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Preparing Today to Empower Future Learners: Preservice teachers' experiences selecting & evaluating children's literature for quality and use in PreK-6th grade integrated literacy/science instruction

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Introduction

When asked how they will go about finding quality literature, the following excerpts were responses that two students in a literacy methods course wrote on an initial class survey.

To find and review a number of children's literature, I will read a book a day and then I will become more familiar with children's authors.

I will go to the library. I will think about when I was a child and the books that were read. I will also read children's literature.

Their responses indicated to us as literacy instructors that our pre-service teachers appeared to be limited in their knowledge about finding and using quality children's literature. They struggled with understanding the term "quality" and how to evaluate texts for use in future classroom instruction.

Quality texts have been defined as texts that "have a clear structure" (Hall et al., 2005; Williams, 2005), and are "very well written and facilitative of comprehension" (Duke et al 2011). They are eagerly welcomed by teachers who are "searching for logical and attainable ways to address national and state standards as well as their individual school's curriculum, and to provide instruction that is sensitive to their students' various learning styles and abilities" (Fleener & Bucher, 2004, p. 76). Hansader (2004), argues that when quality literature is successfully integrated with instruction, children benefit by improving their communication skills, become actively involved in learning, connect to concepts in real-world contexts and are motivated to challenge themselves. Yopp and Yopp (2012) encourage teachers to consider the elements of content, vocabulary, text structure, text features, writing style/language, and text layout/design when selecting high quality texts.

Tunnell and Jacobs (2007) tell us that the first definition of a good book "is one created by a knowledgeable and skilled author in which the elements of literature measure up under critical analysis. Quality is recognized by evaluating different elements of the book, including style and language, character, plot, illustrations, pacing, setting, tension, design and layout, mood, accuracy, tone, point of view, and theme. The second definition of a quality children's book is, simply put; TASTE. In other words a book that a reader likes" (p. 13). Given that between 5,000 and 10,000 children's books are published yearly (Fleener & Bucher, 2004), and the prominent function of quality texts in elementary classrooms, we recognized that our beginning teachers needed to gain knowledge and experience on how to identify quality texts from among the thousands. Williams & Bauer (2006), came to similar conclusions and noted that "teachers without preparation in children's literature are certainly at a disadvantage concerning the selection and use of quality books in their classroom". Further, they contend that "when highly qualified teachers....value children's literature and know how to use it effectively in collaboration with students, an environment where children learn can be created." (p. 21).

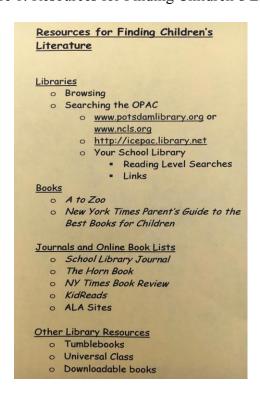
Hoewisch (2000), argues that "pre-service teachers cannot be expected to know how to use children's literature as purposeful and meaningful educational tools unless [teacher educators] teach them well". Hoewisch contends that "teacher educators need to equip preservice teachers with the tools and knowledge of pedagogically sound strategies for effectively integrating literature with their future classrooms." He suggests that this is best implemented "into existing methods courses, including those for content area subjects." Hoewisch (2000), noted that the professional understanding of children's literature should take shape within the supportive structure of developmental courses, among them classroom field experiences with children and teachers. Consequently, in our literacy methods course, we designed a specific

assignment with the goal of helping our pre-service teachers become aware of, choose, and evaluate quality children's texts that can support an integrated curriculum (science and literacy), which they were required to develop and teach in their field experiences. The motivation for this project was also influenced by existing reports in teacher preparation research concluding that pre-service teachers' "professional frames are both individually and socially derived, in other words, shaped by experiences as well as by expectations and values" (Barnes, 1992 as cited in Thomas, 2003). The reports also suggest that the goal of educators should be to "challenge preservice teachers' views and to work collectively to see them embrace new perspectives that may enable them to confront, shift, and/or refine the beliefs, knowledge, values and assumptions that form their personal theories about teaching and learning." By providing an ongoing social context (i.e., the college classroom) and a variety of forums (e.g., reading logs, grade level classroom interactions, and literacy strategy demonstrations) to facilitate students' reflections, conversations and presentations when choosing quality children's literature, the instructors' goal was to influence and positively impact students' practices for the use of quality literature in their future classrooms.

