



Using Fiction and Nonfiction Literature with *Exploring Science All Around Us* in the Second Grade Science Classroom

The following list was compiled in 2013 to enhance your classroom library or be used with lessons found in *Exploring Science All Around Us*. Organized by chapter, this reference list offers scientifically accurate biographies, fiction, and nonfiction selections on varied reading levels. Share the list with your library media specialist, principal, PTA, or anyone else who might help you acquire these wonderful resources to help your students get excited about reading in the science classroom. This list is a copyrighted work-product of the Five Ponds Press, please do not post or share publically outside of the school without prior permission.

Chapter 1 SOL 2.1

Adler, David. 1999 *How Tall, How Short, How Faraway* This colorful picture book tackles how measurement and mathematics are necessary to collect scientific data. The text shares the history of measurement beginning with ancient Egypt using nonstandard measurement. The book progresses to modern day measurement systems, noting there are **two primary systems of measurement currently used**. Current applications of measurement and **appropriate units** for everyday objects are explored. A simple conversion table is located in the back. *2000 NSTA Outstanding Science Trade Book winner*

Allen, Pamela. 1998 *Mr. Archimedes' Bath* In this humorous picture book, Mr. Archimedes tries to discover why water overflows his bathtub when he and his animal friends take a bath. He makes **observations and predictions** as he **investigates** by asking each animal to stay out of the bath one at a time as he **measures** the changing water levels. In the end, he **draws a conclusion** that the water overflows when everyone is in the tub together. This book illustrates that although the **water volume** remains the same, the water is displaced when objects are added. Note that multiple cartoonish illustrations show the back of Mr. Archimedes stepping in and out of the bathtub.

Auch, Alison. 2011 *All About Temperature* From the *Physical Science* series, this book describes and illustrates **temperature** with simple, yet scientifically accurate text. It is ideal for struggling readers. Full color photographs are accompanied by information about how to read a thermometer, the **Celsius and Fahrenheit scales**, and various temperature readings around the world. A simple glossary and books and web sites about temperature are listed.

Harris, Trudy. 2009 *The Clock Struck One* Through simple, rhythmic rhyme this picture book follows the chaos that mischievous animals on a farm create for twelve hours during one crazy day. Hour by hour, more animals are introduced ending with a chase through the barnyard. Pictures of both **digital and analog clocks** are included and a two-page afterword provides detail on the two types of clocks.

Jackson, Alison. 2008 *Thea's Tree* This story is whimsical spin on a well-known fairy tale where a seed is planted and a stalk grows and grows. The entire story is told through letters written between the main character and a variety of experts. There are multiple opportunities to discuss **nature of science** concepts about understanding the natural world and scientists building a consensus by sharing ideas. The main character **asks questions, makes predictions, and makes observations**. Data about the plant's growth are **measured and recorded** and **unusual, unexpected data** are recognized. The vocabulary can be challenging, so this story is ideal as a read-aloud.

Jenkins, Steve. 2003 ***What Do You Do With a Tail Like This?*** This Caldecott Honor book encourages readers to make **observations and predictions** based upon those observations. Animal parts, such as noses and feet, are shown on one page. The reader is asked to name the corresponding animal and how that part of their body is used. On the next page, correct answers are revealed. The back of the book offers more detail about each featured animal highlighting how **observations and predictions can lead to more questions about the natural world.**

McNamara, Margaret. 2007 ***How Many Seeds in a Pumpkin?*** Also available as an e-book, this is a story of curious students making predictions of the number of seeds from different sized pumpkins. They make **predictions using estimating skills**, open the pumpkins, and count the seeds to determine an accurate number of seeds in each pumpkin. Once **data are collected and analyzed**, **unexpected results are discovered** with a surprising number of seeds is counted in one pumpkin.

Murphy, Stuart. 1998 ***Lemonade for Sale*** In this picture book, four friends sell lemonade to raise money for their clubhouse. Daily earnings are tracked on a **bar graph**. Additional ideas on how to use the book's concepts are found in an appendix. Other titles by Murphy applicable to this SOL include ***Game Time!*** which tells the story of a soccer game while teaching concepts of **measuring time** and ***Dave's Down-to-Earth Rock Shop*** about **classifying objects** in different ways according to similar characteristics.

Nagda, Ann Whitehead. 2000 ***Tiger Math: Learning to Graph from a Baby Tiger*** This book will grasp the attention of any animal lover! This high interest book is detailed and above grade level, but appropriate graphing concepts are throughout. Data about the life cycle and daily activities of a Siberian tiger are chronicled through **picture and bar graphs**. Further details are provided in the text providing integration between science and math. *2001 NSTA Outstanding Science Trade Book winner*

Poydar, Nancy. 2011 ***No Fair Science Fair*** This easy fiction book follows Mr. Zee's students as they prepare for the science fair. Students participate in a round of "I Spy" to practice **observation** skills. They are encouraged to be curious about their everyday worlds and **formulate questions** for their projects. Pictures in the book show students using **proper tools for measurement**, recording observations in science notebooks, and **designing models to help clarify their explanations**. One student is determined to discover an answer to his science fair question, and this theme helps illustrate multiple **nature of science** concepts about the world being understandable, the need for observation, and how scientists communicate their findings to other scientists.

