Sponsoring Committee: Dr. Richard Grove, Moravian College
Dr. Elizabeth Conard, Moravian College
Mrs. Eileen Cro, Lehigh Valley Academy RCS

PUTTING OUR THINKING CAPS ON:

UTILIZING THE THINK-ALOUD STRATEGY TO PROMOTE METACOGNITION WITH INFORMATIONAL TEXTS

Stephanie Chimics

Submitted in partial fulfillment
of the requirements for the degree of
Master of Education
Moravian College
Bethlehem, Pennsylvania
2015

Copyright © Stephanie A. Chimics

2015

TABLE OF CONTENTS

ABSTRACT

This qualitative research study chronicles the observed behaviors and reported experiences of 25 fifth grade students as they engage in the use of metacognitive strategies while interacting with informational texts, in response to the modeling of the strategy use through think-alouds. This study was conducted in an elementary school, consisting of approximately 450 students in eastern Pennsylvania from urban, suburban, and rural areas. To foster students into more active readers who interact more critically with texts, as well as to promote increased student achievement and confidence when faced with the unique challenges and demands of informational pieces of writing, students reflected on think-alouds and the explicit instruction of the teacher and then transferred those experiences to their own guided practice and independent reading. Data were collected frequently through student surveys, examples of student work, and Scholastic Reading Inventory assessments, as well as observations. Through analyzing the data, it became evident that through frequent explicit instruction in strategy use, guided practice during Guided Reading with informational texts, application across disciplines, and abundant opportunities to utilize the metacognitive strategies independently with self-selected books, students demonstrated more confidence when faced with demanding texts, were more willing to be risk-takers during small group instruction, and utilized more strategic approaches to interacting with informational passages.

ACKNOWLEDGEMENTS

This thesis is dedicated to the 25 fifth graders who have shared nothing but enthusiasm and willingness to assist me in my journey of being a lifelong learner. From the excitement and giddy questions about what the thesis process would look like, to the gift of a surprise notebook so that I would have adequate room for all my observational notes, to the Christmas present of a classroom game about identifying text structures, to the catchy metacognition title (our Mission for Metacognition), they have offered me nothing but support during this process. It goes without saying that this document would not exist without them, but their unwavering assistance and passion about helping me have made this process much more meaningful that I could have ever imagined.

I would like to express my gratitude to my colleagues and professors at Moravian College for their insights, support, and for sharing this experience with me. For as overwhelming as this process could be, it was comforting to know that there were people who were going through the same emotions and feelings, just a text message away.

This section would be incomplete without mention of my family, who I would never be here without. They have been there every step of the way, pushing me along with their love, support, and pride. They were the first ones to believe in me, and have taught me the power of being a lifelong learner and the impact it can have on my life's journey.

LIST OF TABLES

LIST OF FIGURES

RESEARCHER STANCE

I vividly remember December 7, 1997, and walking into my fifth grade classroom. On the blackboard Mr. Roman had recorded the question of the day. The words on the blackboard smiled happily to me as I read, "Why is this day special in United States history?" Several emotions flooded through me, such as excitement, eagerness, and confidence that I knew the answer my teacher was searching for. As I carefully pondered the exact words which would formulate the perfect answer in my notebook, the emotion that shined the brightest in my mind was gratitude. I felt such gratitude toward my dad for dedicating the time he did sharing the significance of Pearl Harbor with me from an article written in the daily newspaper the night before. The knowledge that he shared with me through the article not only informed me about the world around me, but provided me with the knowledge necessary to be successful and confident. Upon reflection, this experience illuminates the power that informational texts possess. Informational texts provide us with the opportunity to explore unknown and hidden topics, to interact with the world around us in unexpected and meaningful ways, and to become well-rounded and knowledgeable thinkers who can significantly use our knowledge to impact our world in powerful and significant ways.

My dad fostered a love of informational texts in me because of the passion and enthusiasm for reading and learning that he demonstrated to me throughout

my childhood. He showed me the power of being knowledgeable and the benefits of being an inquirer and a lifelong learner. Every night he modeled for me what a strong reader looked like and shared his insights with me as he read the daily paper, front to back. Unfortunately, not all of our students have the opportunity to grow up and thrive in a print-rich environment where reading is done for pleasure and for purpose. Many of our students look to us as their teacher to be that model for them and to share the insights we have gleaned from our own personal journeys through informational texts. They need someone to care enough to show them how to locate and understand the world that is hidden among the words on the page.

This is an incredible responsibility to undertake as educators. We must explicitly teach how to interact with complex and challenging texts to invite our students to interact with all the knowledge of the world, to explore ancient, present, and future secrets, and to discover the heroes of our history. However, sparking enthusiasm in our students requires enthusiasm and passion from us. We need to provide them with the tools and strategies that will serve as keys to unlock this knowledge on their own when they are interacting with informational texts independently. We can accomplish this by proving to them that informational texts empower us, inspire us, and help us experience our world in novel and valuable ways. Our students must personally see the value in exploring informational texts for them to benefit the most from the interaction. They look

to us for guidance and feed off our personal commitment to the task, so it is our responsibility to ensure that we serving as a role model every step of the way.

By using engaging and authentic informational texts and thinking aloud about our insights, thought processes, and strategies we employ to navigate the knowledge, we are modeling the inner dialogue that occurs in our minds for our students. Through these experiences, our students will not only get a glimpse at the metacognition we utilize but also recognize the richness of information at our disposal if we have the keys to unlock it. Creating a classroom environment where students can then practice these strategies and receive constructive feedback and reinforcement will allow them to internalize the metacognition that will help them remain active in the reading process. In this safe and nurturing environment, students will grow in their confidence when interacting with complex and challenging texts because they will possess the tools necessary to be successful and will have the understanding of how powerful knowledge can be.

It is our responsibility to evoke passion and enthusiasm in our students and to foster them into knowledgeable inquirers who are determined to be lifelong learners on the quest for understanding. The research question being posed states, "What are the observed behaviors and reported experiences when a teacher utilizes the Think aloud strategy to foster metacognition with informational texts?" By incorporating the Think aloud strategy into reading instruction to promote metacognition when interacting with informational texts, the hope is to

provide students with the keys to unlock the mysteries and insights of our world, both on their educational journey in the present and in their everyday travels in the future.

LITERATURE REVIEW

Informational texts afford students opportunities to enhance their human experience by providing them with the information that contributes to their awareness of the world around them. Adequate exposure to informational texts ensure that students are able to transition into the adult world with the skill set necessary to read texts to gain knowledge (Ness, 2011). The Common Core Standards are calling for instructional time in the upper elementary grades to be 50% fiction and 50% nonfiction (Greene, 2013). However, the Kaiser Family Foundation found that students are choosing to read less than 4 minutes a day of nonfiction in their leisure time (Rideout, Foehr, & Roberts, 2010). Informational texts pose specific, unique, and demanding challenges for students due to the various text structures utilized to organize the information, the text features that provide additional, yet sometimes overwhelming facts, and the domain specific vocabulary which demands students to strategically derive meaning from unknown words.

Explicit and precise instruction on metacognitive strategies increases comprehension of informational texts by helping students navigate the demands of the genre (Lapp, Fisher, & Grant, 2008). When teachers employ the Think-Aloud Strategy, students receive the opportunity to become more thoughtful and active in their own reading by experiencing the inner dialogue that occurs in a proficient reader's mind while interacting with informational texts. After

modeling, it is the responsibility of the educator to allow time for students to actively interact with informational texts with specific feedback and support to guide their practice and build their confidence. By scaffolding their understanding through explicit instruction, modeling, and guided practice, students will internalize the metacognitive strategies that will help them be critical and successful readers of informational text (Lapp, Fisher, & Grant, 2008; Wilson & Conyers, 2014). Wilson and Conyers (2014) emphasize the benefits of metacognitive instruction through think-alouds, explicit discussion in the usefulness of these strategies, and helping students to recognize how these strategies can benefit them in their future educational endeavors and careers. Metacognitive instruction to enhance deeper and more critical exploration and understanding of content, beginning in the earliest grades, correlates with the primary goals of the Common Core Standards and provides students with the skills necessary to find success (Wilson & Conyers, 2014).

Best Practices in Think-alouds

Think-Aloud Strategy. The Think-Aloud Strategy affords proficient readers the opportunity to illuminate the internal dialogue and processes they are going through when interacting with a text (Olshavsky, 1977; Davey, 1983). By explicitly sharing the myriad of thoughts that occur within the mind of a proficient reader, developing readers will recognize that reading is an active process and that we have to remain active with the text in order to build our

comprehension. Meaning is not always created by just the decoding words but also through using various strategies in conjunction with one another to build understanding from the words on the page. It is the responsibility of the educator to impart how to build understanding of content by facilitating active interaction with text rather than focusing on just teaching that content to the students (Wilhelm, 2001). If students are provided with the tools necessary to construct their own understanding of text, then they are able to unlock content on their own and are more prepared to become lifelong learners who understand how to gather what they need independently and with ease.

In order to develop students into thoughtful, critical, and active readers when interacting with complex and challenging texts, it is the responsibility of teachers to provide opportunities for students to understand how to utilize metacognition, when it is appropriate to use specific strategies in regards to the purpose and text structure presented, and how to recognize when a different strategy would be more effective (McTavish, 2008). Walker (2005) found that many struggling readers have a negative understanding of their ability to be strong readers because they are not actively engaging with the text and are underdeveloped in their ability to use metacognition and self-regulation. Beers (2003) reflects that developing readers observe their peers moving through text with ease, but are unable to observe all the inward processes those proficient peers are undergoing to make meaning of what they are reading. Think-alouds allow

that dialogue and those processes to become illuminated and allow developing readers to learn how to possess and use those tools to unlock the meaning behind the words on the page.

Research also suggests that developing readers sometimes use strategies in a faulty manner, which can lead to a breakdown in comprehension, especially within the informational genre (McTavish, 2008). As teachers think-aloud and model these metacognitive strategies, students are able to see a clearer representation of the internal processes that occur inside a proficient reader's head and are able to observe the inner dialogue that helps the reader construct meaning from the text (Hagaman, Luschen, & Reid, 2010). Wilson and Conyers (2014) even stress the importance of making mistakes when engaging students in a think aloud and then thinking-aloud explicitly about how you fix your misconceptions and mistakes. Eilers and Pinkley (2006) recognize that in order for students to become strong readers, modeling of metacognitive strategies through the use of think-alouds must be explicitly taught through instruction.