The Literacy Methods Course Assignment for Evaluating Texts for Quality

The assignment description directed students to complete specific tasks to achieve the goal of finding and evaluating children's literature they judged as quality texts. Beginning with a library assignment in which a field trip was planned to visit the local public library, students located, reviewed and evaluated 12 children's literature (texts) related to the physical sciences. This area was specifically targeted as these were topics in which our pre-service teachers appeared to struggle with, such as magnets, electricity, structures and forces. As an introduction to the field trip, the instructors collaborated with the youth coordinator of the library who

planned an introductory session of the library's database and available resources. The resources included evaluation tools such as books and journals, and other online resources as shown in Picture 1: Resources for Finding Children's Literature.



Secondly, our students created a reading log of 30 texts combining the first twelve sourced from the public library and the other 18 from a mentor teacher assigned science topic taught during their 5-week practicum experience in PreK – 6th grade classrooms. Some of these topics during fall semesters included the five senses, bats, pumpkins, and weather. In spring, the students examined topics such as electricity, pollution, plants, and food chains. Students individually evaluated each text selected on content, text structures, visual features; how their selection supported a variety of ability levels (text leveling for Guided Reading and Lexile), appealed to diverse learners, engaged interest in science inquiry and topics, and how it would be used in the classroom. The completed log was expected to reflect a variety of genres (i.e., narrative, expository, and hybrid) and text formats (i.e., e-book, website, big book, wordless,

periodical, pop-up, chapter, poetry, reference, and activity ideas). Students then identified their top five texts, and further evaluated these texts as a basis for literacy strategy instruction linked to the NYS ELA CCS.

Finally, at the end of the semester, students completed a three-page reflection paper of their experiences evaluating texts, creating a reading log, and teaching a science lesson at the grade level they were assigned while using a variety of texts related to the topic. Throughout the semester, the goal of finding, evaluating, and using quality children's texts was supported by hands-on activities in the college classroom where students explored suitable literature to enhance literacy strategy demonstrations and the writing of science/literacy lessons. The instructors also introduced articles from leading reading journals to become familiar with the research literature that has led to numerous reforms in elementary classrooms when quality children's books were used.

Examples of Pre-service Students' Reading Log Entries

Students were provided with specific prompts to complete their logs. In addition to including bibliographic information about the text, they were expected to address the following areas as described in Table 1: Evaluating Texts: What to Look For

Text Structure	Content	Visual Features
Type of Text- Narrative (story like), Expository (factual information), or Hybrid (combination of factual information and narrative)	 Is the information accurate and recognizable? How complex are the ideas? How do you see yourself using this text? 	 Illustrations or photographs? Diagrams, such as charts, tables, or graphs to plot information?
• Is the vocabulary and syntax appropriate for the age, interest, and comprehension level of your students?	 Do you think that the text will stimulate the students' curiosity? Why? What is the text level as 	 Illustration extensions such as labels captions, keys, narrative dialogue? Bubbles, or non-narrative dialogue bubbles?

research supported text leveling guide?	What is striking about them and how do they enhance the
	content of the text? Are these
	beneficial to students' reading
	levels and interests?

This information was adapted for our students' use from a Donovan & Smolkin (2001) research article on 'Genre and Other Factors Influencing Teachers' Book Selections for Science Instruction'. We noted that our students' reading log entries included these areas along with descriptions that highlighted how the texts would be used in the classroom to support diverse learners as well as supporting literacy strategies as illustrated in Tables 2a & 2b.

Table 2a: Example of Reading Log Entry

Example # 1

Title: Solids and Liquids: Who Messed Up My Sand?

Author: Emily Sohn and Joel Gendler **Publisher/Year:** Norwood House Press/2011

Date: 2011

Number of pages: 24

Guided Reading/Lexile levels: J/430

Grade: 2nd

Genre: Expository

Summary: This text talks about solids and liquids. The text talks a lot about sand. It introduces concepts like properties and mixtures. This text gets students ready to learn about the states of matter. It is a nice lead in to the phases of matter. This text can be used as either a read aloud to begin a discussion about the phases of matter or for students to read through using this as a reference.