Sweeney, Joan. 2001 ***Me and the Measure of Things*** This book shares how **measurement is a part of everyday life**. Some examples include: measurements of a baby's weight and length, of food for baking, of the volume of various liquids in a refrigerator. **Standard English units and proper measuring tools** are used throughout this book.

Young, Ed. 2002 ***Seven Blind Mice*** In this Caldecott Honor book, six blind mice investigate the same object and try to determine what the Something is based upon their **observations**. One by one they arrive at a different **personal interpretation** until the last mouse pieces concludes what the mysterious object is by conducting a thorough investigation. This last mouse believes the natural world is understandable and uses the varied interpretations of the data about the Something to build a consensus for his findings. This book lends itself to discuss the **nature of science** in your classroom.

Chapter 2 SOL 2.2

Branley, Franklyn. 1996 ***What Makes a Magnet?*** All 32 pages from this *Let's-Read-and-Find-Out Science* book teach Essential Knowledge required in this SOL. Text is age-appropriate and explains scientific concepts about **magnetism**. Cartoon illustrations make the text approachable and engaging. **Magnetic poles, compasses, natural magnets**, description of **iron**, and concepts of **repel/attract** are explored!

Carmi, Rebecca. 2001 **Amazing Magnetism** Based on *The Magic School Bus* books by Joanna Cole, this chapter book follows Mrs. Frizzle in a contest about magnetism. The advanced reader will enjoy this story about students who are given scavenger hunt questions. While they unravel the clues, facts about magnets are shared. Topics include **magnetic and nonmagnetic items**, **magnetite** and the history of magnets, and **everyday uses of magnets**. The title takes magnets beyond the standard introducing students to electricity. The nine scavenger hunt questions are found in the back of the book for quick reference.

Manushkin, Fran. 2006 **The Shivers in the Fridge** This picture book presents a family trying to escape an unknown land—earthquakes, monsters, and darkness are around them. The reader learns the family is stuck IN the refrigerator! Eventually, they are rescued and placed in their proper home, ON the fridge. It is revealed that the characters are a family of **refrigerator magnets** that were accidentally placed inside the fridge. The story is a little long for a read-aloud but would provide a fun reading opportunity with this SOL.

Pilegard, Virginia Walton. 2002 **The Warlord's Fish** This fiction picture book is an ideal read-aloud for this SOL. The main character, Chaun, is kidnapped and taken on a journey through a desert where men use the sun for navigation. On the journey, a sandstorm blocks the sun and the men become lost in the desert. However, Chaun had a floating, carved fish in his pocket made from **lodestone**. He placed it in a bowl of water to use it as a **compass**. The story tells how people in China learned about **magnetism** and made early compasses from magnetic spoons on a board, which is an excellent link to social studies SOL 2.1. The back of the book describes how students can make their own fish compass.

Richardson, Adele. 2006 **Magnetism: A Question and Answer Book** This book geared toward 3-5 graders has clear illustrations and photographs with informative text. The author poses questions at the top of each two-page spread and the explanations are clear and informative. Topics include **magnetic poles**, **compasses**, **magnetic materials**, **magnets in everyday life**, and a comparison of **natural and artificial magnets**. Simple student experiments can be found.

Vogel, Julia. 2011 **Push and Pull! Learn About Magnets** This picture book is a simple and age-appropriate introduction to magnetism. Information is shared about what **metals magnets attract**, items that are **nonmagnetic**, **compasses**, **magnetic poles**, and **applications of magnets in everyday life**. A short glossary is found in the back.

Walker, Sally M. 2012 **Investigating Magnetism** This book discusses the basics of magnetism including **everyday magnets**, what **materials are magnetic**, **magnetic poles**, and **compasses**. Simple experiments will excite your enthusiastic scientists and photographs of students conducting experiments are found throughout. This book is also available as an e-book. Web sites and additional books are listed.

Weakland, Mark. 2011 **Magnets Push, Magnets Pull** This picture book shares multiple uses of **magnets in everyday life** through oversized photographs and simple text. Age-appropriate descriptions and photographs of **lodestones and magnetic poles** are also shared. Concepts of how and why magnets **repel or attract** materials are discussed. Additional books and web-based materials to support this learning are recommended in the back.

Chapter 3 SOL 2.3

Gardner, Robert. 2006 **Melting, Freezing, and Boiling Science Projects with Matter** This short book contains student-friendly explanations of the **properties of solids, liquids, and gases**, easy-to-follow bulleted experiments for students or for classroom demonstrations, and ideas for further investigation. Students are encouraged to **design and conduct experiments** like real scientists using suggested inquiry ideas following each presented topic. Safety is reinforced many times. Material lists are supplied along the sides of pages, as are cartoon illustrations and diagrams. **Condensation**, **evaporation**, **melting and freezing of water** are explored. A short glossary and books and web sites for further study are supplied.

Higgins, Nadia. 2011 **SPLASH! Learn about Water** Clear photographs and simple text examine how water changes from one phase to another. Water is seen as a solid (ice), a liquid (water) and a gas (steam).