Explicit instruction. Explicit instruction is purposeful and intentional instruction that provides students with a clear and detailed explanation of the concepts. This model of instruction has been shown to be beneficial when instructing students in strategy use. Bluestein (2010) explains, "Such instruction allows for students to straightforwardly and clearly learn comprehension strategies over a period of time before owning them with independence. When

we unpack a strategy completely for students, we ensure their abundant internalization of our instruction" (p. 597). It is the teacher's responsibility to foster strategy use in our students by providing them with opportunities to see how we use those strategies in an in-depth and clear way. Dymock and Nicholson (2010) caution that teachers should not jump to the conclusion that students will learn strategies without explicit explanation. Our instruction needs to be planned and purposeful to meet the needs of all our readers. Researchers have found that strategy use has to be stated clearly and in detail in terms of how to use the strategy, when it is appropriate, and why we would use the strategy (Hagaman, Luschen, & Reid, 2010). By promoting the benefits of strategy use, we communicate the importance of actively engaging with the text in a way that is meaningful for our students and help them see the value of the strategies.

Boulware-Gooden, Carreker, Thornhill, and Joshi (2007) studied whether direct and explicit instruction in the use of metacognitive strategies would be effective in regards to comprehension of text. The researchers explored the theories and frameworks regarding comprehension, vocabulary instruction, and metacognition within the elementary school classroom. They questioned whether third grade students would increase their comprehension and vocabulary achievement if they were explicitly taught multiple metacognitive strategies. Their study took place within six, third grade classrooms in two different urban schools in the southwest of the United States. Students took a variety of pre-

assessments to identify their academic levels, which included Word Attack, Letter-Word Identification, and parts of the Woodcock Johnson III Test of Achievement.

Following the pre-assessments the students were exposed to 30 minutes of reading comprehension instruction every day for 25 days with all expository passages, with one of the schools also engaging in direct instruction of metacognitive strategies everyday as well. The intervention group was exposed to direct and explicit instruction in strategy use every day to complement the comprehension instruction. The teacher attempted to hook and motivate the students, utilizing semantic webs to build vocabulary specific to the text, read the story while thinking out loud, and then called upon the students to explore the main ideas and summarize the text. The design of this study was consistent across the groups, except for the direct instruction of strategies, even down to the exact expository texts to be used.

Following the 25 days, data were collected and analyzed by giving all students the same criterion-referenced assessments as the beginning of the study to identify their academic levels after the instruction. The researchers found that over the course of the 25 days, the intervention group had 40% greater gains in vocabulary and a 20% increase in gains in reading comprehension compared to the control group, which appeared to be related to the additional instruction in metacognition. These students were found to use multiple strategies while

interacting with the expository text, were more likely to think out loud as they were reading, and were shown to monitor their understanding of the text more. Summarizing was included as one of the metacognitive strategies that was emphasized, which the researchers believe impacted their ability to evaluate and analyze the material better, which led to more comprehension of the text, as indicated by the percentage of gains shown by the data collection instruments (Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007).

Hagaman, Luschen, and Reid (2010) also recognized the importance of taking the time to model, scaffold, and guide the students through the strategies and then having them engage in those strategies independently. Through increased modeling and explicit instruction during think-alouds, teachers are able to release responsibility gradually to the students, provide them with adequate time to independently engage in using the strategies, and ultimately guide them toward internalization of the targeted metacognition to promote deeper levels of understanding and comprehension, even with complex and demanding informational texts (McTavish, 2008).

Think-alouds with informational texts. With increased emphasis on Common Core standards, informational texts are becoming more integral to the learning experiences of children. Common Core Standards require that 50% of reading within the fifth grade classroom should be focused on informational texts and the strategies used to best comprehend them (Greene, 2013). The use of

think-alouds while interacting with informational texts provides the opportunity for the unique characteristics of this genre, such as text structures, text features, and domain-specific vocabulary, to be explored in a way that illuminates how to navigate these challenges in an effective way. Think-alouds can demonstrate what specific metacognitive strategies are most efficient when working with this genre, how to recognize when strategy use is faulty, and how to select a new strategy that will be more beneficial in that situation (McTavish, 2008). Using the Think-Aloud Strategy while working with informational texts also allows teachers to demonstrate how strong readers grapple with the specific challenges that are presented in this genre, which helps all students to recognize that even proficient readers find the text demanding and need to employ strategies to be successful. The researchers stress the importance of grappling with the demands of these texts in front of the students because it demonstrates how using metacognitive strategies and putting forth effort to navigate a challenging text can be a meaningful and fulfilling experience (Lapp, Fisher, & Grant, 2008).

Best Practices in Metacognition

Metacognition. Metacognitive theory explains how people reflect on their own thinking when interacting with text in a variety of ways to enhance their understanding of what they are exploring. McKeown & Gentilucci (2007) explain that reading is the process of actively developing meaning from the text and that readers use metacognition to "think about their thinking" throughout this process

(pp. 136). By utilizing reading strategies, such as questioning, monitoring understanding, connecting, and visualizing, metacognition is fostered and readers become more actively engaged in the process and enhance their comprehension of the text (Keene & Zimmermann, 2007). Students become more willing to take their time to analyze the text and examine the meaning between the lines, which increases understanding, authenticates the knowledge, and also fosters confidence in students as they know how to read for meaning and how to express and support their thinking in meaningful ways (Keene & Zimmermann, 2013).

Research suggests that proficient readers activate several metacognitive strategies in conjunction with one another to truly understand a text (Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007). However, developing readers struggle to utilize these strategies, which lead them to become passive readers who are not aware of their own understanding of the text or what steps to take if they experience a breakdown in comprehension. It is imperative that while modeling the strategy use, students understand why they are doing each part and when the strategy is most appropriate. Students also need to understand that strategy use is much more than just knowing the procedure of the strategy (Hagaman, Luschen, & Reid, 2010). By explicitly instructing students on appropriate strategy use, teachers are providing them with the opportunity to experience the inner dialogue of a strong reader interacting with text, and guide

them to internalize these strategies which they can apply to all texts and all new reading experiences they might encounter (Eilers & Pinkley, 2006).

This explicit instruction in metacognitive strategies must be modeled, scaffolded, and guided within each genre individually so that students recognize the differences that occur when switching from fictional stories to informational texts. Prado and Plourde (2011) support this idea and explain that teachers need to teach students to approach genres in different ways because their purpose changes based on what they are reading. McTavish (2008) suggests that informational texts may require a specific set of metacognitive strategies, such as questioning and monitoring understanding, to promote comprehension and synthesis of the material.

Questioning. Proficient readers utilize metacognitive strategies to remain actively engaged with the text, which facilitates stronger comprehension. Questioning calls upon students to be reflective about their understandings and to seek clarification of any misconceptions they may have. Research suggests that encouraging students to actively question the content they are interacting with before, during, and after reading promotes higher levels of understanding (Dymock & Nicholson, 2010). Modeling can demonstrate to students that there may be more than one answer to a question and that sometimes we have to go beyond the text to find an answer. Within informational text, students can be explicitly taught how to incorporate the important characteristics of that genre

into their questioning, such as asking questionings about the structure of a text, questioning the meaning of unknown words that are specific to the content, and by asking questions regarding the text features that are presented (Dymock & Nicholson, 2010). By posing these questions and then motivating themselves to answer the questions they generated, students interact with the text in an active and continuous way, which facilitates their understanding of the text as a whole.

Visualizing. The metacognitive strategy of visualization aids students in their comprehension by helping them create an image in their minds of what is occurring in the text. Specific to informational texts, visualizing the text structure that the author used to organize the information and applying it to graphic organizers that were modeled during the instruction of text structures can help guide students to reorganize the information in their own minds, make it their own, and diagram the structure that is being used (Dymock & Nicholson, 2010). Developing readers can then transfer these diagrams, or organized graphics, onto paper to make visualizations of the information more concrete. These visualized diagrams consist of the main idea and aid students in determining importance and eliminating unnecessary information.

Lapp, Fisher, and Johnson (2010) support the use of text-mapping plus, which creates a graphic that organizes information within the text. Text-mapping plus is a retelling technique which allows for students to create a mapping of what they have read, and as they add additional information, words, and graphics, their

understanding of the text becomes deeper and more complex. They agree that visualizations such as text-mapping plus help students to prioritize and determine importance among information, enhance their understanding of the text, and that using this visualization of what has been read increases confidence in students, especially when asked to provide a retelling (Lapp, Fisher, & Johnson, 2010). Use of this type of visualization has benefited all students, but the authors state that students with language barriers benefit immensely from organizing the information in this graphic way because it provides cues that spark comprehension, especially during retellings and while summarizing (Lapp, Fisher, & Johnson, 2010).The more the students can use these graphics to organize the abundance of information they are collecting, the more they can access the information at a later time, which demonstrates true comprehension of the text and bridges their prior knowledge with new insights (Dymock & Nicholson, 2010).

Activating prior knowledge and connecting to existing schema. Informational texts provide the opportunity for teachers to embed comprehension strategies and skills into authentic reading experiences where students are gathering information for an engaging purpose (McTavish, 2008). Many students have a natural curiosity that sparks background knowledge and helps them to connect the new information to existing schema that they already possess which deepens their comprehension and provides them with more incentive to actively

engage with the text. Ness (2011) notes that informational text fosters the growth of prior knowledge in students by exposing them to new information about the world around them to complement the schema that already exists, which ultimately aids their comprehension of those concepts when interacting with future informational texts on the same topic.

Though informational texts provide vast opportunities to build on prior knowledge, some students may lack the background necessary to derive meaning from the text in the first place (Ness, 2011). Teachers should teach students how to ask themselves questions about a text prior to reading it and how to assess their background knowledge of the content. Based on their level of prior understanding, teachers can demonstrate how to find additional information through other resources such as maps, videos, and how to use technology to support their understanding independently (Dymock & Nicholson, 2010). Explicit instruction on how to make those vital connections through think-alouds provide students with the resources they need to create a strong foundation for themselves, even while interacting with content about which they possess limited prior knowledge.

Synthesizing information. Synthesizing information can be challenging for students as they are required to blend together important ideas and details to create a complete and comprehensive picture of what the text is stating, including information from other texts on the topic and prior knowledge. Cummins and

Stallmeyer-Gerard (2011) explain that many students do not respond to the big ideas of a text, but rather simply to pieces of the text that they identify as being important, which demonstrates a lack of synthesis. They explain that through the use of think-alouds, teachers can demonstrate how a proficient reader makes sense of all the details within a text and how they combine them to create a synthesis of the written piece. They can then model how to use that synthesis of text to compose a written summary, which demonstrates true comprehension of what has been read (Cummins & Stallmeyer-Gerard, 2011). The act of summarizing and paraphrasing the information within a text calls upon students to reinforce their own understanding, determine importance based on the details that have been shared within the text, and then organize their ideas into a cohesive piece, which guides them to actively engage with the text throughout the entire reading process (Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007). Hall, Sabey, and McClellan (2006) recognize that summarizing a piece of writing, after the initial reading, guides students to interact with the information they encountered in a fresh way that cements their understanding and corrects any misconceptions that might have occurred.