Text structure: This text uses both **problem and solution** and **description** to address the content. The text asks questions such as "How can you get the salt out?" and later in the book the text states the answer to the three ideas of getting the salt out of the sandbox and describes which would be the best. "Pretty good! The salt would dissolve. Then the salty water would go through the holes. The sand would not. Now, you can scrape the sand off the screen. You can put it back into your sandbox!" The text uses description by explaining what mixtures, sorting and properties of liquids and solids.

Content: The text begins with asking a question about salt being in a sandbox. The question is how to get the salt out of the sandbox. This will allow the students to relate to the text. The text describes what properties are and what solids and liquids are. The text also explains what steps you could take to remove the salt from the sandbox. The text is accurate because the content encourages authentic science based activities that students can relate to in their environment. The text was also written fairly recently and there is an index in the back explaining important words in simple ways for students to be able to understand.

Visual Features: The text uses both **labels** and **caption series.** The text uses labels to help the students understand words they may not understand. For example, the text uses an example of sorting beans and sesame seeds in a strainer. If the students had never heard of a strainer, or beans or sesame seeds the text has a picture of these each labelled. The caption series in this book offer extra details. For example, there is a "Did You Know?" section that talks about how some sand whistles and describes how this happens.

Literacy strategy and NYS ELA CCS: Grand Conversation- the students could talk and come up with examples of things they may sort or properties of certain objects. We would then share out as a class.

SL.2.1a Following agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to other with care, speaking one at a time about the topics and texts under discussion).

Table 2b: Example of Reading Log Entry

Example # 2

Title: *My Five Senses* **Author:** Margaret Miller

Publisher and Date: Aladdin, 1998

of Pages: 24 pages

Guided Reading and Lexile Levels: E/200

Grade Level: PreK – 2nd

Genre: Hybrid

Summary: This story focuses on five children who are using their senses. When the author talks about each sense, she also talks about what body part correlates with it while also writing about the body part. With the photographs, children are able to make real life connections to their own ways of using their senses. Each child is of a different ethnicity as well, so children of all ethnicities can relate to the book and understand what the senses are. In the book there is a simple pattern of listing the sense, what body part is used, and examples of what they use their sense for. Multiple examples offers the opportunity for a student to make the connection that maybe they used their senses in the same way at a time. The simplicity of the sentences on each page makes it an easy read for young readers.

Content: This book is also an exemplary book to use to understand the senses. With the use of different ethnicities, this book creates a more diverse learning capability. Children of different ethnicities can now see themselves in the book and see how they use their own senses. Using different ethnic backgrounds provides the option for children who may not have experienced those ethnicities to be exposed to them through a reading that they enjoy. The use of different ethnicities keeps the story visually pleasing as well, as it is incredibly diverse. Literacy Strategy and NYS ELACCS: I would use the Language Experience Approach with learners that may be English Second Language. With using this strategy, the learners will be able to connect with the story of seeing different ethnicities. I would use this in a preschool or kindergarten classroom as it is a simple story. The standard I would use would be RI.PreK. 7. With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g. what person, place, thing or idea in the text an illustration depicts).

Our students also demonstrated their knowledge about global elements (Pappas, 2006), that are typically included as specific features of non-narrative informational text as illustrated in the following examples:

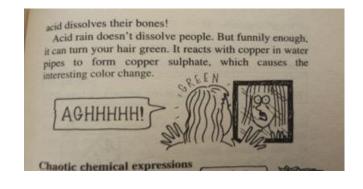
Example 1

Title: Horrible Science: Chemical Chaos

Author: Nick Arnold

Illustrator: Tony De Saulles Publisher: Scholastic Inc. Date published: 1997

of pages: 158



Non-narrative Dialogue Bubble: Non-narrative dialogue bubbles are found throughout this text through the use of comical illustrations depicting characters reacting to the different scientific facts that are discussed on that page.

Example 2

Title: Weather

Author: Penelope Arlon and Tory Gordon-Harris

Publisher: Scholastic Inc. Date published: 2013

of pages: 80

Exposition Complement: One section of this text discusses floods, and page 59 features an exposition complement. It shows a photograph of a home after the flood in Arkansas in 2010.