Mason, Adrienne. 2006 **Change It! Solids, Liquids, Gases and You** Part of the *Primary Physical Science* series, the pages of this book have limited, yet informative, text and colorful drawings about the basics of matter. Animals with cartoon dialogue bubbles offer simple scientific explanations or facts throughout the book. Age-appropriate experiments are suggested, but this book maintains a heavy focus on explaining concepts. Topics include the phases of matter, melting and freezing, as well as simplistic explanations of evaporation. At the end are ideas for adults to help students further study the presented concepts.

Oxlade, Chris. 2009 **Heating** This title is one in a series of four written for primary grades focusing on physical science. It contains simple text descriptions and colorful photographs with short, yet informative, captions. Information about reading a thermometer is shared when discussing matter changing phases. Another relevant book in this series by Oxlade is **Cooling**. Simple investigations, a condensed glossary, and books and web sites for further reading are listed in the back of both books.

Scieszka, Jon. 2004 **Science Verse** This book of poems presents an entertaining way to share topics such as phases of matter, water cycle, and insect life cycle changes. The author mimics the poetic formation of classic literature, as the poems spoof works by Edgar Allen Poe, Robert Frost and more. This format provides opportunities to introduce original literature along with the science spoof.

Taylor-Butler, Christine. 2012 **Experiments with Solids, Liquids, and Gases** Written for primary students, this book from the *A True Book* series shares information about the states of matter, details about properties of each phase, and a few experiments to explore the phases. Engaging statistics are sprinkled over the pages, as are colorful photographs with informative captions. One spread is dedicated to the "The Three Phases of H₂O" and shares information and photographs in a straightforward manner about the properties of each phase and how changes in phases occur. Suggested investigations measure the mass and volume of solids and liquids. The investigation explanations are helpful, but it should be noted that many require adult supervision and materials that need to be purchased.

Wick, Walter. 1997 **A Drop of Water** The text and the presented concepts in this book are challenging for second graders; however, the photographs are exceptional. Captured images of drops of water in its three phases will promote curiosity and wonder for students. Topics such as evaporation and condensation are explained through text and striking photographs. Some suggested experiments are found on the last pages.

Zoehfeld, Kathleen. 1998 **What is the World Made Of?** From the *Let's-Read-and-Find-It-Out Science* series, this title explores the basic phases of matter. The easy-to-read pages of this book would serve well as a read-aloud introducing the concepts of this SQL. Colorfully illustrated pages are devoted to the properties of each phase of matter, as well as a few pages that discuss how temperature can help matter changes from one phase to another. Three activities are provided to learn more about matter.

Books that portray the three phases of matter through illustrations, not textual material:

- **Polar Express** by Chris Van Allsburg
- **Pop! The Invention of Bubble Gum** by Meghan McCarthy
- **King Bidgood's in the Bathtub** by Audrey Wood and Don Wood *Caldecott Honor Book*
- **Little Polar Bear and the Submarine** by Hans de Beer
- **Tiger in My Soup** by Kashmira Sheth

Chapter 4 SOL 2.4

Aloian, Molly. 2004 ***Life Cycle of a Flower*** This colorful, engaging book is full of information directly related to this SOL. Key concepts of the **flower's life cycle** are discussed in text, through diagrams, and with detailed photographs. This resource offers scientific information for curious learners. Each stage in the life cycle of the flowering plant is covered in rich detail. Another title in this series that is applicable to this SOL is ***Life Cycle of a Butterfly*** by Kalman.

Barefield, Shannon. 2011 ***Eggs, Legs, Wings*** For a fresh approach to the **life cycle of the butterfly**, read this graphic novel! The author and illustrator deliver an age-appropriate, scientific explanation of the life cycle through clear, simple text and colorful, detailed illustrations. Scientific facts are found in small text boxes along the bottom of the pages. The back of the book offers a glossary and books and web sites for further research. As the author does not shy away from scientific vocabulary this title is appropriate for strong readers or for a teacher-led presentation. Another applicable title by Barefield is ***Seed, Sprout, Fruit*** which follows the same graphic novel presentation.

Brown, Ruth. 2001 ***Ten Seeds*** This simple picture counting book is easy-to-read. While the text does not discuss the stages in the life cycle of the flowering plant, the illustrations portray valuable details to support this SOL. Students are able to visually follow the complete **life cycle of a sunflower** as it grows from a seed planted in the soil into a tall flower! *NSTA/CBC Outstanding Science Trade Book*

Bunting, Eve. 1999 ***Butterfly House*** This is the story of a young girl and her grandfather building a butterfly house as a safe place for a rescued caterpillar. The girl designs the house and observes the caterpillar as it grows. A **chrysalis** is formed and a butterfly emerges. Ultimately, the girl releases the **butterfly** in her garden. End notes share information with tips on building a butterfly house and feeding a butterfly.

Carle, Eric. 1987 ***The Tiny Seed*** This classic captures the **life cycle of a flowering plant** in straightforward, relatable text accompanied by Carle's distinctive cut-paper collages. The story follows a tiny seed as it travels in the wind, germinates, flowers, and produces more seeds.

Collins, Pat Lowery. 2013 ***Deer Watch*** Follow a father and son on a journey to see a deer. As they explore the marsh and woods, they see various animals and spot the mysterious **white-tailed deer**. Soft oil paintings depict a doe and two fawns running in the woods. Although the life cycle is not discussed, this fiction selection would make a fine introduction to the study of deer in their natural environment.