Bluestein (2010) created a summarization technique entitled Very Important Points (VIPs) to help students identify the main ideas that exist within a text by determining how important information they encounter is. This technique requires students to engage in a variety of strategies in conjunction with one

another, such as connecting to background knowledge, visualizing, and determining importance of information, to help students focus their attention while reading the informational text. Students then use their VIPs to synthesize the information they have explored in the text and to create a cohesive, succinct, yet complete summary, which demonstrates their true comprehension (Bluestein, 2010).

Monitoring understanding. Strong readers possess the ability to monitor whether they comprehend what they are reading or whether they need to apply additional strategies to fix misconceptions and breakdowns in comprehension (McTavish, 2008). These readers then apply strategies such as rereading, taking their time with the text, and utilizing context clues to reinforce the information they are taking in. Beers (2003) stresses that developing readers do not always understand that even proficient readers sometimes have to read things multiple times to construct meaning from the text. These readers are sometimes under the assumption that the proficient readers read something once and understand it completely. Educators must prove to students that rereading is a strategy that can be meaningful and effective when dealing with text, especially when it is complex and demanding, which can be demonstrated through modeling and thinking aloud, showing the treasures we can find when we read something more than once (Beers, 2003). Developing readers need to be explicitly taught how to reflect on

what they have read and evaluate their understanding throughout the entire reading process.

Determining importance. Informational texts require students to determine which pieces of information are necessary and important for them to know and what factual information is not essential for understanding the text (Bluestein, 2010). This can be a daunting and challenging task as many authors compose expository texts with an abundance of information that readers have to reflect on and prioritize accordingly so that the text does not become too overwhelming to process. Harvey and Goudvis (2000/2007) recognize that students sometimes believe that everything is important in a piece of writing, or it would not have been written there, so it is the teacher's job to show them how to choose what is important and extract it from the secondary ideas and facts. Instructing students on how to use the text structure and text features that exist within informational texts to identify the key ideas that they should extract from the plethora of facts will build their confidence and provide them with the tools they need to travel through demanding texts with a clearer purpose and deeper comprehension of the content (Bluestein, 2010).

Best Practices in Teaching Informational Texts

Informational texts. As students progress into the upper elementary grades, there is a stronger emphasis placed on reading to gain information. Hall, Sabey, and McClellan (2005) recognize that students interact with more fictional

narratives in the primary grades, which does not adequately provide them with the skill set necessary to interact with informational texts. Without adequate exposure to informational texts, students will not possess the strategies and skills necessary to tackle the demands of this genre, which can impact their confidence and motivation (Fang, 2008).

Ness (2011) aimed to understand how kindergarten through fifth grade teachers were utilizing informational texts within their classroom. Ness raised three research questions, which centered on the frequency that informational texts were included in an average school day, how teachers felt about the positive benefits of informational texts, and what challenges prevented teachers from utilizing informational texts with their students. To obtain data, the researcher asked 318 K-5 classroom teachers from six different states to respond to open-ended questionnaires about their use of informational texts. The data collection occurred during the 2007-2008 school year (Ness, 2011). Using a constant comparative method, she analyzed the data through data coding for any patterns that were recognized in the written responses (Ness, 2011).

The findings of the study indicated that teachers in K-5 classrooms were integrating informational texts into their everyday instruction, but that this integration occurred at a higher frequency in the upper elementary grades than in the primary classrooms (Ness, 2011). Ness (2011) suggests that this occurs as the students move from learning the mechanics of how to read to using their

understanding of reading to gain information. Findings indicated that the overall percentage of informational texts within the classroom libraries was 32.77% on average, which did not provide students with adequate opportunities to utilize informational text on their own during independent reading (Ness, 2011). Teachers shared that they felt that informational texts were important for students because they help build prior knowledge, provide them with opportunities to become more familiar with the genre, which will benefit them as they enter middle school and high school, and because students' natural curiosities keep them engaged in this genre because they have a thirst for learning about various topics (Ness, 2011). However, there were overwhelming patterns in the challenges that informational texts present which prevented teachers from feeling as confident in explicitly teaching how to read this genre. These challenges included domain-specific vocabulary, the text structures and features that are unique to informational texts, and the lack of background knowledge of students that prevent them from comprehending what they are reading (Ness, 2011). Lack of resources, time, and professional opportunities to grow in their understanding of how to teach informational texts also present challenges that impact the prevalence of informational texts within instruction, even though the benefits of such instruction are well understood (Ness, 2011).

These specific challenges are problematic as the students' abilities to navigate these demanding texts are dependent on exposure to the genre and on

explicit instruction in strategy use with this type of text (Fang, 2008). Informational texts possess unique vocabulary specific to the content and not common in everyday language, text structures that are not always chronological in nature, and text features which provide additional information that needs to be comprehended and synthesized. Prado and Plourde (2011) concur that students need to be taught to approach various genres in unique ways that are based on the characteristics presented. McTavish (2008) agrees that exposure to informational texts is not enough to prompt students to utilize the strategies that are going to help them be most successful, but rather that they require explicit instruction in how to interact with informational texts to find success.

Analyzing text structures. When students possess the ability to recognize how an author has organized a piece of writing, they are better able to identify the main ideas of the text and comprehend relationships and connections within the text (Hall, Sabey, & McClellan, 2005). When a student approaches a text with prior understanding of its organization and structure, she can visualize the flow of the text and anticipate how to navigate the text more effectively. Bakken and Whedon (2002) identify the need for teachers to explicitly teach students which strategies are most appropriate for each specific text structure and why they are most effective in that situation, so they can get the most out of their strategy use.

Hall, Sabey, and McClellan (2005) researched the effectiveness of small group instruction that targets expository text comprehension in second grade students, including how it relates to text structure. They analyzed data from five second-grade classrooms, which were randomly assigned to three conditions. The three conditions explored were the Text Structure group, Content group, and No Instruction group and all participated in small group instruction over the course of six weeks. All of the conditions utilized two types of expository text which included informational books from the guided reading collection already at the school and passages that were drafted by the researchers. The Text Structure group instruction consisted of introducing the text to the students, including vocabulary and the main idea, reading the text, and then reflecting on the text and summarizing, with the use of graphic organizers about text structure. The Content group followed the same instructional sequence, but the graphic organizer dealt with the main idea and supporting details of the passage. The students were assessed before the intervention using four measures that targeted summarizing skills of a compare and contrast text, identifying clue words in a paragraph, matrix, and vocabulary. The posttest utilized the same data measures.

The researchers found that the small group instruction that targeted text structure was the most successful in regards to comprehension of the text. The students in the Text Structure condition were shown to efficiently use the strategies, especially the graphic organizers, to help them understand. The

authors stressed that the students were interacting with well-structured texts, which utilized a clear compare and contrast text structure, which impacted reading comprehension. They share that students experience more difficulty with texts that are unstructured or use several text structures within the same piece of writing. They also share the importance of teachers giving the students adequate time and opportunities to interact with informational texts so that they can practice and reinforce the strategies taught in the small group instruction.

It is necessary to explicitly teach students these text structures as many informational texts call upon them to utilize several text structures within the same piece of writing (Ness, 2011). Dymock and Nicholson (2010) stress the importance of explicit instruction on each text structure independently, with the aid of graphic organizers, to help students truly master the concept and be able to analyze which is occurring in a text and why it is appropriate for the information that is being presented. Opportunities to interact with the various text structures with teacher scaffolding will build student confidence and help them transition between the myriad of structures in a more fluid and automatic way, which will increase comprehension of the information being presented (Ness, 2011).

Identifying and utilizing text features. Another unique characteristic of informational texts is the use of text features that provide the reader with additional information to synthesize. Students may not understand how to interact with these features, such as headings, diagrams, captions, and text boxes, and

therefore lack in their full understanding of the topic because they are not gathering all necessary information (Ness, 2011). Many students may skip over these additional features and feel overwhelmed by the abundance of information on a single page if they have not had explicit instruction as to how to read these features and use them to their full advantage (Ness, 2011; Bluestein, 2010).

Students need to be instructed on how to use the features to their fullest potential to build the deepest comprehension of the material possible (Dymock & Nicholson, 2010). Bluestein (2010) suggests that teachers can use their modeling and instruction to demonstrate how to hone in on the essential and vital information and how to not get confused by the details and secondary facts within the text. By modeling how to interact with text features using biographies, which are similar to the students' narrative experiences, and with journalistic texts, which tend to be shorter and less dense with information, students have a more nurturing and less intimidating experience with the text to practice interacting with text features. Once students have mastered how to utilize text features to their fullest potential using these stepping stone texts, they will be more prepared to tackle larger informational pieces with efficiency and confidence, even if they are more condensed with information.

Interacting with vocabulary. Informational texts require students to experience novel vocabulary that is specific to the content being addressed, which can be problematic to our students if they do not possess the strategies necessary

to determine the meaning of unknown words (Ness, 2011). The vocabulary within informational texts is not within the student's common language, which limits exposure to the words (Dymock & Nicholson, 2010). This problem exists for all students, but creates a significant barrier for English Language Learners and developing readers. Sibold (2011) suggests building a vocabulary rich environment where students are enthusiastic about identifying unknown words and understand how to find their meanings through repeated explicit instruction in uncovering unknown words, which will benefit all learners, including those with language barriers. Creating a nurturing environment where students are eager to learn new words rather than discouraged and intimidated by them, promotes self-awareness. Direct instruction on how to figure out unknown vocabulary contributes to that awareness and builds confidence by providing them with the tools they need to unlock the mysteries of the words.

During think-alouds, it is imperative that teachers use vocabulary tactics to show students how to solve conflicts that arise around unknown words, rather than simply telling them what the word means. When teachers take the time to model how to utilize context clues, available resources, and word morphology to derive meaning of unknown words, students will add these tools to their personal repertoire and be more willing to tackle the specific vocabulary and build a stronger understanding of the words, which adds to their overall comprehension of the material (Lapp, Fisher, & Grant, 2008).