Example 3

Title: Experiments with Motion

Author: Susan H. Gray Publisher: Children's Press Date published: 2012

of pages: 48

Historical Vignette: This text uses a historical vignette on pages 24 and 25 to provide some historical background and information about Sir Isaac Newton



Pre-service students' reflections on the process

Our students' initial reaction to this assignment showed a gamut of emotions from being overwhelmed and nervous; to becoming quite comfortable with the task. We noted a change as students became more comfortable locating appropriate texts. One student wrote:

I was very nervous when finding out that we would construct a library assignment that consisted of thirty books. At the time it seemed like a lot of literature, but once we began finding books I felt more at ease. I will admit that before going to the library I wasn't

quite sure how to find books. I had not actually searched for a book since I was in middle school.

Another stated:

Completing the library assignment was a tedious process. However...having to complete so many texts really gave me a lot of practice on how to properly select and evaluate texts. Before this course I did not know how to properly select and evaluate texts, or even where to start. I am glad that we had to complete so many texts for the Library Assignment. When it came time to complete the other eighteen books for the Reading Log Assignment it made evaluating texts seem like a breeze.

Despite these initial emotions and range of feelings, we noted that our students were able to utilize resources to select texts from a variety of genres and across grade levels on different science topics. The following students' reflections captured this sentiment.

Another benefit from working on the library assignment, was learning how to level books. I have never had to level books before. This was probably the hardest part of the assignment for me. Learning how to find the Lexile and GR levels is something that I can apply in my career as a teacher and in student teaching. Through this process and through my placement, I also learned how big of a range of levels you need to have in your classroom.

Another wrote,

The library assignment was a great way of introducing us to the world of books...it also helped me to determine which books were worthy of including in terms of visual features, content, and text structures. For example, I came across one book that had

accurate information. However, the pictures didn't match up with the text and the information appeared very unorganized throughout. I chose not to include this book.

Another wrote,

I immediately noticed characteristics that each book had to offer such as a glossary, pictures, charts, and familiar concepts in science that appeared to be accurate information. I explored a variety of different genres such as fantasy, hybrid, expository, and informational books. It is important for children in the classroom to be exposed to different genres so that they are able to distinguish fact from fiction. Different genres also help the students learn from different perpectives.

Students also reflected on the evaluative process when choosing texts:

After completing the library assignment, many of the skills and knowledge we acquired during that process were then able to be used to complete our reading logs. For starters, when I went back to the Potsdam Public Library, I actually knew where to look and find books. That was a nice feeling to not have to wander around a public space looking like a moron.

Another wrote,

When I started researching each text, I had no idea of the amount of information a teacher has to look for when choosing a book. There are many different aspects to consider. Each of the different components of a book can help a teacher determine if the text is appropriate for a specific use. Before this project, the only aspect I considered when looking for a book was the reading level. After hours of reading and searching through each text, I feel I can now successfully choose the type of instruction for a specific book.

The Power of Reflecting: Bridging Present Experiences to Future Practices

As we examined and read our students' reflections we looked for instances when students highlighted the celebration of new knowledge connected with the use and evaluation of literature, and the integration of curricular areas. Taken together, these experiences seem to be the incentive for influencing our students' future teaching as noted in these students' responses.

As I move into my own classroom someday, I will take these experiences and the knowledge with me. When I choose books I will choose them based on the concepts within them. I will also choose books that lend themselves to more than one subject as integration is key.

It is important to expose students to a wide selection of texts such as magazines, eBooks, books, websites, articles, and more. My reading log incorporated one website, a chapter book, and 3 Tumble books (ebooks). Personally, the Tumble books were fun, colorful, interactive, and easy to follow along. I plan to use Tumble books in my future classroom to engage students and allow them to practice their reading/pacing skills.

This entire semester of work may have been daunting at first, and definitely a ton of work, but the experience and skills I have acquired throughout the completion of these assignments is knowledge I will be able to put to use every single day in my future classroom.

Evaluating Texts Providing Opportunities to Explore the NYS English Language Common Core Standards (ELA CCS)

An additional benefit noted in our pre-service teachers' experiences when evaluating children's literature, especially their top five texts, were the connections they made to the current state mandate of the NYS ELA CCS.