Gerber, Carole. 2013 ***Seeds, Bees, Butterflies, and More*** This unique collection of 18 poems is designed to be read by two people. Poetry lines are color-coded so readers know when to speak. Topics include plant parts, the **plant life cycle**, germination, and pollination. The **life cycle of the butterfly** is also explored. An informative end note has age-appropriate scientific explanations of the plant's life cycle. Colorful illustrations and poems filled with scientific information make this a delightful read.

Hinshaw, Dorothy. 2005 ***White-Tailed Deer*** This informative selection consists of clear, descriptive information and multiple photographs of the **white-tailed deer**. The book opens with a map and vocabulary section including the words fawns, does, and bucks. It ends with a nice note to adults to aid with comprehension.

Koller, Jackie French. 2008 ***Peter Spits a Seed at Sue*** Four bored friends decide to entertain themselves on a hot summer day by eating watermelon and even spitting a few of their seeds! This light-hearted tale sets the stage for lessons in the Teacher's Edition about **measurement** and the **life cycle of the flowering plant**.

McGill, Jordan. 2012 ***Animals in My Backyard: Deer*** This *Media Enhanced Book* introduces basic information about **deer**. The child-friendly presentation has detailed photographs with outlined text boxes accompanying each color photograph. The text is in large print with few sentences per box, ideal for a beginning reader. The book has a code for readers to enter online for access to additional resources including video clips, activities, and links to informative sites. A Deer Fact section at the back provides further information relating to each page of this 21 page book.

Pedersen, Janet. 2008 ***Houdini the Amazing Caterpillar*** In this lighthearted fictional tale, Houdini is the classroom caterpillar. He is determined to entertain students and share his talents, such as eating leaves, crawling on the high-wire stick, and shedding his skin. When students loose interest in observing him, he draws inspiration from posters on classroom walls depicting the changes in the **life cycle of a butterfly**. He decides to form a **chrysalis** and emerge as a butterfly! When he finally emerges, he does so with a butterfly “Ta-Da!” An Author’s Note describes the life cycle stages in more detail.

Wade, Mary Dodson. 2009 ***Plants Grow*** This title is from the *I Like Plants!* series and provides an outstanding overview of the **life cycle of the flowering plant** through captivating photographs, descriptive photograph captions, and easy-to-read text. This must-read consists of 21 pages ending with an experiment titled “Can you see part of a plant’s life cycle?” There is also a short list of recommended books and web sites for further learning.

Chapter 5 SOL 2.5

Anholt, Laurence. 1998 ***Stone Girl, Bone Girl*** This picture book biography is of the determined Mary Anning who loved to dig for **fossils**, which she called her “curiosities.” Through her searches, she is mentored by local female scientists. At the age of 12, she makes a significant scientific discovery near her home in England. An end note explains more about Anning’s life. For other interesting biographies about Anning, consider the illustrated chapter book ***Mary Anning: Fossil Hunter*** by Sally Walker or the graphic-novel style ***The Fossil Girl*** by Catherine Brighton. Lexile scores on each book: ***Stone Girl, Bone Girl***—520, ***Mary Anning: Fossil Hunter***—320, ***The Fossil Girl***—250.

Arnold, Caroline. 2008 ***A Platypus’ World*** This is one book in a series by Arnold about animals in their **habitats**, where they live, and what they eat. Other plants and animals found in the habitat are mentioned. Packed full of facts but written in an age-appropriate manner, this book highlights **living and nonliving** components of the platypus’ **stream habitat**. The book shows how the platypus is **dependent on its surroundings** for **food, shelter, and a safe place to raise her young**. Informative sidebars and maps are found throughout the book. Cut-paper illustrations cover each page. Other titles in the series explore different animals and different habitats. *NSTA/CBC Outstanding Science Trade Book*

Berger, Melvin. 1998 ***Chirping Crickets*** Solid, age-appropriate background information about crickets is supplied in this *Let’s-Read-and-Find-Out Science* book. The **basic components of a cricket’s habitat** are described. Information about keeping a cricket as a pet, determining the temperature with the help of a cricket, and making a cricket model can be found in the back.

Ehlert, Lois. 2004 ***Pie in the Sky*** Collage illustrations share a story of a cherry tree that changes through the **seasons**. Themes include the tree life cycle and animals that depend on the tree for food. Opportunities are presented to discuss simple measurement as the pie is made with the ripe fruit.

Farrar, Sid. 2012 ***The Year Comes Round: Haiku through the Seasons*** Eleven haiku poems, each about one of the four seasons, are found in this book. Simple illustrations accompany each poem. A description of what a haiku poem is can be found at the back of the book, along with brief descriptions of each season. The descriptions detail the crops, months, weather patterns, **plant growth, and animal**

behaviors associated with each season. It would be fun for students to hear the poems and categorize them by which season is being described. Students can also practice fluency by reading the poems and counting the syllables in each line to comprise a haiku.

Fleischman, Paul. 1988 *Joyful Noise* The collection contains fourteen poems about insects. These poems are unique in that each one features two voices. "House Crickets" is one poem used in a Teacher's Edition lesson where students predict and describe seasonal changes in habitats and how crickets respond to changes in the seasons.