Providing students with the opportunity to experience what occurs in proficient readers' minds as they interact with complex and demanding texts helps build their comprehension and illuminate the important of appropriate strategy use to navigate challenges (Lapp, Fisher, & Grant, 2008; Olshavsky, 1977; Davey, 1983). Exploring the unique demands of informational text, such as domain specific vocabulary, a myriad of text structures, and the various text features which provide additional information, exposes students to the novel characteristics of the genre and help them to gain the key facts and details which are imperative to promote deep comprehension (Hall, Sabay, & McClellan, 2005; Dymock & Nicholson, 2010; Bluestein, 2010). Explicitly instructing students on the metacognitive strategies that are most beneficial and effective when interacting with informational texts will provide them with the skill set necessary to be successful in their educational journey and their adult life (Wilson & Conyers, 2014; McKeown & Gentilucci, 2007; Keene & Zimmermann, 2007). Synthesizing all of these unique characteristics of informational texts with explicit strategy instruction in metacognition will guide students to unlock the abundance of benefits that this genre has waiting for them and provide them with the skills and understanding necessary to unlock their own success in the process.

RESEARCH DESIGN AND METHODOLOGY

The prevalence of informational texts within the everyday lives of our students is increasingly demonstrating the significance of explicit strategy instruction to prepare students to interact with complex and demanding texts. Lapp, Fisher, and Grant (2008) found that explicit modeling and instruction on metacognitive strategies increases comprehension of informational texts by helping students navigate the unique and challenging demands of the genre. The intent of this action research project was to determine the observed behaviors and reported experiences when utilizing the Think-Aloud Strategy to foster metacognition in fifth grade students while interacting with informational texts. The instructional procedures consisted of regular, twenty minute lengths of time for modeling through think-alouds on strategies strong readers use while interacting with informational texts and a strong emphasis on the specific characteristics that exist within the informational genre that differentiate this type of text from fiction. Guided and independent practice occurred throughout the day in a variety of disciplines.

Setting

The setting of this action research project was at an elementary school in Pennsylvania. There were approximately 450 students in the elementary school, which spanned from fourth grade through sixth grade. The population of the

school was varied and included students who lived in urban, suburban, and rural areas.

Within this fifth grade classroom, a quarter of the room was dedicated entirely to the classroom library. There were approximately 1,500 books and magazines of various levels and genres. Informational texts made up about half of the classroom library. There was a large carpet and an array of pillows for the students to use within the classroom library. The students were seated in groups of four to five students each. The classroom also contained a Smartboard and an ELMO document camera.

Participants

There were 25 participants who were all in fifth grade and were approximately ten to eleven years old. There were 13 girls and 12 boys within the classroom. This classroom was heterogeneous in academic abilities and there was a wide variety of reading levels throughout the classroom. There were two students with an IEP in English Language Arts who were instructed by the learning support teacher during ELA times.

Procedures

Four days prior to the first session together, the students were asked to complete their Pre-Study Surveys (see Appendix D) on their attitudes toward reading, especially in the genre of informational texts, and the specific strategies that they employ as they are reading. This survey acted as baseline data and

showcased where the students' attitudes and strategy use was prior to the modeling and instructional sessions.

One day prior to the first session together, students were told that just as they are students who are learning, their teacher was also a student. It was explained that over the next few months some of their work would be collected, and that conversations about our reading of informational texts would take place. There was a regular period of approximately 20 minutes on Tuesdays, Wednesdays, and Thursdays, where they explored strategy use through think-alouds and modeling with informational texts and an additional period of time on those days where they spent time actively reading their own self-selected books, interacting with informational texts on their own, and reinforcing the skills with various activities. Additional reinforcement occurred during Writer's Workshop and the Science and Social Studies time block.

Following that conversation, students sat together and were asked to create the classroom procedures that everyone would follow while spending time reading independently. These procedures were the guidelines and expectations for behavior, and included choosing appropriate books, handling the books well, how to find a spot to read, and how to record our reading behaviors in our Reader's Notebooks. This essential agreement for our independent reading time was student generated and written on a poster. Each student signed their name to show their support and commitment to following these guidelines. The signed

essential agreement was placed on the classroom library wall for all students to see in case they were in need of a reminder.

Week one. The following sessions occurred during the first week.

Session one. Objective: Students discussed the importance of informational texts. Students analyzed the distinguishing characteristics of informational texts that differentiate them from narrative fiction.

- Students were asked to create a word splash on the Smartboard of all the words that came to mind when they heard the words "informational text".
- The students did a Think-Pair-Share as to what they thought a "structure" was. I explained that a structure is a building or a framework of something. I connected this to how text structure is the way an author builds a piece of writing.
- I asked the guiding question, "Why are text features helpful?"
- I asked the question "What do you do when you come across a word that you do not know?"

Session two. Objective: Students were introduced to the metacognitive strategies that are helpful while interacting with informational texts.

- We discussed how strong readers remain active and interact with the text before, during, and after we read.

Session three. Objective: Students examined the use of metacognitive strategies while interacting with the distinct characteristics of informational texts.

- I shared that using the metacognitive strategies while reading informational texts help us to focus on what is most important and to truly engage with the material in a way that will make it more real and meaningful for us.
- We brainstormed reasons why we use informational texts to demonstrate that this genre is significant in our lives.

Week two. The following sessions occurred during the second week.

Session four-six. Objective: Students recognized the text structures that are utilized by authors to convey information.

- Together we made a flipchart of the five most common text structures. The flipchart focused on description, problem and solution, chronological, cause and effect, and compare and contrast text structures.
- Students then met with a partner and interacted with the latest *Time for Kids* periodical. The students wrote the text structure utilized in the feature article in their Reader's Notebook.

Week three. The following sessions occurred during the third week.

Session seven. Objective: Students generated questions based on informational text and used textual evidence to answer the questions throughout the rest of the text. They continued to classify texts based on text structure.

- I shared how strong readers ask questions to help them remain active with the text and that this can occur before, during, or after reading.
- Together, we created an anchor chart on the Smartboard about the reasons to generate questions.
- I did a think-aloud to show students how I generate questions about the topic using the article "Up, Up, and Away". I shared how I developed the questions and how to document them in my Reader's Notebook so that I could remember them and search for evidence while I was reading to answer the posed questions.
- Each student received a Table Texting organizer (see Appendix J) and read the article "Saving Sloths". After reading, the students generated a question and documented it on the organizer. The students switched their organizer with the person to their right and that person responded to the question using textual evidence or inferences that they have made now that the text had been read. After an appropriate amount of time, the students switched again

with the person to their right, who wrote a new reply, whether to the question or the response.

Session eight. Objective: Students interacted with text features, including the table of contents, glossary, and index.

- Using our weekly story, *Fury of a Hurricane*, we explored table of contents on the Smartboard. I thought-aloud how to find information on hurricane names using the table of contents. Then I used a think-aloud about how to find information about the process by using the index. I used a think-aloud about the benefits of a glossary.
- Students used Text Mapping to begin gathering examples of the text features in periodicals.

Session nine. Objective: Students utilized text features to develop their own diagram.

- Students engaged in creating their own Hurricanes in a Bottle to complement the weekly story, *The Fury of the Hurricane.*
- Using their understanding of text features such as diagrams, titles, captions, and labels, they formulated their own diagram of the Hurricane in a Bottle and what it demonstrated in relation to a real hurricane.

Week four. The following sessions occurred during the fourth week.

Session ten. Objective: Students activated their prior knowledge on a topic and connected new information to their existing schema. They continued to use previously explored metacognitive strategies. Students interacted with text features, including headings, special fonts, and text boxes.

- I shared that strong readers also make connections to their prior knowledge and existing schema, which we discussed as a file folder in our brain.
- The students received the RAN strategy organizer (see Appendix F) to place in their Reader's Notebook. This organizer, Reading and Analyzing Nonfiction Text, required students to reflect on their prior knowledge, what was confirmed while reading, what new learning occurred, any misconceptions that they came across, and any questions they still had.
- We focused on headings and subheadings, special fonts such as boldfaced, italicized, underlined, and highlighted words, and text boxes with additional information.
- While reading "Manatee Emergency" on the Smartboard, I did a think-aloud about how to use the RAN organizer as I read the section. I used the text features available to think-aloud how they helped build understanding of the text. Afterwards, I added

information to my misunderstandings, new learning, and questions I still had.

- To reinforce the strategies, students were asked to reread "Manatee Emergency" and add to the RAN organizer together.
- Each group of students was given time to work on their text structure and text feature Text Mapping activity.

Session eleven. Objective: Students visualized the structure and information in their text to aid comprehension and understanding. They continued to use questioning actively as they read independently. They continued to differentiate text structures.

- I shared that strong readers make pictures in their mind of what they are reading to help them understand the text.
- I drew attention to the graphic organizer visuals that we created in our text structure flipcharts for each type of structure and related the text structure to visualization of the text.
- With the text, "Manatee Emergency", I completed a think-aloud about visualizing both the text structure and utilizing sensory details to visualize the content.
- Students continued reading the article and created Gallery Images.
- Strategies were reinforced in Guided Reading throughout all sessions in small groups.

Session twelve. Objective: Students reflected on their visualizations and the visualizations of others during a Gallery Walk.

- Students placed their visualizations (Gallery Images) from "Manatee Emergency" around the classroom.
- Each student was given three Post-It notes to celebrate the visualizations of their peers.

Week five. The following sessions occurred during the fifth week.

Session thirteen. Objective: Students utilized context clues to determine the meaning of unknown words.

- On the Smartboard, students watched the video "Context Clues Song" on YouTube.
- We created an anchor chart on the ways that we could use context clues, including definitions, examples, antonyms, synonyms, and word parts.
- While reading the article "Koala Caretakers", I used a think-aloud about how to identify the words that I am not sure of and how to use context clues to help me come up with a definition. We created a graphic organizer together of the word, evidence that helped us from the text, proposed definition, and then the definition we got from the glossary or a dictionary.

- Students were asked to read independently and identify one word that was unknown to them during Guided Reading.

Session fourteen. Objective: Students monitored their understanding of the text and employed fix-up strategies to remediate breakdowns in comprehension. They continued to actively question, visualize, and utilize their prior knowledge and existing schema while reading independently. Students utilized text features such as illustrations, captions, and graphic sources.

- I shared that some of the best strategies to use as you are actively reading are fix-up strategies to help when you are confused. I shared that I have had to reread things several times to understand exactly what is being conveyed, but that strong readers always make sure that they understand what they have read before they continue on.
- I explained that strong readers monitor their understanding of what they are reading and recognize when they do not understand something. Strong readers use the tools in their fix-up toolbox to help them fix their misunderstandings such as rereading, using text features, reading more slowly, and stopping and thinking about was read so far.
- We discussed captions, illustrations, photographs, and graphic sources and how they helped us gain knowledge on the topic.