Overall, from this whole experience I have learned a lot about curricular integration as well as associating different texts with the Common Core standards. When evaluating the different texts, I had to make sure that I was focusing on literacy as well as science. I kept asking myself, "Does this book relate to my topic, and if so, are there specific aspects of the book I would use in the classroom?" Also, looking at the book and unpacking it to make sure it fit into [supported] the Common Core was extremely important.

It seemed like a very large project but now after finishing it I feel like I learned a lot. Not only did we get a new understanding for the topics we chose but also learned how to

really evaluate literature in keeping with the Common Core standards. We gather so many books that we can use in the future.

The extended reading logs were very helpful because it allowed me to become more

familiar with the Common Core standards. I also thought that exploring different literacy strategies was very useful because it allowed me to brainstorm different ways of presenting the information to the students.

Overall, our observations of our students' reading logs and reflections revealed that our students appear to have gained important skills in finding and evaluating children's literature to judge them as 'quality texts'. We reasoned that this display of skills to determine quality texts could contribute to teacher effectiveness as they moved from their field experiences into their future classrooms. This reasoning seems consistent with previous research findings that identified a correlation between teaching effectiveness and perceptions of successful understanding about a concept. When pre-service teachers are able to interpret their actions as successful they develop high levels of self-efficacy, which is translated into a sense of

confidence and improved teacher effectiveness (McMahon Giles, Byrd, & Bendolph, 2016). We also concluded that our assignments provided our students with 'efficacy building activities' where the underlying principle is that preparing teachers entails fostering the development of competence and confidence and includes engagement in authentic learning activities (Siwatu, Frazier, Osaghae & Sarker, 2011).

Quality Texts for Literacy/Science Integration: Resources for Pre-service and In-service Teachers

Given the encouraging results obtained from this college classroom assignment, we offer a compilation of the texts evaluated as 'quality' texts to both pre-service as well as in-service teachers in Appendix A: Quality Texts for PreK- grade 6 literacy/science integration. Our offering highlights a range of genres that can be used across grade levels to support the teaching of science topics/ themes explored in authentic public school classrooms throughout the year. We also included electronic resources since many students found these to also complement their use of texts. As one student commented: "The largest impact these assignments have had on me are in making me realize that there are a multitude of educational resources online that have expository texts for teachers to use." We noted the prevalence of key authors whose work is often used in science instruction as ones more often chosen in students' lists of top texts (i.e. Joanna Cole, Gail Gibbons, Seymour Simon). Additionally, students were challenged to find a narrative chapter book that coincided with their science topic as a way to extend and enhance classroom learning of the topic. Therefore, you will see texts such as *Out of the Dust* by Karen Hesse under the topic of adaptations, and *Hoot* by Carl Hiassen under the topic of conservation.

Concluding Thoughts

The benefits of selecting and evaluating texts to identify quality literature for classroom use in K-6th grades should not be undervalued. Instead, both beginning and practicing teachers should thoughtfully reflect on what texts deserve attention and consideration when planning for instruction. They should consider the potential roles texts play in promoting language and literacy development, recognizing that in addition to serving as a critical source of academic language in content areas and promoting comprehension, quality texts serve as an entry point to developing lifelong learners.

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Appendix A: Quality texts for PreK-Grade 6 literacy/science integration

