horse, and her search for a friend.

Elephants

NATHAN & NICHOLAS ALEXANDER, by Lulu Delacre (Scholastic, Inc.)

Nathan, the elephant, is visited by a mouse in the middle of the night. After a rocky start, they become fast friends.

THE RIGHT NUMBER OF ELEPHANTS, by Jeff Sheppard (Harper & Row)

A counting book of a girl who needs the right number of elephants to do various activities.

17 KINGS AND 42 ELEPHANTS, by Margaret Maky (Dial Books)

A group of Kings and elephants encounter a variety of animals as they journey through the jungle.

THE WAY HOME, by Judith Richardson (Macmillan)

When baby elephant doesn't want to leave the beach, mother elephant finds another method to show him the way home.

ALISTAIR'S ELEPHANT, by Marilyn Sadler (Prentice-Hall)

Alistair's life changes forever after an elephant follows him home from the zoo.

**THE STORY OF BABAR, THE LITTLE ELEPHANT, by Jean de Brunhoff
(Random House)**

An orphaned elephant goes to the city to live with an old lady who gives him everything he could ever want. Eventually, however, he returns to the forest and is crowned king of the elephants. (Other "Babar" books available.)

BABAR'S LITTLE CIRCUS STAR, by Jean de Brunhoff (Random House)
Once unhappy because she is the smallest, Isabelle finds that being small can be an advantage when she gets to perform in the circus.

JIMMY & JOE CATCH AN ELEPHANT, by Sally Glendinning (Garrard Publishing)
Two boys help an old man who is chasing a mischevious elephant around town.

ELEPHANTS NEVER FORGET, by Diane L. Burns (Lerner Publications)
A collection of elephant jokes.

FIVE MINUTES PEACE, by Jill Murphy (G. P. Putnam's Sons)
A mother elephant trys to escape from her rowdy children for five minutes peace, but is always found.

HORTON HATCHES THE EGG, by Dr. Seuss (Random House)
Horton, the elephant, agrees to sit on the nest of a lazy bird who is tired of waiting for her egg to hatch.

Monkeys

CECILY G. & THE 9 MONKEYS, by H. A. Rey (Houghton Mifflin)
A picture book about a lonely giraffe and his encounter with a homeless family of monkeys.

THE MONKEY AND THE CROCODILE, by Paul Goldone (Clarion Books)
A retelling of an Indian fable where, in the form of a monkey, Buddha outwits the crocodile who tries to capture him.

FIVE LITTLE MONKEYS JUMPING ON THE BED, by Eileen Christelow (Clarion Books)
One by one, the monkeys who are jumping on the bed fall and bump their heads.

GORILLA, by Anthony Browne (Julia MacRae)
A toy gorilla comes alive and brings happiness to a lonely little girl.

PRINCESS GORILLA AND A NEW KIND OF WATER, by Verna Aardema (Dial Books)
To marry Princess Gorilla, a suitor must first drink strange, acidic water to prove his strength. But does it require strength or wits to empty the barrel?

THE ESCAPE OF MARVIN THE APE, by Caralyn Buehner (Dial Books)
Marvin escapes from the zoo and finds he can easily blend into city life.

CAPS FOR SALE, by Esphyr Slobodkina (Young Scott Books)
A peddler takes time to nap, only to awaken to find a band of monkeys all wearing the hats he is selling.

APE IN A CAPE, by Fritz Eichenberg (Harcourt Brace Jovanovich)
An assortment of animals introduce the alphabet.

LITTLE GORILLA, by Ruth Bornstein (Clarion Books)

A cute, baby gorilla makes lots of friends, but will things change when he grows up and becomes big?

CURIOUS GEORGE GOES TO AN ICE CREAM SHOP, by Margret and H. A. Rey (Scholastic, Inc.)

George gets himself in trouble while waiting for the man with the yellow hat in an ice cream store. (Other "Curious George" books available.)

CURIOUS GEORGE RIDES A BIKE, by H. A. Rey (Scholastic, Inc.)

George gets a bike as a special present and uses it to get in and out of several adventures. (Other "Curious George" books available.)

ALL ABOUT ARTHUR (AN ABSOLUTELY ABSURD APE), by Eric Carle (Franklin Watts)

A lonely ape travels from city to city meeting other animals.

Zoo Animals

A GIRAFFE AND A HALF, by Shel Silverstein (Harper Collins)

A giraffe gets "transformed" into a giraffe and a half with many crazy accessories, and then the situation is reversed in a humorous way.

FOLLOW THE ZOOKEEPER, by Patricia Relf (Western Publishing)

Follows Mr. Scott around the zoo as he visits with all of his animal friends.

THERE'S A HIPPOPOTOMUS ON OUR ROOF EATING CAKE, by Hazel Edwards (Holiday House)

The hippo living on the roof is allowed to do all of the things a little girl is forbidden to do.

TEN LITTLE HIPPOS: A COUNTING BOOK, by Bobette McCarthy (Bradbury Press)

A group of hippos entertain the audience, with each act composed of one less hippo.

AM I BEAUTIFUL?, by Else Holmelund Minarik (Greenwillow Books)

A young hippo asks various families "Am I beautiful?", and finally finds the answer he is looking for from his mother.

HIPPO LEMONADE, by Mike Thaler (Harper & Row)

Hippo and his friends share a variety of activities.

GEORGE AND MARTHA ONE FINE DAY, by James Marshall (Houghton Mifflin)

Two friends share experiences in five short stories.

SOPHIE & JACK HELP OUT, by Judy Taylor (Houghton Mifflin)

Includes five new stories in the friendship of two hippotamuses.

WHO WANTS A CHEAP RHINOCEROS?, by Shel Silverstein (Macmillan)

A rhinoceros can be very useful, if you use your imagination!

Cows

THE STORY OF FERDINAND, by Munro Leaf (Viking Press)

The story of Ferdinand, an unusual bull, who doesn't fit in with the rest of his friends.

MR. BROWN CAN MOO! CAN YOU?, by Dr. Seuss (Random House)

Mr. Brown is an expert at imitating all sorts of noises, including a cow, a bee, and even a hippopotamus.

Rabbits

THE BIONIC BUNNY SHOW, by Marc Brown (Little, Brown & Company)

The reader views "behind the scene" as an ordinary rabbit is transformed to a bionic bunny for television.

THE RABBIT CLUB, by Jan Wask (Harcourt Brace Jovanovich)

Fritz discovers some unusual rabbits who hold their club meetings in the barn.

RABBIT'S MORNING, by Nancy Tafuri (Greenwillow Books)

A new day begins, and baby rabbit decides to go exploring.

THE RUNAWAY BUNNY, by Margaret Wise Brown (Harper & Row)

A mother rabbit assures her little bunny that wherever he goes, she will be nearby.

NAUGHTY BUNNY, by Richard Scarry (Western Publishing)

A mischievous little bunny tries to be good for an entire day.

THE BIG BUNNY AND THE EASTER EGG, by Steven Kroll (Scholastic, Inc.)

What happens when the Easter Bunny gets sick the night before Easter? His friends try to pitch in and help.

THE VELVETEEN RABBIT, by Margery Williams (Alfred A. Knopf)

The story of a toy bunny who learns what it is like to become "real".

Woodland Animals

LITTLE TRICKER THE SQUIRREL MEETS BIG DOUBLE THE BEAR, by Ken Kesey (Viking Penguin)

Big Double, the bear, terrorizes the woodland animals, until a tricky squirrel gets even.

BREAD AND JAM FOR FRANCES, by Russell Hoban (Harper & Row)

Frances sings about "Jam on Toast", the food she likes most, until she has it for the sixth meal in two days.

NUTS TO YOU, by Lois Ehlert (Harcourt Brace Jovanovich)

A squirrel finds himself in an apartment and has quite an adventure.

BAT TIME, by Ruth Horowitz (Four Winds Press)

Leila and her father watch the bats devouring the insects in the backyard.

A PORCUPINE NAMED FLUFFY, by Helen Lester (Houghton Mifflin)

A misnamed porcupine is unhappy until he meets a misnamed rhinoceros.

POSSUM COME A-KNOCKIN', by Nancy Van Laan (Alfred A. Knopf)

A rhythmic story of a mountain family and a possum who comes visiting.

THE HAPPY HEDGEHOG BAND, by Martin Waddell (Candlewick Press)

Happy hedgehogs playing drums soon recruit other woodland animals to join them in making music.

RACCOONS AND RIPE CORN, by Jim Arnosky (Lothrop, Lee & Shepard)

At night, the hungry raccoons feast on the ripe corn they find in the field.

THE BADGER AND THE MAGIC FAN, by Tony Johnston (G. P. Putnam's Sons)

A badger makes a fortune by stealing a magic fan and making a rich girl's nose grow.

CHIPMONK SONG, by Joanne Ryder (E. P. Dutton)

A little child imagines the life of a chipmonk who burrows, collects acorns, and finally hibernates.

ARMADILLO, by Mary Elise Monsell (Atheneum)

The prairie animals worry about Armadillo, who disappears when it rains, and soon discover how warm and snug it can be inside.

Water Mammals

THE WALRUS AND THE CARPENTER, by Lewis Carroll (Henry Holt)

A walrus and a carpenter take a walk on the beach and discover a mutual fondness for oysters.

**I WAS KISSED BY A SEAL AT THE ZOO, by Helen Marion Palmer
(Beginner Books)**

A group of children discuss their visit to the zoo.

JACK, THE SEAL, AND THE SEA, by Joanne Fink (Silver Burdett)

Jack ignores the fact that the fish he is catching are sickly, until he meets an ailing seal and realizes how polluted the water is.

IF YOU EVER MEET A WHALE, by Myra Cohn Livingston (Holiday House)

A collection of poems about whales.

MY FRIEND WHALE, by Simon James (Bantam Books)

A child is saddened when a whale near his home is suddenly never seen again.

BABY BELUGA, by Ashley Wolff (Crown Publishers)

A little, white whale frolics in the deep blue sea. (Based on the song "Baby Beluga" by Raffi.)

CATCH A WHALE BY THE TAIL, by Edward R. Ricciuti (Harper & Row)

Scientists help catch a mate for the lonely, white whale at the aquarium.

HUMPHREY, THE LOST WHALE, by Wendy Tokudo and Richard Hall (Heian)

A true story of a lost whale who enters San Francisco Bay.

GOING ON A WHALE WATCH, by Bruce McMillan (Scholastic, Inc.)

Two 6-year-olds go whale watching and see different kinds of whales. Facts on each kind of whale are included.

BURT DOW DEEP-WATER MAN, by Robert McCloskey (Viking Press)

Burt accidentally hooks the tail of a whale and fixes the injury with a band-aid. Now, as friends, the whale protects Burt from a storm by temporarily swallowing his boat.

THE WHALES' SONG, by Dyan Sheldon (Scholastic, Inc.)

After hearing her grandmother's stories of the singing of whales when they're left a special gift, Lilly leaves a present at the shore and waits.

LIFE SCIENCES

ANIMALS - DINOSAURS

"Benchmarks":

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another." (Benchmarks, p. 102)
- "Plants and animals have features that help them live in different environments." (Benchmarks p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (Benchmarks, p. 102)
- "There is variation among individuals of one kind within a population." (Benchmarks, p. 107)
- "Offspring are very much, but not exactly, like their parents and like one another." (Benchmarks, p. 107)
- "Most living things need water, food and air.", (Benchmarks, p. 111)
- "Animals eat plants or other animals for food and may also use plants (or even other animals) for shelter and nesting." (Benchmarks, p. 116)
- "Plants and animals both need to take in water, and animals need to take in food. In addition, plants need light." (Benchmarks, p. 116)
- "Different plants and animals have external features that help them thrive in different kinds of places." (Benchmarks, p. 123)
- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (Benchmarks, p. 123)
- "All animals have offspring, usually with two parents involved. People may prevent some animals from producing offspring." (Benchmarks, p. 132)

Recommendations/Comments:

With the recent dinosaur craze, it won't be hard to excite students on this topic with all of the children's books available! Make a time line of the different dinosaur periods and have students bring in any toy dinosaurs they have. What dinosaur period do they belong? How are they similar? How are they different? Write a story about your dinosaur and plan a dinosaur picnic. (Remember that some of your guests are meat-eaters and some prefer plants!) Make dinosaur fossils by mixing 1/2 cup corn starch, one cup baking soda and 5/8 cup water and cooking this mixture over medium heat until thick. When mixture is cool, flatten your object into the mixture and let cool. Presto -- your own fossil!

Related Children's Fiction:

DINOSAUR CHASE, by Carolyn Otto (Harper Collins)

A mother dinosaur reads an exciting chase story to her sleepy child.

**WHAT DO YOU FEED A DINOSAUR FOR BREAKFAST?, by Della Cohen
(Marvel Entertainment)**

Grandpa tells Jeremy a bedtime story about when he was a boy and had a dinosaur come home to spend the night with him.

**TYRONE THE DOUBLE DIRTY ROTTEN CHEATER, by Hans Wilhelm
(Scholastic, Inc.)**

Boland has to decide how to handle problems with Tyrone, the school bully, when he cheats at games played during an outing to Swamp Island. (Other "Boland" books available.)

A DINOSAUR FOR GERALD, by Helena Clare Pittman (Carolrhoda Books)

Gerald's family finds a way to satisfy his desire to have a pet dinosaur.

DINOSAUR DOS AND DON'TS, by Jean Burt Polhamus (Prentice-Hall)

A group of dinosaurs discuss good behavior and manners in a poetic manner.

**THE BERENSTAIN BEARS AND THE MISSING DINOSAUR BONE, by Stan
& Jan Berenstain (Beginner Books)**

The Berenstain Bears search for the missing dinosaur bone. Written in a rhyming format.

IF YOU ARE A HUNTER OF FOSSILS, by Byrd Baylor (Atheneum)

A fossil hunter describes how the earth may have appeared in prehistoric times.

HOW I CAPTURED A DINOSAUR, by Henry Schwartz (Orchard Books)

Liz finds a living dinosaur on a camping trip and brings it home.

DINOSAUR DRESS UP, by Allen L. Sirois (Tambourine Books)

Professor Saurus describes another possible explanation for the disappearance of the dinosaurs -- their obsession with fashion and their clothing habits.

DINOSAUR GARDEN, by Liza Donnelly (Scholastic, Inc.)

Rex plants a garden to attract dinosaurs, and gets some unexpected results.

DINOSAUR ISLAND, by Max Haynes (Lothrop, Lee & Shepard)

Two youngsters set off to find Dinosaur Island which only appears once a year.

DOCTOR DINOSAUR, by Jean Polhamus (Prentice-Hall)

The ailments of dinosaurs are treated at the dinosaur hospital.

AMY'S DINOSAUR, by Syd Hoff (Windmill Books)

Amy and her friends find a dinosaur, and together they clean the forest and the city.

BABY DOT: A DINOSAUR STORY, by Margery Cuyler (Clarion Books)

Baby Dot is a spoiled dinosaur who refuses to practice the routines of the "learning cave" and then discovers another dinosaur even meaner than she is.

BONES, BONES, DINOSAUR BONES, by Byron Barton (Thomas Y. Crowell)

A group of friends search for dinosaur bones and, when they find some, they try to assemble them.

THE BOUNCING DINOSAUR, by Emma Chichester Clark (Farrar, Straus & Giroux)

After careful investigation, William and Freddy discover that an earthquake had not really occurred, but the shaking was actually due to a bouncing dinosaur.

DEREK, THE KNITTING DINOSAUR, by Mary Blackwood (Carolrhoda Books)

Derek doesn't want to act ferocious like his brothers, and prefers to stay home and knit. When cold weather arrives, his knitting becomes useful.

DINOSAUR BEACH, by Liza Donnelly (Scholastic, Inc.)

Sunbathers are frightened away when someone yells, "Shark!" But it is really only a friendly dinosaur who takes a young boy to Dinosaur Beach.

SACHELMOUSE AND THE DINOSAURS, by Anotnia Barber (Childrens Press)

With the help of a little mouse and his magic trumpet, Sarah meets a real dinosaur.

PATRICK'S DINOSAURS, by Carol Carrick (Clarion Books)

Patrick is afraid after hearing his brother talk about dinosaurs, until he finds out that they all died millions of years ago.

DINOSAUR BOB AND HIS ADVENTURES WITH THE FAMILY LAZARDO, by William Joyce (Harper & Row)

The Lazardo family vacation in Africa and bring a friendly dinosaur back with them that becomes the talk of the town.

DANNY AND THE DINOSAUR, by Syd Hoff (Harper & Row)

On Danny's trip to the museum, he finds a live dinosaur who comes home with him to spend the day.

YOUR PET DINOSAUR, by Dr. Rex (Morrow Junior Books)

A humorous book giving the reader advice for caring for a pet dinosaur.

MRS. TOGGLE AND THE DINOSAUR, by Robin Pulver (Macmillan)

Mrs. Toggle and her class expect a dinosaur to be coming as the new student.

A BOY WANTS A DINOSAUR, by Hiawyn Oram & Satoshi Kitamura (Farrar, Straus & Giroux)

Alex wants a pet dinosaur and no other pet will do. However, Alex gets more than he bargained for.

DINOSAUR DREAM, by Dennis Nolan (Macmillan)

Wilbur finds a baby dinosaur outside his bedroom window and travels back in time to return it to its home.

OUR MAMMOTH, by Adrian Mitchell (Harcourt Brace Jovanovich)

Twins find a mammoth frozen in an iceberg and take it home for a pet.

PREHISTORIC PINKERTON, by Steven Kellogg (Dial Books)

A dog's natural instinct to chew on things while teething causes problems while visiting a museum's dinosaur collection.

DANIEL'S DINOSAURS, by Mary Carmine (Scholastic, Inc.)

Daniel loves dinosaurs and sees them wherever he goes.

THE TROUBLE WITH TYRANNOSAURUS REX, by Lorinda Bryan Cauley
(Harcourt Brace Jovanovich)

The other dinosaurs come up with a plan to outwit Tyrannosaurus Rex.

LIFE SCIENCES

HABITATS - SEA LIFE

"Benchmarks":

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another." (*Benchmarks*, p. 102)
- "Plants and animals have features that help them live in different environments." (*Benchmarks* p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (*Benchmarks*, p. 102)
- "Animals eat plants or other animals for food and may also use plants (or even other animals) for shelter and nesting." (*Benchmarks*, p. 116)
- "Living things are found almost everywhere in the world. There are somewhat different kinds in different places." (*Benchmarks*, p. 116)
- "Different plants and animals have external features that help them thrive in different kinds of places." (*Benchmarks*, p. 123)
- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (*Benchmarks*, p. 123)

Recommendations/Comments:

For centuries, children (and adults) have found the ocean fascinating! It is the last frontier on earth. Set up a display of shells, starfish, sand dollars, and include a variety of non-fiction books. Look at the food chains of the ocean and then to add excitement, bring in fresh clams, mussels and/or a lobster! (You could even steam these and give students a taste!) Use contrasting skills by comparing a shark and a whale on a Venn diagram. (Or use a three circle Venn diagram and compare a dolphin, shark and whale.)

Tie in language arts by comparing several versions of the Grimm Brother's tale "The Fish of Gold". Students can also imagine living on a submarine or discovering a new sea creature. Draw a sea scene with crayons and paint the entire picture with blue tempera paint or watercolors. (This is a good group activity!) Don't forget to make fish mobiles to add a 3-D effect to your classroom!

Related Children's Fiction:

VERY LAST FIRST TIME, by Jan Andrews (Atheneum)

Eva, an Inuit girl, gets to go down under the ice to search for mussels along the bottom of the seabed.

STINA, by Lena Anderson (Greenwillow Books)

Every summer, Stina would go to visit her grandfather at his house by the sea and collect treasures on the beach. This summer a tremendous storm sends her a present she will never forget.

AHOY THERE, LITTLE POLAR BEAR, by Hans de Beer (North-South Books)

Nemo, the cat, helps rescue Lars from a fishnet and get him back home where he belongs.

THE SMALLEST TURTLE, by Lynley Dodd (Gareth Stevens)

A new-born turtle must make the dangerous journey across the beach to the sea.

JOHN TABOR'S RIDE, by Edward C. Day (Alfred A. Knopf)

John is not excited about his first whaling voyage until he ends up going on an extraordinary journey.

**THE FISH OF GOLD, by The Brothers Grimm (Adapted by M. Eulalia Valeri)
(Silver Burdett)**

A poor fisherman catches a fish of gold that promises to grant any wish the fisherman may have if he will set the fish free.

THE GIRL WHO DANCED WITH DOLPHINS, by Frank DeSaix (Farrar Straus Giroux)

After Adrienne is rescued from a shark by a dolphin, she has a beautiful dream about this heroic animal.

THE SEAL MOTHER, by Mordicai Gerstein (Dial Books For Young Readers)

Based on a Scottish folktale, a fisherman tricks a seal-turned-woman into staying with him for seven years.

GO FISH, by Lucy Dickens (Viking Press)

Herbert needs to test out the waters after all of his food sources desert him.

SEA SQUARES, by Joy N. Hulme (Hyperion Books for Children)

Various sea creatures are used, along with rhyming text, to practice counting and squaring numbers.

SEA TALE, by Gail E. Haley (E. P. Dutton)

A mermaid, in love with a young sailor, fashions a ring for him out of her hair. The young sailor, however, is troubled by a promise he has made to a strange, old lady.

CAPTAIN TOBY, by Satoshi Kitamura (E. P. Dutton)

In Toby's dream, his house turns into a ship, and he and his cat fight stormy seas and a giant octopus.

**THE SEASHELL SONG, by Susie Jenkin-Pearce & Claire Fletcher
(Lothrop, Lee & Shepard)**

A young girl listens to the song of a seashell and wonders about all of the hidden treasures of the sea.

SWIMMY, by Leo Lionni (Panttheon)

Swimmy, the only black fish in the school and the fastest swimmer, is the only one to escape the jaws of a large tuna. Swimmy discovers the wonders of the ocean as he searches for a new school to belong to.

HERMAN THE HELPER, by Robert Kraus (Simon & Schuster)

Herman, the octopus, is always willing to help anyone who needs him.

JONAH AND THE BIG FISH, by Sekiya Miyoshi (Abingdon)

God speaks to Jonah through a giant rainbow fish and orders him to travel to a faraway city to warn them of their ultimate destruction if they do not change their evil ways.

JOSEPH AND NELLIE, by Bijou LeTord (Bradbury Press)

Joseph and Nellie arise early each day and spend their time fishing on the sea.

CYRUS THE UNSINKABLE SEA SERPENT, by Bill Peet (Houghton Mifflin)

Cyrus decides he is tired of wandering the seas all day long and wants to have some fun. Instead of having fun, however, Cyrus ends up helping a shipful of people have a safe voyage across the sea to a new land.

WINTER WHALE, by Joanne Ryder (Morrow Junior Books)

A child experiences life in the ocean when he is turned into a humpback whale.

ALL I SEE, by Cynthia Rylant (Orchard Books)

A painter set up on the shore of a lake paints the whales that he sees there.

HUMPHREY THE LOST WHALE, by Wendy Tokuda (Heian International)

The true story of how people around the San Francisco area helped save a beached whale.