- Before reading the article “Everglades”, I did a think-aloud to activate prior knowledge about the topic. While reading, I modeled how to use the text features, how to identify the text structure, and about the visualizations and questions I was creating. I identified a point in time where I did not fully understand something and did a think-aloud about what fix-up strategies could help me to make sense of what was confusing.
- These strategies were reinforced during small group practice in Guided Reading.

Session fifteen. Objective: Students determined importance and prioritized information based on the main idea. They continued to monitor their understanding, questioned, visualized, and connected the information to their existing schema. Students discovered the meaning of unknown words through context clues.

- I shared that strong readers understand how to tell the difference between information that shows a big idea and information that is just fun and interesting, but not essential to understanding what the author is sharing.
- To simulate the significance of determining importance when faced with overwhelming amounts of information, the students were given a scenario where they had to determine what items

were most important to pack in their suitcase for a trip to Hawaii (see Appendix G).

- Afterwards, students were asked to think-aloud to a partner about the choices that they made.
- Following their discussions, I shared that we have to do a similar thing when we are reading informational texts. Authors provide so much information in the text and in the text features that it can be overwhelming and we have to prioritize what knowledge is essential to the main idea and what knowledge is fun to know, but not necessary.
- I shared the analogy of noodles, water, and a strainer. I shared that a book has noodles and water in it. The noodles are essential to our understanding and the water is the fun, interesting little facts that accompany the noodles. Our brain must act as a strainer to separate the imperative information from the information that we can let go of in order to fully understand the message the author is portraying.
- On the Smartboard, I displayed the article "Bye, Bye, Balloons". I modeled how to place a green smiley face next to information that is essential to the main idea and a red smiley face next to information that is neat, but not necessary. I did a think-aloud

about how I determined what information is important. For the last two paragraphs, I asked students to come up and do the same thing, while thinking out loud about their thought process.

Week six: The following sessions occurred during the sixth week.

Session sixteen. Objective: Students recognized the significance of synthesizing information. They continued to generate questions, visualize, and apply their prior knowledge while remaining active with the text. They analyzed the meaning of words they do not know through context clues.

- On the Smartboard, I played the video "Sesame Street: Russian Dolls (1-10)" from YouTube. This video showed nesting dolls and how they fit inside one another.
- I shared that synthesizing information is very similar to nesting dolls. Our understanding of a topic starts off like the littlest doll and continues to grow and grow and grow based on the new information we are receiving. Synthesizing information means that our thinking and understanding changes and grows as we read. We need to combine what we know and what we are learning to make new meaning of what we are reading. I shared that this can be seen as baking a cake where we gather ingredients from our reading and combine them with other ingredients to get our final result.

- I shared that sometimes we have to synthesize information from several sources together so that our understanding of the topic can change and grow.
- To model synthesis of information, I called their attention to the articles “Up, Up, and Away”, “Manatee Emergency”, “Saving Sloths”, and “Bye-Bye, Balloons”. I used the Synthesizing Organizer (see Appendix H) as I reread the articles to demonstrate how I utilized textual evidence and prior knowledge to formulate my synthesis of the various texts.
- Students worked in partners to continue synthesizing the articles.

Session seventeen. Objective: Students prioritized details to formulate a cohesive synthesis of informational texts using coding of the text. They questioned, visualized, connected to existing schema, and monitored their comprehension while reading. They justified the text structures using key words and clues. They explained text features and constructed meaning of unknown words through clues and the morphology of words.

- The students were told that they would be producing a written summary of informational texts and that it was important to understand the differences between informational summaries and fictional summaries. I shared that we will be focusing on the main idea and important details and facts that support that main idea in

our summaries. I reminded them that we must determine importance and find our essential information to ensure our summary is complete, cohesive, and not sharing information that is not important.

- I reinforced that to find important information we must read a section and identify the main idea and essential information. We should reread and ensure that we understand what the author is trying to convey. We should also remember to think about the text structures and use the text features and vocabulary to enhance our understanding.
- Using the Nonfiction Summary Graphic Organizer (Appendix I), the students worked to construct a summary of the article they were reading in their Guided Reading groups.

Week seven. The following sessions occurred during the seventh week.

Session eighteen. Objective: Students utilized appropriate metacognitive strategies while interacting with informational texts. Students used text structure, text features, and vocabulary to enhance their understanding of the text. Students applied their knowledge of strategies and unique informational characteristics by composing an informational magazine.

- Students were introduced to a project that they will complete in a small group to reinforce their metacognition and understanding of

the distinguishing characteristics of informational texts. I shared that they would be researching an environmental topic in our *Use It, But Don't Lose It* Science/Social Studies Unit that they felt enthusiastic about.

- The students used informational texts to research the topic and create their own magazine articles about the topic studied. They composed articles written in the five different text structures, using domain specific vocabulary. The magazine also contained text features as indicated on the *Use It, But Don't Lose It* Magazine Project Description Sheet (Appendix L) and Magazine Rubric (Appendix M).
- Each of the following sessions was broken up with time given to students to work in a group on the final project and additional time to independently interact with a self-selected text.

Session nineteen-session thirty: Objective: Students interacted actively with informational texts by employing appropriate strategies. They incorporated their understanding of the characteristics of informational texts to develop their comprehension and to compose informational articles.

- Students continued to work on their magazine projects in small groups. They continued to use their understanding of text

structures, text features, and vocabulary to research their topics and to reach the objectives of the project.

- They published their magazines in Microsoft Publisher.
- Students finalized their magazines by the end of the tenth week. They continued to receive time to actively engage with a self-selected text.

Following the sessions, the students handed in their Reader's Notebooks. The students then took the survey (Appendix D) on their attitudes about reading informational texts and metacognitive strategy use when they are actively reading.

Data Gathering Methods

Participant observations. To collect the data throughout this action research project, there was a triangulation of data collection techniques utilized including observations, analysis of student artifacts, and information provided on student surveys. Observations were based on behaviors observed throughout the think-alouds and during practice, student artifacts showed what the students were producing independently and during guided practice, and student surveys shared insights into what the students were experiencing throughout the execution of the action research project.

Observations were collected during each of the sessions during the modeling, activities, Guided Reading, and independent reading time. The observations were recorded in a notebook with a T-chart printed on it. This

allowed for written observations to be recorded on one side and teacher reflections about what was being observed on the opposite side.

Student artifacts. Throughout the research study, student artifacts included authentic examples of comprehension such as the Table Texting, Gallery Images, and work produced during Guided Reading, as well as their Reader's Notebook responses.

The Magazine Final Project demonstrated an understanding of text structures, text features, and the ability to utilize and synthesize informational texts. The students were required to research a topic using informational texts, synthesize that information into a cohesive article, and compose that article using a specific text structure. Each student was also responsible for developing a text feature to incorporate into the published magazine.

Student surveys. In order to gather baseline data about the initial reactions that the individual students had about reading and their reading behaviors, there was a student survey given at the beginning of the action research project and following the completion of the instructional sessions. The survey asked questions related to motivation to read, their personal attitudes and feelings about informational texts, the strategies the students use while they are reading, their strengths in reading, and their metacognitive awareness when independently interacting with texts. The surveys from before the sessions were compared and contrasted with those given after the sessions.

Summary

The focus of this action research project was to observe behaviors and record the experiences when a teacher utilizes the Think-Aloud Strategy to promote metacognition in students when interacting with informational texts. The students were exposed to several key metacognitive strategies and the unique characteristics of informational texts through think-alouds and modeling and then were expected to demonstrate their ability to utilize these strategies in conjunction with one another throughout independent reading, guided practice activities in Guided Reading, and during an authentic research project in order to remain active while reading and to help them interact with the text in meaningful ways.

Trustworthiness Statement

To ensure trustworthiness and validity within this action research study, ethical guidelines were followed throughout the development and execution of the methodology and throughout the analysis of the data collected. Before beginning the study within the classroom, approval and written permission from the Human Subjects Internal Review Board at Moravian College was obtained (Appendix A). The principal of my school provided written permission for me to conduct the action research within my classroom (Appendix B). All parents and guardians of the students received an informed consent letter prior to the study beginning which explained the purpose of the study as well as the details on how data would be collected and utilized (Appendix C). They were informed that data would only

be collected and used from students who had written consent to be participants, and that they would be able to withdraw their child from the study at any time, without consequence. It was explained that all participants would have their personal information protected and kept confidential throughout the entire process, as well as afterwards and that each participant would be provided with a pseudonym. Parents and guardians were assured that the data would be kept in a secure and locked location and that it would be destroyed at the conclusion of the study.

After receiving consent and beginning the study, I remained open to unexpected research findings and was dedicated to analyzing and interpreting the data from various points of views and varying perspectives. To increase validity and trustworthiness within this action research study, there was triangulation of data collection techniques utilized including observations, analysis of student artifacts, and information provided on student surveys. The observations were prolonged and persistent to ensure accuracy in the data facts and findings and my commitment to keeping an extensive field log assured that the information that was gathered was as accurate and precise as possible (Hendricks, 2009). The accuracy of the data collected ensured that the findings and explanations were supported by facts and evidence, which increased legitimacy and validated the importance of the findings for other educators in their own practice (McNiff & Whitehead, 2010). Throughout data analysis, opportunities for peer debriefing,

with colleagues as well as with fellow action researchers, helped clarify and enhance conclusions and provided additional and novel perspectives which increased understanding based on the evidence. During the entire process, continuous reflection was essential to ensure validity and trustworthiness by allowing me to reflect on the data patterns and be flexible in the face of unexpected research findings and to continue approaching the study with a dedication to the various perspectives and points of view of those involved in the process (Hendricks, 2009).

MY STORY

"Wait! You are a student too?"

Every summer, I dedicate hours upon hours of organizing and decorating to create a learning environment that not only feels safe and nurturing for my upcoming fifth graders, but that tries to spark the intense desire to find a cozy little hide away to read. Most of these hours are spent rooting through my classroom library, trying to reorganize the chaos that was left behind from the rampant readers of the past year. This is a quiet time to reflect on the myriad of books that I provide to the students and to get excited about the upcoming year and the educational reading experiences and journeys we will take together.

During those meaningful, but hectic, first days of the year, the enthusiasm about the research plan I had slaved away over throughout the past few months of my life began to grow exponentially every day as I went about the yearly tradition of establishing routines, and more importantly, relationships, with the brand new fifth graders that I was fortunate enough to inherit for this year. As the beginning weeks began to transform into a more regular schedule, it felt right to invite the students into my action research and ask for their guidance and support for the next chapter of this journey.