Fleming, Denise. 1996 *Where Once There Was a Wood* This fiction book shares a forest habitat and the animals and plants that live there. Bright pictures and simple text tell the subtle message of how this habitat was overtaken when a community of houses was built there. Readers can infer how the animals are affected by the loss of their habitat. Informative pages at the end explore how to create a backyard habitat and offer more information about the four basic components of a habitat.

Hodge, Deborah. 2009 *Who Lives Here? Forest Animals* This 24-page book is designed to answer young reader questions about the forest habitat and how animals living there are dependent on their surroundings. Interesting facts about the animals and their adaptations accompany the illustrations. A simple glossary and additional information for adults can be found at the back of the book.

Jenkins, Steve. 2005 *I See a Kookaburra! Discovering Animal Habitats Around the World* Explore six habitats from around the world in this engaging book filled with pictures showing the differences between habitats, geographic information, and a variety of animals found in each specific habitat. Readers explore a two page picture of each habitat and look for hidden creatures. On the following page, brief descriptions of each hidden animal are shared. Pages at the back of the book offer more in-depth, scenically accurate information on the featured animals. *NSTA/CBC Outstanding Science Trade Book*

Kelly, Irene. 2011 *Even an Octopus Needs a Home* Eight types of animal homes are described with colorful, detailed pictures and age-appropriate descriptions. Readers determine whether components of each home are living or nonliving. Opportunities also arise to discuss the habitats of the featured homes. Different animals that live in the homes are also discussed. Fun, scientifically accurate facts are sprinkled throughout. The overall theme of the book is how there are many different types of animal homes and they all provide shelter and a safe place to raise young. *NSTA/CBC Outstanding Science Trade Book*

Miche, Mary. 2012 *Nature's Patchwork Quilt* In this beautiful picture book, the author presents illustrations woven together in various patchwork quilt designs. The illustrations show seven different habitats by highlighting the living and nonliving components in each one. The text offers discussion topics for interdependency, food chains, survival adaptations, and human influence on environments. At the end is a section with suggestions for teachers on how to use this book in art, language arts, and math. *NSTA/CBC Outstanding Science Trade Book*

Reid, Barbara. 2011 *Picture a Tree* Come follow this imaginative journey of a tree through the seasons. Vivid illustrations show how a tree changes through the seasons and how the tree can be many things to many people and animals. As seasons change, habitats and visiting animals change.

Rustad, Martha. 2008 *Animals in Fall* Simple text and colorful, full-page photographs describe animal behaviors in response to the changing seasons. Concepts such as migration, camouflage, and hibernation are implied. A short glossary and recommended web sites are found in the back. This book is ideal for early readers. Rustad also wrote *Animals in Winter*. These titles can also be found in Spanish.

Salas, Laura Purdie. 2009 ***Are You Living: A Song about Living and Nonliving Things*** Sung to the tune of “Are You Sleeping?” this fun, illustrated song teaches about **classifying objects as living or nonliving**. The **basic components of an animal’s habitat** are also discussed. Other Salas books of interest in the *Science Songs* series include: ***There Goes the Water: A Song about the Water Cycle*** and ***From Beginning to End: A Song about Life Cycles***.

Stewart, Melissa. 2009 ***Under the Snow*** In this exploration of animal dwellings during the winter, students see paintings of animals in their **habitats** and learn intriguing facts of survival. *2010 NSTA Outstanding Science Trade Book winner*

Walker, Sally. 2007 ***Fossils*** This book from the *Early Bird Earth Science* series has age-appropriate descriptions of fossils and explanations of how they form. The text is accompanied by clear photographs with descriptive captions. One chapter titled, “Why Do We Study Fossils?” explains how **scientists use the study of fossils to provide information about ancient plants and animals**. A simple glossary and web sites for further study are found in the back. For curious students and advanced readers, ***How Does a Bone Become a Fossil?*** by Melissa Stewart explores many of the same topics.

Chapter 6 SOL 2.6

Aardema, Verna. 1983 ***Bringing the Rain to Kapiti Plain*** This classic Reading Rainbow book is the African tale of a drought and one herdsman determined to end the drought on Kapiti Plain. The rhythmic language tells the progression of the **drought** and how it affects the land and the animals.

Bodden, Valerie. 2012 ***Hurricanes*** From the *Our Wonderful Weather* series, this title shares crisp, detailed photographs and age-appropriate text for the beginning reader. The information is clear. **Forecasting hurricanes and floods** is discussed. A child-friendly demonstration is suggested. Three other titles in this series include ***Snow, Thunderstorms, and Tornadoes***.

Doeden, Matt. 2010 ***Floods*** Simple, straightforward explanations of what a **flood** is, dangers of it, and **tools scientists use to predict** floods are explored. There are limited words on each page accompanied by full page color photographs to illustrate each concept. It is ideal for struggling or reluctant readers who are curious about weather phenomena. A simple glossary and recommended books are listed. Other appropriate titles in this *Earth in Action* series are ***Hurricanes*** and ***Tornadoes***, both by Mari Schuh.

Goin, Miriam Busch. 2009 ***Storms*** Curious students will love the colorful photographs and descriptions found on the 32 pages of this book. **Hail, tornadoes, blizzards, and hurricanes** are explored. The book shares how some animals and humans combat the weather.