MCCELLIGOT'S POOL, by Dr. Seuss (Random House)

A little boy daydreams about how he just might catch a fish in McElligot's Pool.

I WAS ALL THUMBS, by Bernard Waber (Houghton Mifflin)

An octopus tells the story of how he was suddenly put into the sea as part of an experiment.

AMOS AND BORIS, by William Steig (Farrar, Straus & Giroux)

After being rescued at sea by a friendly whale, Amos, the mouse, finds a way to reciprocate.

HANSY'S MERMAID, by Trinka Hakes Noble (The Dial Press)

After a Dutch family finds a mermaid and puts her to work for them, their youngest son tries to help her return to the sea.

JIMMY'S BOA AND THE BIG SPLASH BIRTHDAY BASH, by Trinka Hakes Noble

(Dial Books For Young Readers)

At Jimmy's birthday party at Sealand, everyone ends up taking a dip in the big tank!

PENGUIN PETE AND PAT, by Marcus Pfister (North-South Books)

Penguin Pete meets a beautiful, blue-beaked girl penguin who changes his life.

PENGUIN PETE, by Marcus Pfister (North-South Books)

Pete plays on land with his friends and learns how to swim in the sea.

BABY BELUGA, by Raffi (Crown Publishers)

This text beautifully illustrates the song about a little white whale in the sea.

**HENRY'S WRONG TURN, by Harriet Ziefert & Andrea Baruffi
(Little, Brown & Company)**

A humpback whale gets lost and ends up in New York Harbor. Based on a true story.

GREYLING, by Jane Yolen (Philomel Books)

A magical selchie becomes a boy on land to bring happiness to a fisherman and his wife, but returns to the sea to save a drowning man.

BURT DOW DEEP-WATER MAN, by Robert McCloskey (Viking Press)

Burt catches a whale on his fishing hook, lets it go, and bandages the whale's tail. In return, the whale swallows Burt's boat to protect it during a raging storm.

KERMIT THE HERMIT, by Bill Keet (Houghton Mifflin)

Kermit, the crab, works hard to repay a young boy who saves him from disaster.

**CURIOUS GEORGE GOES TO THE AQUARIUM, by Margaret Rey & Alan J. Shalleck
(Houghton Mifflin)**

George decides to feed the seals while on a trip to the aquarium and ends up doing tricks in the seal tank.

IS THIS A HOUSE FOR HERMIT CRAB?, by Megan McDonald (Orchard Books)

Hermit Crab must search for a new house when he outgrows the one he has.

THE SEASHORE BOOK, by Charlotte Zolotow (Harper Collins)

A young boy, who has never seen the sea, listens to his mother describe a day at the beach.

THE LITTLE WHALE, by Ann McGovern (Four Winds Press)

Describes the life of a humpback whale from birth to adulthood.

THE MAGIC FISH, by Freya Littleddale (Scholastic, Inc.)

The fisherman's greedy wife is never satisfied with the wishes granted her by an enchanted fish.

IF YOU EVER MEET A WHALE, by Myra Cohn Livingston (Holiday House)

A collection of poems about whales.

CATCH A WHALE BY THE TAIL, by Simon James (Bantam Books)

Scientists help catch a mate for the lonely, white whale at the aquarium.

GOING ON A WHALE WATCH, by Bruce McMillan (Scholastic, Inc.)

Two 6-year-olds go whale watching and see different kinds of whales. Facts on each kind of whale are included.

THE WHALE'S SONG, by Dyan Sheldon (Scholastic, Inc.)

After hearing her grandmother's stories of the singing of whales when they are left a special gift, Lilly leaves a present at the shore and waits.

THE BOOK OF JONAH, by Peter Speir (Doubleday)

The story of Jonah, who spends three days and nights in the belly of a great fish.

ARMIEN'S FISHING TRIP, Catherine Stock (Morrow Junior Books)

A young boy stows away on a fishing boat to prove he's old enough to be a fisherman and, unexpectedly, becomes a hero.

**STRINGBEAN'S TRIP TO THE SHINING SEA, by Vera Williams
(Greenwillow Books)**

Stringbean describes his trip to the Pacific Ocean through a series of postcards.

LIFE SCIENCES

HABITATS - DESERTS

"Benchmarks":

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another." (Benchmarks, p. 102)
- "Plants and animals have features that help them live in different environments." (Benchmarks p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (Benchmarks, p. 102)
- "Animals eat plants or other animals for food and may also use plants (or even other animals) for shelter and nesting." (Benchmarks, p. 116)
- "Living things are found almost everywhere in the world. There are somewhat different kinds in different places." (Benchmarks, p. 116)
- "Different plants and animals have external features that help them thrive in different kinds of places." (Benchmarks, p. 123)
- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (Benchmarks, p. 123)

Recommendations/Comments:

This is a great unit to integrate with a study of Native Americans. Several fiction books are available that relate tales of the desert such as The Pueblo or The Legend of the Indian Paintbrush. Map skills can be included when the deserts of the world are located. Math skills can be integrated into the topic if students compare rainfall or temperatures at different locations, (include a location considered "tundra"). Which characteristics are consistent with being a desert? To integrate art, make layered "sand paintings" by coloring sand with liquid tempera paint and letting it dry. Layer the different colored sands in a clear container. Make designs by using a toothpick and making depressions along the outside.

Related Children's Fiction:

THE PUEBLO, by Charlotte and David Yue (Houghton Mifflin)

Tells the story of the special relationship to the land shared by the Pueblo people.

NADIA THE WILLFUL, by Sue Alexander (Pantheon Books)

Nadia will not let her favorite brother be forgotten after he disappears in the desert.

THIS HOUSE IS MADE OF MUD, by Ken Buchanan (Northland Publishing)
Follows the actions of a family as they build an adobe house in the desert.

SISTER YESSA'S STORY, by Karen Greenfield (Laura Geringer)
Yessa, the storyteller, tells the animals the story of how they were all deposited on this earth in the areas that they now consider their homes.

THE TREK, by Ann Jonas (Mulberry Books)
A little girl tells of her trip across the desert on her way to school.

THE LEGEND OF THE INDIAN PAINTBRUSH, by Tomie de Paola (G. P. Putnam's Sons)
A legend explaining the beautiful colors of the Indian Paintbrush.

PAMELA CAMEL, by Bill Peet (Houghton Mifflin)
A circus camel who does not have the qualities to perform in the big top runs away and proves that she is far from ordinary.

COYOTE DREAMS, by Susan Nunes (Atheneum)
When evening falls, coyotes come to a suburban garden and bring with them dreams of their special desert world.

MOJAVE, by Diane Siebert (Thomas Y. Crowell)
The land and inhabitants of the desert are described in poetic text.

GILA MONSTERS MEET YOU AT THE AIRPORT by Marjorie Weinman Sharmat (Macmillan)
A little boy is nervous about his move from New York City to a city in the West because of ideas he has about what it will be like there.

CACTUS FLOWER BAKERY, by Harry Allard (Harper Collins)
A near-sighted armadillo helps a snake open a bakery in the desert.

HAPPY BIRTHDAY, DEAR DUCK, by Eve Bunting (Clarion Books)
All of duck's birthday presents require water for use, which presents a problem, except for his last and best one.

ALONG SANDY TRAILS, by Ann Nolan Clark (Viking Press)
A collection of poetry with desert themes.

HAPPY DROMEDARY, by Berniece Freschet (Scribner)
Tells the story of how the camel got its long neck and why it lifts its head so high.

HOW THE CAMEL GOT HIS HUMP, by Rudyard Kipling (Rabbit Ear Books)
A tall tale explaining how the camel received his hump after saying, "Humph!" once too often.

MOUSEKIN TAKES A TRIP, by Edna Miller (Prentice-Hall)
A mouse takes an unexpected trip to the desert when searching for food in a mobile home.

THE DESERT IS THEIRS, by Byrd Baylor (Macmillan Publishing)
The plant and animal life of the desert is described in poetic verse.

LIFE SCIENCES

HABITATS - POLAR REGIONS

"Benchmarks":

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- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (Benchmarks, p. 123)

Recommendations/Comments:

The polar regions can be associated with tales of courage and adventure as students research some of the expeditions to the North or South Poles. Several books are available that discuss different Arctic animals. This is a great opportunity to discuss animal adaptations. Physical properties of water can also be included with this unit. If possible, have a parent or visitor discuss ice fishing and bring in some of the equipment. Students can research the Iditarod and the Eskimos. Make a suitcase by folding a sheet of paper in half and adding a paper handle. Inside the suitcase, have students draw/list items they would pack if they were going on a expedition to the South Pole. (Remember, there's no electricity, food, or shelter!)

Related Children's Fiction:

ARCTIC SPRING, by Sue Vyrer (Viking Press)

As spring approaches, most of the Arctic animals venture out, except for a polar bear who has good reason to stay close to the den.

THE BEAR ON THE MOON, by Joanne Ryder (Morrow Junior Books)

Relates how the polar bears came to live at the top of the world on all of the ice and snow.

NO BATH FOR BORIS, by Diana White (E. P. Dutton)

A little polar bear needs a lot of persuasion to take a bath.

HERE IS THE ARCTIC WINTER, by Madeleine Dunphy (Hyperion Books for Children)

A cumulative book introducing the animals of the cold white world.

WALPOLE, by Syd Hoff (Harper & Row)

Even though Walpole could be the leader of the herd, he chooses to play with the baby walruses instead.

CATCH A WHALE BY THE TAIL, by Edward Ricciuti (Harper & Row)

Scientists try to catch a mate for the lonely white whale at the aquarium.

BRRRL, by James Stevenson (Greenwillow Books)

Grandpa tells Mary Ann and Louie about a really cold winter when they begin to complain about how cold it is outside.

SALTY TAKES OFF, by Gloria Rand (Henry Holt and Company)

Salty, a dog, falls from an airplane over Alaska and must learn to survive until he can be rescued.

TOBIAS GOES ICE FISHING, by Ole Hertz (Carolrhoda Books)

Tobias and his father fish through the ice that covers the inlet.

RALPH'S FROZEN TALE, by Elise Primavera (G. P. Putnam's Sons)

A friendly polar bear helps a fearless explorer on his journey to the North Pole.

A CARIBOU ALPHABET, by Mary Beth Owens (Dog Ear Press)

The characteristics and habits of the caribou are depicted in this alphabet book.

LITTLE PENGUIN'S TALE, by Audrey Wood (Harcourt Brace Jovanovich)

Little Penguin is looking for fun and finds it in several spots of his polar world.

NESSA'S FISH, by Nancy Luenn (Atheneum)

Nessa protects her grandmother and the fish caught for the Eskimo village from a fox, a pack of wolves, and a bear.

MAMA, DO YOU LOVE ME?, by Barbara Joosse (Chronicle Books)

A child who lives in the Arctic finds out that a mother's love is unconditional.

DOGTEAM, by Gary Paulsen (Delacorte Press)

Shows the beauty, excitement, and danger of a night run of a dogteam.

WOODSONG, by Gary Paulsen (Bradbury Press)

Tells the tale of a man and his family's life in the wilds of northern Minnesota with wolves, deer, and the sled dogs that make their life possible.

AUNT LULU, by Daniel Pinkwater (Macmillan Publishing)

Aunt Lulu tires of being a librarian in Alaska and decides to move to Parsippany, New Jersey.

PENGUIN PETE'S NEW FRIENDS, by Marcus Pfister (North-South Books)

Since Pete is not big enough to go on the fishing trip with the other penguins, he decides to take a trip of his own.

THE LITTLE PENGUIN, by Patrick Benson (Philomel Books)

Pit is unhappy that she is so much smaller than the Emperor penguins, until a huge sperm whale puts things in a different perspective.

TACKY THE PENGUIN, by Helen Lester (Houghton Mifflin)

Tacky, a rather unusual penguin, shows that you don't have to fit in to be useful.

THE POLAR EXPRESS, by Chris Van Allsburg (Houghton Mifflin)

The Caldecott Medal Book about a magical train ride that a boy takes on Christmas Eve to the North Pole to receive the first gift of Christmas from Santa, himself.

THE STRANGER, by Chris Van Allsburg (Houghton Mifflin)

Farmer Bailey brings home a stranger who he inadvertently hit with his truck. The stranger's recovery seems to be linked closely with weather conditions. Could he be Jack Frost?

VERY LAST FIRST TIME, by Jan Andrews (Atheneum)

Eva, an Inuit girl, gets to go down under the ice to search for mussels along the bottom of the seabed.

OUR MAMMOTH, by Adrian Mitchell (Harcourt Brace Jovanovich)

Twins find a mammoth frozen inside a huge cake of ice and take it home for a pet.

OUR MAMMOTH GOES TO SCHOOL, by Adrian Mitchell (Harcourt Brace Jovanovich)

When the Gumble twins take their pet mammoth to school with them, it causes quite a stir.

TALE OF ANTARCTICA, by Ulco Glimmerveen (Scholastic, Inc.)

The story of penguins in Antarctica demonstrates how their environment is being threatened by the pollution from man's presence.

PENGUIN PETE, by Marcus Pfister (North-South Books)

Pete plays on land with his friends and learns how to swim in the sea.

PENGUIN PETE AND PAT, by Marcus Pfister (North-South Books)

Penguin Pete meets a beautiful, blue-beaked girl penguin who changes his life.

POLAR BEAR LEAPS, by Derek Butle Hall (Alfred A. Knopf)

Baby Polar Bear goes fishing with his mother and learns that a leap to safety can save his life.

AHOY THERE, LITTLE POLAR BEAR, by Hans de Beer (North-South Books)

Nemo, the cat, helps rescue Lars from a fishnet and get him back home where he belongs.

LIFE SCIENCES

HABITATS - TROPICAL RAINFORESTS

"Benchmarks":

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another." (Benchmarks, p. 102)
- "Plants and animals have features that help them live in different environments." (Benchmarks p. 102)
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Recommendations/Comments:

The recent emergence of concern over the rainforest will make this topic "politically correct". Students can research the products and benefits received from the rainforests and approach this topic from an ecology viewpoint. Younger students may just enjoy studying the variety of colorful animals found in this area. It is fascinating to think that the rainforests contain thousands of different insects and many new species are still begin discovered! Have students compile of list of foods that come from the tropical forest. What would it be like without vanilla, chocolate, sugarcane, tea or coffee?

A good variety of children's books are available to integrate with this topic. Read a fiction story about an animal and then research what life is really like for that animal. Be sure to read The Great Kapok Tree by Lynn Cherry and discuss whether these animals are in immediate danger. Design a poster to promote awareness of the rainforest.

Related Children's Fiction:

I'LL PROTECT YOU FROM THE JUNGLE BEASTS, by Martha Alexander
(Dial Books For Young Readers)

A little boy starts out protecting his teddy bear from the strange sounds in the woods and ends up depending on his teddy bear to protect him and help him find the way home.

BIMWILI & THE ZIMWI, by Verna Aardema (Dial Books For Young Readers)

Bimwili sets out with her sisters for the first time to go play by the sea. Bimwili ends up having an unusual adventure when she returns to the beach to retrieve the shell she forgot.

WIDOW AND THE PARROT, by Virginia Woolf (Harcourt Brace Jovanovich)

When a widow loses her home to a fire, she adopts a parrot who leads her to a hidden treasure.

PRINCESS GORILLA AND A NEW KIND OF WATER, by Verna Aardema (Dial Books For Young Readers)

If the male gorillas of the jungle want to marry the princess, they must first prove their strength by drinking the smelly water that King Gorilla has in a barrel.

ONCE UPON A TIME IN A PIGPEN AND THREE OTHER STORIES, by Margaret Wise Brown (Addison-Wesley)

Four short stories about animals in their natural habitats.

TWO WAYS TO COUNT TO TEN, by Ruby Dee (Henry Holt & Company)

A traditional African tale about King Leopard and his search for a successor.

LITTLE POLAR BEAR, by Hans de Beer (North-South Books)

A friendly hippopotamus helps a little polar bear return home after he drifts to sea and ends up in the jungle.

JOSEPHINA HATES HER NAME, by Diana Engel (Morrow Junior Books)

Josephina hates her name until her grandma tells her about the adventurous great-aunt she was named after.

SISTER YESSA'S STORY, by Karen Greenfield (Laura Geringer)

Yessa, the storyteller, tells the animals the story of how they were all deposited on this earth in the areas that they now consider their homes.

THE GUNNIWOLF, by Wilhelmina Harper (E. P. Dutton)

A little girl wanders farther and farther into the jungle while picking wild flowers. There she meets up with the Gunniwolf!

THE TREK, by Ann Jonas (Mulberry Books)

A little girl tells of her imaginary trip through the jungle on her way to school.

TENREC'S TWIGS, by Bert Kitchen (Philomel Books)

Tenrec asks the opinions of many jungle animals about the small buildings that he makes out of twigs.

A NICE WALK IN THE JUNGLE, by Nan Bodsworth (Viking Kestrel)

Miss Jellaby takes her class for a walk in the jungle and must confront a hungry boa constrictor to get her class back.

REGINA'S BIG MISTAKE, by Marissa Moss (Houghton Mifflin)

Regina has trouble deciding how to draw a jungle in art class. Then, with time running out, she turns a drawing mistake into a creative idea.

THE TIGER'S BREAKFAST, by Jan Mogensen (Crocodile Books)

Elephant goes to the Mouse Deer for help after losing a roaring contest to Tiger.

THE SPOOKY TAIL OF PREWITT PEACOCK, by Bill Peet (Houghton Mifflin)

Prewitt lived in the jungle with the other peacocks. Unlike the other peacocks, his tail was not beautiful but spooky and terrifying. Prewitt is very unhappy until he finds that his tail has an unusual use.

THE QUICKSAND BOOK, by Tomie de Paola (Holiday House)

Presents information on the composition of quicksand and provides rescue procedures, all in enjoyable story form.

WHY MOSQUITOES BUZZ IN PEOPLE'S EARS, by Verna Aardema (Scholastic)

Retells the folk tale from West Africa of a series of animals trying to discover who killed an owl causing Mother Owl great sadness. Because of this, she wouldn't wake the sun.

ONE DAY IN THE TROPICAL RAIN FOREST, by Jean Craighead George (Harper Collins)

A scientist and young boy search for a rare butterfly in the rain forest of Macaw. Written in diary form.

WELCOME TO THE GREENHOUSE, by Jane Yolen (G. P. Putnam's Sons)

Describes the tropical rain forest, and the life found there, through repetitive phrases and beautiful illustrations.

JOURNEY OF THE RED-EYED TREE FROG, by Martin and Tanis Jordan (Simon & Schuster)

A threatened tree frog journeys to the heart of the Amazon jungle to consult an Oracle Toad for advice on how to stop the destruction.

PANTHER DREAM, by Bob & Wendy Weir (Hyperion Books for Children)

A young boy learns that man must respect the rainforest and coexist with nature without destroying it. Rain forest animals are illustrated and labeled at the end of the story.

ANANSI THE SPIDER, A TALE FROM THE ASHANTI, by Gerald McDermott (Henry Holt and Company)

Kwaku Anansi sets out on a long journey fraught with danger. He is saved from a terrible fate by his six sons.

MR. MONKEY AND THE GOTCHA BIRD, by Walter Dean Myers (Delacorte Press)

Monkey must do some fast thinking to keep from being eaten by the Gotcha Bird that has just captured him.

CRAFTY CHAMELEON, by Mwenye Hadithi (Little, Brown and Company)

A chameleon uses his wits to outsmart a leopard and crocodile who are constantly bullying him.

WHERE THE FOREST MEETS THE SEA, by Jeannie Baker (Greenwillow Books)

A young boy on a camping trip with his father thinks about the history of the plants and animals of the Australian rain forest and wonders about their future.

A STORY, A STORY, by Gail Haley (Atheneum)

Tells how most African folk tales became known as "Spider Stories".

THE ELEPHANT TREE, by Penny Dale (G. P. Putnam's Sons)

The jungle animals search for the elephant tree and, when none is found, make one themselves.

JUNGLE SOUNDS, by Rebecca Emberley (Little, Brown & Company)

Text and illustrations depict sounds associated with the jungle.

JUNGLE DAY, by Claire Henley (Dial Books For Young Readers)

Relates how a variety of jungle animals spend their days.

PAPAGAYO, THE MISCHIEF MAKER, by Gerald McDermott (Windmill Press)

A noisy parrot helps the night animals save the moon from being eaten.

BIG BOSS, by Anne F. Rockwell (Macmillan)

A clever frog outwits a tiger and a fox.

OLD TIGER, NEW TIGER, by Ron Roy (Abingdon Press)

The monkeys are delighted that the old tiger is dying until Wise Monkey warns them that a new one may be even worse.

SANTA'S HAT, by Clair Schumacher (Prentice-Hall)

The animals take over Santa's hat when it blows down into their jungle and are not happy about giving it back.

THE ZABAJABA JUNGLE, by William Steig (Farrar, Straus & Giroux)

When Leonard visits the Zabajaba Jungle, strange adventures await him.

MOUSE-DEER'S MARKET, by Joanna Troughton (Bedrick)

A tale from Borneo in which a little mouse-deer outwits all of the animals of the jungle.

MONKEY IN THE JUNGLE, by Edna M. Preston (Viking Press)

A little monkey refuses to go to sleep despite the efforts of the other jungle animals.

MAGIC PUMPKIN, by Gloria Skurzynski (Four Winds Press)

A little old woman rides through the jungle in a magic pumpkin confident she can outwit the tiger and gray wolf who want to eat her.

"NOT ME!" SAID THE MONKEY, by Colin West (J. B. Lippincott)

Although a monkey constantly causes trouble for the other jungle animals, he staunchly denies it.

WHO IS THE BEAST?, by Keith Baker (Harcourt Brace Jovanovich)

A tiger doesn't realize that he is the beast the jungle animals are fleeing from.

EENEY, MEENEY, MINEY, MO, by B. G. Hennessey (Viking Press)

Eeney, Meeney, Miney, and Mo walk through the jungle and collect animals as they go.

MATEPO, by Angela McAllister (Dial Books For Young Readers)

After a walk through the jungle, Matepo, the monkey, ends up with a perfect birthday present for his mother.

FINISH THE STORY. DAD, by Nicola Smee (Simon & Schuster)

Ruby is angry that her father has not completed her bedtime story and dreams of a number of jungle animals who transport her on her quest for an ending.

TIGRESS, by Helen Cowcher (Farrar, Straus & Giroux)

Herdsmen must work with a ranger to keep their animals safe from a marauding tigress.

BEAKY, by Jez Alborough (Houghton Mifflin)

A frog helps a small animal, whose egg fell out of a tree, determine what type of animal it is.

THE GREAT KAPOK TREE, by Lynne Cherry (Harcourt Brace Jovanovich)

The many animals who make their home in a kapok tree try to convince a man not to cut it down.

FEATHERS LIKE A RAINBOW, by Flora (Harper & Row)

The dark-feathered birds of the Amazon forests decide to steal some colorful feathers from the Hummingbird.

THE KING AND THE TORTOISE, by Tololwa M. Mollel (Clarion Books)

To all of the animal's surprise, it is the tortoise who is able to prove to the king that he is the cleverest animal in the jungle.