The students each settled into their personal spot on our rainbow-colored, lambswool rug and shared the plethora of fun pillows. They were surrounded by close to 2,000 books of varying genres, all calling to them to open their pages and

find a new friend. My excitement was tangible as I began to tell them the tale of the events that led me today. As I began to explain, in quite some detail, the process, many of the students expressed visible giddiness and excitement about the prospect of their words being meaningful and documented. As one hand rose, ten more rose in response, and the conversation became a nice question and answer session entirely dependent on excitement on the part of the students.

Bryan casually raised his hand and asked, "Wait! You are a student too?" The students found it quite amusing that their teacher would be getting homework and having to write the narrative of our journey just like they do during Writer's Workshop. We had common ground now, and they seemed very eager to start supporting me, in the same ways that I had supported them.

Reading Reflections

It soon became time to have the students reflect on some of their attitudes and beliefs about reading before any of the instruction about metacognition and informational texts began. Each student was asked to complete the Student Pre-Study Survey (Appendix D) and to provide as much evidence of their answers as possible. The survey provided me with further insights into each individual child as a reader, and how they perceived their own abilities. It also provided insights into their personal preferences about genres and the beliefs that they held about informational texts.

Many of the students felt that they were either "strong" or "good" readers, and some students recognized characteristics that make strong readers such as that they spend their time reading, they understand the purpose and meaning of the text, they read books deeply, and that they actively read (see Table 1).

When asked whether they understand everything when they read, many students reported having experiences where they did not understand the text that they were interacting with. However, it became evident that some students were quick to give up in the face of challenge. Some students reported that when they experienced a breakdown in comprehension they would "go to the next paragraph," "skip the sentence and move on," or even get a new book." It was clear that some of the students were struggling to be resilient in the face of challenge and did not possess the necessary strategies to help themselves construct meaning when it became difficult.

There were a variety of strategies that the students reported utilizing before, during, and after reading, such as focusing on past experiences, visualizing the characters, rereading when a breakdown in comprehension occurred, and focusing on the key concepts of the text. Several students alluded to using text features such as graphs, the glossary, and timelines to help build comprehension. However, it became clear that some students were faulty in their strategic efforts by relying on asking for help, moving on without ensuring meaning had been made, and using the Five-Finger Rule, which is a strategy for

choosing a book that is right on their level by identifying how many unknown words there are on their fingers.

More students favored fictional stories for their action, creativity, humor, and because they can be "easier." Several students preferred informational texts for their facts and to help them learn more. Only four students reported that they would prefer not to read informational texts, with six students saying they like reading informational texts a lot. Most students felt that informational texts were okay (see Table 1).

Survey Question	**Response**	**Results**
On a scale of 4 to 1, rate yourself as a reader.	4 (Strong)	6
	3 (Good)	11
	2 (Okay)	3
	1 (Not Very Strong)	1
Do you prefer reading fictional or informational texts?	Fictional	14
	Informational	6
	Both	1
Choose the response that best describes you.	Likes to read informational texts a lot	5
	Informational texts are okay	11
	Prefer not to read informational texts	5

Table 1: *Pre-Survey Questionnaire*

Use It, But Don't Lose It

After the surveys were complete, it was time to get started. A percentage of the action research was completed within the context of the Science and Social Studies Unit, *Use It, But Don't Lose It.* The Central Idea revolved around the

students understanding that humans have a responsibility to conserve and respect the natural resources that we have inherited from our environment and that resources are unequally distributed throughout the planet. This unit called upon the students to become reflective stewards of the environment through increasing awareness of the benefits of conservation. Upon reflection, I felt that tying together our informational texts through the common theme of environmental issues and practices would provide students with the context necessary to apply their metacognition and understanding of the characteristics of informational texts within a meaningful and authentic learning experience. Using resources such as *SuperScience, Dynamath,* and *Time for Kids* periodicals provided the high-interest and relevant informational texts to truly approach the unit in a transdisciplinary way.

Getting Started

The first few sessions were imperative to emphasize the unique and demanding characteristics of informational texts and to set a purpose for our exploration together. The students worked together to make a word splash of all the prior knowledge they had about informational texts, and their excitement flooded the room as they raised their hands to share and add to the word splash on the Smartboard (see Figure 1). Ella even asked, "Are all the classes getting to do this?" By activating their prior knowledge on informational texts, it seemed that they already had past experiences with text structures, text features, and how to

define unknown vocabulary using context clues, which would prove to be a strong starting point.

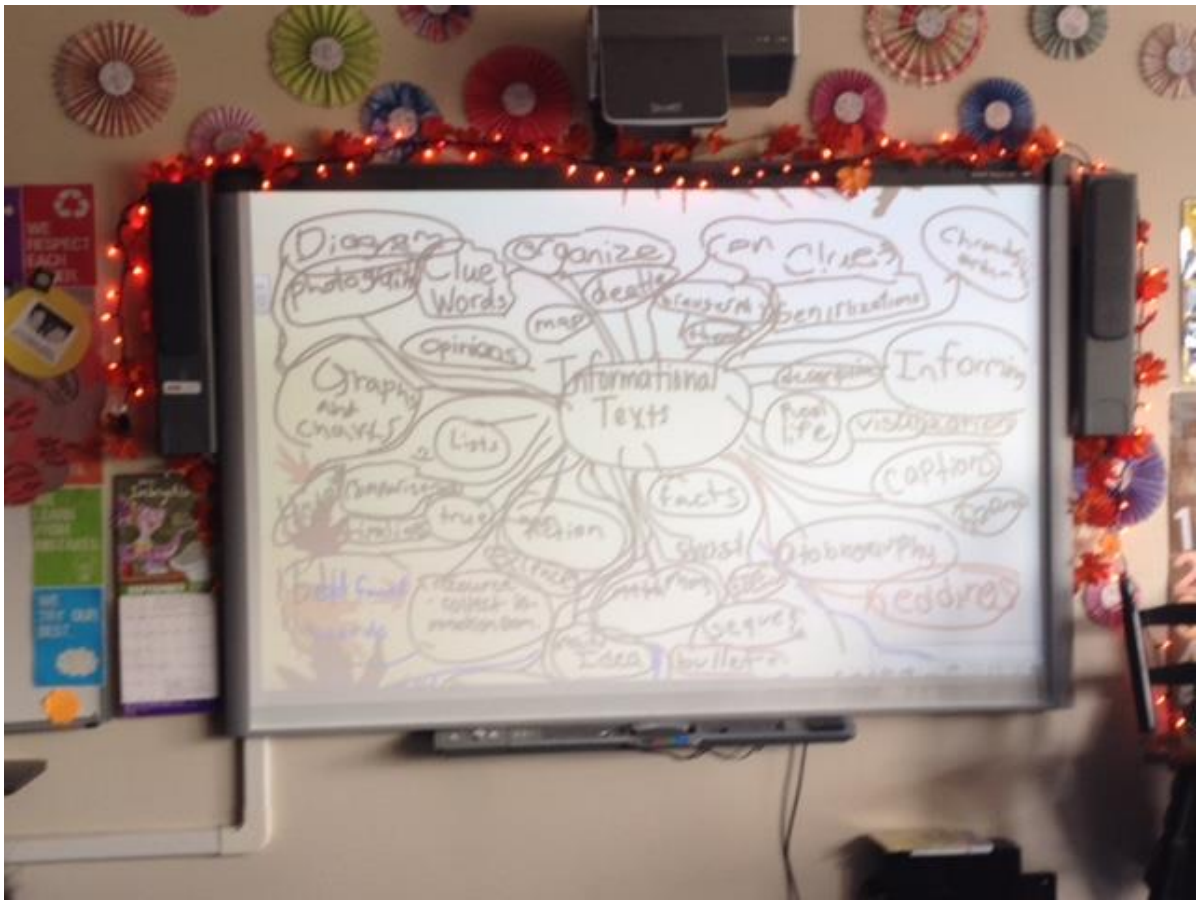


Figure 1: *Informational Text Word Splash*

Based on the data collected from the survey, the importance of discussing strategic approaches to interacting texts was evident because some students had demonstrated some learning gaps. Some of the students needed to recognize the value in being risk-takers with their reading and being committed to analyzing texts, even if they struggled to make sense of it the first time around. A main goal

that arose from the survey information was to produce readers who were not comfortable with just moving on when something didn't make sense, but who could be reflective and strategic to make sense of the text.

Gradual Release of Responsibility

I planned to instruct the students on several key metacognitive strategies as part of the study. The method that I used to instruct the students in this strategic use was through explicit instruction through think-alouds, while interacting with informational texts. The students were asked to do their own think-alouds during this process. The texts were all correlated to our unit and were displayed on the Smartboard, while each student also had her own copy of the text. There was also an emphasis on text structures, text features, and vocabulary to enhance their understanding of the genre.

The students then had guided practice opportunities within small groups and during Guided Reading. During the small group experiences, students were paired with partners of heterogeneous abilities, to support and coach one another through the process. During Guided Reading, the students were with peers who possessed similar reading abilities and had scaffolded opportunities to practice the strategy use with leveled texts. Students were guided with discussion, but also utilized graphic organizers and templates to promote strategy use.

Ultimately, when they were ready, the students were called upon to transfer their strategy use to their formative weekly cold reads and during

independent reading time. They were asked to provide evidence of interacting with the text, such as examples of questioning and the use of abundant annotations, to think-aloud their thought process on the page while taking assessments. They reflected on their strategy use in their Reader's Notebook during their independent reading time, as well.

Having the opportunity to explicitly teach the strategies provided students with more insight into how to interact actively with a text. The survey had shown that some students were unaware of the processes that are used to comprehend and make meaning of the words and this model of instruction provided them with novel experiences as to how a reader constructs meaning by remaining active and strategic in the process. The students became more aware that comprehension does not just happen, but that it must be developed, and that it requires persistence, commitment, and resiliency.

"Up, Up, and Away"

To explicitly instruct students on the metacognitive strategy of questioning, I chose an article from *SuperScience* entitled "Up, Up, and Away", which concerned how quickly the world's reserves of helium were diminishing because of human consumption. I began the lesson by thinking-aloud about the predictions that I could make based on the text features, such as the title, headings, photographs, and captions. While interacting with each heading, I generated a question to correlate with the heading and documented the question.

As we began to read through the article, the students began to connect the new information with their existing schema of natural resources and to the upcoming Thanksgiving Day Parade, which was only a month away. They began to connect the helium shortage to the prices of balloons for their birthday parties and even began to formulate ways that they could take action and limit their consumption of helium (see Figure 2).

Ms. Chimics: I am wondering how we can limit our use of helium in our everyday lives.
Ella: We can stop buying helium balloons.
Nohla: This summer we had a "Frozen" birthday party and the helium balloons were so expensive that we blew up our own balloons.
Ms. Chimics: Very interesting. I am questioning why helium balloons would be so expensive.
Andrew: It is like supply and demand. We learned about that last year. Since we are running out of helium, they charge more.