Harper, Jamie. 2012 ***Miss Mingo Weathers the Storm*** This fiction book is of a flamingo teacher taking her class of animals on a field trip to a weather observatory. Together, they observe their surroundings, **predict the weather**, and experience heat, a **hailstorm**, rain, and some snow. Brief scientific facts are sprinkled throughout the text in picture captions. The class learns that the weather changes!

Hesse, Karen. 1999 ***Come On, Rain!*** This story by Newbery medalist Karen Hesse follows a girl who finds delight in a long-awaited rainstorm that comes after a three-week **drought** in the city. The girl observes clouds in the distance and gets excited for the changing weather. The language creates vivid images and realistic characters experiencing the despair of a drought and excitement of the long-awaited rain!

Hill, Susanna Leonard. 2011 ***April Fool, Phyllis!*** In this fiction book, Punxsutawney Phyllis tries to convince her fellow groundhogs that winter isn’t over. She predicts a **blizzard** is on its way. Illustrations show dad reading a **weather forecast** in the newspaper, Phyllis trying to convince her family with charts

and instrument data, and a **thermometer** reading the temperature in both scales. This tale would be a fun way to discuss the importance of weather predictions.

Huggins-Cooper, Lynn. 2005 **Weather** While this book from *First-Hand Science* series has elementary, cartoon illustrations, it offers support when teaching how **daily weather conditions influence our dress and activities**. The main character, Joe, observes the weather outside, selects his clothing, and participates in weather-appropriate activities. The pages encourage the reader to examine the natural world through a scientific perspective. Simple explanation of the water cycle is presented. **Storms and types of precipitation** are discussed. Each page has a question for the reader about the topic to build a child's natural curiosity about the world around them.

Johnson, Robin. 2013 **What is Precipitation?** Part of the *Weather Close-Up* series, this nonfiction title is full of information for the early reader! Key words such as **hail, sleet, precipitation, temperature, evaporation, condensation, rain, snow**, and many more are bolded in the paragraphs. Simple diagrams and color photographs share the pages to increase comprehension. Throughout the book are "What do you think?" bubbles challenging students to apply the presented information. Simple investigations and graphing challenges are presented. Books and web sites about precipitation are gathered in the back. Another interesting title in this series is **What is Weather?**

Kaner, Etta. 2006 **Who Likes the Snow?** Pages in this book raise questions and a folded-flap opens to reveal scientific explanations to the questions. The book is smaller in size, but the images are simple. While the concept of **snow** may seem familiar to students, this book challenges them with information to understand how it is formed, the different types of snow, and where it goes when it melts. Other titles in this series include **Who Likes the Rain?** and **Who Likes the Wind?**

Lawrence, Ellen. 2012 **How are Rain, Snow, and Hail Alike?** Students will explore the **types of precipitation** in this gorgeous nonfiction book designed for beginning readers! Full-page interesting photographs are accompanied by age-appropriate, scientifically accurate explanations of precipitation. An emphasis is placed on explaining and illustrating **hailstones**. A picture glossary and a science lab with a weather observation journal are found in the back. Other titles in this *Weather Wise* series include **What is Weather?** and **What is the Water Cycle?**

Long, Loren. 2011 **Otis and the Tornado** Follow the changes in the sky and how animals and people react to an impending **tornado** in this fictional tale set on a farm. Otis, a heroic tractor, tries to guide the farm animals to safety before the storm hits.

Lyon, George Ella. 2011 **All the Water in the World** In this short book, a mother uses lyrical verse to explain the **water cycle** and the importance of water to a child. It is sure to ignite a curiosity of the natural world.

Mack, Lorrie. 2004 **Weather** This title is for the more advanced reader, although captivating photographs will engage readers on all levels. **Weather conditions, seasons, types of precipitation, storms, and forecasting instruments** are all explored. A detailed glossary is found in the back.

Prelutsky, Jack. 2006 **It's Snowing! It's Snowing!** Prelutsky will entertain students with his sixteen whimsical poems about winter weather. **Snow, ice, and sleet** are mentioned and the concepts of dormancy, hibernation, and migration are implied in the lyrics. Illustrations can spark conversation **about appropriate winter dress and activities** of the season.

Wiesner, David. 1990 **Hurricane** This fiction book is the story of two brothers who are nervous about an upcoming **hurricane**. They prepare for the impending rain and wind and discuss their feelings about

the sounds they hear and the darkness around them when the electricity goes out. The morning after the storm they investigate the damage caused by the storm.

Williams, Judith. 2005 ***How Does the Sun Make Weather?*** This book offers an accurate description of the **water cycle** and how weather forms. **Weather changes through the seasons** are discussed, as are **droughts**. Each page begins with a question and is followed by a direct, child-friendly answer. Clear photographs appear on each page. A simple experiment about evaporation is suggested. Other titles in this *I Like Weather* series include ***Why is it Snowing?*** and ***Why is it Raining?***

Chapter 7 SOL 2.7

Bancroft, Henrietta. 1997 ***Animals in Winter*** Although this *Let's-Read-and-Find-Out* science book is older, it is an ideal book to compliment this SOL. Age-appropriate text outlines how both plants and animals respond to seasonal changes. **Migration and hibernation** are discussed. The book ends with ways people can help animals find food in the winter.