JUMANJI, by Chris Van Allsburg (Houghton Mifflin)

Two bored children find more excitement than they bargained for when they play a mysterious and magical jungle board game.

LYLE FINDS HIS MOTHER, by Bernard Waber (Houghton Mifflin)

Lyle returns to the jungle in search of his mother, who he has not seen since he was small.

THE ANT AND THE ELEPHANT, by Bill Peet (Houghton Mifflin)

The elephant helps rescue many of his animal friends, but who will return the favor when the elephant is in trouble?

17 KINGS AND 42 ELEPHANTS, by Margaret Maky (Dial Books)

A group of kings and elephants encounter a variety of animals as they journey through the jungle.

TREE OF LIFE. THE WORLD OF THE AFRICAN BAOBAB, by Barbara Bash (Sierra Club Books)

A folktale describing the baobab tree and how the people and animals use the tree.

LIFE SCIENCES

HABITATS - GRASSLANDS

"Benchmarks":

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another." (Benchmarks, p. 102)
- "Plants and animals have features that help them live in different environments." (Benchmarks p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (Benchmarks, p. 102)
- "Animals eat plants or other animals for food and may also use plants (or even other animals) for shelter and nesting." (Benchmarks, p. 116)
- "Living things are found almost everywhere in the world. There are somewhat different kinds in different places." (Benchmarks, p. 116)
- "Different plants and animals have external features that help them thrive in different kinds of places." (Benchmarks, p. 123)
- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (Benchmarks, p. 123)

Recommendations/Comments:

The variety of tall tales that relate to animals living in the Grasslands, make this a perfect opportunity to integrate science with language arts. Read several tales and have students create their own! Write a story where an animal from this habitat is suddenly in another environment. What obstacles does he face?

Since many of our grains are grown in the grasslands, this is a great opportunity to compare grains and cereals. Research all the foods that we get from a grain such as corn (margarine, pancake syrup, corn bread and cola!). Make breads using different types of flours (rye, oatmeal, whole wheat, etc.). Use rice to demonstrate volume and density by taking measurements before and after cooking. A whole variety of experiments may be waiting for you in your kitchen cabinet!

Related Children's Fiction:

BRINGING THE RAIN TO KAPITI PLAIN, by Verna Aardema
(Dial Books For Young Readers)

A cumulative rhyme relating how Ki-pat brought rain to the drought-stricken Kapiti Plain.

WHEN THE RAIN STOPS, by Sheila Cole (Lothrop, Lee & Shepard)

A little girl and her father encounter a variety of wildlife creatures as they walk through the meadow to pick blackberries.

WATCHING FOXES, by Jim Arnosky (Lothrop, Lee & Shepard)

While their mother is away, little foxes play and romp in the meadow by their den.

COME TO THE MEADOW, by Anna Grossnickle Hines (Clarion Books)

It takes a picnic to make a family stop their work and go to enjoy the wonders of the meadow.

THE MILLER, HIS SON AND THEIR DONKEY, by Aesop (North-South Books)

A father and son set out across the plain to market. On the way, they find out that it is impossible to please everyone.

THEO'S VINEYARD, by Karen Ackerman (East Eagle Company)

After traveling from job to job all of his life with his family, Noah's dream of settling down with his family in their very own house finally comes true.

JUST LIKE MY DAD, by Tricia Gardella (Harper Collins)

A young child enjoys the activities of a day spent working on a cattle ranch as a cowhand, just like Dad.

MEANWHILE BACK AT THE RANCH, by Trinka Noble (Dial Books for Young Readers)

A bored rancher drives to town, not knowing that amazing things are happening back at the ranch.

ONE GOOD HORSE: A COWPUNCHER'S COUNTING BOOK, by Ann Herbert Scott (Greenwillow Books)

A cowboy and his son count the things they see as they check on the cattle.

PATULOUS, THE PRAIRIE RATTLESNAKE, by Jonathan Kahn (Landmark Editions)

As a hungry rattlesnake searches for prey, he must also escape the claws and fangs of his own enemies.

HERBERT AND HORTENSE, by Betty Bates (A. Whitman)

A neat, graceful rhinoceros and her sloppy classmate learn to enjoy each others' company.

RHINOS DON'T CLIMB, by Ruth Rosner (Harper & Row)

Two young rhinos who love to climb build a mountain and end up teaching the adults the joys of climbing.

THE THREE BILLY GOATS GRUFF, by Paul Galdone (Clarion Books)

The classic tale of the three billy goats who must get past the troll who lives under the bridge to get to the meadow full of grass and flowers on the other side.

LITTLE CHICKEN, by Margaret Wise Brown (Harper & Row)

Tells of the adventures of a little chick who goes off through the meadow on his own.

EDMOND WENT FAR AWAY, by Martin Bax (Harcourt Brace Jovanovich)

After saying good-bye to all of his friends on the farm, Edmond goes off to explore the lands beyond the hill.

THE MOTHER'S DAY MICE, by Eve Bunting (Clarion Books)

Three mouse brothers go into the meadow to find a Mother's Day present for their mother. It takes the littlest mouse to come up with a truly wonderful present.

MORNING, RABBIT, MORNING, by Mary Caldwell (Harper & Row)

Rabbit spends a day romping in the meadow and then returns home.

LADYBUG, LADYBUG, by Ruth Brown (E. P. Dutton)

Blown by a breeze, the ladybug flies over meadows and fields in an attempt to return home to her children.

HOW THE RHINOCEROS GOT HIS SKIN, by Rudyard Kipling (Rabbit Ear Books)

A tall tale relating how the rhinoceros got his skin.

OVER IN THE MEADOW, by John Langstaff (Harcourt Brace Jovanovich)

A counting book which takes place "over in the meadow".

ELI, by Bill Peet (Houghton Mifflin)

An old lion, living in the grasslands of Africa, learns an important lesson about friendship from some vultures he has always despised.

ZELLA ZACK AND ZODIAC, by Bill Peet (Houghton Mifflin)

A zebra helps a young ostrich when he is still helpless, and the ostrich returns the favor after he has grown up.

YOU LOOK RIDICULOUS, by Bernard Waber (Houghton Mifflin)

A hippopotamus longs to have the characteristics of other animals. When she realizes how ridiculous that would look, she finally can appreciate her own uniqueness.

RAIN PLAYER, by David Wisniewski (Clarion Books)

To save his village from a drought, Pik challenges the Rain God to a game.

RAINFLOWERS, by Ann Turner (Harper Collins)

The animals of a meadow scurry for cover as a thunderstorm passes through.

A PRAIRIE BOY'S WINTER, by William Kurelek (Houghton Mifflin)

This story depicts the hardships and pleasures of life on the prairies during the challenging 1930's.

CHRISTMAS ON THE PRAIRIE, by Joan Wilkins Anderson (Clarion Books)

Simple text recreates Christmas Eve and Christmas morning in a typical frontier community.

GREEDY ZEBRA, by Mwenye Hadithi (Little, Brown & Company)

A zebra's stripes are explained through the legend of a greedy zebra.

THE RIGHT NUMBER OF ELEPHANTS, by Jeff Sheppard (Harper & Row)

A counting book of a girl who needs the right number of elephants to do various activities.

CARROTS AND MIGGLE, by Ardath Mayhar (Atheneum)

When a scholarly English child moves to a Texas ranch, everyone must make adjustments.

BABY BABOON, by Mwenye Hadithi (Little, Brown & Company)

A lazy Leopard decides to settle for Baby Baboon for dinner when a Rabbit is too hard to catch.

HOT HIPPO, by Mwenye Hadithi (Little, Brown & Company)

Tells the story of why the Hippo lives in water.

LAZY LION, by Mwenye Hadithi (Little, Brown & Company)

A demanding lion orders his subjects to build him a house before the Big Rain comes.

TRICKY TORTOISE, by Mwenye Hadithi (Little, Brown & Company)

Elephant is outsmarted by Tortoise who proves he can jump over Elephant's head.

LIFE SCIENCES

HABITATS - WOODLANDS AND PONDS

"Benchmarks":

- "Some animals and plants are alike in the way they look and in the things they do, and others are very different from one another." (*Benchmarks*, p. 102)
- "Plants and animals have features that help them live in different environments." (*Benchmarks* p. 102)
- "Stories sometimes give plants and animals attributes they really do not have." (*Benchmarks*, p. 102)
- "Animals eat plants or other animals for food and may also use plants (or even other animals) for shelter and nesting." (*Benchmarks*, p. 116)
- "Living things are found almost everywhere in the world. There are somewhat different kinds in different places." (*Benchmarks*, p. 116)
- "Different plants and animals have external features that help them thrive in different kinds of places." (*Benchmarks*, p. 123)
- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (*Benchmarks*, p. 123)

Recommendations/Comments:

For many children, this habitat is most often envisioned when a "forest" is mentioned. Cute little woodland animals (rabbits, raccoons, mice, bears, etc.) are the subjects of many children's stories. Try reading these stories after looking into factual books such as Forest Life, River Life, Swamp Life and Pond Life (by Barbara Taylor, published by Dorling Kindersley). This is a good unit to do in the fall in areas where deciduous trees are present -- an annual event enjoyed by all ages! Hypothesize how different animals benefit from the trees in different seasons (For example, in the spring birds build nests out of broken twigs and dead leaves, in the summer insects may live off of the sap of trees, and animals depend on the trees for food, shelter, and protection, etc.)

Several versions of "The Mitten" exist. ("The Mitten" by Alvin Tresselt, "The Mitten" by Jan Brett, and "The Woodcutter's Mitten" by Lack Koopmans) Compare and contrast these books and the animals that squeeze into the mitten. For added fun, write a version of this story using nocturnal animals! To tie in music, listen to Tchaikovsky's music for "Peter and the Wolf". Let the students illustrate what they hear!

Related Children's Fiction:

WINTER HARVEST, by Jane Chelsea Aragon (Little, Brown & Co.)

A young child takes on the responsibility of feeding a deer family she finds in the woods by her house.

DEER AT THE BROOK, by Jim Arnosky (Lothrop, Lee & Shepard)

Tells the tale of what happens when a mother deer and her two fawns come out of the woods to a small brook to drink.

COME OUT MUSKRATS, by Jim Arnosky (Lothrop, Lee & Shepard)

In late afternoon, the muskrats come out of the woods to swim and eat in the cove.

SOMEDAY WITH MY FATHER, by Helen E. Buckley (Harper & Row)

A little girl who is very ill dreams of the day when she and her father will actually be able to do all the wonderful things they talk about.

LADYBUG AND DOG AND THE NIGHT WALK, by Polly Berrien Berends (Random House)

Dog and Ladybug take a nighttime tour of their farm to show off its wonders to Ladybug's cousins.

LITTLE FUR FAMILY, by Margaret Wise Brown (Harper & Row)

Tells of the wonderful day that the furchild spends in the woods around his home.

THE GRIZZLY SISTERS, by Cathy Bellows (Macmillan Publishing)

The Grizzly Sisters live to regret it when they disobey their mother's warning to stay away from the tourists.

ANNIE AND THE WILD ANIMALS, by Jan Brett (Houghton Mifflin)

When Annie can't find her pet cat, she wanders into the woods to find a new friend.

ARTHUR GOES TO CAMP, by Marc Brown (Little, Brown & Co.)

Arthur runs away into the woods when strange things start happening at the summer camp his parents send him to.

WAIT TILL THE MOON IS FULL, by Margaret Wise Brown (Harper & Row)

Little raccoon has trouble waiting until the moon is full to see what lies out in the woods at night.

THE ROYAL RACCOON, by Cathy Bellows (Macmillan Publishing)

Frederick, a snobbish raccoon, learns the importance of friendship when he is driven out of his garbage dump home and into the world of the wild raccoon.

GOLDILOCKS AND THE THREE BEARS, by Jan Brett (Dodd, Mead & Company)

A tired and hungry young girl helps herself to food and rest when she happens upon a small house in the woods.

THE MAN WHO COULD CALL DOWN OWLS, by Eve Bunting (Macmillan Publishers)

A stranger who tries to steal the power to control the owls finds out that he did not understand this power at all.

RUFF LEAVES HOME, by Anne Carter (Crown Publishers)

A small fox cub decides to leave his woodland home to explore the outside world.

GRANDFATHER TWILIGHT, by Barbara Berger (Philomel Books)

Every evening, Grandfather Twilight walks through the forest to bring night to the world.

MONSTER TRACKS?, by A. Delaney (Harper & Row)

Harry imagines he is being chased by a monster while taking a walk through the woods.

IN THE FOREST, by Marie Hall Ets (Puffin Books)

A parade develops as a little boy with a toy horn takes a walk through the forest.

GIANT STORY, by Annegert Fuchshuber (Carolrhoda Books)

The story of a lonely giant and a lonely dormouse who find each other in the forest and become friends. The stories start at each end of the book and meet in the middle.

PETER AND THE WOLF, by Selina Hastings (Henry Holt & Company)

Retells the fairy tale of how Peter attempts to capture a wolf.

THE GREEN MAN, by Gail E. Haley (New River Publishing)

When a rich squire's son is forced to stay in the forest, he realizes how selfish he has been and changes his life around.

WINTER MAGIC, by Eveline Hasler (Wm. Morrow & Company)

Peter's cat takes him out into a snow-covered forest to show him some of the wonders of winter.

MY FATHER DOESN'T KNOW ABOUT THE WOODS AND ME, by Dennis Haseley (Atheneum)

A young boy seems to become some of the woodland animals as he walks in the woods with his father.

THE GOODNIGHT CIRCLE, by Carolyn Lesser (Harcourt Brace Jovanovich)

Describes various animals' activities from sun-up to sun-down.

THE TEDDY BEARS' PICNIC, by Jimmy Kennedy (Green Tiger Press)

Recounts the song of the annual picnic the teddy bears hold in the woods.

THE WOODCUTTER'S MITTEN, by Loek Koopmans (Interlink Publishing)

A woodcutter drops his mitten while walking through the woods and many forest creatures seek shelter in it.

TWO LITTLE BEARS, by Hanna Muschg (Bradbury Press)

Two little bears emerge from their cave to explore the forest around them and learn survival skills.

NICHOLAS CRICKET, by Joyce Maxner (Harper & Row)

Nicholas Cricket and his band lead the forest creatures in a huge celebration of the night.

HANSEL AND GRETEL, by James Marshall (Dial Books For Young Readers)

Hansel and Gretel are captured by a wicked witch when they become lost in the forest.

THE LITTLE RED RIDING HOOD REBUS BOOK, by Ann Morris (Orchard Books)

In this version of the classic fairy tale, pictures are substituted for some of the words.

AURORA MEANS DAWN, by Scott Russell Sanders (Bradbury Press)

A family leaves Connecticut and travels across the forests and prairies to start a settlement in Aurora, Indiana.

THE BEAR WHO HAD NO PLACE TO GO, by James Stevenson (Harper & Row)

Ralph the Bear is fired from the circus and finds he has no place to go until a country rat introduces him to the wonders of the forest.

THE GNATS OF KNOTTY PINE, by Bill Peet (Houghton Mifflin)

A swarm of gnats help save the creatures of Knotty Pine Forest from the hunters' guns.

WHAT A CATASTROPHE!, by Eileen Christelow (Bradbury Press)

A young boy tells how he found a frog in the tall grass outside his home and brought it home for breakfast. The reader is asked to pick his own ending to the tale.

THE FROG WHO DRANK THE WATERS OF THE WORLD, by Patricia Montgomery Newton (Atheneum)

An old Indian tale of a frog who, for revenge, decides to drink all of the water that exists in the forest.

THE RABBITS' WEDDING, by Garth Williams (Harper & Row)

A little black rabbit is saddened by the thought of being parted from the little white bunny, until a solution is found.

WHO'S HIDING HERE?, by Yoshi (Picture Book Studio)

A look at several animals hidden in their habitats. Poetic text and die-cut pages add to the appeal of the book.

BADGER'S PARTING GIFTS, by Susan Varley (Lothrop, Lee & Shepard)

When their good friend, Badger, dies, the animals find that remembering the good times and what they've learned from him helps make them all feel better.

MOUSEKIN'S MYSTERY, by Edna Miller (Prentice-Hall)

Mousekin is frightened by a glowing light in the dark forest and investigates its source.

SLEEPY BEAR, by Lydia Dabovich (E. P. Dutton)

A story of an expressive bear who prepares for a winter's nap and then wakes up at the signs of spring.

WOODPECKER FOREST, by Tejima (Philomel Books)

A young woodpecker learns the ways of the forest and how to overcome his fears of the unknown.

THE MITTEN, by Alvin Tresselt (Lothrop, Lee & Shepherd)

The animals of the forest try to find warmth by squeezing into a lost mitten.

DEEP IN THE FOREST, by Brinton Turkle (E. P. Dutton)

A little bear discovers a cabin in the forest with unexpected results.
(A wordless twist on Goldilocks and the Three Bears.)

SLEEP OUT, by Carol Carrick (Clarion Books)

Christopher sleeps out in the woods alone for the first time in order to try out his new camping equipment.

ALL WET! ALL WET!, by James Skofield (Harper & Row)

A small boy experiences, along with the animals of the meadow and forest, the sights, smells, and sounds of a rainy summer day.

NEED A HOUSE? CALL MS. MOUSE, by George Mendoza (Grosset & Dunlap)

Henrietta Mouse custom-designs homes for her animal friends.

CURIOUS GEORGE GOES HIKING, by Margret Rey & Alan J. Shalleck (Houghton Mifflin)

George and his friends realize they are lost with nothing to eat after they carelessly chase each other through the woods.

MCCREPHY'S FIELD, by Christopher A. Myers & Lynne Born Myers (Houghton Mifflin)

After a 50-year absence, Joe McCrephy returns to his farm to find that it has evolved into a forest.

MERLE THE HIGH FLYING SQUIRREL, by Bill Keet (Houghton Mifflin)

A squirrel flies west to find the peace and quiet in the forests that is missing in the big city.

THE LEGEND OF JOHNNY APPLESEED, by Reeve Lindbergh (Little, Brown & Company)

The life of John Chapman (Appleseed) is told through rhymed text.

BIRCHES, by Robert Frost (Henry Holt)

A poem which gives the author's impression of what a birch tree says to him.

NIGHT TREE, by Eve Bunting (Harcourt Brace Jovanovich)

A family makes its annual pilgrimage to decorate an evergreen tree with food for the forest animals at Christmastime.

ANIMALS, ANIMALS, by Eric Carle (Philomel Books)

A collection of poems describing domestic and wild animals.

LIFE SCIENCES

ECOLOGY

"Benchmarks":

- "Many materials can be recycled and used again, sometimes in different forms." (Benchmarks, p. 119)
- "Some things people take into their bodies from the environment can hurt them." (Benchmarks, p. 144)
- "Some materials can be used over again." (Benchmarks, p. 188)
- "People can save money by turning off machines when they are not using them." (Benchmarks, p. 193)
- "People burn fuels such as wood, oil, coal, or natural gas, or use electricity to cook their food and warm their houses." (Benchmarks, p. 193)

Recommendations/Comments:

This topic can combine the study of ecology with the social issues now raised involving our environment. Numerous books are available that describe experiments in this area such as My First Green Book by Angela Wilkes (Alfred A. Knopf), Experiments That Explore Oil Spills by Martin J. Gutnik (Millbrook Press) and The Kids' Earth Handbook by Sandra Markle (Atheneum). Try making a water filtration system or try to clean up an "oil spill"! Another group of books are available is using "recyclable" for craft ideas -- Crafts from Recyclables by Colleen Van Blaricam (Boyds Mill) and Art with Found Materials by John Lancaster (Franklin Watts). This is an excellent unit to combine science concepts with art.

Numerous fiction books have addressed some of the problems of today in stories that children will easily relate to or find amusing. For fun, try reading The Wartville Wizard where litter sticks to the litterbug. Many other books present a stronger message to get the reader to think about tomorrow. These books can lead into writing assignments. After reading Miss Rumphius have students reflect on how they could make the world more beautiful. Books such as Just a Dream or The Wump World make us stop and think about losing our resources. Students could write to pertinent organizations expressing their concerns or try making commercials or ad campaigns for this issue. To see what other "real" kids are doing share Kid Heroes of the Environment -- Simple Things Real Kids Are Doing To Save the Earth by Catherine Dee (Earth Works Press)!

Related Children's Fiction:

THE WARTVILLE WIZARD, by Don Madden (Macmillan Publishing)

An old man tries to fight a town full of litterbugs by sending each piece of litter back to the person who tossed it.

WHERE THE FOREST MEETS THE SEA, by Jeannie Baker (Greenwillow Books)

A father takes his son on a camping trip into the Australian rain forest. While there, the son thinks about the past of the plants and animals and wonders if they will have a future.

STOP THAT NOISE!, by Paul Geraghty (Crown Publishers)

A mouse is no longer annoyed by the sounds of the forest once he has heard the sounds of a machine that has come to knock the trees down.

THE TOWN THAT MOVED, by Mary Jane Finsand (Carolrhoda Books)

When iron ore is discovered under a Minnesota town, the people decide to move the town rather than have it destroyed.

ARTHUR'S NEW POWER, by Russell Hoban (Thomas Y. Crowell)

After blowing all of the fuses in the house when plugging in his new Dracula Hi-Vamp, the Crocodile family decides they need to try conserving electricity.

A ROSE FOR ABBY, by Donna Guthrie (Abingdon Press)

After seeing a homeless woman searching for food on her street, Abby decides to prepare a dinner for the homeless people of her neighborhood.

RADS, ERGS, AND CHEESEBURGERS, by Bill Yanda (Muir)

A visit to a planet where the inhabitants did not learn in time to use their energy resources wisely.

THE LAND OF GRAY WOLF, by Thomas Locker (Dial Books)

Running Deer grows up watching white settlers claim his people's land, clear the forests, overfarm the land, and leave it when it is used up.

A RIVER DREAM, by Allen Say (Houghton Mifflin)

A young boy must decide whether to keep his prize fishing catch or return it to the river that it came from.

THE TREE, by Naomi Russell (E. P. Dutton)

A squirrel leaves behind an acorn from his pile, and a huge tree grows. After the tree is cut down, another acorn is left behind.

ONCE THERE WAS A TREE, by Natalia Romanova (Dial Books)

The story of the stump of a tree that is split by lightning and then felled by a woodcutter. Many animals make use of the stump and try to claim it but find that it is part of the earth which belongs to all of us.

JOURNEY OF THE RED-EYED TREE FROG, by Martin & Tanis Jordan (Simon & Schuster)

A threatened tree frog journeys to the heart of the Amazon jungle to consult an Oracle Toad for advice on how to stop the destruction.

A TREE IS NICE, by Janice May Udry (Harper & Row)

A young child gives several reasons why a tree is nice to have around.

LOST KINGDOM OF KARNICA, by Richard Kennedy (Scribner's)

Farmer Erd finds a valuable red stone in his field which changes life in Karnica forever.

SOMEDAY A TREE, by Eve Bunting (Houghton Mifflin)

All of a sudden, in the middle of spring, the leaves on Alice's favorite tree turn brown and fall off. The reasons why teach Alice a valuable lesson.

GREENING THE CITY STREETS, by Barbara Huff (Houghton Mifflin)

Show how people of all ages and abilities become involved in the community's garden movement.