Figure 2: *Conversation using questioning and prior knowledge*

The students were surprised to find the various ways that helium impacts their daily lives, such as the fact that helium is prevalent in smartphones and is used to make MRI machines. Discussion erupted as students interacted with the text and connected it to their existing schema (see Figure 3). I wondered if they were recognizing the value of sticking with a text, rather than skipping the parts that were challenging. We continued to go back to our questions and see if we found answers within the text.

Several students began to be risk-takers and share their own questions that they were forming based on the text. We discussed how posing questions, and

then attempting to answer them, promotes deeper and more critical interactions with the text and helps us to activate our prior knowledge, which further supports our comprehension.

Max: What is an MRI?
Ms. Chimics: MRI stands for Magnetic resonance imaging. It is a machine that doctors can use to see inside of your body.
Lauren: They used an MRI in the article about dogs and how they understand our emotions so well during our Current Events projects yesterday!

Figure 3: *Conversation connecting new information to existing schema*

For their guided practice, students met with their groups and interacted with "Saving Sloths" using a Table Texting Organizer (Appendix J). The students formulated their own questions based on the article and then responded to the questions of others. I noticed that students began to utilize textual evidence to answer the questions and were using our stems such as, "I know this because the text says..." to support their answers (see Figure 4).

The article chronicled the challenges that sloths in Costa Rica are facing because of human interactions with the environment. The article shared that scientists are now outfitting the sloths with backpacks that gather information, especially about the prevalence of mothers abandoning their babies. One group analyzed the question "How are sloths going to function using a high-tech backpack?" They began to hypothesize that perhaps the backpack operates itself and that the backpacks might have been made specifically for sloths and fit them

perfectly, so that it would be easy to use. One student, Sara, focused her question on a text feature provided in the article and asked, "Since the chart shows three-toed sloths eat a lot of leaves, is the reason they are becoming orphaned and abandoned because humans are cutting down all those leaves?" She not only was utilizing questioning, but was engaging with text features to enhance her understanding of the text and make connections between the information she was gathering.

They demonstrated a more critical analysis of the text and the ability to infer based on prior knowledge and clues, while talking to one another and having social interactions with their peers. It was enlightening to see the varying questions that were posed and the plethora of ways that students were interacting with peers, whether it be in the form of generating a new question or enhancing previous answers. They were documenting their interaction with the text and many were providing evidence that they could be strategic readers.

One student, Eddie, did formulate a question that was answered within the text, "Why did the sloths get burned on power lines?" His peers tried to answer in a deeper way, using prior knowledge as well as textual evidence, but it was clear that he was not analyzing the text in the same way that others were. He was not thinking deeply about the text, and perhaps was having a breakdown in comprehension, to lead to a clear disconnect from what the text was telling him. This showed what direction I should take with him during our Guided

Reading time to promote a higher order interaction with the text than he was currently demonstrating.

"Manatee Emergency"

I shared that strong readers make connections to prior knowledge and existing schema. Using what we already know about the topic can help us to set our purpose and understand the context of what we are reading. Using the RAN strategy organizer, Reading and Analyzing Nonfiction Text, (Appendix F), I thought aloud about what I already knew about the topic of manatees. I shared that when I was in fourth grade, we had two authors come in who were activists for manatees. I reflected on what I knew from them and other experiences I had with manatees, including seeing some when in Florida.

While reading "Manatee Emergency" about the ways in which humans are negatively impacting manatees in Florida, we used the RAN organizer to confirm prior knowledge, document new learning that was occurring, and to fix any misconceptions we were having. The students thought aloud about their process as we went through the text and shared questions they were generating. For guided practice, the students reread the article and added to their own RAN organizer (see Figure 5).

Afterwards I chose one line from the text and thought-aloud what I was visualizing based on the textual evidence. I drew my visualization of a manatee swimming into a red cloud of algae on the Smartboard and students came up to

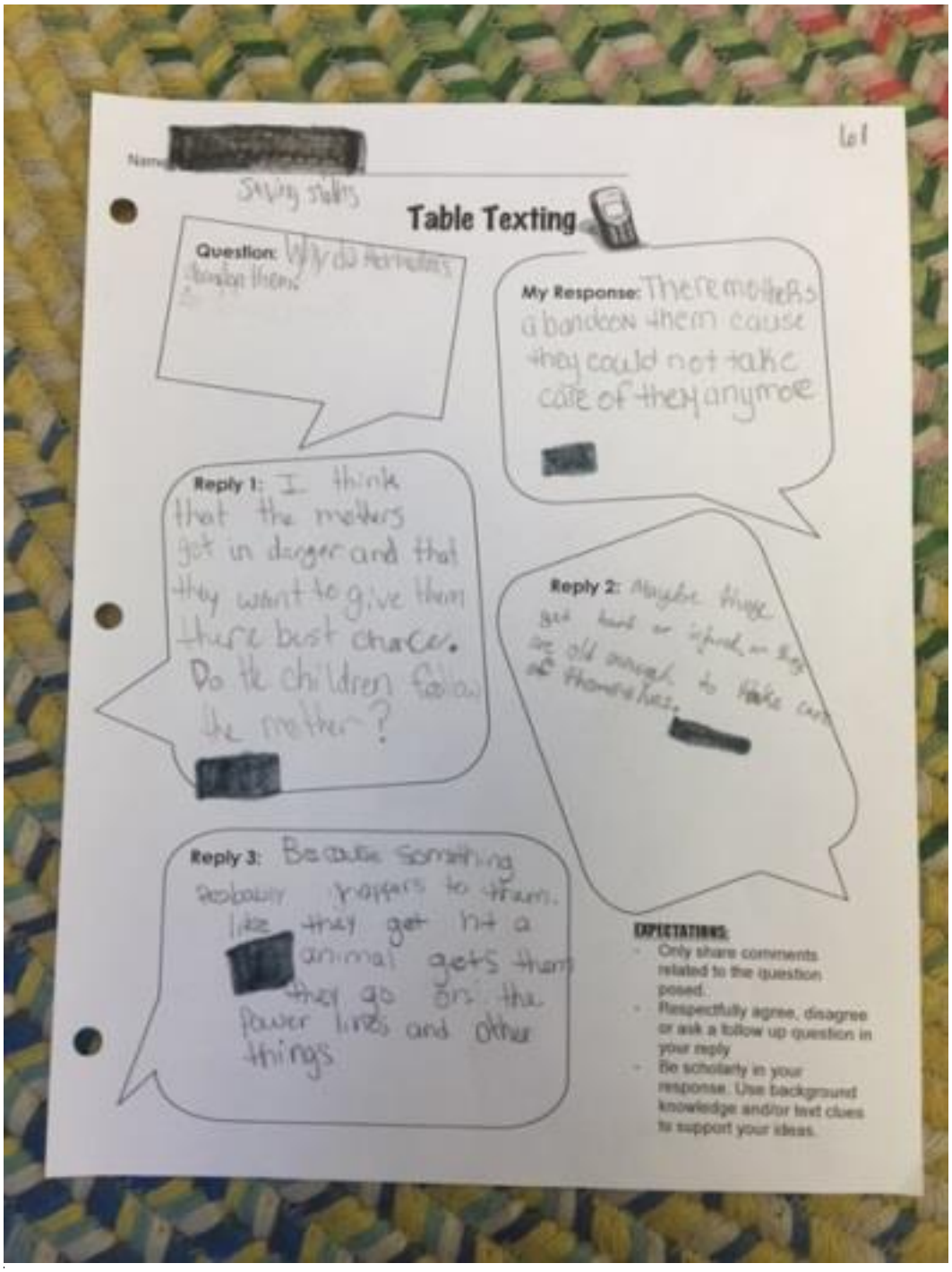


Figure 4: *Table Texting organizer to promote questioning and connecting knowledge*

RAN Graphic Organizer

Name: [redacted]

Module 2 – Complete "What I Think I Know" about the **Retelling Strategy**
Module 3

- Read Chapter 3 "The Art of Retelling"
- Complete the RAN graphic organizer and submit it as an attachment to an email to the instructor.

What I Think I Know	Yes, I Was Right	New Information	Wonderings
• In Florida many Manatees are hurt from human actions • Manatees are becoming more comfortable around humans, which can be dangerous. • Sea cows - gentle	• They are gentle • They do get hurt • They do get called sea cows. • In florida human actions hurt them.	• Their endangered. • They live by harmful red algae. • Coastal areas. • They give birth to live young mammals • gentle giants • Put caution signs so no one hurt them • algae hurts them • Sanctary to help them • Slotes • Breathe air, warm water • Both coast of FL • Red tide appeared off the coast of Southwest Florida • The red tide Paralyzed the Manatees so they can't swim. • The red tide killed 305 manatees.	• How do they get their meal? • what is the red tide? • How do they find the Manatees paralyed if they can't swim? • why would People fish where the Manatees live?

Modules 2-3

Figure 5: *RAN Graphic Organizer student sample*

add details that they found within the text to enhance the drawing. Individually, the students selected their own lines from the text and built visualizations based on them. They crafted their own caption to apply their knowledge of text features. The visualizations the students created developed into true works of art. The students were excited because they heard that we would be doing a Gallery Walk with their creations and transform our classroom into an art museum once they were complete. Having this end celebration of their visualizations prompted them to take their time. Most students quoted directly from the text within their caption and then paraphrased the line in their own words, which was a skill that we had been working on. The students took the activity in their own direction and determined what was important to them out of the article. I saw students take ownership over the process and show pride and confidence in their work.

Chimics Art Museum Presents Manatee Emergency Visualizations

The day finally came for the students to showcase their artistic approaches to "Manatee Emergency." The entire room was covered with colorful creations, all unique and special for their own reasons (see Figure 6). The students were ready to go and hear about what we were going to do in the Chimics Art Museum.

Armed with three Post-its to write celebrations and wonderings to place on each work of art, the students began to circulate the room and explore. The students read the captions and related whether the visualizations were supported

by evidence from the text. Reflections such as "I enjoy your visualization because it shows me what type of plants they eat", "I like your visualization because it shows why manatees get hurt and why they die every year", "I enjoy your visualization because it reflects on human actions", "I wonder why they think the red tide is food?" and "When I look at your visualization, I wonder why people do this to manatees?", were demonstrating that the students were thinking about what they were seeing in the images and relating it back to their knowledge of manatees. The students were caring, respectful, and reflective during our Gallery Walk and seemed to enjoy the opportunity to provide feedback to their peers.