Topic	Text title and author with *Guided Reading and Lexile Levels (approximate)
Fall topics	
Rainforest	A is for Anaconda by Anthony D. Fredericks (V/900) "Slowly, Slowly, Slowly," said the Sloth by Eric Carle (C/125) The Great Kapok Tree by Lynne Cherry (R/825) If I Ran the Rainforest by Bonnie Worth (P/800) Over in the Jungle a Rainforest Rhyme by Marianne Berkes (P/800) The Rainforest Grew All Around by Susan Mitchell and Connie McLellan (K/475) The Magic School Bus Presents: The Rainforest by Thomas Jackson (N/700)
Bats	Stellaluna by Janell Cannon (N/700)
	Little Red Bat by Carole Gerber (O/750)
	Amazing Bats by Seymour Simon (T/850) Bats by Elizabeth Carney (L/500)
	Bats in the Band by Brian Lies (M/650)
Pumpkins	Big Pumpkin by Erica Silverman (N/700) The Biggest Pumpkin Ever by Steven Kroll (L/500) Pumpkin Pumpkin by Jeanne Titherington (D/150) The Pumpkin Book by Gail Gibbons (M/650) Plant Reproduction: How Do You Grow a Giant Pumpkin? by Cath Senker (R/825) Mr.Murry and Thumbkin by Karma Wilson (M/650) The Magic School Bus Plants Seeds: A Book About How Living Things Grow by Joanna Cole (R/825) Pumpkin Fiesta by Caryn Yacowitz (P/800) Pumpkins by Ken Robbins (E/200) How Many Seeds in a Pumpkin? by Margaret McNamara (P/800)
Hibernation/Migration	Hibernation by Tori Kosara (K/475) Butterflies! By David Bjerklie (K/475) Watch Me Grow Bear by Lisa Magloff (M/650) Don't Wake Up the Bear by Marjorie Dennis Murray (K/475) Hibernation Station by Michelle Meadows (G/325)
Natural Disasters	Hurricanes by Lorraine Jean Hopping (P/800) Earthquakes and Other Natural Disasters by Harriet Griffey (R/825) I Survived: The Destruction of Pompeii, AD79 by Lauren Tarshis (S/850) Who likes the Rain? by Etta Kaner (H/375) Magic Tree House Fact Hunter: Tsunamis and Other Natural Disasters by Mary Pope Osborne (R/825)

Monkeys	Do You Really Want to Meet a Monkey? by Cari Meister (H/375) Monkeys and Apes by Richard G. VanGelder (N/700) Five Little Monkeys Jumping on the Bed by Eileen Christelow (C/125) Monkey Mo Goes to Sea by Diane Goode (E/200) Monkeys by Susan Canizares (B/100)
Life Cycles	The Life Cycle of a Duck by Andrew Hipp (K/475) The Life Cycle of a Butterfly by Bobbie Kalman (N/700) The Life Cycle of an Oak Tree by Angela Royston (H/375) Growing Frogs by Vivian French (H/375) An Extraordinary Life: The Story of a Monarch Butterfly by Laurence Pringle (X/950)
The Human Body	Your Body by Brenda Stones and Thea Feldman (I/425) A First Book All About Your Eyes, Nose, Fingers, and Toes by Judy Hindley (G/325) How Does the Ear Hear? And Other Questions About the Five Senses by Melissa Stewart (Q/800) My Five Senses by Aliki (H/375) More Parts by Tedd Arnold (K/475)
Weather	Bats at the Beach (https://youtu.be/lBjgoAidJvw) by Brian Lies (L/500) The Drop Goes Plop: A first look at the water cycle by Sam Godwin (K/475) Fall Walk by Virginia Brimhall Snow (R/825) The Big Storm by Bruce Hiscock (Q/800) It's Winter! by Linda Glaser (K/475)
The Five Senses	Me and My Amazing Body by Joan Sweeney (M/650) My Five Senses by Aliki (H/375) Five Senses (Website/ABCya.com) (C/125) Curious George Discovers the Senses by John Loy (M/650) Brown Bear, Brown Bear, What Do You See? by Bill Martin Jr. (C/125) Pass It On! by Marilyn Sadler and Michael Slack (I/425) Jim Henson's Sid the Science Kid: What's that Smell? by Jennifer Frantz (K/475) Whoosh Went the Wind! by Sally Derby and Vincent Nguyen (M/650) Side Kicked by John David Anderson (T/850) My First Look at Touch Board book (A/50) ShhhhA Book About Hearing by Dana Meachen Rau (I/425) 5 Senses Game (http://www.abcya.com/five_senses.htm) (F/250) What Does Baby See? by Denise Lewis Patrick (P/800) Hello Ocean by Pam Munoz Ryan (B/100) The Listening Walk by Paul Showers (F/250) I Am Helen Keller (Ordinary People Change the World) by Brad Meltzer (D/150) Who Was Helen Keller? (Who Was?) by Gare Thompson (Q/800)