THE LOST LAKE, by Allen Say (Houghton Mifflin)

A young boy and his father plan a quiet trip to Lost Lake, only to find the lake is noisy and overrun with visitors. As the two continue to find their own special place, they grow closer and build a special bond.

MOUSKIN'S LOST WOODLAND, by Edna Miller (Simon & Schuster)

When a new house is built in the woods, many trees are removed, and the animals' homes are destroyed. Luckily, Mousekin finds one home that respects nature.

SONG OF THE TREES, by Mildred D. Taylor (Dial Press)

A rural family tries to save the forest on their land when an unscrupulous man tries to cut it down.

PARSLEY, by Ludwig Bemelmans (Harper)

Because a pine tree grew twisted, lumbermen never cut it down, so it was able to provide shelter for an old stag.

AROUND THE HOUSE THAT JACK BUILT, by Roz. Abisch (Houghton Mifflin)

Traces the interdependency of all living things.

JACK'S BASKET, by Alison Catley (E. P. Dutton)

Jack and his family find new uses for the basket Jack can no longer sleep in.

JET BLACK PICKUP TRUCK, by Patricia Lakin (Orchard Books)

A little girl takes a trip to the dump with her Grammy and finds many treasures in the things others have thrown away.

STAY AWAY FROM THE JUNKYARD, by Tricia Tusa (Macmillan)

Theo finds out how to turn junk into beauty when he helps out a junkman and his pig.

THE OLD MAN AND THE ASTRONAUTS, by Ruth Tabrah (Island Heritage)

An old man in New Guinea is worried that, as the astronauts remove rocks from the moon, it will lessen the light it provides.

THE BEAVER POND, by Alvin Tresselt (Lothrop, Lee & Shepard)

Beavers build a dam which creates a pond that is beneficial to many different creatures.

SQUIRREL PARK, by Lisa Ernst (Bradbury Press)

A boy disagrees with his father over the design of a park which calls for eliminating an old oak which is the home for his friend, a squirrel.

PUMPKINS: A STORY FOR A FIELD, by Mary Lyn Ray (Harcourt Brace Jovanovich)

When a man harvests and sells a large crop of pumpkins, he is able to save his field from developers.

THE LITTLE PARK, by Dale Fife (A. Whitman)

Neighborhood children work to preserve their last vacant lot as a wildlife preserve.

ONCE THERE WAS A TREE, by Gennadi Spirin (Dial Books for Young Readers)

An old stump attracts man and other living creatures and, when it is gone, a new tree takes its place.

GIFT OF THE TREE, by Alvin Tresselt (Lothrop, Lee & Shepard)

Describes how animals depend on an old oak tree for shelter and food.

JACK, THE SEAL AND THE SEA, by Gerald Aschenbrenner (Silver Burdett)

Jack, a fisherman, is oblivious to the pollution going on in the sea until he comes across a young seal who is dying because of it.

A POCKETFUL OF CRICKET, by Rebecca Caudill (Henry Holt and Company)

A little boy who loves nature and the world around him learns to share this love with others.

MISS RUMPHIUS, by Barbara Cooney (Viking Press)

Miss Rumphius grows up remembering her grandfather's directive that she must "do something to make the world more beautiful" while you are here on earth.

ZEBO AND THE DIRTY PLANET, by Kim Fernandes (Annick Press)

A story with a Noah's Ark theme that tells of a space traveler bringing animals from a polluted planet to his own clean planet to help them survive.

FIRST THERE WAS FRANCES, by Bob Graham (Bradbury Press)

Frances is happy in her isolated spot at the edge of the city, but finds that her little space is becoming more and more populated.

BROTHER EAGLE, SISTER SKY, by Susan Jeffers (Dial Books)

The Native American belief that the earth and all of its creatures are sacred is the central theme of this story which cautions all people to preserve our environment.

ABC OF ECOLOGY, by Harry Milgrom (Macmillan)

The letters of the alphabet each tell a cause of pollution and a way to prevent it.

FAREWELL TO SHADY GLADE, by Bill Peet (Houghton Mifflin)

Old Raccoon decides that he and his friends must leave Shady Glade when men with bulldozers arrive and start leveling the trees nearby.

THE WUMP WORLD, by Bill Peet (Houghton Mifflin)

The Wump World is turned into a concrete jungle after it is invaded by the Pollutians.

DEAR GARBAGE MAN, by Gene Zion (Harper & Row)

A garbage man, hesitant to destroy unwanted items, gives them away. When the items are returned, he realizes that all of the items can be useful after all.

NOAH'S ARK, by Gail E. Haley (Atheneum)

A contemporary Noah mourns the loss of animals to hunting and pollution. When his attempts to warn others fail, he constructs a modern ark and sails around the world collecting animals.

PROFESSOR NOAH'S SPACESHIP, by Brian Wildsmith, (Oxford Press)

Various animals help Professor Noah build a spaceship to escape the pollution destroying their habitats. Instead of reaching another planet, however, they travel backward through time to a preindustrial Earth.

JUST A DREAM, by Chris Van Allsburg (Houghton Mifflin)

After Walter has a nightmare about how the world will be in the future, he agrees to stop littering and to help with the family's recycling efforts.

THE LITTER KNIGHT, by Syd Hoff (McGraw-Hill)

Sir Dudley angers the king with his interest in garbage disposal, not dragon slaying.

SIGN OF THE SEAHORSE, by Graeme Base (H. N. Abrams)

The sea life of a coral reef is threatened when a real estate deal fills their world with poisonous waste.

SOMEDAY A TREE, by Eve Bunting (Clarion Books)

Neighbors unite to try to save an old oak tree poisoned by pollution.

THE DOLPHIN AND THE MERMAID, by Ruth Carroll (H. Z. Walck)

The mermaid and her friends lead a peaceful life until thoughtless humans threaten their existence.

TALE OF ANTARCTICA, by Ulco Glimmerveen (Scholastic, Inc.)

Penguins in Antarctica demonstrate how their environment is threatened by the pollution from man's presence.

TWO ISLANDS, by Ivan Gantschev (Picture Book Studio)

Two islands, which develop in different ways, eventually find themselves in conflict with each other.

THE LORAX, by Theodor Geisel (Random House)

The local pollution problem is detailed by the Once-ler.

THE HIDDEN JUNGLE, by Simon Henwood (Farrar, Straus & Giroux)

Mr. Pinn must find a new home for a potted tree that is dying from the city's noise, dirt, and odor.

AMY'S DINOSAUR, by Syd Hoff (Windmill Books)

A dinosaur discovered by Amy and her friends helps them clean up the woods and the city.

SMOKE, by Ib Spang Olsen (Coward, McCann & Geoghegan)

While on their way to a picnic, a family does what they can to fight air pollution.

THE PAPER BAG PRINCE, by Colin Thompson (Alfred A. Knopf)

An old man moves into an abandoned train at the dump and watches nature reclaim the polluted land.

WILBER'S SPACE MACHINE, by Lorna Balian (Holiday House)

Violet and Wilbur find a need for more space when many neighbors invade their quiet valley.

GREAT TRASH BASH, by Loreen Leedy (Holiday House)

The animals of Beaston learn new ways to recycle and control their trash.

BLUE BUG'S BEACH PARTY, by Virginia Poulet (Bradbury Press)

Blue Bug must clean up the litter on the beach before he and his friends can have a party.

**AND STILL THE TURTLE WATCHED, by Sheila MacGill-Callahan
(Dial Books for Young Readers)**

A turtle, carved in a rock by Indians centuries earlier, watches sadly as man comes bringing many changes with him.

MICHAEL BIRD-BOY, by Tomie de Paola (Prentice-Hall)

A large, black cloud makes many harmful environmental changes in a child's environment. He helps to solve the problem when he locates the source of the pollution.

LIFE SCIENCES

ECOLOGY - ENDANGERED ANIMALS

"Benchmarks":

- "Some kinds of organisms that once lived on earth have completely disappeared, although they were something like others that are alive today." (*Benchmarks*, p. 123)

Recommendations/Comments:

In addition to the children's books on dinosaurs (See "Dinosaur" chapter), several books deal with endangered animals of today. This unit can easily integrate the study of these animals with geography. Try locating where most endangered animals exist and determining why they are threatened. (For example, do they interfere in some way with people's activities, do they have very specific food or nesting requirements, etc.) Brainstorm on solutions for these animals.

Creative writing can be integrated with the fiction books. After reading Donald and the Fish That Walked students could write a story of how the introduction of a new species into a habitat caused problems. After reading aloud the chapter book Chimpanzee Kid by Ron Roy (Clarion Books) students could reflect on the use of animals in laboratories. Posters can be made for saving particular animals or dioramas could be made showing the animal in its habitat.

Related Children's Fiction:

DONALD AND THE FISH THAT WALKED, by Edward Riccuiti (Harper & Row)
The walking catfish, which had been brought to Florida as an addition to an aquarium, soon spread and threatened the ecological balance.

THE GREAT KAPOK TREE, by Lynne Cherry (Harcourt Brace Jovanovich)
The many different animals that live in a great Kapok tree in the Brazilian rain forest try to convince a man with an axe of the importance of not cutting down their home.

MOLLY IN DANGER, by Anne Carter (Crown Publishing)
A mole must find a new place to dig a home after she finds her home filled with flood water.

A WOLF STORY, by David McPhail (Charles Scribner's Sons)
A wolf is captured to be used in a film. He escapes and is about to be killed when a group of children befriend him.

DEAR MR. BLUEBERRY, by Simon James (Margaret K. McElderry)
Emily writes to her teacher asking for advice when she believes she sees a whale in her pond.

THE GNATS OF KNOTTY PINE, by Bill Peet (Houghton Mifflin)
The creatures of Knotty Pine Forest meet every year on the eve of the first day of hunting season to try to think of a way to save themselves.

HUMPHREY THE LOST WHALE, by Wendy Tokuda (Heian International)

The true story of how people around the San Francisco area helped save a beached whale.

MY FRIEND WHALE, by Simon James (Bantam Books)

A child is saddened when a whale near his home is suddenly never seen again.

I WAS ALL THUMBS, by Bernard Waber (Houghton Mifflin)

An octopus tells the story of how he was unceremoniously introduced to ocean life as part of an experiment.

**HENRY'S WRONG TURN, by Harriet Ziefert & Andrea Baruffi
(Little, Brown & Company)**

A humpback whale gets lost and ends up in New York Harbor. Based on a true story.

A BEACH FOR THE BIRDS, by Bruce McMillan (Houghton Mifflin)

The author takes you on a tour of a beach in Maine which is a wildlife refuge for families of rare birds.

THE GRIZZLY SISTERS, by Cathy Bellows (Macmillan Publishing)

The Grizzly Sisters live to regret it when they disobey their mother's warning to stay away from the tourists.

NOAH'S ARK, by Gail E. Haley (Atheneum)

A contemporary Noah mourns the loss of animals to hunting and pollution. When his attempts to warn others fail, he constructs a modern ark and sails around the world collecting animals.

IBIS: A TRUE WHALE STORY, by John Himmelman (Scholastic, Inc.)

Tells the story of a humpback whale calf who gets tangled in a fishing net.

THE GREATEST TREASURE, by Arcadio Lobato (Picture Book Studio)

The new queen of the witches will be the one who can find the greatest treasure.

AARDVARKS, DISEMBARK! by Ann Jonas (Greenwillow Books)

After the Flood, Noah discovers many unfamiliar animals as the creatures disembark. Then, as he journeys down the mountain, he encounters species that are now extinct or endangered.

HUNTER AND THE ANIMALS, by Tomie De Paola (Holiday House)

Forest animals play a trick on a sleeping hunter. A wordless book.

THE EMPTY ISLAND, by Roger Smith (Crocodile Books)

A man and his family live in harmony with the animals on an island until the man and his wife decide they would like to have the animals' clothes for themselves.

THE OLD LADIES WHO LIKED CATS*, by Carol Greene (Harper Collins)

An island's ecology is disturbed when the old ladies are no longer allowed to let their cats out at night.

SALLY AND THE LIMPET, by Simon James (Margaret K. McElderry)

Sally gets a limpet stuck to her finger while at the beach.

HEY! GET OFF OUR TRAIN, by John Burningham (Crown Publishers)

A young boy takes a trip on his toy train and saves several endangered animals.

ALDITA AND THE FOREST, by Thelma Catterwell (Houghton Mifflin)

A newly-born butterfly, the last of her kind, helps many other forest creatures and is rewarded by being turned into a butterfly orchid.

TIGER, by Judy Allen (Candlewick Press)

Japanese background adds to this story of a village's desire to kill a tiger because they believe eating its meat will make them brave.

PHYSICAL SCIENCES

LIGHT AND HEAT

"Benchmarks":

- "The sun warms the land, air and water." (*Benchmarks*, p. 83)
- "People can save money by turning off machines when they are not using them." (*Benchmarks*, p. 193)
- "People burn fuels such as wood, oil, coal, or natural gas, or use electricity to cook their food and warm their houses." (*Benchmarks*, p. 193)

Recommendations/Comments:

Many elementary teachers are less than enthusiastic when presented with the challenge of creating a unit on light. However, when the concepts of color and shadows are added, this unit can come alive! Try mixing colors with watercolors, cellophane, and colored water. Pass out prisms and create your own rainbows. Cover flashlights with red, blue, or yellow cellophane and overlap the circles of light. Did you get the colors you thought you would? Why or why not?

The study of solar energy combines the study of light and heat. Fill paper cups with dark colored water and clear water and set in the sun. After several hours compare temperatures of the waters. How do they compare?

For language arts, try writing a skit involving shadow puppets! Discuss the literary use of "light" as associated with goodness, happiness, laughter, etc. while "darkness" is seen as sinister, evil and foreboding. Write a letter to someone who is the "light" of your life!

Related Children's Fiction:

A DARK, DARK TALE, by Ruth Brown (Dial Books)

The author talks about many dark, dark places which look sinister but are not too scary because of the use of shafts of light in the pictures.

ONE LIGHT, ONE SUN, by Raffi (Crown Publishers)

Three diverse families see the "light" and, on a warm, sunny day, realize that they are not so terribly different.

THE PINKISH, PURPLISH, BLUISH EGG, by Bill Peet (Houghton Mifflin)

What hatches out of a pinkish, purplish, bluish egg? It is a griffin named, Ezekiel who must win the hearts of the woodland creatures.

BROWN BEAR, BROWN BEAR, WHAT DO YOU SEE?, by Bill Martin, Jr. (Henry Holt)

The author shows a variety of different colored animals, and a mother, looking at the reader.

WHO SAID RED?, by Mary Serfozo (McElderry Books)

A discussion between two children, one of which is interested only in red, while the other introduces many other colors.

ALICE'S BLUE CLOTH, by Deborah van der Beek (G. P. Putnam's Sons)

After being sent away by her mother who is baking, Alice finds a piece of blue cloth and amuses herself and her mother for the rest of the afternoon.

BLUE BUG'S BOOK OF COLORS, by Virginia Poulet (Childrens Press)

Blue bug experiments with mixing colors in an attempt to make many different colors.

BLACK IS BROWN IS TAN, by Arnold Adoff (Harper & Row)

The story of the members of a family who delight in all the colors that make up their very special family.

BEAR SHADOW, by Frank Asch (Simon & Schuster)

Bear tries to get rid of his shadow after it gets in the way when he is trying to catch a fish.

MR. WINK AND HIS SHADOW, NED, by Dick Gackenbach (Harper & Row)

After a silly misunderstanding, Mr. Wink decides to find a new shadow.

I HAVE A FRIEND, by Keiko Narahashi (McElderry Books)

A little boy tells about his shadow who is with him all day long.

PAPA LUCKY'S SHADOW, by Niki Daly (McElderry Books)

Papa Lucky teach his granddaughter to dance his old routines. She learns so well, that she can follow his every move.

THE ENCHANTED CARIBOU, by Elizabeth Cleaver (Atheneum)

Three hunters befriend a maiden who is then changes into a white caribou. Includes instructions on how to put on a shadow play of the story.

THE ROOSTER'S HORNS, by Ed Young (Collins Publishing)

Presents the plot of a Chinese play and directions for making a theatre and shadow puppets.

SHADOW PUPPETS IN COLOR, by Louise Cochrane (Plays, Inc.)

Includes three traditional shadow plays and directions for making the puppets and theater.

THE COLOR BOX, by Dayle Ann Dodds (Little, Brown & Company)

A monkey finds a box with spots of color inside and journeys to many bright landscapes through it. Each page has a hole showing the next color.

TEN BLACK DOTS, by Donald Crews (Greenwillow Books)

Book uses black dots to count having them depict wheels on a bus, foxes' eyes, etc.

LET'S PAINT A RAINBOW, by Eric Carle (Philomel Books)

Colors are introduced as painters create a rainbow cat.

MY VERY FIRST BOOK OF COLORS, by Eric Carle (Thomas Y. Crowell)

Colors are introduced in a charming and interesting way.

LIGHT, by Donal Crews (Greenwillow Books)

A presentation of kinds of light -- daylight, starlight, lightning, electric light, etc.

PEPPE THE LAMPLIGHTER, by Elisa Bartone (Lothrop, Lee & Shepard)

In a time before electricity, a poor boy, responsible for lighting the lamps, dislikes his job until one special night.

RETURN OF THE SHADOWS, by Norma Farber (Harper Collins)

A group of shadows rebel and find new "owners".

THE YEAR OF FIRE, by Teddy Jam and Ian Wallace (McElderry Books)

A grandfather recollects the worst fire he can remember.

SWITCH ON THE NIGHT, by Ray Bradbury (Alfred A. Knopf)

A little boy is no longer afraid of the dark and shadows when he makes a new friend.

LITTLE BLUE AND LITTLE YELLOW, by Leo Lionni (Astor Books)

A story about the many colors derived from blue and yellow.

A COLOR OF HIS OWN, by Leo Lionni (Pantheon Books)

A small chameleon is sad because he doesn't have a color of his own.

PHYSICAL SCIENCE

SOUND AND COMMUNICATIONS

"Benchmarks":

- "Things that make a sound vibrate." (*Benchmarks*, p. 89)
- "Information can be sent and received in many different ways. Some allow answering back and some do not. each way has advantages and disadvantages. (*Benchmarks*, p. 197)
- "Devices can be used to send and receive messages quickly and clearly. (*Benchmarks*, p. 197)

Recommendations/Comments:

The study of sound can be very exciting for children! Use a tuning fork and "hear" through your teeth! (Place the tuning fork on your teeth, the bridge of your nose, your forehead, etc. You'll be able to "hear" the pitch!) Demonstrate different pitches by creating shoebox guitars. String rubber bands of different lengths and thicknesses around it and pluck the different bands. How do the pitches compare?

Different forms of communication can also be interesting. Create a poster of Morse Code and have student's create messages. If possible, have someone visit the class and demonstrate sign language. Don't forget to make those string telephones!

Related Children's Fiction:

THUNDER CAKE, by Patricia Polacco (Scholastic, Inc.)

When a storm approaches her grandmother's farm, a little girl learns not to be afraid of thunder by helping grandmother make her famous Thunder Cake.

MUSIC. MUSIC FOR EVERYONE, by Vera B. Williams (Mulberry Books)

Rosa earns money by playing in the Oak Street Band to help with expenses while her grandmother is sick.

EVEN THAT MOOSE WON'T LISTEN TO ME, by Martha Alexander (Dial Books)

A little girl tries to get rid of a moose in her garden after her family refuses to listen to her warnings.

MY FIVE SENSES, by Alike (Thomas Y. Crowell)

An easy-to-read presentation of the five senses and how we use them.

DO NOT DISTURB, by Nancy Tafuri (Greenwillow Books)

A wordless book about a family camping in the woods who unwittingly disturbs the woodland creatures during the day. At night, the creatures have a surprise of their own.

MARY ALICE OPERATOR NUMBER 9, by Jeffrey Allen (Little, Brown & Company)

When Mary Alice, the duck, gets sick, many other animals try to take over her job of telling time over the phone.

MY VERY FIRST BOOK OF SOUNDS, by Eric Carle (Thomas Y. Crowell)

Pages split to make many different combinations of words and pictures.

CAN YOU HEAR ME, GRANDAD?, by Pat Thomson (Gollancy)

Grandpa teases his granddaughter by pretending to misunderstand what she is saying, until she says something he is very interested in hearing.

NOISY NORA, by Rosemary Wells (Dial Books)

A little mouse makes a lot of noise trying to be noticed by two very busy parents.

POLAR BEAR, POLAR BEAR, WHAT DO YOU HEAR?, by Bill Martin, Jr. (Henry Holt & Company)

Children imitate the sound of many of the zoo animals for the zookeeper.

NOBODY LISTENS TO ANDREW, by Elizabeth Guilfoile (Modern Curriculum Press)

Andrew tries to tell his family and others about the bear asleep in his bed, but nobody has time to listen.

I HEAR A NOISE, by Diane Goode (E. P. Dutton)

A little boy hears noises at his window at night and is frightened. As it turns out, he has every right to be frightened.

THE NOISEMAKERS, by Judith Caseley (Greenwillow Books)

Two mothers find the perfect place for two noisy, active children to play.

WHEN THE WOODS HUM, by Joanne Ryder (Morrow Junior Books)

A little girl listens in awe to the sound of the cicadas, and returns seventeen years later with her son to hear them again.

A BUTTON IN HER EAR, by Ada Litchfield (A. Whitman)

A little girl humorously misunderstands what others are saying, until her hearing deficiency is detected and a hearing aid is worn.

THE SPOOKY, EERIE NIGHT NOISE, by Mona Rabun Reeves (Bradbury Press)

Jenny imagines all kinds of scary things outside her window until she and her parents go investigate.

TOO MUCH NOISE, by Ann McGovern (Houghton Mifflin)

Peter goes to the village wiseman to see what can be done about all the noise around his house.

PHYSICAL SCIENCE

SIMPLE MACHINES

"Benchmarks":

- "Things move in many different ways, such as straight, zigzag, round and round, back and forth, and fast and slow." (*Benchmarks*, p. 89)
- "The way to change how something is moving is to give it a push or a pull." (*Benchmarks*, p. 89)
- "Machines improve what people get from crops by helping in planting and havesting, in keeping food fresh by packaging and cooling, and in moving it long distances from where it is grown to where people live." (*Benchmarks*, p. 184)
- "Tools are used to help make things, and some things cannot be made at all wihtout tools. Each kind of tool has a special purpose." (*Benchmarks*, p. 188)

Recommendations/Comments:

There's a great trilogy of non-fiction books teachers can use in this unit: Marbles, Roller Skates, Doorknobs: Simple Machines That Are Really Wheels; Seesaws, Nutcrackers, Brooms: Simple Machines That Are Really Levers; and Bathtubs, Slides, Roller Coaster Rails: Simple Machines That Are Really Inclined Planes, all by Christopher Lampton (Millbrook Press). Bring in some other household items that can be classified as levers -- scissors, tweezers, a hammer (the claws), a fork, and a pencil. How can they be used as levers? After discussing different types of simple machines, provide students with a large selection of reading books and let them read about one of their favorite machines.