Berkes, Marianne. 2010 ***Going Home: The Mystery of Animal Migration*** Ideal as a read-aloud, this book has a short poem on each colorful two-page spread. Each poem features a migrating animal and explains **why the animal migrates**. An emphasis is placed on **animal behavioral responses to weather and seasonal changes**. Quick, scientific narratives also accompany each page offering background information. Many of the illustrations feature outlines of the continents, which can be used to support social studies SOL 2.5. The book ends challenging the reader to wonder and question more about migration. Further detailed information about the mystery of migration and the migrating animals that are featured can be found at the back of the book.

Bishop, Nic. 2008 ***FROGS*** Students will be mesmerized by this captivating photography! Close-up, accurate shots of frogs in natural habitats will provide the background for discussions of **camouflage coloration patterns of frogs**. While only a few pages of the book actually discuss camouflage, all the photographs are valuable for the discussion. *2009 NSTA/CBC Outstanding Science Trade Book*

Brynne, Faith Hickman. 2010 ***Do Animals Migrate?*** Part of the *I Like READING about ANIMALS* series, this short book introduces 12 animals and shares full-page photographs and brief text about **why and where they migrate**. Various habitats, geographic regions, and seasons are explored.

Glaser, Linda. 2012 ***Not a Buzz to be Found*** What a fun way to discuss how animals respond to the changing seasons! This book focuses on how insects behave in the winter. Each two-page spread features a colorful habitat illustration and short text highlighting one insect. The text describes the **insect's behavioral responses in winter**. At the end of the book are detailed paragraphs with further background information about each insect discussed.

Hickman, Pamela. 2008 ***It's Moving Day!*** Follow woodland animals through the **changing seasons** as different occupants move into a burrow. The colorfully illustrated book opens with a dormant, barren tree in the winter. Soon, a woodchuck crawls out of his burrow under the tree. Pictures and text show spring has arrived. As seasons pass, the author shares **animal behaviors in each season** and offers brief explanations of why the animals are behaving like they are. For example, when the raccoon is featured, the text shares how her house had been destroyed by a spring storm so she goes in search of a safe home in which to have her babies. After they grow all summer and fall, they are seen cuddled in the underground burrow for the winter. The book closes with a more detailed, scientific description of each animal discussed.

Kalman, Bobbie. 2008 ***What Shapes the Land?*** This 32 page picture book gives early readers an introduction to how **weathering and erosion** shape land surfaces. Colorful photographs support the text.

Messner, Kate. 2011 ***Over and Under the Snow*** This picture book shares observations made by a family one winter day in a forest habitat. Through text and pictures students identify **behavioral responses of plants and animals to seasonal changes**. Although not directly stated, concepts such as hibernation, camouflage, and dormancy are implied. This title also supports SOL 2.8 by showing pictures of animals using plants as shelter. *NSTA/CBC Outstanding Science Trade Book*

Miller, Debbie S. 2003 ***Arctic Lights Arctic Nights*** Although above grade level, this book fits this SOL well. Through the changing of seasons and weather, the author highlights various arctic animals and ways they respond to the changing temperatures and daylight hours. **Migration, hibernation, and animal camouflage** are all mentioned. Each spread features a different time of year and how arctic animals **respond to the seasonal changes**. *NSTA/CBC Outstanding Science Trade Book*

Na, Il Sung. 2010 ***Snow Rabbit, Spring Rabbit: A Book of Changing Seasons*** This simple fiction story shows how animals survive through winter and then welcome spring. For example, at the beginning of the book, a rabbit is white in the snow and he is brown when springtime arrives. Concepts such as **migration, hibernation**, and food storage are discussed but are not named. The subtle scientific information provides opportunity for discussion and inference while reading.

Pryor, Kimberley Jane. 2009 ***Clever Camouflage*** Part of the *Animal Attack and Defense* series, this book provides simple descriptions of the types of camouflage. Emphasis is placed on how **camouflage is useful to animals in their habitats**. Twenty-five different animals are highlighted through color photographs and brief statistics.

Rustad, Martha H. 2010 ***Animal Camouflage in the Desert*** Through photographs this book shows how animals are able to hide and avoid predators in the desert habitats thanks to their **outward coloration and coloration patterns**. Other appropriate titles in this series include ***Animal Camouflage in the Forest, Animal Camouflage in the Snow, and Animal Camouflage in the Ocean***.

Schwartz, David M. 2007 ***Where in the Wild? Camouflaged Creatures Concealed...and Revealed*** The seek-and-find format of this book presents a new mystery at the turn of each page and will keep readers engaged from start to finish. On the left side of each two-page spread is a poem filled with clues about the animal **camouflaged** in the photograph on the right side. Readers are challenged to find the hidden animal and then open the flap to learn additional information. Opportunities for integrating **animal response to seasonal change** are woven throughout the book. *NSTA/CBC Outstanding Science Trade Book*

Titles recommended for use with the **hibernation** lessons include:

- ***A Den is a Bed for a Bear*** by Becky Baines
- ***Hibernation*** by Margaret Hall
- ***What is Hibernation?*** By John Crossingham
- ***Old Bear*** by Kevin Henkes
- ***Hibernation Station*** by Michelle Meadow
- ***Time to Sleep*** by Denise Fleming
- ***Groundhog Stays up Late*** by Margery Cuyler
- ***Bear Has a Story to Tell*** by Philip C. Stead