	Curious George Discovers the Senses by Adah Nuchi (L/500)
	Making Sense of Senses by Jennifer A. Roth (R/825)
	You Can't Taste a Pickle with Your Ear by Harriet Ziefert (O/750)
	Leopold & the 5 Senseteers: Flour Power by Joshus Tabachnick
	(F/250)
	The Magic School Bus Explores the Senses by Joanna Cole (P/800)
Adaptations/ Habitats	Exploding Ants: Amazing Facts About How Animals Adapt by Joanne
	Settle (Z/1050)
	How the Camel Got its Hump by Christianne C. Jones (L/500)
	Hot, Hotter, Hottest by Michael Dahl (O/750)
	Oscar the Button by Eszter Nagy (K/475)
	Out of the Dust by Karen Hesse (X/950)
	Why Oh Why Are Deserts Dry? ebook by Tish Rabe (R/825)
	Who Has These Feet? By Laura Hulbert (I/425)
	What If You Had Animal Hair? By Sandra Markle (N/700)
	What Do You Do with a Tail Like This? By Steve Jenkins (J/425)
	Born in the Wild: Baby Mammals and Their Parents by Lita Judge
	(W/900)
Survival	Hide and Seek by Toni Eugene (N/700)
	In the Trees, Honey Bees by Lori Mortensen (D/150)
	Diego and the Baby Sea Turtles by Lisa Rao (J/425)
	Do Not Disturb by Margery Facklam (W/900)
	Sea Animals by Angela Royston (I/425)
Magnets/Magnetism	Electricity and Magnets, Hands on Science by Sarah Angliss (U/875)
	Magnetism and Electricity: The Broken Toy Car by Emily Sohn and
	Joseph Brennan (O/750)
	The Magic School Bus: Amazing Magnetism by Rebecca Carmi
	(N/700)
	Magnets Pulling Together, Pushing Apart by Natalie Rosinsky
	(P/800)
	The Magnetic Dog by Bruce Whatley (O/750)
Whales	Journey of a Humpback Whale by Caryn Jenner (L/500)
	Zoobooks: Whales by John Bonnett Wexo (K/475)
	A Look Around Whales by Martha Morss (I/425)
	The Blue Whale by Jenni Desmond (K/475)
	Big Blue by Shelley Gill (N/700)
Spring topics	
Electricity	Electricity by Matt Mullins (O/750)
Liberioty	The Boy Who Harnessed the Wind by William Kamkwamba and
	Bryan Mealer (W/900)
	Blackout by John Rocco (I/425)
	Flick a Switch: How Electricity Gets to Your Home by Barbara
	Seuling (L/500)
	Why does a battery make it go? How? What? Why? by Jackie
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	\perp Holderness (I/425)
Weather	Holderness (J/425) Hurricanes: Weathering the Storm by Benjamin Hojen (S/850)

	Super Storms that rocked the world: Hurricanes, Tsunamis and Other Disasters by Discovery Channel (P/800)
	Flash, Crash, Rumble and Roll by Franklyn M. Branley (N/700) One Rainy Day by M. Christina Butler (L/500)
	Clouds by Marion Dane Bauer (J/425)
	The Big Storm by Bruce Hiscock (S/850)
	The Kids' Book of Weather Forecasting by Mark Breen (R/825)
	Storms by Seymour Simon (T/850)
	Weather Words and What They Mean by Gail Gibbons (Q/800)
	Weather by Catriona Clarke (N/700)
Earth	Miss Rumphius by Barbara Cooney (P/800)
Day/Conservation	Hoot by Carl Hiaasen (Z/1100)
	The Great Trash Bash by Loreen Leedy (L/500)
	Michael Recycle by Ellie Bethel (D/150)
	The Lorax by Dr. Seuss (M/650)
Pollution	Just a Dream by Chris Van Allsburg (N/700)
	A River Ran Wild: An Environmental History by Lynne Cherry
	(P/800)
	Abigale the Happy Whale by Peter Farrelly (M/650)
	Just Grace Goes Green by Charise Mericle Harper (W/900)
	Save the Earth! by Abby Klein (U/875)
Plants and Seeds	Planting a Rainbow by Lois Ehlert (F/250)
	Oh Say Can You Seed? All About Flowering Plants by Bonnie Worth (M/650)
	The Tiny Seed by Eric Carle (L/500)
	Roots, Shoots, Buckets & Boots: Gardening Together with Children
	by Sharon Lovejoy (X/950)
	Elizabite: Adventures of a Carnivorous Plant by H. A. Rey (K/475) Life Cycle of a Plant by Pam Holden (F/250)
	The Biggest Pumpkin Ever by Steven Kroll (L/500)
	Our Tree Named Steve by Alan Zxeibel (P/800)
	James and the Giant Peach by Roald Dahl (Q/800) The Argument by Annie Harmon (N/700)
	My Side of the Mountain by Jean Craighead George (U/875)
	No Monkeys, No Chocolate by Melissa Stewart (R/825)
	Tropical Rain Forests by Peter Benoit (Q/800)
	From Seed to Plant by Gail Gibbons (M/650)
	The Giving Tree by Shel Silverstein (N/700)
The Moon	One Lighthouse One Moon by Anita Lobel (A/50)
THE MOON	Hey, Diddle Diddle by Kin Eagle (J/425)
	Gobble, Quack, Moon by Matthew Gollub (M/650)
	The Disappearing Moon by Dori H. Butler (J/425)
	The Magic School Bus: Lost in the Solar System by Joanna Cole
	(P/800)
Frogs	
Frogs	The Frog by Sabrina Crewe (M/650) Frogs by Goil Gibbons (N/650)
	Frogs by Gail Gibbons (N/650)