This can be a fun unit for those creative minds. Students can write about new inventions they would like to create. To help foster empathy and understanding, you could look at inventions in the medical field to discover what products are available for the handicapped and how these are used. Students could record their feelings on what it might be like to use these products.

For an art project, try painting with marbles! In a shallow pan (such as a cake pan) place a piece of paper and then a piece a paper with a shape cut out or a stencil. Place three dabs of tempra paint on the paper and roll marbles around in the pan. A very striking piece of art! You can also try drawing a picture using only circles and wheels, or creating advertisements for a new machine.

Related Children's Fiction:

WHEELS ON THE BUS, by Paul O. Zelinsky (Dutton Childrens Books)

Book version of classic song tells of the wheels, wipers, and people getting off and on the bus.

BIG WHEELS, by Anne Rockwell (E. P. Dutton)

Introduces many different wheels on working vehicles and shows their purposes.

FOX ON WHEELS, by Edward Marshall (Dial Books)

Fox babysits for his little sister, learns to climb a tree, and wins a shopping cart race.

WHEELS: A TALE OF TROTTER STREET, by Shirley Hughes (Lothrop, Lee & Shepard)

Carlos is jealous of Billy's new bike and wants one of his own for his upcoming birthday.

WHEELS AWAY, by Dayle Ann Dodds (Harper & Row)

A runaway wheel takes a bumpy, noisy ride through town.

BICYCLE RACE, by Donald Crews (Greenwillow Books)

The numbered order of a bicycle race changes as the race goes on.

MIKE MULLIGAN AND HIS STEAM SHOVEL, by Virginia Lee Burton (Houghton Mifflin)

An Irish steam-shovel operator refuses to desert his faithful steam-shovel, Mary Anne, for a newer model.

THE BEAR'S BICYCLE, by Emilie Warren McLeod (Little, Brown & Company)

A little boy and his favorite bear have a very exciting bicycle ride.

TRUCKS, by Anne Rockwell (E. P. Dutton)

The author introduces many different trucks and explains their purposes.

TEDDY BEARS TAKE THE TRAIN, by Susanna Gretz and Alison Sage (Macmillan)

The teddy bears take a trip to see Uncle Jerome and have a wonderful time doing it.

BICYCLE TO TREACHERY, by Robert Quackenbush (Prentice-Hall)

Miss Mallard uncovers a smuggling ring while on a bicycle tour of Holland. (Other "Miss Mallard Mystery" books available.)

TRUCKS, by Byron Barton (Thomas Y. Crowell)

Presents many different trucks and tells what they do through easy text and illustrations.

ALISTAIR'S TIME MACHINE, by Marilyn Sadler (Prentice-Hall)

Alistair's time machine takes him on many adventures through history. Unfortunately, Alistair cannot prove this to the judges at his science fair.

DEATH OF THE IRON HORSE, by Paul Goble (Bradbury Press)

A group of Indians derail and rob a train in an act of defiance against the white man taking their land.

TRAIN WHISTLES, by Helen Roney Sattler (Lothrop, Lee & Shepard)

Explains how train whistles are used as signals and tells what some of these signals mean.

TIN LIZZIE, by Peter Spier (Doubleday)

Describes the experiences of a Model T car which has a series of owners from 1909 to the present time.

FIFTY GETS THE PICTURE, by Martin Baynton (Crown Publishers)

Fifty, the tractor, helps the farm hand with his chores so that he will have enough time to finish painting Fifty's picture. (Other "Fifty" books available.)

FIFTY AND THE GREAT RACE, by Martin Baynton (Crown Publishers)

Fifty, the tractor, must win the big race at the fair or possibly be scrapped for junk. (Other "Fifty" books available.)

MACHINES AT WORK, by Byron Barton (Thomas Y. Crowell)

Workers at a construction site use many different machines to knock down a building and start constructing a new one.

TAKE ME FOR A RIDE, by Michel Gay (Wm. Morrow & Company)

A little boy has a hard time trying to push his stroller as more and more animals get in for a ride.

RABBIT EXPRESS, by Michel Gay (Wm. Morrow & Company)

A little rabbit gets roller skates for his birthday and travels to the city to skate on the sidewalks.

MR. GUMPY'S MOTOR CAR, by John Burningham (Thomas Y. Crowell)

Mr. Gumpy and his human and animal friends all pile into his car to go for a ride.

MOLLY'S NEW WASHING MACHINE, by Laura Geringer (Harper & Row)

Molly and her friends dance to the music her mysterious new washing machine makes while it is running.

WHEEL ON THE CHIMNEY, by Margaret Wise Brown and Tibor Gergely (J. B. Lippincott)

Because storks bring honor and good luck to his house, a farmer ties a wheel on his chimney to help the stork build his nest there.

MRS. ARMITAGE ON WHEELS, by Quentin Blake (Alfred A. Knopf)

Tells of the misadventures of Mrs. Armitage who keeps making more and more complicated changes in her bicycle.

MR. MURPHY'S MARVELOUS INVENTION, by Eileen Christelow (Clarion Books)

Mr. Murphy makes a housekeeping machine for his wife's birthday, but the family is shocked to find out what the machine really does.

HERBERT BINNS AND THE FLYING TRICYCLE, by Caroline Castle and Peter Weevers (Dial Books)

Some animals who are jealous of Herbert Binns' genius, plot to sabotage his latest invention.

THE LITTLE ENGINE THAT COULD, by Watty Piper (Platt & Munk)

The Little Blue Engine helps a trainload of toys and special food get over the mountain to the boys and girls waiting on the other side.

PHYSICAL SCIENCE

PHYSICAL AND CHEMICAL CHANGES

Benchmarks:

- "Water can be a liquid or a solid and can go back and forth from one form to the other. If water is turned into ice and then the ice is allowed to melt, the amount of water is the same as it was before freezing." (*Benchmarks*, p. 67)
- "Change is something that happens to many things." (*Benchmarks*, p. 72)
- "Animals and plants sometimes cause changes in their surroundings." (*Benchmarks*, p. 72)
- "Things can be done to materials to change some of their properties, but not all materials respond the same way to what is done to them." (*Benchmarks*, p. 76)

Recommendations/Comments:

Studying physical changes with primary students can be great fun! After all, what child is not fascinated when magicians change a bird into a rabbit or make something disappear? Numerous books depicting change are available, and these stories can be a springboard into discussing what is magic and what can be explained. Is it "magic" when water left on a saucer disappears? What will happen if you place an ice cube in the sunlight? See how many different "mysterious" changes you can present and let students discover what is happening. Three books of experiments that can be used include: Liquid Magic by Philip Watson (Lothrop, Lee & Shepard), Make It Change by David Evans and Claudette Williams (Dorling Kindersley) and 175 Science Experiments to Amuse and Amaze Your Friends by Brenda Walpole (Random House). For fun, have a race to see who can melt their ice cube the fastest (place in plastic bags first).

To tie in literature, compare Strega Nona by Tomie de Paola and The Magic Porridge Pot by Paul Galdone. Bring in some sort of container from home and have students write stories of what the "pot" can do. To combine art and writing, read The Little Lump of Clay by Diana Engel. Let students create something from clay, and then write and illustrate their own stories. For an activity that fascinates adults as well as children, make Oobleck (Bartholomew and the Oobleck by Dr. Suess) by mixing 16 ounces of cornstarch, 1 1/2 to 1 2/3 cups of water and 5 drops of food coloring. If too thin, allow it to sit, uncovered, so that excess water can evaporate. Water can be added if the Oobleck begins to dry out.

Related Children's Fiction:

WORLD FAMOUS MURIEL AND THE MAGIC MYSTERY, by Sue Alexander
(Thomas Y. Crowell)

Muriel must find the Great Hokus Pokus when he disappears during the rehearsal of his magic show.

HUMBUG POTION AND A B CIPHER, by Lorna Balian (Abingdon Press)

By learning the letters of the alphabet, you can help a witch decipher the code for a secret recipe that will change her into a beauty.

JOE ON SUNDAY, by Tony Blundell (Dial Books For Young Readers)

Depending on how he feels, Joe may act like a lion, a pig, a mouse, or some other animal.

MARTIN'S HATS, by Joan W. Blos (Mulberry Books)

Martin has many different adventures around his house simply by changing hats.

ARTHUR'S APRIL FOOL, by Marc Brown (Little, Brown & Company)

Arthur experiences trouble with his magic tricks for the April Fool's Day school assembly.

CRAFTY CHAMELEON, by Mwenye Hadithi (Little, Brown & Company)

A chameleon uses his wits to outwit a leopard and a crocodile.

A MILLION CHAMELEONS, by James Young (Little, Brown & Company)

A million chameleons enjoy a trip to the zoo, changing color as they move from one activity to another.

THE PAPER CRANE, by Molly Bang (Greenwillow Books)

A stranger pays for his meal in a restaurant with a paper crane that suddenly comes alive.

THE FAIRY WITH THE LONG NOSE, by Claude Bouion (Margaret K. McElderry)

A fairy gets more than she bargained for when she tries to use her magic to make her long nose smaller.

ALPHABET SOUP, by Kate Banks (Alfred A. Knopf)

A young boy takes a magical journey while spelling out words with his alphabet soup.

ARTHUR'S NOSE, by Marc Brown (Little, Brown & Company)

Arthur visits a rhinologists when he is unhappy with the size of his nose.

THE MAGIC HONEY JAR, by Susi Bohdal (North-South Books)

While Julian is sick with the flu, he dreams of a magical honey jar that can cure all of his ills.

SYLVESTER AND THE MAGIC PEBBLE, by William Steig (Wanderer Books)

A donkey with a magic pebble asks it to turn him into a rock and then he cannot hold the pebble to turn back to normal.

DOCTOR CHANGE, by Joanna Cole (Wm. Morrow & Company)

Evil Dr. Change imprisons his apprentice, Tom, in his home. But Tom learns Dr. Change's spells and makes his escape.

KING CHANGE-A-LOT, by Babette Cole (G. P. Putnam's Sons)

With help from a genie, Prince Change-a-lot makes many changes to the kingdom which improve the lot of the people.

THE FRIENDS OF EMILY CULPEPPER, by Ann Coleridge (G. P. Putnam's Sons)

Because she is lonely, an old lady miniaturizes several friends and keeps them in jars in her kitchen for company.

BARTHOLOMEW AND THE OOBLECK, by Dr. Suess (Random House)

The king asks the magician for something new to come out of the sky (rather than rain, snow, etc.). Oobleck becomes more than the king bargained for.

THE MIXED-UP CHAMELEON, by Eric Carle (Harper & Row)

A little chameleon is unhappy with its looks and wishes that he had different parts of many different animals.

STREGA NONA'S MAGIC LESSONS, by Tomie de Paola (Harcourt Brace Jovanovich)

Anthony disguises himself as a woman so he can learn magic from Strega Nona.

BIG ANTHONY AND THE MAGIC RING, by Tomie de Paola (Harcourt Brace Jovanovich)

Anthony borrows Strega Nona's magic ring to turn himself into a handsome man. He ends up getting more trouble than he bargained for.

HEY PRESTOI, by Sue Eaton and Martin Bridle (Bedrick/Blackie)

Vicky is surprised to find that the magician who performed at her birthday party cannot fix a small bird's broken wing.

THE LITTLE LUMP OF CLAY, by Diana Engel (Morrow Junior Books)

A little lump of clay has its wish granted when a little girl molds him into "something".

IF I HAD LONG, LONG HAIR, by Angela Elwell Hunt (Abingdon Press)

A child wishes for long, long hair and daydreams about what it would be like until her dreams become unpleasant.

AMANDA AND THE WITCH SWITCH, by John Himmelman (Viking Kestrel)

When a friendly witch gives a toad three wishes, he uses one of them to become a witch himself.

THE FRONT HALL CARPET, by Nicholas Heller (Greenwillow Books)

A little girl imagines that the carpet in her home is really a river, a meadow, and a maze to catch monsters.

THE LEGEND OF THE VEERY BIRD, by Kathleen Hague (Harcourt Brace Jovanovich)

The Keeper of the Forest helps a young boy when he most needs it and gives the world a beautiful, singing bird.

ROCKING-HORSE LAND, by Laurence Housman (Lothrop, Lee & Shepard)

The rocking horse that Prince Freedling receives for his fifth birthday becomes real during the night and wishes to be set free.

THE WITCH'S HAT, by Tony Johnston (G. P. Putnam's Sons)

A witch has trouble with her hat which keeps turning into different animals and refusing to behave.

DOG FOR A DAY, by Dick Gackenbach (Clarion Books)

A new invention of Sidney's causes unexpected problems when it changes Sidney into his dog and his dog into Sidney.

- MY WICKED STEPMOTHER**, by Norman Leach (Macmillan Publishing)
Tom finds that his new stepmother might not be the witch he thinks she is.
- I WISH I WERE**, by Genevieve Laurencin (G. P. Putnam's Sons)
A young boy wishes that he could change into different animals to fit different occasions.
- PRINCE BERTRAM THE BAD**, by Arnold Lobel (Harper & Row)
A very naughty prince is turned into a small dragon when he shoots rocks at a passing witch.
- MR. MCMOUSE**, by Leo Lionni (Alfred A. Knopf)
A tiny mouse who has been turned into a tiny man searches for his real identity in a group of field mice.
- I KNOW I'M A WITCH**, by David A. Adler (Henry Holt & Company)
A little girl mixes a magic potion which she hopes will change her nasty Aunt Ruby into a nice person.
- SARAH'S UNICORN**, by Bruce Coville (J. B. Lippincott)
Aunt Mag's spell bombs and turns her into a wicked witch who treats her niece, Sarah, badly.
- DORRIE AND THE WIZARD'S SPELL**, by Patricia Coombs (Lothrop, Lee & Shepard)
Dorrie's mother drinks the wizards magic potion by mistake and turns into a teacup that is sold during the Library Bazaar and Tea.
- THE ANGEL AND THE WILD ANIMAL**, by Michael Foreman (Atheneum)
What happens to the little boy who lives in our house? Sometimes he is an angel and, sometimes, he is nothing like an angel.
- THE MAGIC VASE**, by Fiona French (Oxford University Press)
A selfish art-dealer loses all of his greed and anger thanks to Maria and her magic vase.
- THE MAGIC PORRIDGE POT**, by Paul Galdone (Houghton Mifflin)
An old woman gives a little girl a magic pot that produces all the porridge she and her mother need to survive. The pot goes amuck when the mother tries to use it without knowing the magic words.
- THE SHRINKING OF TREEHORN**, by Florence Parry Heide (Holiday House)
A young boy finds that he is shrinking, but has trouble convincing his parents that it is true. He finds that he must handle the problem by himself.
- AMANDA AND THE MAGIC GARDEN**, by John Himmelman (Viking Kestrel)
The vegetables Amanda grows from magic seeds end up making the animals who eat them grow into giants.
- WALTER'S MAGIC WAND**, by Eric Houghton (Orchard Books)
Walter uses his imagination and a magic wand to bring several library books to life.

LET'S MAKE RABBITS, by Leo Lionni (Pantheon Books)

The scissors and the pencil each make rabbits who end their adventure by becoming real.

PUSS IN BOOTS, by Paul Galdone (Houghton Mifflin)

When his cat outwits a giant by making him change into different animals, a poor man gains fortune and meets a beautiful princess.

SIDNEY RELLA AND THE GLASS SNEAKER, by Bernice Myers (Macmillan Publishing)

Sidney Rella asks his fairy godfather to help him become a football player.

DADDY IS A MONSTER...SOMETIMES, by John Steptoe (J. B. Lippincott)

Two children tell of the times when their daddy turns into a monster.

MEG AND MOG, by Helen Nicoll and Jan Pienkowski (Puffin Books)

Meg, the witch, and her friends meet on Halloween to make a spell. But, something goes wrong, and Meg's friends all turn into mice.

IMOGENE'S ANTLERS, by David Small (Crown Publishers)

When Imogene wakes up one day with antlers growing out of her head, she creates a sensation wherever she goes.

BABUSHKA'S DOLL, by Patricia Polacco (Simon & Schuster)

When her grandmother's doll comes to life while Natasha is playing with it, she understands why Babushka played with the doll only once.

I WAS A SECOND GRADE WEREWOLF, by Daniel Pinkwater (E. P. Dutton)

A second grader describes what happens when he awakes to find he has turned into a werewolf.

CALEB & KATE, by William Steig (Farrar, Straus & Giroux)

When Caleb and Kate have a quarrel, Caleb storms out of the house. While in the forest resting, a witch turns Caleb into a dog. What will Kate do now?

SOLOMON. THE RUSTY NAIL, by William Steig (Farrar, Straus & Giroux)

A bunny with a special ability finds himself in an ominous predicament.

ETCHED STONE, by Chris Van Allsburg (Houghton Mifflin)

A strange stone that glows has a transforming effect on the crew that finds it.

DORRIE AND THE HAUNTED SCHOOLHOUSE, by Patricia Coombs (Clarion Books)

Dorrie and a fellow student mix up some of their spells and cause chaos in school.

THE ENCHANTED CARIBOU, by Elizabeth Cleaver (Atheneum)

Three hunters befriend a maiden who is then changed into a white caribou. Includes instructions on how to put on a shadow play of the story.

PHYSICAL SCIENCE

MASS AND MEASUREMENT

Goals:

- "Objects can be described in terms of the materials they are made of (clay, cloth, paper, etc.) and their physical properties (color, size, shape, weight, texture, flexibility, etc.)" (*Benchmarks*, p. 76)

Recommendations/Comments:

A unit on "Mass and Measurement" can include an endless supply of activities! Try measuring objects in different units -- paper clips, pencils, straws, hands, etc. Brainstorm on how you could measure the circumference of a ball. (A great follow-up to Farmer Mack Measures His Pig by Tony Johnston.) Introduce density (or observing that weight is not related to size) by measuring the same amount (i.e. 1 cup or 50 ml) of different liquids such as oil, catsup, corn syrup and water. Demonstrate different pieces of equipment that can measure weight, such as a balance, an electronic scale, a spring scale, etc. Compare 1 cup or 50 ml of cooked pasta or rice with the same volume of uncooked pasta or rice and compare weight and density.

This may be a great time to discuss relative terms -- big, bigger, biggest. Is the definition of big always the same? When is something big? Students can write about a time when "bigger was not better" or how a smaller person/animal outwits a bigger, stronger person.

Related Children's Fiction:

HOW BIG IS A FOOT?, by Rolf Myller (Atheneum)

When the king uses his foot to measure a bed for the queen, he learns that everyone's method of measurement is not the same and that there is a need for a form of standard measurement.

FARMER MACK MEASURES HIS PIG, by Tony Johnston (Harper & Row)

Chaos reigns on Farmer Mack's farm when he attempts to measure his fat pig.

INCH BY INCH, by Leo Lionni (Astor-Honor, Inc.)

The little inch worm agrees to measure the parts of many different birds in an attempt to keep from being eaten.

BIG AND LITTLE, by Ruth Krauss (Scholastic, Inc.)

Text and illustrations help describe some of the little things that big things love.

THE BIGGEST, MEANEST, UGLIEST DOG IN THE WHOLE WIDE WORLD, by Rebecca C. Jones (Macmillan Publishing)

Jonathan is frightened of the dog next door, until an accident changes their relationship.

GEORGE SHRINKS, by William Joyce (Harper & Row)

George tries to take care of the cat and his baby brother even though he awakes to find that he is the size of a mouse.

FLETCHER AND THE GREAT BIG DOG, by Jane Kopper Hilleary (Houghton Mifflin)

Fletcher tries to run away from a big dog that scares him only to be glad the dog is around when Fletcher finds himself lost.

MARY MARY, by Sarah Hayes (Margaret K. McElderry)

Mary Mary changes the relationship between the town and a local giant when she sets out to prove to the children that she isn't afraid of the giant.

MOLLY PINK GOES HIKING, by Judith Caseley (Greenwillow Books)

Molly learns not to judge people by their size when she goes hiking with her family.

THE STORY OF IMELDA, WHO WAS SMALL, by Morris Lurie (Houghton Mifflin)

Imelda's family sets out to discover why she is so small.

LITTLE TRICKER THE SQUIRREL MEETS BIG DOUBLE THE BEAR, by Ken Kesey (Viking)

Little Tricker gets revenge on Big Double after watching him terrorize all of the forest animals.

FRISKA THE SHEEP THAT WAS TOO SMALL, by Rob Lewis (Farrar, Straus & Giroux)

The other sheep made fun of Friska because she was so small, until she showed them that being small has its advantages.

THE BIGGEST HOUSE IN THE WORLD, by Leo Lionni (Pantheon)

When a little snail wishes for the biggest house in the world, his father tells him a story to show why this would not be wise.

TOO SHORT FRED, by Susan Meddaugh (Houghton Mifflin)

Four short stories tell how Fred deals with the problem of being short.

GONE FISHING, by Earlene Long (Houghton Mifflin)

The story of a father and son who go fishing with "big" things for daddy and "little" things for the child.

BIG, SMALL, SHORT, TALL, by Loreen Leedy (Holiday House)

Performing animals present thirteen pairs of opposites like: big-small and short-tall.

NEW HOUSE, by Joyce Maynard (Harcourt Brace Jovanovich)

Andy is taught to measure and plan when he builds a treehouse out of scrap material from a nearby building site.

A BIG FAT ENORMOUS LIE, by Marjorie Weinman Sharmat (E. P. Dutton)

After a little boy tells his mother and father a lie, he finds that it just keeps getting bigger and bigger until he tells the truth.

GRANDPA'S TOO-GOOD GARDEN, by James Stevenson (Greenwillow Books)

Grandpa relates the adventures of trying to grow a garden with the help of his little brother, and the wonderful effect his father's miracle hair growing tonic had on the garden.

SOUP FOR SUPPER, by Phyllis Root (Harper & Row)

A wee little woman and a giant find that they can share vegetable soup and an unlikely friendship.

AMANDA & APRIL, by Bonnie Pryor (Wm. Morrow & Company)

Big sister, Amanda, has many misadventures on her way to a party and discovers how helpful her little sister can be.

LEAST OF ALL, by Carol Purdy (Margaret K. McElderry)

Raven Hannah feels she is too small to contribute much to help her big farm family with their chores. Something wonderful happens as she reads her Bible while doing a tedious chore that shows her that even someone small can make a big difference.

TALL INSIDE, by Jean Richardson (G. P. Putnam's Sons)

A clown finally convinces Joanne that being tall on the inside is more important than being tall on the outside.

JETHRO AND JOEL WERE A TROLL, by Bill Peet (Houghton Mifflin)

Jethro, part of a giant, two-headed troll, tries to save the countryside from Joel's rampage.

BIG JEREMY, by Steven Kroll (Holiday House)

Jeremy's enormous size is very helpful, until he overdoes it and causes havoc. Jeremy then decides it's best if he runs away.

SMALLER THAN MOST, by Shirley Lincoln Rigby (Harper & Row)

Three short stories that show how Won-Ton's family is growing and, although he is smaller than most of his friends, good things do come in small packages.

THE WUGGIE NORPLE STORY, by Daniel M. Pinkwater (Four Winds Press)

As the new pet kitten grows and grows, father brings home different animals to compare sizes.