Chapter 8 SOL 2.8

Brenner, Barbara. 2004 ***One Small Place in a Tree*** This book explores who lives in a tree and how shelters are formed. See how bear claw marks on the bark of a tree may make a home for beetles. See how a woodpecker hole may become a hollow place for a squirrel to nestle up on a winter day, a place for bluebirds to find safety, or a place for mice to call home. *NSTA/CBC Outstanding Science Trade Book*

Cherry, Lynne and Mark Plotkin. 1998 ***The Shaman's Apprentice*** In this fiction tale, a young boy is sick. To heal him, the local medicine man places leaves, roots, and bark from the forest into a pot of boiling water. He then gives the drink to the sick boy. Throughout the story, plants from the community are used to make clothing, dye, food, and canoes. The overall theme of the story is how plant products are used in this village with a focus on how they can be used as medicine. An Author's Note further explores how cultures around the world use plant products to make medicines.

Fleischman, Paul. 1999 ***Weslandia*** In this adventurous tale, an innovative young boy is determined to found his own civilization during his summer vacation. Readers see how his unique crops are grown and how he uses all the plant parts in his civilization for food and other products, such as a hat from the plant fibers, suntan lotion from plant oils, and musical instruments from the stalks. This book is sure to encourage students to be curious and imaginative and develop questions about the world around them.

Gourley, Robbin. 2009 ***Bring Me Some Apples and I'll Make You a Pie*** Follow Edna Lewis through the seasons as she grows up in a farmer's town of Freetown, Virginia. Poetic details describe seasonal changes and foods grown and harvested by her family. Plant products from her geographic area are used as food and as medicine. An Author's Note reveals how Lewis grew up, moved to New York City, and became a chef at a time when African American female chefs were uncommon.

Grisby, Susan. 2012 ***First Peas to the Table*** A challenge started by Thomas Jefferson and his fellow farmers comes to life in this modern-day story of two friends who compete to win a classroom contest. The competition involves the girls planting, caring for, and being the first to fill a bowl of shelled peas to eat. Jefferson's respect for agriculture and his scientific experimentation with seeds are two themes throughout the book. The girls use scientific journals to record their notes from their investigation. They also learn about examples of roots, leaves, and fruits that we eat. Watercolor artwork helps readers follow the life cycle of the pea. This book is sure to excite and motivate young scientists.

Komatsu, Yoshio. 2004 ***Wonderful Houses Around the World*** Clear photographs introduce ten homes from around the world. Students will see how plant products available in a specific geographic area affect the development of that area.

Leavell, Chuck. 2005 ***The Tree Farmer*** This fiction tale is a conversation between a grandson and grandfather, the tree farmer. The two walk through the growing trees discussing how trees provide oxygen, homes for animals, and a variety of plant products. Intricate illustrations reveal many products, such as paper, musical instruments, and furniture, that can be made from a single tree. A message of human responsibility to take care of trees from generation to generation is conveyed. This is a must-read book when teaching about classifying and identifying the sources and uses of plant products!

Levenson, George. 2004 ***Bread Comes to Life: A Garden of Wheat and a Loaf to Eat*** Where does bread come from? Beginning with seeds in the soil, readers explore how bread is a plant product that we eat. Crisp photographs show grains of wheat and the harvesting of the stalks. Tools and ingredients used to make dough are described with fresh bread as the result of hard work! Further information about wheat is found in the back of the book, as is a simple recipe for making bread in the classroom, an ideal way to motivate reading as well as science investigation.

Morgan, Sally. *How We Use Plants* is a series published by PowerKiDS Press that contains titles applicable to this SOL such as:

- ***How We Use Plants for Medicine and Health***
- ***How We Use Plants for Food***
- ***How We Use Plants for Making Everyday Things***
- ***How We Use Plants for Shelter***

Muldrow, Diane. 2010 ***We Planted a Tree*** This colorful picture book has cartoon drawings of multiple families from around the globe planting trees and watching them grow through the seasons. They learn about many **benefits of the tree** such as how the tree **produces oxygen** and how it provides **homes for animals** and **food products**, such as fruit and sap. They also learn how roots help **prevent soil erosion** which leads to healthier soil. The overarching theme of this easy-read tale is that planting a tree can help make the world a better place...one tree at a time.

Peterson, Cris. 2010 ***Seed, Soil, Sun: Earth's Recipe for Food*** Straight-forward language and clear photographs tell how seeds, sun, and soil create a majority of the **food** we eat. The reader follows seed germination to the growth of a corn plant. Plant parts are discussed.

Rotner, Shelley. 2006 ***Where Does Food Come From?*** Readers explore the many foods derived from plants in this simple nonfiction selection. For example, potatoes are pictured and described as vegetable from under the ground. Then, the author takes it a step further and explains how French fries come from the potatoes. Thirteen foods are featured, including **apples and peanuts**. The last pages show salt and sugar as **plant products**. Fun "Did you know?" facts are found on each page to further engage the reader.

Ward, Jennifer. 2009 ***The Busy Tree*** This fiction book opens by explaining the purpose of tree roots. The story continues describing what happens in every part of a tree. The tree is used for food by hungry chipmunks and woodpeckers, as a bridge for scurrying ants, and as a **home** for a spider, an owl, and a nest full of birds. Mention is also made of how the green leaves **produce oxygen**.