	Frogs and Toads by Sara Swan Miller (R/825)
	The Frog: Natural Acrobat by Paul Starosta (N/700)
	Fantastic Frogs by Penelope Arlon (O/750)
Food webs/Food	Pond Circle by Betsy Franco (I/425)
chains	Trout Are Made of Trees by April Pulley Sayre (M/650)
	Predators: The World's Deadliest Hunters! by Steve Parker (L/500)
	Predator in 3-D by John Woodward (L/500)
	Forest Food Webs by Paul Fleisher (M/650)
	Nugget and Fang by Tammi Sauer (K/475)
	Wolf Island by Celia Godkin (P/800)
	Pass the Energy, Please by Barbara Shaw McKinney (O/750)
	Meat Eaters, Plant Eaters by Ross Latham (D/150)
	Carnivorous Plants by Cynthia Overbeck (W/900)
Space	Planets: A Solar System Sticker Book by Ellen Habrouck (H/375)
	101 Things You Need to Know AboutSPACE by Tim O'Shei
	(U/875)
	The Magic School Bus Lost in the Solar System by Joanna Cole
	(N/700)
	Space for Kids Who Really Love Space! by Sarah Powell (I/425)
	Faces of the Moon by Bob Crelin (M/650)
Rocks	Rocks in His Head by Carol Otis Hurst (O/750)
	Let's Go Rock Collecting by Roma Gans (P/800)
	The Big Rock by Bruce Hiscock (T/850)
	If You Find a Rock by Peggy Christian (O/750)
	Let's Rock by Eric Braun (N/700)
Oceans	Plastic Ahoy! Investigating the Great Pacific Garbage Patch by
	Patricia Newman (R/825)
	Solving the Puzzle Under the Sea: Marie Tharp Maps the Ocean
	Floor by Robert Burleigh (N/700)
	Journey into the Deep: Discovering New Ocean Creatures by
	Rebecca Johnson (U/875)
	Oceans: Inside Out by Robin Johnson (U/875)
	Polluted Oceans by Ellen Lawrence (N/700)
The Water Cycle	The Water Cycle: Water Play Series, Book 1 by Mayra Calvani
	(C/125)
	The Water Cycle by Howard Perlman
	http://water.usgs.gov/edu/watercycle-kids-adv.html (W/900)
	Did a Dinosaur Drink This Water? by Robert E. Wells (R/825)
	Tuck Everlasting by Natalie Babbitt (T/850)
	Water Dance by Thomas Locker (K/475)

*Note: Guided Reading is based on the standards developed by Irene Fountas and Gay Su Pinnell in *Matching Books to Readers, Using Leveled Books in Guided Reading*, Heinemann, 1999; *Guiding Readers and Writers Grades 3-6*, Heinemann, 2001; *The Fountas and Pinnell Leveled Book List*, Heinemann, 2006.

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