TEENY TINY, by Jill Bennett (G. P. Putnam's Sons)

Tells the tale of a teeny-tiny woman who finds a teeny-tiny bone in a churchyard.

GREAT CAT, by David McPhail (E. P. Dutton)

Toby takes Great Cat in as a huge kitten and finds he must change his lifestyle to keep his huge pet.

HUE BOY, by Rita Phillips Mitchell (Dial Books For Young Readers)

Although everyone in his village gives him helpful advice, Hue Boy does not grow. He learns, however, that there are several ways to "stand tall".

LITTLE GORILLA, by Ruth Bornstein (Houghton Mifflin)

A rhythmic text tells of Little Gorilla, who everyone in the jungle loved, even when he kept growing, and growing, and growing.

IN THE HAUNTED HOUSE, by Eve Bunting (Houghton Mifflin)

The illustrations show two pairs of sneakers, one big and one small, as a little girl and her father tour a dark, old house.

THE BIGGEST NOSE, by Kathy Caple (Houghton Mifflin)

Eleanor, the elephant, attempts to be like everyone else after she is teased about having the biggest nose. She finally realizes that everyone has some feature that is more prominent than the others.

THE COUNTRY BUNNY AND THE LITTLE GOLD SHOES, by Dubose Heyward (Houghton Mifflin)

A country bunny is named the Easter Bunny, despite being the mother of 21 children, when cleverness and kindness win out over size and muscle.

THE BIGGEST BEAR, by Lynd Ward (Houghton Mifflin)

The little bear cub that Johnny Orchard brings home soon becomes a huge bear and a problem in the neighborhood.

I WISH I HAD A BIG, BIG TREE, by Satoru Sato (Lothrop, Lee & Shepard)

A boy dreams of building a treehouse to visit the squirrels and birds, but needs a big, big tree.

WHICH ONE IS DIFFERENT?, by Joel Rothman (Doubleday)

Offers several similar pictures and the reader must decide "which one is different."

THE HUMAN BODY

THE SENSES

"Benchmarks":

- "People have different external features, such as the size, shape, and color of hair, skin and eyes, but they are more like one another than like other animals." (*Benchmarks*, p. 128)
- "The human body has parts that help it seek, find and take in food when it feels hunger - eyes and noses for detecting food, legs to get to it, arms to carry it away, and a mouth to eat it." (*Benchmarks*, p. 136)
- "Senses can warn individuals about danger; muscles help them to fight, hide or get out of danger." (*Benchmarks*, p. 136)
- "People use their senses to find out about their surroundings and themselves. Different senses can give different information. Sometimes a person can get different information about the same thing by moving closer to it or further away from it." (*Benchmarks*, p. 140)

Recommendations/Comments:

What's that smell? A great way to introduce this unit may be to actively involve the class in a friendly battle of the noses! Dip cotton balls into different liquids and let the students try to identify the smells. (Be sure to include an unpleasant odor or two!) Another fun activity involves hearing through your nose. Strike a tuning fork and place it on the bridge of your nose (or even your teeth!) and hear the sound. You can "see" a sound by stretching a piece of clear plastic wrap over the top of a jar and securing it in place by a rubber band. Place a few grains of rice on the plastic wrap. Hold a metal tray or pie pan close to the jar and bang it with a spoon. Watch the grains "dance" from the sound waves. Look at magnifying glasses and microscopes and "see" things you couldn't see before! For added fun, present Experiments in Optical Illusions by Nelson Beeler & Franklyn Branley (Thomas Y. Crowell).

To tie in writing, students could contemplate whether or not they would like to hear what other people are thinking. (A great follow-up for What's So Funny, Ketu?) Create a restaurant menu with the headings "Sweet", "Sour", "Salty" and "Bitter". Pretend you work for an ear, nose, throat doctor and create pamphlets on how to take care of your ears. Write a story about a time when a smell triggered a memory or create a fantasy where two animals changed sounds. Create a map to a favorite place by illustrating what sounds you would hear, rather than what landmarks you would see. For those artistic souls, create eyeglasses that depict the student's personality. (Read Spectacles by Raskin). Will your glasses be wild, funny, glamorous, or studious?

Related Children's Fiction:

WHAT'S SO FUNNY, KETU?, by Verna Aardema (Dial Press)

Ketu is rewarded for saving the life of a snake by being allowed to hear what animals think. This wonderful gift ends up getting Ketu in quite a bit of trouble.

ARTHUR'S EYES, by Marc Brown (Little, Brown & Co.)

Arthur must get glasses and is teased by his friends. Finally, he learns to wear his glasses with pride.

AN ILLUSIONARY TALE OPT, by Arline & Joseph Baum (Viking Kestrel)

A tale of optical illusions in which images change shapes and appear and disappear.

I SEE THE MOON. AND THE MOON SEES ME..., by Helen Craig (Willa Perlman)

A collection of nursery rhymes most of which involve the use of one of the five senses.

I SEE, by Rachel Isadora (Greenwillow Books)

A baby reacts to all the things she sees during a day.

I HEAR, by Rachel Isadora (Greenwillow Books)

A baby hears all of the sounds around her.

WHAT DOES THE RAIN PLAY?, by Nancy White Carlstrom (Macmillan Publishing)

A boy realizes that the rain can make many different sounds.

MARA IN THE MORNING, by C. B. Christiansen (Atheneum)

When Mara wakes up before the rest of the family, she moves around quietly listening to all of the sounds of morning.

NOT SO FAST SONGOLOLO, by Niki Daly (Margaret K. McElderry)

While everyone rushes and fills the house with noise in the morning, Malusi prefers to take things slow and enjoy his day.

HALF A MOON AND ONE WHOLE STAR, by Crescent Dragonwagon (Macmillan Publishing)

Susan falls asleep listening to all of the wonderful sounds of a summer's night.

CITY SOUNDS, by Rebecca Emberley (Little, Brown & Company)

Takes you on a trip through the city and all of the sounds that you hear there.

NIGHT NOISES, by Mem Fox (Harcourt Brace Jovanovich)

Old Lily falls asleep to the night sounds outside and awakens to an unexpected surprise.

THE MAGNIFICENT MOO, by Victoria Forrester (Atheneum)

When a cow is scared by the loud mooing sound she makes, a cat agrees to switch sounds with her.

WATCH OUT, RONALD MORGAN!, by Patricia Reilly Giff (Viking Kestrel)

Ronald finds that he doesn't have near as many mishaps after he gets a pair of eyeglasses.

MOLLY'S NEW WASHING MACHINE, by Laura Geringer (Harper & Row)

Molly's new washing machine makes noises that sound like music as it runs.

STOP THAT NOISE!, by Paul Geraghty (Crown Publishers)

A small mouse is no longer annoyed by the noises of the forest after he experiences the sounds of a machine that has come to tear the forest down.

KATIE'S BABBLING BROTHER, by H. J. Hutchins (Annick Press)

When Katie's little brother began to babble non-stop, the noise began to drive Katie crazy.

I DANCE IN MY RED PAJAMAS, by Edith Thacher Hurd (Harper & Row)

Though mom and dad tell her to be quiet when she visits her grandparents, Jenny finds out that her grandparents love noise.

THE LOOK AGAIN... AND AGAIN, AND AGAIN, AND AGAIN BOOK, by Beau Gardner

(Lothrop, Lee & Shepard)

Book contains graphics which, when turned four different ways, produce four different pictures.

LOOK AGAIN!, by Tana Hoban (Macmillan Publishing)

Readers are shown a small square of a picture and must try to identify the picture before turning the page to look.

BROWN BEAR IN A BROWN CHAIR, by Irina Hale (Atheneum)

A small bear who matches the color of the chair he sits in, tries to come up with a way to be seen and not sat on.

I HEAR A NOISE, by Diane Goode (E. P. Dutton)

A small boy finally convinces his mother that he is hearing noises outside his window at night.

WHERE'S OUR MAMA?, by Diane Goode (Dutton Children's Books)

Two little children lose their mother in a Paris train station. Their view of what mama looks like makes it difficult for the gendarme to track her down.

THE COPYCAT, by Kathleen and Donald Hersom (Atheneum)

A story, written in verse, about a cat that enjoys imitating the sounds of other animals.

MY HANDS CAN, by Jean Holzenthaller (E. P. Dutton)

Describes the many activities that can be accomplished by a pair of hands.

CROMWELL'S GLASSES, by Holly Keller (Greenwillow Books)

After getting new glasses, Cromwell finds he is no longer clumsy and slow.

LOOKING FOR HENRY, by Elaine Livermore (Houghton Mifflin)

Henry, the leopard, is sad because his spots make him blend into the background. The reader is challenged to find Henry in each picture.

LOOK! THE ULTIMATE SPOT-THE-DIFFERENCE BOOK, by April Wilson
(Dial Books For Young Readers)

Presents a pair of pictures that seem to be the same, but the second picture actually contains twelve differences. Can you find them?

WHEN FRANCIE WAS SICK, by Holly Keller (Greenwillow Books)

When Francie must stay home from school because she is sick, she hears many sounds from her bedroom.

THE BLUEBERRY BEARS, by Eleanor Lapp (Albert Whitman & Company)

Bessie Allen hears many strange noises from behind her cabin and escapes with her cat and dog just in time.

THE QUIET FARMER, by Marni McGee (Atheneum)

A quiet farmer hears many different sounds as he goes through his daily tasks.

POLAR BEAR, POLAR BEAR, WHAT DO YOU HEAR?, by Bill Martin, Jr.

(Henry Holt)

Children imitate the different sounds that animals make, from polar bears to walruses.

BROWN BEAR, BROWN BEAR, WHAT DO YOU SEE?, by Bill Martin, Jr.

(Henry Holt)

A variety of animals look at each other in a variety of different colors.

DREAMS, by Peter Spier (Doubleday & Company)

In this wordless book, two children look up at the clouds going by and see the most wonderful sights.

A SNIFF IN TIME, by Susan Saunders (Atheneum)

When James feeds a hungry wizard, the wizard rewards him by giving him the ability to smell into the future.

GLASSES, WHO NEEDS 'EM?, by Lane Smith (Viking Penguin)

A doctor provides an unhappy boy with an imaginative list of well-adjusted eyeglasses wearers.

TRAIN WHISTLES, by Helen Roney Sattler (Lothrop, Lee & Shepard)

Tells how train whistles are used as signals and discusses what some of the signals mean.

OH, I LOVE!, by George Shannon (Bradbury Press)

A lullaby repeats the sounds made by a variety of animals.

RAIN TALK, by Mary Serfozo (Margaret K. McElderry)

A child enjoys a day of listening to the various sounds that rain makes as it falls from the sky.

WHO SAID MEOW?, by Maria Polushkin (Bradbury Press)

A little puppy tries to find out which of many animals makes the new sound he has just heard.

HONK, HONK, by Anne Rockwell (E. P. Dutton)

Many different animals make their distinctive sounds as they help a boy chase the goose that nipped them.

MRS. TOGGLE AND THE DINOSAUR, by Robin Pulver (Macmillan Publishing)

Mrs. Toggle is getting a new student in her class. But, could she have heard the principal correctly? Her new student is a dinosaur!

WOOD-HOOPOE WILLIE, by Virginia Kroll (Charlesbridge)

Willie finds many ways to create noises and rhythms using everyday items.

DO YOU SEE WHAT I SEE?, by Mathew Price (Harper & Row)

As a little boy visits his friends to find a companion to go to the circus, you see many unusual sights. Or do you?

SPECTACLES, by Ellen Raskin (Atheneum)

Iris mistakes objects around her as peculiar things (Aunt Fanny appears to be a dragon) until she is fitted for glasses.

WHAT'S THAT FEEL?, by Kate Petty & Lisa Kopper (Franklin Watts)

Two small children go out with their mother and experience many different feelings on their trip.

NIGHT IN THE COUNTRY, by Cynthia Rylant (Bradbury Press)

Describes the sights and sounds of nighttime as it happens in the country.

FIEIO, THE STORY OF OLD MACDONALD, WHO HAD A FARM, by Gus Clarke (Lothrop, Lee & Shepard)

Farmer MacDonald has had enough of all of the noise on his farm and goes about rectifying the situation.

UNDER THE MOON, by Joanne Ryder (Random House)

Little mouse learns how to find his way home by remembering its special smells, sounds, and textures.

IS IT ROUGH? IS IT SMOOTH? IS IT SHINY?, by Tana Hoban (Greenwillow Books)

Color photographs without text introduce objects of many different textures.

LOOK! LOOK!, by Tana Hoban (Greenwillow Books)

View objects through a cut-out hole and try to determine what the entire object is.

LOOK UP, LOOK DOWN, by Tana Hoban (Greenwillow Books)

Shows objects and scenes from many different perspectives.

TAKE ANOTHER LOOK, by Tana Hoban (Greenwillow Books)

The viewer sees photographs through die-cut pieces and then the full-page photo. The object is to show the viewer how things may be perceived differently when viewed in different ways.

TASTY POEMS, by Jill Bennett (Oxford Press)

Illustrated collection of poems about food from English and American authors.

SPECTACLES, by Ann Beattie (Workman Publishers)

Great Grandma's glasses become magical when Alison puts them on. They help her to see her grandmother's frustrations of old age.

THE FOURTH-GRADE FOUR, by Marilyn Levinson (Henry Holt)

Alex refuses to wear his new glasses anywhere but at home.

WHEN THE WOODS HUM, by Joanne Ryder (Morrow Junior Books)

A little girl listens in awe to the sound of the cicadas, and returns seventeen years later with her son to hear them again.

ARTHUR'S NOSE, by Marc Brown (Little, Brown & Company)

Arthur decides to visit the doctor to get a new nose.

AN ORDINARY DAY, by Sally Mitchell Motyka (Simon and Schuster)

Tells of an ordinary day in the life of a little boy which is filled with things to see, touch, taste, and enjoy.

PEACE AT LAST, by Jill Murphy (Dial Books For Young Readers)

Mr. Bear has a very hard time getting to sleep because of all of the noise going on in his home at night.

I SPY. AN ALPHABET IN ART, by Lucy Micklethwait (Greenwillow Books)

Twenty-six pieces of artwork by famous painters are used to reinforce the alphabet. Children must find an object in each painting beginning with the letter being discussed.

CRASH! BANG! BOOM!, by Peter Spier (Doubleday)

Categorizes pictures of objects and actions and the sounds they make.

GOBBLE, GROWL, GRUNT, by Peter Spier (Doubleday)

Depicts over 600 animals and the sounds they make.

LIBBY'S NEW GLASSES, by Tricia Tusa (Holiday House)

An embarrassed ostrich shows Libby that it's okay to wear glasses.

THE PRINCESS AND THE PEA, by Janet Stevens (Holiday House)

The Queen, discouraged in not finding a suitable princess for the Prince, gives one more princess a test.

THE HUMAN BODY

BODY SYSTEMS

"Benchmarks":

- "People have different external features, such as the size, shape, and color of hair, skin and eyes, but they are more like one another than like other animals." (Benchmarks, p. 128)
- "People need water, food, air, waste removal, and a particular range of temperatures in their environments, just as other animals do." (Benchmarks, p. 128)
- "A human baby grows inside its mother until its birth. Even after birth, a human baby is unable to care for itself, and its survival depends on the care it receives from adults." (Benchmarks, p. 132)
- "The human body has parts that help it seek, find and take in food when it feels hunger - eyes and noses for detecting food, legs to get to it, arms to carry it away, and a mouth to eat it." (Benchmarks, p. 136)
- "Senses can warn individuals about danger; muscles help them to fight, hide or get out of danger." (Benchmarks, p. 136)
- "The brain enables human beings to think and sends messages to other body parts to help them work properly." (Benchmarks, p. 136)
- "Some of the things people do, like playing soccer, reading, and writing, must be deliberately learned. Practicing helps people to improve. How well one learns sometimes depends on how one does it and how often and how hard one tries to learn." (Benchmarks, p. 140)
- "People can learn from each other by telling and listening, showing and watching, and imitating what others do." (Benchmarks, p. 140)
- "People have many different feelings - sadness, joy, anger, fear, etc. -- about events, themselves and other people." (Benchmarks, p. 148)
- "People react to personal problems in different ways. Some ways are more likely to be helpful than others." (Benchmarks, p. 148)
- "Talking to someone (a friend, relative, teacher, or counselor) may help people understand their feelings and problems and what to do about them." (Benchmarks, p. 148)

Recommendations/Comments:

Go beyond the memorization of bones and muscles to make this unit exciting. Try dissecting a chicken leg to observe tendons, muscle, skin and fat. Look at different types of cells under the microscope and begin to appreciate the uniqueness of our bodies. Bring in x-rays or have a health professional visit and bring models of body organs. Study personal hygiene and discuss how to best take care of our bodies.

Students can write stories of a time they were nervous or a time they discovered mysterious bones. Write an adventure story that resulted in a scar. Make an animal out of varying heart shapes (try a bunny, bird or a cat for starters). Draw a picture of the body and label humorous sayings regarding different body parts, such as "butterflies in the stomach", "frog in my throat", a "funny bone", "water on the knee", etc.

Related Children's Fiction:

Bones & the Skeleton

HANDS, by Ruth Thomson (Franklin Watts)

Introduces the hand to small children. The book shows pictures of the x-ray of a hand so children can see what it looks like inside.

MY FEET, by Aliko (HarperCollins)

Provides a close look at the structure of the foot and tells of the many things our feet allow us to do.

THE GROWING UP FEET, by Beverly Cleary (Wm. Morrow & Company)

Twins who are in a hurry to grow up choose new red boots that will stretch as their feet grow.

FUNNYBONES, by Janet and Allan Ahlberg (Greenwillow Books)

A big skeleton, little skeleton, and dog skeleton go for a walk one night. Since there is no one to frighten, they amuse themselves in other ways.

MR. JORDAN IN THE PARK, by Laura Jane Coats (Macmillan Publishing)

Shows the changes that take place in Mr. Jordan's physical appearance as he grows from childhood to an old man.

BIG OLD BONES, by Carol Carrick (Clarion Books)

Professor Potts finds some old bones and puts them together in a very peculiar way to construct a dinosaur that he believes once ruled the earth.

ANANCY AND MR. DRY-BONE, by Fiona French (Little, Brown & Company)

Anancy and Mr. Dry-Bone both wish to marry Miss Louise. Who will win her hand?

HOW MANY KISSES GOOD NIGHT, by Jean Monrad (Random House)

A mother helps her little girl get ready for bed while she counts her toes, eyes, ears, and nose.

THE AMAZING BONE, by William Steig (Farrar, Straus & Giroux)

A little pig's life is saved when she befriends a talking bone.

Teeth

TARYN GOES TO THE DENTIST, by Jill Krentz (Crown Publishers)

Taryn, a little girl, describes what her first visit to the dentist was like.

THE BEAR'S TOOTHACHE, by David McPhail (Little, Brown & Company)
A little boy is awakened in the middle of the night by the sound of a bear with a toothache who is sitting under his bedroom window.

DOCTOR DESOTO, by William Steig (Farrar, Straus & Giroux)
Doctor DeSoto is a fine dentist who helps many animals keep their teeth healthy and white. Since Dr. DeSoto is a mouse, he must decide whether or not to take the risk of helping a fox suffering with a toothache.
(Also, Dr. Desoto Goes To Africa)

MOLLY AND THE SLOW TEETH, by Pat Ross (Lothrop, Lee, & Shepard)
Molly tries to fool the Tooth Fairy because she is afraid she will never lose her baby teeth.

AIR MAIL TO THE MOON, by Tom Birdseye (Holiday House)
Ora Mae's tooth disappears before she can leave it for the tooth fairy, and Ora Mae sets out to find the culprit.

MARTIN AND THE TOOTH FAIRY, by Bernice Chardiet (Scholastic)
Martin decides to buy his friends' teeth to put under his pillow when he finds out that he received more for his teeth than his friends do.

THE TOOTH TREE, by Nicholas Heller (Greenwillow Books)
After Charlie buries his tooth in his backyard, a tree with teeth on its branches appears and begins to devour everything in sight.

THE TOOTH WITCH, by Nurit Karlin (J. B. Lippincott)
An apprentice witch is turned into the new Tooth Fairy.

MY DENTIST, by Harlow Rockwell (Greenwillow Books)
A little girl describes her visit to her dentist.

MANDY AND THE DENTIST, by Alison Coles (EDC Publishing)
Mandy is afraid to go to the dentist to have her tooth filled because her best friend has told her that getting a filling really hurts.

JUST ONE TOOTH, by Miriam Nerlove (Margaret K. McElderry)
Ruth doesn't believe the tooth fairy when told that the tooth that fell out will be replaced with a new one.

THE KING'S TOOTHACHE, by Colin West (J. B. Lippincott)
When a dentist cannot be found, a baker, town crier, and a sailor are sent to attend a King's toothache. Written in rhyming text.

ALBERT'S TOOTHACHE, by Barbara Williams (E. P. Dutton)
No one believes Albert when he complains of a toothache.

CURIOUS GEORGE GOES TO THE DENTIST, by Margaret Rey and Alan J. Shalleck
(Houghton Mifflin)
George is bound to get into trouble when his curiosity overtakes him, and he leaves the waiting room to investigate what really goes on in a dentist's office.

Respiration

DARK AND FULL OF SECRETS, by Carol Carrick (Clarion Books)

Christopher panics, and almost drowns, when he drifts too far out from shore and finds he can't touch bottom.

GRANNY IS A DARLING, by Kady MacDonald Denton (Margaret K. McElderry)

When Billy shares his room with Granny, he learns that loud snoring can frighten monsters away.

THERE'S A MONSTER UNDER MY BED, by James Howe (Atheneum)

Alex is sure that monsters live under his bed at night, because he can hear them breathing.

Immune System & Sickness

MY DOCTOR, by Harlow Rockwell (Macmillan Publishing)

A little boy tells of all the things he sees when he visits his doctor's office.

TELL ME A MITZI, by Lore Segal (Farrar, Straus & Giroux)

In the second of these three "Mitzi" stories, Mitzi has a terrible cold and ends up giving it to the entire family.

WHO'S SICK TODAY?, by Lynne Cherry (E. P. Dutton)

Rhyming text introduces the reader to a variety of animals with a variety of ailments.

NANA UPSTAIRS & NANA DOWNSTAIRS, by Tomie de Paola (G. P. Putnam's Sons)

A little boy learns to deal with the death of his great-grandmother and, later, his grandmother.

NOW ONE FOOT. NOW THE OTHER, by Tomie de Paola (G. P. Putnam's Sons)

After his grandfather has a stroke, Bobby helps him learn to walk, just like grandfather helped Bobby when he was small.

TERRIBLY WONDERFUL, by Valiska Gregory (Macmillan Publishing)

Scamp wakes up with a sore throat and Mr. Poggie has just the prescription to make him better.

WHAT'S CLAUDE DOING?, by Dick Gackenbach (Clarion Books)

Claude refuses all of his friends' offers to come out to play in order to stay home with his sick master.

TEDDY BEARS CURE A COLD, by Susanna Gretz (Four Winds Press)

The teddy bears must work together to help cure William of a cold that seems to be lingering on longer than normal.

ROSALIE, by Joan Hewett (Lothrop, Lee & Shepard)

A little girl still loves her pet dog, even though she is old and sick.

MAYBE A BAND-AID WILL HELP, by Anna Grossnickle Hines (E. P. Dutton)

Sarah tries to fix her favorite doll's leg with a band-aid when Mama is too busy to help her.

A LETTER FOR MARIA, by Elizabeth Lindsay (Orchard Books)

Bear makes a picture-letter for his friend Maria and delivers it to her in the hospital.

MAX'S DADDY GOES TO THE HOSPITAL, by Danielle Steel (Delacorte Press)

Max's father, a firefighter, is injured while responding to a fire. Max is very worried about him until he finally can visit him in the hospital.

THE TINY PATIENT, by Judy Pedersen (Alfred A. Knopf)

A girl and her grandmother find a sparrow with a broken wing and decide to nurse it back to health so it can return to the wild.

MOUSE FEATHERS, by Robert Quackenbush (Clarion Books)

While their parents are away for the evening, two young mice have a pillow fight and come down with a mysterious illness.

MOTHERS CAN'T GET SICK, by Sylvie Wickstrom (Crown Publishers)

A dedicated mother tries to prepare for her child's birthday, even though she is sick. Her family comes through by assuming the chores and managing a very special birthday.

SICK IN BED, by Anne & Harlow Rockwell (Macmillan Publishing)

A little boy who is sick with a sore throat describes how he feels and the experiences he has while staying in bed.

EDWARD HURTS HIS KNEE, by Michaela Morgan (E. P. Dutton)

Edward wishes for more glory than he gets when he falls down and skins his knee on the way to Grandma's house.

CURIOUS GEORGE GOES TO THE HOSPITAL, by Margret & H. A. Rey (Houghton Mifflin)

George causes quite a ruckus when he is taken to the hospital after swallowing a piece of a jigsaw puzzle.

DOCTOR DUCK AND NURSE SWAN, by Bernard Wiseman (E. P. Dutton)

A doctor and nurse treat a group of patients with strange ailments.

A RIVER DREAM, by Allen Say (Houghton Mifflin)

A sick boy receives a box of fishing lures from his uncle and discovers the joy of catching the prized fish and then letting it go.

FROG MEDICINE, by Mark Teague (Scholastic, Inc.)

A boy believes that a book on frog medicine is too dull to read, until he finds he needs an anecdote himself.

RACHEL FISTER'S BLISTER, by Amy MacDonald (Houghton Mifflin)

The entire community comes to Rachel's aid with remedies for her blister.

TAKING CARE OF CARRUTHERS, by James Marshall (Houghton Mifflin)
Carruthers has a terrible cold, so his friends, Eugene and Emily, try to cheer him up with tales of an adventure they shared on the river.

TREE OF CRANES, by Allen Say (Houghton Mifflin)
A mother folds origami silver cranes in preparation for Christmas as a young boy recovers from a bad chill.

A VISIT FROM DR. KATZ, by Ursula K. Le Guin (Atheneum)
Marianne receives medical treatment from her two cats when she is sick in bed.

BORIS'S BIG ACHE, by Susie Jenkin-Pearce (Dial Books For Young Readers)
Boris doesn't feel at all well and is worried about his condition until he finds out that he is suffering from growing pains.

WHEN FRANCIE WAS SICK, by Holly Keller (Greenwillow Books)
Francie must stay home from school when she wakes with a scratchy throat and a stomach ache.

WHEN DADDY HAD THE CHICKEN POX, by Harriet Ziefert (Harper Collins)
A family is upset when daddy gets the chicken pox.

Body Care / Personal Hygiene

I HATE TO TAKE A BATH, by Judi Barrett (Four Winds Press)
A look at the fun side of taking a bath -- swimming, sailing ships, and being a submarine or a turtle.

ONE BEAR IN THE PICTURE, by Caroline Bucknall (Dial Books for Young Readers)
Ted Bear wants to look nice for his class picture, but finds it difficult to keep clean.

ALPHA AND THE DIRTY BABY, by Brock Cole (Farrar, Straus & Giroux)
Alpha uses soap and water to deal with a devil's imp, his wife, and their baby.

THE SOAP BANDIT, by Dennis Haseley (F. Warne)
During the summer that Jesse visits his aunt in a town that has no children, the soap bandit undoes the citizen's preoccupation with cleanliness.

THE BACKWARDS WATCH, by Eric Houghton (Orchard Books)
By winding her grandfather's watch backwards and turning him back into a little boy, Sally finds that, as a child, he was not as tidy as he led her to believe.

DIRTY KURT, by Mary Serfozo (Margaret K. McElderry)
Describes Kurt's great fondness for dirt.

CLEAN ENOUGH, by Kevin Henkes (Greenwillow Books)
A little boy finds lots to enjoy in the bathtub besides getting clean.

MAX'S BATH, by Rosemary Wells (Dial Books For Young Readers)

Even though Max gets two baths, he ends up dirtier than ever.

NO BATH TONIGHT, by Jane Yolen (Thomas Y. Crowell)

A grandmother must be creative in order to get her small grandson to take a bath.

IN MY BATHROOM, by Carol Thompson (Delacorte Press)

A young pig tells how he cleans himself when getting ready for bed.

THE LITTLE BOY WHO LOVED DIRT AND ALMOST BECAME A SUPERSLOB, by

Judith Vigna

(A. Whitman)

Jonathan travels to a secret world of superslobs where you never need to wash.

Sleep and Rest

SLEEPY BOOK, by Charlotte Zolotow (Harper & Row)

A poetic look at how all animals, including little boys and girls, need to sleep.

TAKE TIME TO RELAX, by Nancy L. Carlson (Viking Press)

The beaver family is forced to stay at home and relax when a snow storm hits their town.

WHEN I'M SLEEPY, by Jane R. Howard (E. P. Dutton)

A little girl is very sleepy, she thinks about all of the different places she could lie down. She finally ends up choosing her own, warm bed.

WHEN SHEEP CANNOT SLEEP. THE COUNTING BOOK, by Satoshi Kitamura

(Farrar Straus Giroux)

When Woolly cannot sleep, he takes a walk and observes other animals in their nightly activities.

MICHAEL IN THE DARK, by Alison Coles (EDC Publishing)

Michael has to deal with trying to go to sleep in complete darkness when his new babysitter turns out the light his mother usually leaves on.

CLYDE MONSTER, by Robert L. Crowe (E. P. Dutton)

Clyde refuses to go to sleep in his cave because he is afraid of the dark.

Reproduction

NOBODY ASKED ME IF I WANTED A BABY SISTER, by Martha Alexander

(Dial Books For Young Readers)

Oliver takes some drastic measures to return his home to the way it was before baby sister, Bonnie, came to stay.

WHEN THE NEW BABY COMES, I'M MOVING OUT, by Martha Alexander

(Dial Books For Young Readers)

Oliver's mother convinces him not to move out by explaining the important role a big brother plays in a family.

AREN'T YOU LUCKY!, by Catherine Anholt (Little, Brown & Co.)

An older sister doesn't always feel so lucky when a new baby arrives in the house. This book chronicles the nine-months of waiting, the trip to the hospital, and the baby's arrival home.

ARTHUR'S BABY, by Marc Brown (Little, Brown & Company)

Arthur isn't sure he likes having a new baby around the house until his sister needs his help to care for it.

EVERETT ANDERSON'S NINE MONTH LONG, by Lucille Clifton (Henry Holt & Co.)

Nine months is a long time for Everett and his family to wait for a new family member.

...ALONG CAME ERIC, by Gus Clarke (Lothrop, Lee & Shepard)

Everybody liked Nigel very much until Baby Eric came along. Nigel must learn to deal with a new baby in the family.

IT'S MINEL, by Alicia Garcia de Lynam (Dial Books for Young Readers)

An older sister finds that it is hard to share her favorite toys with a new baby.

BEN'S BABY, by Michael Foreman (Harper & Row)

Ben asks for a baby for his birthday and ends up having a baby brother by the time his birthday comes.

THAT NEW PET!, by Alane Ferguson (Lothrop, Lee & Shepard)

The household pets are confused when they see the strange new pet that their owners bring home.

MAMA, DADDY, BABY AND ME, by Lisa Gewing (Spirit Press)

The preparation for and arrival of a new baby is told from a small child's point-of-view.

SHE COME BRINGING ME THAT LITTLE BABY GIRL, by Eloise Greenfield (J. B. Lippincott)

A small boy loses his jealousy over a new baby sister when he discovers the importance of his role as big brother.

JACK AND THE MONSTER, by Richard Graham (Houghton Mifflin)

Jack can find nothing good about his new baby brother until he really takes the time to look.

OUR NEW BABY, by Jane Hamilton Merritt (Julian Messner)

Michael tells the story of the arrival of his new baby brother and his part in the process. (Story contains photographs of a real-life family.)

KATIE MORAG AND THE TIRESOME TED, by Mairi Hedderwick (Little, Brown & Company)

Katie becomes so angry when her baby sister is born that she throws her teddy bear into the sea. The teddy bear is returned, and so are Katie's good spirits.

ANGELINA'S BABY SISTER, by Katharine Holabird (Clarkson N. Potter)
Angelina becomes jealous of her new baby sister when she becomes the center of attention.

NEW BIG SISTER, by Debi Gliori (Bradbury Press)
Describes the pregnancy of a young girl's mother from the moment she is pronounced pregnant to the birth of twins.

Mental Health and Emotions

ARTHUR MEETS THE PRESIDENT, by Marc Brown (Little, Brown & Company)
Arthur is very nervous when he must read his contest-winning essay to the President at the White House.

THE BERENSTAIN BEARS GET STAGE FRIGHT, by Stan & Jan Berenstain (Random House)
Sister Bear is nervous about her part in the school play, while Brother Bear has no fear. The results are not what the family expected.

HARRIET'S RECITAL, by Nancy Carolson (Carolrhoda Books)
Harriet is nervous and unhappy as her ballet recital approaches.

MOLLY PINK, by Judith Caseley (Greenwillow Books)
Molly sang beautifully, except when someone was watching. What would she do when it came time for her solo in the school concert?

EUGENE THE BRAVE, by Ellen Conford (Little, Brown & Company)
Since he is afraid of the dark, Eugene, the possum, decides to sleep all night rather than go look for food.

THE HIGHEST BALLOON ON THE COMMON, by Carol Carrick (Greenwillow Books)
Paul is especially scared when he realizes he is lost on the town common during Old Home Day.

HENRY AND THE DRAGON, by Eileen Christelow (Clarion Books)
Henry is sure he sees the shadow of a dragon on his bedroom wall at night and must work up the courage to find out the truth.

THE CLIMB, by Carol Carrick (Clarion Books)
Brendan is scared when he and his cousin start to climb a mountain, but it is his cousin who ends up frightened.

DARKNESS AND THE BUTTERFLY, by Ann Grifalconi (Little, Brown & Company)
An African child is fearless during the day, but is terrified of the strange things that lie in the darkness.

KNOCK, KNOCK! WHO'S THERE?, by Sally Grindley (Alfred A. Knopf)
Many scary creatures knock on a little girl's bedroom door trying to get in, but only Daddy is allowed to enter.

UNCLE ROLAND, THE PERFECT GUEST, by Phyllis Green (Four Winds Press)
Although everyone is glad to see Uncle Roland come for a visit, they are all jumpy and nervous by the time he leaves.

THE KNIGHT WHO WAS AFRAID OF THE DARK, by Barbara Shook Hasen
(Dial Books For Young Readers)

The castle bully tries to use Sir Fred's fear of the dark to stir up some trouble.

ALICE ANN GETS READY FOR SCHOOL, by Cynthia Jabar (Little, Brown & Company)

Although Alice Ann is excited about starting school, she finds that she is becoming anxious, too.

WILLY BEAR, by Mildred Kantrowitz (Aladdin Books)

When a child becomes uneasy the night before his first day at school, he transfers his uneasiness to his teddy bear.

FARMER BUNGLE FORGETS, by Dick King-Smith (Atheneum)

A forgetful farmer cannot remember any of his wife's instructions and even has trouble remembering his name.

BIZZY BONES AND UNCLE EZRA, by Jacqueline Briggs Martin
(Lothrop, Lee & Shepard)

Uncle Ezra helps his nephew get over his fear of losing his home.

MISS MAGGIE, by Cynthia Rylant (E. P. Dutton)

Nat had always been afraid of Old Miss Maggie and kept his distance. But, when no smoke appears from her chimney one cold, winter morning, Nat overcomes his fears and ends up making a new friend.

GILA MONSTERS MEET YOU AT THE AIRPORT, by Marjorie Weinman Sharmat
(Macmillan Publishing)

A boy who has been raised in New York City is very apprehensive about moving "out West".

WHAT'S UNDER MY BED?, by James Stevenson (Greenwillow Books)

Mary Ann and Louie are afraid to go to bed when they are staying with Grandpa. So, Grandpa tells one of his famous stories about when he was in a similar situation.

GRANDMA REMEMBERS, by Ben Shecter (Harper & Row)

A little boy and his grandmother remember all of the special times they have shared in the home that grandma is now leaving for the last time.

HOW DO I FEEL?, by Norma Simon (Albert Whitman & Company)

Tells of the many feelings a young boy deals with as he goes through a typical day.

HARRY GETS AN UNCLE, by Barbara Ann Porte (Greenwillow Books)

Harry begins to worry about being ringbearer at his aunt's wedding after a friend tells him about all the things that went wrong at his uncle's wedding.

COWARDLY CLYDE, by Bill Peet (Houghton Mifflin)

Clyde, a big war-horse, is a hopeless coward. In the end, Clyde learns that he can be brave when he must.

THE HUMAN BODY

NUTRITION AND EXERCISE

"Benchmarks":

- "People need water, food, air, waste removal, and a particular range of temperatures in their environments, just as other animals do."
(Benchmarks, p. 128)

- "Eating a variety of healthful foods and getting enough exercise and rest help people to stay healthy." (Benchmarks, p. 144)

- "Some things people take into their bodies from the environment can hurt them." (Benchmarks, p. 144)

- "Most food comes from farms either directly as crops or as the animals that eat the crops. To grow well, plants need enough warmth, light, and water. Crops also must be protected from weeds and pests that can harm them." (Benchmarks, p. 184)

- "Part of a crop may be lost to pests or spoilage. A crop that is found when harvested may spoil before it gets to consumers."
(Benchmarks, p. 184)

- "Machines improve what people get from crops by helping in planting and harvesting, in keeping food fresh by packaging and cooling, and in moving it long distances from where it is grown to where people live."
(Benchmarks, p. 184)

Recommendations/Comments:

This is a great topic and most needed materials can be found in your kitchen cabinet! Bring in a variety of breads (pita, cornbread, whole wheat, rye, etc.) and discuss what gives each type of bread its unique flavor. Have fun with a favorite carbohydrate -- popcorn. Estimate the number of unpopped kernels in 1/4 cup or 50 grams, and then predict how many will pop. Research some of the history of popcorn and write a tall tale of how it may have originated. Survey the class for their favorite fruits and graph the results. Bring in different types of ground meats, cook the meats and compare fat content. Sort and compare different types of cheeses. Research from what plant chocolate is obtained and how chocolate is processed. The possibilities are endless!

Prepare a class recipe book with students writing recipes from "memory". Have students write a persuasive letter to a parent to convince them that pizza would or would not be a nutritious breakfast food. Use dyed pastas and create 3-D pictures (or spray paint when finished). Make placemats for a special holiday. Design an advertisement for a favorite food. Try to bring in a different foreign food and give the unit a multi-cultural flair. When combined with an assortment of fiction books, the vast array of activities in this area can be quickly compiled into a great unit!

Related Children's Fiction:

ALL ABOUT YOU, by Catherine & Laurence Anholt (Viking)

Follows children through their day looking at what they do, including what they like to eat.

THE POPCORN BOOK, by Tomie de Paola (Holiday House)

Gives a variety of facts about popcorn and includes two recipes.

PANCAKES FOR BREAKFAST, by Tomie de Paola (Harcourt Brace Jovanovich)

A little old lady has to find a creative way to get pancakes for breakfast after her initial attempts are unsuccessful. A wordless book.

FOOD MARKET, by Peter Spier (Doubleday)

Illustrations and text show the many foods available at a supermarket.

I WANT A BLUE BANANA, by Joyce and James Dunbar (Houghton Mifflin)

A trip to the grocery store doesn't go as a mother planned when she misplaces her grocery list.

I NEED A LUNCH BOX, by Pat Cummings (Harper & Row)

A little boy wishes for a new lunch box even though he hasn't started school yet.

ON OUR WAY TO MARKET, by Dayle Ann Dodds (Simon & Schuster)

The tale of how a small boy and a parade of animals make their way to market.

SAM'S SANDWICH, by David Pelham (Dutton Childrens Books)

When Sam's sister asks for a sandwich with "everything" on it, Sam decides to slip in some little surprises.

PANCAKES, PANCAKES, by Eric Carle (Picture Book Studio)

Jack helps make his breakfast pancakes by gathering all of the needed ingredients from their original sources.

NICK RIBBECK OF RIBBECK OF HAVELLAND, by Theodor Fontane (Picture Book Studio)

Nick Ribbeck looks for ways to share the fruits of his pear tree with everyone who passes.

HOW MY PARENTS LEARNED TO EAT, by Ina R. Friedman (Houghton Mifflin)

An American and a Japanese who are courting try, in secret, to learn the other's eating customs.

FEAST FOR 10, by Cathryn Falwell (Clarion Books)

A number book that relates how a family shops and works together to prepare their meal.

GROWING VEGETABLE SOUP, by Lois Ehlert (Harcourt Brace Jovanovich)

A child and father grow vegetables in their garden and use them to make vegetable soup.

FRANK AND ERNEST, by Alexandra Day (Scholastic, Inc.)

Frank and Ernest buy a diner and find they must learn a whole new language in order to run it.

NO PEAS FOR NELLIE, by Chris L. Demarest (Macmillan Publishing)

Nellie ends up finishing her peas without realizing it while she daydreams about all of the things she would rather eat.

THE LEGEND OF JOHNNY APPLESEED, by Reeve Lindbergh (Little, Brown & Co.)

The life of John Chapman (Appleseed) is told through rhymed text.

THIS IS THE BREAD I BAKED FOR NED, by Crescent Dragonwagon (Macmillan Publishing)

Tells the story, in cumulative verse, of the meal that Glenda prepares for Ned.

RAYMOND RABBIT GOES SHOPPING, by Lynne Dennis (E. P. Dutton)

Raymond gets lost when he goes on a shopping trip to the grocery store with his mother.

SUNNY SIDE UP, by Valiska Gregory (Four Winds Press)

Mr. Poggle and Scamp make breakfast for themselves and, unwittingly, for the neighborhood birds.

ALLIGATORS ARRIVE WITH APPLES, by Crescent Dragonwagon (Macmillan)

Numerous animals and their special foods celebrate Thanksgiving together.

THE OATMEAL COOKIE GIANT, by Valiska Gregory (Four Winds Press)

Scamp's visit to Uncle Thorny turns out to be more fun than he expected when Uncle Thorny tells stories of his past.

GRANDAD'S MAGIC, by Bob Graham (Little, Brown & Company)

When grandad decides to show Alison his best magic trick, Sunday lunch is changed forever.

IT'S YOUR TURN, ROGER!, by Susanna Gretz (Dial Books For Young Readers)

Roger doesn't want to take his turn setting the table and sets out to find a family in his apartment building who he can eat with without having to work.

THE DOORBELL RANG, by Pat Hutchins (Greenwillow Books)

Every time the doorbell rings, the kids know there will be more people to share their cookies with.

THE BIG SNOW, by Berta and Elmer Hader (Macmillan Publishing)

As winter approaches, the woodland creatures gather food and find warm, dry places to live in.

DON'T FORGET THE BACON!, by Pat Hutchins (Greenwillow Books)

A little boy on his way to the store has difficulty remembering what his mother told him to buy.

A ROSE FOR ABBY, by Donna Guthrie (Abingdon Press)

After seeing a homeless woman on her street, Abby decides to prepare a dinner for the homeless people of her neighborhood.

TEDDY BEARS GO SHOPPING, by Susanna Gretz (Four Winds Press)

The teddy bears cause quite a ruckus when they must go shopping at the grocery store.

MAMA DON'T ALLOW, by Thatcher Hurd (Harper & Row)

Miles and the Swampd Band learn to play songs, other than loud ones, to keep themselves from becoming dinner after their performance.

EVERYBODY COOKS RICE, by Norah Dooley (Carolrhoda Books)

When a child goes to find a younger brother at dinnertime, the child discovers that people can cook the same food in many different ways.

THE MOMMY EXCHANGE, by Amy Hest (Macmillan Publishing)

Two young friends decide that there are many reasons not to switch mommies, not the least of which is the food they serve.

THE LITTLE GIRL AND THE BIG BEAR, by Joanna Galdone (Houghton Mifflin)

A Slavic tale in which a little girl escapes from a bear who is holding her captive by hiding in a basket of pies.

WHO STOLE THE APPLES, by Sigrid Heuck (Alfred A. Knopf)

A horse and bear try to find out who stole all the apples from a tree that grows in the forest.

THIS IS THE BEAR AND THE PICNIC LUNCH, by Sarah Hayes (Joy Street Books)

A little boy finds that the picnic he plans does not go off as he envisioned, but ends up being enjoyable anyway.

DADDY MAKES THE BEST SPAGHETTI, by Anna Grossnickle Hines (Clarion Books)

Daddy can do anything: act like a barking dog, dress up like a super hero, and make the best spaghetti.

CLOUDY WITH A CHANCE OF MEATBALLS, by Judi Barrett (Atheneum)

Life is delicious in the town of Chewandswallow where it rains soup and juice, snows mashed potatoes, and blows storms of hamburgers -- until the weather takes a turn for the worse.

THE GINGERBREAD BOY, illustrated by Scott Cook (Alfred A. Knopf)

A gingerbread boy runs away from the woman who made him and thinks he is very clever until he runs into a wily fox.

THE PEA PATCH JIG, by Thatcher Hurd (Crown Publishers)

Recounts the adventures of Baby Mouse in Farmer Clem's garden patch.

WHERE'S MY SHARE?, by Valerie Greeley (Macmillan Publishing)

Short verse follows a bird trying to get his share of a loaf of bread.

BREAD AND JAM FOR FRANCES, by Russell Hoban (Harper & Row)

Frances finds that, although she likes bread and jam above all things, maybe she doesn't want to eat it at every meal.

THE MIDNIGHT EATERS, by Amy Hest (Four Winds Press)

Samantha and her grandmother raid the refrigerator late one night and talk about old times while they munch on ice-cream sundaes.

FRANNIE'S FRUITS, by Leslie Kimmelman (Harper & Row)

A little girl and her dog help the family run a fruit and vegetable stand near the beach.

THE MISSING TARTS, by B. G. Hennessy (Viking Kestrel)

The Queen of Hearts enlists the help of many nursery rhyme characters to find her stolen strawberry tarts.

JAM DAY, by Barbara M. Joosse (Harper & Row)

Ben goes to a family reunion that includes berry-picking and jam-making with many cousins, uncles, aunts, and grandparents.

MARCEAU BONAPPETIT, by Fanny Joly-Berbeson & Dr. Brigitte Boucher (Carolrhoda Books)

Marceau, a young mouse, finds many new ways of eating as he visits several friends while his parents are away for the weekend.

HOW PIZZA CAME TO QUEENS, by Dayal Kaur Khalsa (Clarkson N. Potter)

Some girls help an Italian visitor to Queens make the pizza she so misses.

PIZZA FOR BREAKFAST, by Maryann Kovalski (Morrow Junior Books)

Frank and Zelda regret wishing for more customers at their pizza restaurant.

THE WOLF'S CHICKEN STEW, by Keiko Kasza (G. P. Putnam's Sons)

A hungry wolf doesn't get the results he expects as he tries to fatten up a chicken for his dinner.

THE BLUEBERRY BEARS, by Eleanor Lapp (Albert Whitman & Company)

Bears invade a woman's cabin after she has collected all of the blueberries in the woods and stockpiled them in her kitchen.

VEGETABLE SOUP, by Jeanne Modesitt (Macmillan Publishing)

Two rabbits who have moved into a new house are reluctant to try the variety of foods they receive from their new neighbors.

JAM. A TRUE STORY, by Margaret Mahy (Little, Brown & Company)

Mr. Castle, who takes care of the house and children while his wife is at work, is so efficient that he needs more to do until the day he spies a tree laden with plums in his backyard.

EAT YOUR DINNER!, by Virginia Miller (Candlewick Press)

Bartholomew, a small bear, refuses to eat his dinner until faced with the reality of no dessert.

THE OUTSIDE INN, by George Ella Lyon (Orchard Books)

This book of rhyming verse presents all kinds of appetizing meals that can be had outdoors.

GREGORY, THE TERRIBLE EATER, by Mitchell Sharmat (Four Winds Press)

Gregory and his parents must learn to compromise when Gregory, a goat wishes to eat fruits, vegetables, and orange juice rather than tin cans and shoes.

THE WONDERFUL FEAST, by Esphyr Slobodkina (Greenwillow Books)

After Farmer Jones feeds his horse, several other animals feast on the leftovers.

SOUP FOR SUPPER, by Phyllis Root (Harper & Row)

A small woman catches a giant stealing vegetables from her garden and finds that they can share both vegetable soup and friendship.

THE SUPERMARKET, by Anne & Harlow Rockwell (Macmillan Publishing)

A mother and her little boy go to the supermarket and do their shopping together.

GRANDPA'S TOO-GOOD GARDEN, by James Stevenson (Greenwillow Books)

Grandpa tells Louie and Mary Ann about the garden he grew when he was a boy.

KEEP LOOKING!, by Millicent Selsam and Joyce Hunt (Macmillan Publishing)

A country scene unfolds showing a variety of animals storing food and preparing their homes for the winter.

ONE POTATO, by Sue Porter (Bradbury Press)

While the other animals are competing to see who gets to eat the last potato, a little mouse family has a feast.

GARDEN PARTNERS, by Diane Palmisciano (Atheneum)

A little girl and her grandmother plant and care for a garden together and then share the proceeds with their friends.

BLUE BUG'S VEGETABLE GARDEN, by Virginia Poulet (Childrens Press)

A beginning reading book that introduces many simple words while Blue Bug searches for his favorite vegetable in the garden.

LOVE FROM AUNT BETTY, by Nancy Winslow Parker (Dodd, Mead & Company)

Charlie receives an unusual recipe from his Aunt Betty for a fudge cake made the old Transylvanian way.

CHICKEN SUNDAY, by Patricia Polacco (Philomel Books)

Several children wish to thank Eula for the wonderful chicken dinners she cooks them each Sunday. They decide to raise money and buy Eula a new Easter hat.

SOLOMON'S SECRET, by Saviour Pirotta (Dial Books for Young Readers)

Solomon takes several trips through Mr. and Mrs. Zee's garden gathering food from many parts of the world.

CHICKEN SOUP WITH RICE, by Maurice Sendak (Harper & Row)

A month-by-month poetic tribute to the joys of chicken soup with rice.

BREAKFAST BY MOLLY, by Ruth Shaw Radlauer (Simon & Schuster)

For her mother's birthday, Molly makes a rather unusual breakfast surprise.

STONE SOUP, by Tony Ross (Dial Books For Young Readers)

The Big Bad Wolf intends to eat Mother Hen, but she outwits him with the help of her grandmother's favorite soup.

ALEXANDER'S MIDNIGHT SNACK, by Catherine Stock (Clarion Books)

Alexander makes himself a late-night feast that includes food for each letter of the alphabet.

GINO BADINO, by Diana Engel (Morrow Junior Books)

Gino would rather sculpt mice out of dough than sweep the floor in his family's pasta factory. But, when the factory falls on hard times, Gino's mice save the day.

THIS YEAR'S GARDEN, by Cynthia Rylant (Bradbury Press)

A large rural family grows vegetables in their garden and cans them for the winter.

APPLES AND PUMPKINS, by Anne Rockwell (Macmillan Publishing)

A family visits a local farm to pick apples and pumpkins in preparation for Halloween.

HARD-BOILED LEGS THE BREAKFAST BOOK, by Michael Rosen (Prentice-Hall)

The author uses poetry and prose to depict the hazards that surround breakfast time.

THE CAKE THAT MACK ATE, by Rose Robart (Joy Street Books)

A book of cumulative verse about the many steps that it took to make the cake that Mack ended up eating.

MRS. PIG'S BULK BUY, by Mary Rayner (Atheneum)

When her little pigs want ketchup on everything she makes, Mrs. Pig decides to serve them a diet of nothing but ketchup.

A FRIEND FOR DRAGON, by Dav Pilkey (Orchard Books)

Dragon becomes close friends with an apple and misses it dearly when it is accidentally eaten.

NO THUMPIN', NO BUMPIN', NO RUMPUS TONIGHT!, by Nancy Patz (Atheneum)

Benjamin and Elephant decide to make a surprise breakfast for Benjamin's mother's birthday.

THE FRANKENBAGEL MONSTER, by Daniel Pinkwater (E. P. Dutton)

People of the city do not know that a monster that is roaming the city at night is the creation of the local bagel maker.

SOMEBODY'S AWAKE, by Paul Rogers (Atheneum)

A little boy goes about making a cup of tea for his parents in the morning while his parents listen and wonder from their bedroom.

MEALTIME, by Maureen Roffey (Four Winds Press)

In a question-and-answer format, the author talks about what makes people hungry and what they like to eat.

BEATS ME, CLAUDE, by Joan Lowery Nixon (Puffin Books)

Shirley has several adventures while trying to bake Claude an apple pie.

BURGOO STEW, by Susan Patron (Orchard Books)

Billy Que tames a group of rough boys by agreeing to make them some Burgoo Stew.

IF YOU GIVE A MOUSE A COOKIE, by Laura Joffe Numeroff (Harper & Row)

Tells the tale of all of the things that can result from the harmless offer of a cookie to a hungry mouse.

ONE HUNGRY MONSTER, by Susan Heyboer O'Keefe (Little, Brown & Company)

Monsters demanding food increase in number from just one to ten, until a young boy finally must banish them from his bedroom.

PANCAKE PIE, by Sven Nordqvist (Wm. Morrow & Company)

A farmer is determined to bake his cat a pancake pie for his birthday despite the many difficulties he must overcome to do it.

TASTY POEMS, by Jill Bennett (Oxford Press)

An illustrated collection of poems about food from English and American authors.

ARGYLE, by Barbara Brooks Wallace (Abingdon Press)

When a sheep changes his diet and produces multi-colored wool, the fortunes of his owners are changed as argyle socks are created.

CHOCOLATE MUD AND CAKE, by Harriet Ziefert (Harper & Row)

Two girls have fun creating a chocolate cake out of dirt, sand, and stones, but quickly abandon their masterpiece for a real snack.

**SING A SONG OF SIXPENCE, by Tracey Campbell Pearson
(Dial Books For Young Readers)**

Illustrates the traditional rhyme about the blackbirds baked in a pie.

ROUND ROBIN, by Jack Kent (Prentice-Hall)

A robin who has eaten until he is very fat finds he cannot fly south with the other birds.

MARATHON AND STEVE, by Mary Rayner (E. P. Dutton)

Marathon has never been excited about his daily run with his master. Then an injury introduces an alternative form of exercise.

RUNNING BEAR, by Jez Alborough (Alfred A. Knopf)

A polar bear decides it is time to begin an exercise program.

BUNNIES AND THEIR SPORTS, by Nancy Carlson (Viking Kestrel)

Reveals the exercises that bunnies use to keep in shape.

FIVE LITTLE MONKEYS JUMPING ON THE BED, by Eileen Christelow
(Clarion Books)

A counting book which also demonstrates that, even though it is obviously dangerous, sometimes even mom can't resist jumping on the bed.

THREE CHEERS FOR ERROL, by Babette Cole (G. P. Putnam's Sons)

Errol must use his brain as well as athletic ability to compete in the school Ratathalon.

HARRIET AND THE GARDEN, by Nancy Carlson (Carolrhoda Books)

During a game of baseball, Harriet ruins a neighbor's prize flower. Does Harriet confess?

BEAR AND DUCK ON THE RUN, by Judy Delton (Albert Whitman & Company)

Duck tries to get Bear to run with him every day but faces a great deal of resistance.

THE MARATHON RABBIT, by Mike Eagle (Holt, Rinehart & Winston)

A rabbit decides he would like to run in the City Marathon with the people of the town.

MAX, by Rachel Isadora (Macmillan Publishing)

Max starts warming up for his Saturday baseball games by joining in his sister's ballet class.

THE ADVENTURES OF ALBERT. THE RUNNING BEAR, by Barbara Isenberg & Susan Wolf
(Clarion Books)

Albert Bear escapes from the zoo and ends up running in a marathon.

LILY TAKES A WALK, by Satoshi Kitamura (E. P. Dutton)

While Lily enjoys her walk, her dog is fending off many unseen dangers.

MUSKRAT. MUSKRAT. EAT YOUR PEAS!, by Sarah Wilson (Simon & Schuster)

Little Muskrat doesn't want to eat peas, even though he knows how much work went into planting, watering, and growing them.

RABBITS ON ROLLER SKATES!, by Jan Wahl (Crown Publishers)

A group of rabbits exercise by roller skating all day.

ALBERT THE RUNNING BEAR GETS THE JITTERS, by Barbara Isenberg & Susan Wolf
(Clarion Books)

Albert is nervous about his upcoming race with Boris, the new Alaskan bear at the zoo. Albert's friends try to relax him by introducing him to Relaxercise.

CURIOUS GEORGE PLAYS BASEBALL, by Margaret Rey and Alan J. Shalleck
(Houghton Mifflin)

George becomes the hero of the day when he makes a catch and a rescue that none of the other baseball players can make.

THE MOTHER'S DAY SANDWICH, by Jillian Wynot (Orchard Books)

When the breakfast Ivy and Hackett prepare becomes a total loss, Mother recommends the best type of sandwich for breakfast.

STRING BEAN, by Charlotte Herman (J. P. O'Hara)

Harold tries to make himself fatter until he realizes there are advantages to being thin.

**ANNA AND THE LITTLE GREEN DRAGON, by Klaus Baumgart
(Hyperion Books for Children)**

During breakfast, a little green dragon comes out of Anna's box of cornflakes and makes a mess on the table.

SUPERGRANDPA, by David M. Schwartz (Lothrop, Lee & Shepard)

A 66-year-old grandfather, who is not allowed to enter a bicycle race because of his age, joins in unofficially and ends up winning the race.

THE HUMAN BODY

DISEASES, DISORDERS, AND DRUGS

"Benchmarks":

- "Magnifiers help people see things they could not see without them." (Benchmarks, p. 111)
- "People use their senses to find out about their surroundings and themselves. Different senses can give different information. Sometimes a person can get different information about the same thing by moving closer to it or further away from it." (Benchmarks, p. 140)
- "Some of the things people do, like playing soccer, reading, and writing, must be deliberately learned. Practicing helps people to improve. How well one learns sometimes depends on how one does it and how often and how hard one tries to learn." (Benchmarks, p. 140)
- "People can learn from each other by telling and listening, showing and watching, and imitating what others do." (Benchmarks, p. 140)
- "Some diseases are caused by germs, some are not. Diseases caused by germs may be spread by people who have them. Washing one's hands with soap and water reduces the number of germs that can get into the body or that can be passed on to other people." (Benchmarks, p. 144)
- "Vaccinations and other scientific treatments protect people from getting certain diseases, and different kinds of medicines may help those who do become sick to recover." (Benchmarks, p. 201)

Recommendations/Comments:

This unit should be part of every study of the human body. An understanding of what can go wrong is just as important as how things work. Simulate different disabilities such as being in a wheelchair, being blind, being deaf, or being on crutches and try to accomplish simple tasks. Research famous hearing-impaired persons such as Helen Keller, Beethoven, Marlene Maitlin, William (Dummy) Joy, and Julliette Gordon Low. What other famous people have overcome disabilities?

To tie in writing, write a story about someone who finds himself in a humorous situation when he misunderstands something that is said to him. (A great follow-up for A Button in Her Ear by Litchfield or Mrs. Toggle and the Dinosaur by Pulver.) Pretend you have a magical wheelchair that will take you anywhere you want to go. Where would you go? To practice oral reading skills, and benefit others, have students record stories on cassette tape for the blind.

Related Children's Fiction:

SEE YOU TOMORROW, CHARLES, by Miriam Cohen (Greenwillow Books)

A class of first graders learn that the blind boy in their class is just the same as them.

A BUTTON IN HER EAR, by Ada B. Litchfield (Albert Whitman & Company)

A humorous story of a little girl as she recalls how her hearing deficiency was detected and fixed with the help of a hearing aid.

A CANE IN HER HAND, by Ada B. Litchfield (Albert Whitman & Company)

Simple illustrations help describe how a young girl is able to cope with her failing vision.

JOSH, A BOY WITH DYSLEXIA, by Caroline Janover (Waterfront Books)

A boy tries to live with his disability, dyslexia, and to gain respect and friendship of those around him. Information on the disorder and organizations that help are included.

THE SEEING STICK, by Jane Yolen (Thomas Y. Crowell)

An old man and his "seeing stick" find a way to show the blind princess how to see the world around her.

NICK JOINS IN, by Joe Lasker (Albert Whitman & Company)

Nick, a little boy confined to a wheelchair, is scared and nervous on the day he starts going to school.

PRINCESS POOH, by Kathleen M. Muldoon (Albert Whitman & Company)

Patty Jean is jealous of her sister who is confined to a wheelchair. When Patty Jean tries out her sister's chair, she finds that it is not fun at all.

THE HANDMADE ALPHABET, by Laura Rankin (Dial Books)

Presents many different hands forming the symbols which represent the alphabet used in American Sign Language.

THE BALANCING GIRL, by Berniece Rabe (E. P. Dutton)

Margaret, who is very good at balancing things while in her wheelchair or on crutches, comes up with her best-ever balancing act to use at the school carnival.

WHO CARES ABOUT DISABLED PEOPLE?, by Pam Adams (Child's Play)

Stressing that we all belong together, the brief text explains different handicaps in simplistic style and illustrations.

MY BROTHER, MATTHEW, by Mary Thompson (Woodbine House)

A boy explains his relationship with his new little brother who has special needs.

MY SISTER IS DIFFERENT, by Betty Ren Wright (Raintree Publishers)

A boy discusses the positive and negative feelings he has about his mentally handicapped sister.

MY SISTER, THEN AND NOW, by Virginia L. Kroll (Carolrhoda Books)

A 10-year-old describes her 20-year-old sister's schizophrenia, its effect on the family, and the emotions involved.

MY BUDDY, by Audrey Osofsky (Henry Holt & Company)

A child in a wheelchair with muscular dystrophy explains how his dog is his arms and legs.

YES, I CAN!, by Doris Sanford (Multnomah Press)

Tells, from first person point-of-view, the trials and tribulations of a handicapped girl.

MY FRIEND JACOB, by Lucille Clifton (E. P. Dutton)

Jacob, older and mentally slower, helps a young boy and is his best friend.

MY GRAMMY, by Marsha Kibbey (Carolrhoda Books)

Amy learns to treat her Grammy, who is suffering from Alzheimer's disease, with patience when they share a bedroom.

HAPPY BIRTHDAY, GRAMPIE, by Susan Pearson (Dial Books for Young Readers)

It is Martha's grandfather's birthday, and she has made him a present. Since her grandfather is now blind and living in a home for the aged, Martha becomes worried that her gift is inappropriate.

ALEX IS MY FRIEND, by Marisabina Russo (Greenwillow Books)

Brightly-colored illustrations help describe the friendship between two boys, one of whom has physical problems, but a great sense of humor.

MAMA ZOOMS, by Jane Cowen-Fletcher (Scholastic)

A little boy plays imaginative games while sitting on his Mom's lap as she "zooms" around in her wheelchair.

WITH THE WIND, by Liz Damrell (Orchard Books)

Expressive words and pictures describe a boy's horseback riding experience. At the end of the book, the reader learns that the boy usually "mounts" a wheelchair.

GRAMMA'S WALK, by Anna Grossnickle Hines (Greenwillow Books)

A child's wheelchair-bound grandmother helps him imagine a wonderful seashore walk.

ARNIE AND THE NEW KID, by Nancy Carlson (Viking Press)

A cat and dog take on human characteristics to provide insight on what life in a wheelchair is like.

WHALES TO SEE, by Glendon Fred Swarthout (Doubleday)

A group of children with learning disabilities have problems coping with the many social pressures they face every day.

HARRY AND WILLY AND CARROTHEAD, by Judith Casely (Greenwillow Books)

Harry, who wears a prosthetic hand, can easily join his friends in activities. However, he won't join in teasing a classmate since he knows how it feels to be "different".

CHARLSIE'S CHUCKLE, by Clara Widess Berfus (Woodbine House)

A child with Downs' Syndrome has an infectious laugh that helps a town stop arguing long enough to solve some serious problems.

BE GOOD TO EDIE LEE, by Virginia Fleming (Philomel Books)

Touching story of a Down's Syndrome child, considered a pest by others his age, who shares special discoveries with a girl next door.

THE ROUGH FACE GIRL, by Rafe Martin (G. P. Putnam's Sons)

An Algonquin Indian version of the Cinderella story in which the young girl has noticeable facial scars to deal with.

MOVE OVER, WHEELCHAIRS COMING THROUGH!, by Ron Roy (Houghton Mifflin)

Presents the profiles of seven children who are confined to wheelchairs as they go through their active daily lives.

RIDE THE RED CYCLE, by Harriette Gillem Robinet (Houghton Mifflin)

A young boy who has been crippled since birth struggles to achieve his goal of being able to ride a cycle.

ITCHY RICHARD, by Jamie Gilson (Houghton Mifflin)

Richard knows that someone in his classroom has head lice and is afraid that it is someone who sits at his table.

THE COW BUZZED, by Andrea Zimmerman (Harper Collins)

The farm animals pass around their voices along with their coughs, sneezes, and sniffles.

WHERE'S CHIMPY?, by Berniece Rabe (A. Whitman)

A little girl with Down's Syndrome reviews her day's activities as she and her father search for her pet monkey.

ROLY GOES EXPLORING, by Philip Newth (Philomel Books)

Roly explores the other geometric shapes that are in the book he lives in. A book for blind and sighted children.

I WISH DADDY DIDN'T DRINK SO MUCH, by Judith Vigna (A. Whitman)

With her mother's help, Lisa learns how to deal with her father's alcoholism.

ONE, TWO, THREE -- AH-CHOO!, by Marjorie Allen (Coward, McCann & Geoghegan)

A boy with allergies searches for a pet that won't make him sneeze.

I'LL NEVER LOVE ANYTHING EVER AGAIN, by Judy Delton (Albert Whitman & Co.)

A little boy must give his beloved dog away after it is determined that his father is allergic to the dog.

HARRY'S DOG, by Barbara Ann Porte (Greenwillow Books)

Harry wants to keep his new dog, even though his father is allergic to it.

FURRY, by Holly Keller (Greenwillow Books)

Laura has problems finding a pet, because of her allergies, until her brother brings home a surprise.

GRANDMA'S SOUP, by Nancy Karkowsky (Kar-Ben Copies)

A young girl must face the problems of her grandma's Alzheimers Disease.

ALWAYS GRAMMA, by Vaunda Nelson (G. P. Putnam's Sons)

A little girl tells what it is like as her grandmother loses the ability to care for herself.

BECKY, by Karen Hirsch (Carolrhoda Books)

A deaf child helps a hearing family understand the problems facing the deaf.

HOWIE HELPS HIMSELF, by Joan Fassler (A. Whitman)

Howie, who has cerebral palsy, wants, more than anything, to be able to move his wheelchair by himself.

WHEN DADDY HAD THE CHICKEN POX, by Harriet Ziefert (Harper Collins)

A family is upset when daddy gets the chicken pox.

ITCHY, ITCHY CHICKEN POX, by Grace Maccarone (Scholastic, Inc.)

A humorous look at having the chicken pox.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Elementary teachers of grades K-2 would benefit from a handbook that integrates children's literature and the new science "Benchmarks". This handbook was developed into two sections to best assist teachers in accomplishing this task. Section One presents the new "Benchmarks" and refers teachers to thematic units in Section Two that can be employed to teach these "Benchmarks". In Section Two teachers will find summaries of children's books and recommendations and suggestions for activities that can be incorporated into a multi-disciplinary, thematic unit. These resources will assist teachers in planning thematic units which integrate children's literature into science topics and also incorporate the science "Benchmarks".

Conclusions

The goal of this project was to develop a handbook that teachers of grades K-2 could use to create thematic units for science. By planning thematic units based on science topics, students are experiencing science through several subjects. This exposes students to the science topic for a longer period of time and allows students to enjoy science through a variety of teaching strategies. Research supports the use of children's literature to foster interests in science, and the benefits of using a thematic

or whole language approach. The integration of science and children's literature will be helpful to classroom teachers and students in the primary grades.

This handbook will assist whole language teachers who are anxious about teaching science and the new "Benchmarks". Teachers are enthusiastic in using children's literature, and are comfortable with the creation of thematic units. This handbook will provide teachers with the references they need to successfully integrate the new "Benchmarks" and children's literature and create thematic units based on science topics.

The handbook is also beneficial to teachers who may not feel they are up-to-date on available children's literature. The referenced children's books all include summaries to assist the teacher in determining which books could be included in a unit. Some of these books are informative, others may be purely fantasy, while yet other may be collections of poems. By reviewing the summaries, teachers can best determine how they would like to integrate science into other subjects by using the children's books

Recommendations

The author recommends this handbook to all primary teachers, especially teachers who want help in incorporating the new science "Benchmarks" into their lesson plans. Teachers will not be able to cover every topic in a one year period, and the author recommends that a specific grade level cover one third of the topics. By doing so, teachers in grades K, 1 and 2 could

coordinate lessons and address the goals recommended in *Benchmarks for Science Literacy* for the primary level. This handbook can be used to replace science textbooks or as a supplement to one's current curriculum. It can be used in its entirety, or used as one's desires.

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