Everglades

I wanted students to understand that though it is important that we comprehend what we read, it is equally important to recognize when they do not understand what they are reading and to apply strategies to help make sense of the text in these difficult times. Some of the students had experiences with just moving on and avoiding the challenge when it presented itself, but it was important to give them the tools they could use to monitor and fix-up their understanding in the face of demands.

Using a think-aloud, I modeled fix-up strategies such as rereading, stopping at the end of a paragraph or page and recalling when I had just read, and reading more slowly when the text becomes dense with our weekly reading story

The Everglades. I focused on specific parts of the text and walked the students though my thought process to make sense of the details. I expressed how the text features helped me to make sense of the text as well, such as graphs, photographs, and the captions.

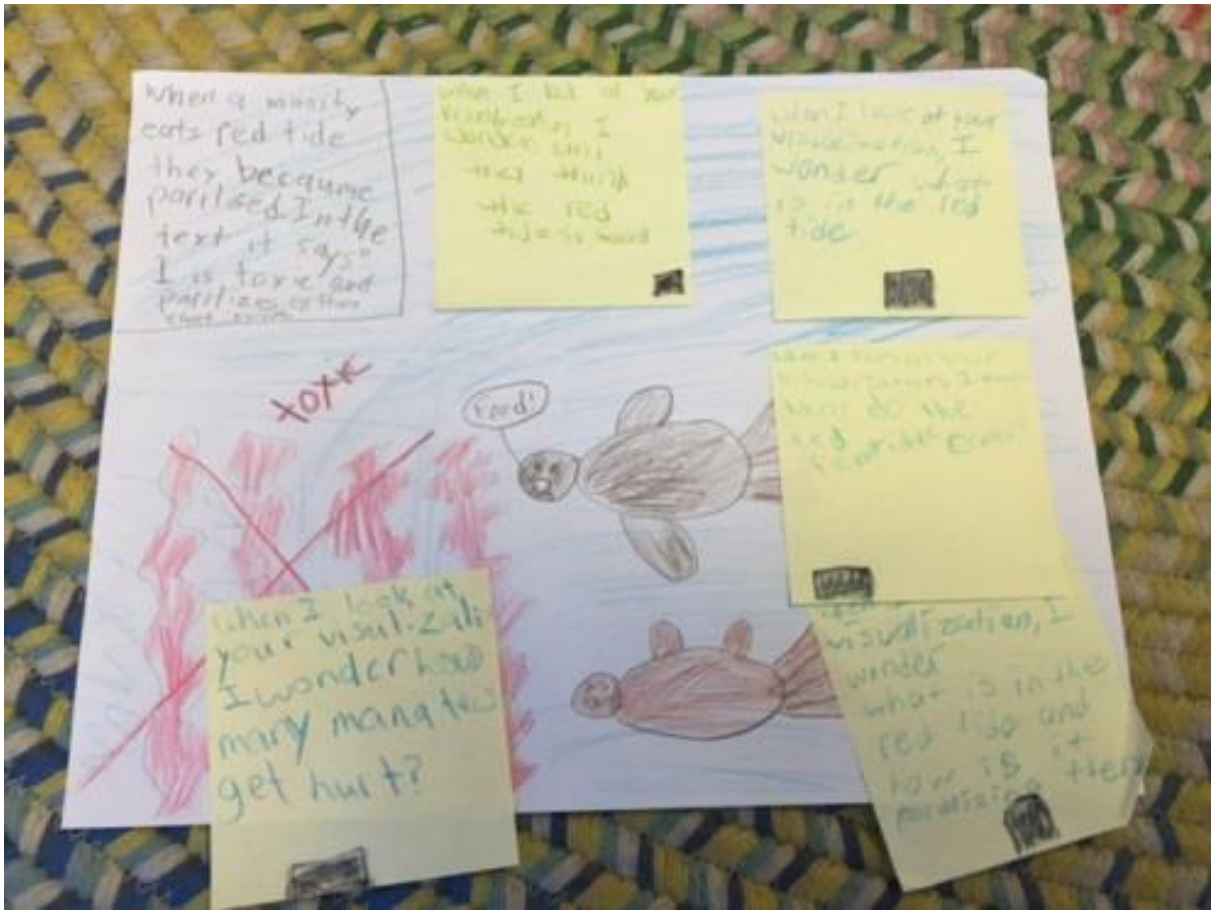


Figure 6: *Gallery Images featuring visualizations, questioning, and connections*

I was proud when the students started to utilize a variety of metacognitive strategies while we read and discussed the story together. The students even used

context clues to identify synonyms of "quantities", even though some of the words were unknown to them (see Table 2).

Student	Discussion Enhancement on *Everglades*
Max	shared that he was visualizing the saw grass cutting through skin
Michael	added on that he knows alligators have tough skin and that is why the saw grass does not cut them
Mia	made a text-to-text connection to *The Great Kapok Tree* because of the way they described the beauty of the Everglades
Lylah	pulled out the vocabulary word “multitudes” and chunked it because she thought of “multi” like the “multiples” we are using in math and she knew that meant to get bigger
Nohla	utilized the vocabulary word “prospered” when she was discussing what was happening in the environment

Table 2: *Discussion on* Everglades *featuring vocabulary morphology, connections, prior knowledge, and visualizing*

Synthesize Exercise

With all of the interactions that we were having with informational articles related to conservation and human impact on the environment, the time had come to begin combining all that information together to formulate big ideas as to what we were finding out from our reading. Through research, I found the analogy that synthesis is like Russian nesting dolls, where our understanding continues to grow

and change as we interact with various materials and engage with novel information. During the think-aloud on synthesis, I showed a Sesame Street video on Russian nesting dolls to ensure that they would have the necessary background knowledge of what those were to visualize the process of synthesis using the analogy. I found that even fifth graders cannot resist a good Sesame Street video! The next day, Sara even brought in authentic nesting dolls to make our visualization of synthesis come to life!

With our understanding of nesting dolls, I began to explain how synthesis is really just us combining all of the new information that we gather about a topic to formulate the most complete understanding of the main idea that we can. I shared that we have to reflect on what we already know and monitor how our understanding changes as we interact with new texts on the topic. Using a graphic organizer, I thought-aloud how to reflect on the articles we had been reading and how to document how my thinking of human interactions and the need for conservation was growing based on textual evidence we had found. The students then engaged with a new text about an elephant sanctuary and added to their graphic organizer new insights that they had found from this new text. We discussed how our thinking was continuing to change, evolve, and grow as we combined all this knowledge together.

Synthesis proved to be one of the most difficult metacognitive strategy to think-aloud with the students because it requires so much of an internal thought

process that I felt that I could not get out all of the connections and insights that I was experiencing onto the graphic organizer and through my words. I found some of the students reflected that this was the most difficult on the Student Metacognitive Strategy Checklist (Appendix E) and that some of them still felt unsure as to how to implement this strategy during their reading. In the future, I would like to continue using this graphic organizer during our Science and Social Studies units, but implement it from the very beginning so that we can document all the changes and evolutions in our thinking from day one of our exploration into the topic. This will provide for a more accurate account of the synthesis we are doing with the information.

Guided Reading Reinforcement

As time was always a concern during this action research study, the ability to implement the new strategies into our Guided Reading time together was a lifesaver. It was invaluable to have the flexibility to provide a myriad of guided practice opportunities with small groups of students and it held the biggest payoff for me to truly see the progress that the individual students were making, both in their comprehension of informational texts and in their confidence and willingness to be risk-takers.

While exploring the Icelandic volcano through the article "Volcano Alert!", the students began to make connections and activate their prior knowledge of the Pompeii volcano we read about a week before. Jack, who at the

beginning of the year was disengaged during our small group conversations and who had to be called upon to answer any questions, began contributing. He shared a cause and effect relationship between the ash and how it encased the bodies in a cement-like substance in Pompeii and the impact of ash clouds in the air over Iceland on airplanes flying through. I guess he had been listening during the first few weeks! Jack was eager to explain what the main idea was of the article and how the text features supported it because of the captions of the photographs and the accompanying diagram. He helped us to identify the text structure as main idea and supporting details and explained his answers using vocabulary from the text. Suddenly, he had become quite the confident thinker in small group!

In another small group, we interacted with graphic sources on the "Comparing Volcanoes" Text Feature Analysis (Appendix K) that supported and complemented our understanding of volcanoes. It chronicled the different volcanoes and their characteristics, such as the type of lava they have and what their eruptions are like. I asked the guiding question of "why is it important not to avoid charts?" Lauren was quick to share that sometimes they have more description and can be organized in an easier to read way. She also shared that sometimes it gives us even more information than the paragraphs do. The students then began to have a discussion while using textual evidence from the diagram to support a question that one of them was having. They were beginning

to see how all the strategies connected to help grow our understanding of a topic through synthesis and the use of metacognition (see Figure 7 and Figure 8).

In small groups, the students rated themselves on vocabulary, visualized tectonic plates under the ground and then justified their visualizations when watching a video that correlated with the plates, and wondered about the topics with questions such as "Are there any underwater volcanoes?" and "Does it change the temperature of the water when they erupt?" One group even took their reading to a higher level by recognizing that a photograph was illustrating volcano lightening and wondered how lightning was created from an eruption. We were then able to adjust our focus to researching skills and utilize laptops to look up volcanic lightning and the reasons why it occurs.

The Guided Reading time provided more support as to how each student was doing as they developed into more strategic readers. It also helped to pinpoint students who were still struggling to implement the new strategies on their own. These observations were able to lead to more targeted small group experiences to support them based on their individual needs.

Putting our Strategies to Good Use

After all of the strategies were introduced and reinforced with the students, we began to explore opportunities to truly use the strategies for meaningful and authentic purposes. Each student prioritized their interest in a hot topic issue about the environment and groups were formed. The students had the objective of

researching their topics using informational texts and creating and informative and interactive presentation to inform and raise awareness of these issues to second graders. This was finally prime time for the students to put all of their strategies to work in a way that was meaningful and would encourage the younger generation to take action and make a difference.

We all knew it would be a long road from the start of our research to the day when they would take the stage and become the teachers to our second graders, but their enthusiasm and eagerness showed that they were up for the challenge!

Who Wants to Start a Magazine?

To incorporate our strategy use into multiple disciplines, the students were called upon to write an informational magazine with the peers in their groups. This was a way to create something authentic out of the all the research to complement the presentations that they would be giving to the younger grade. The students utilized the research they were doing within their Science and Social Studies groups, but had the opportunity to take on the role of a newspaper reporter, with the important job of sharing all the new knowledge they were gathering.

This project proved to be a way to incorporate all their strategic reading into yet another area of our everyday lives. The students were not only asked to

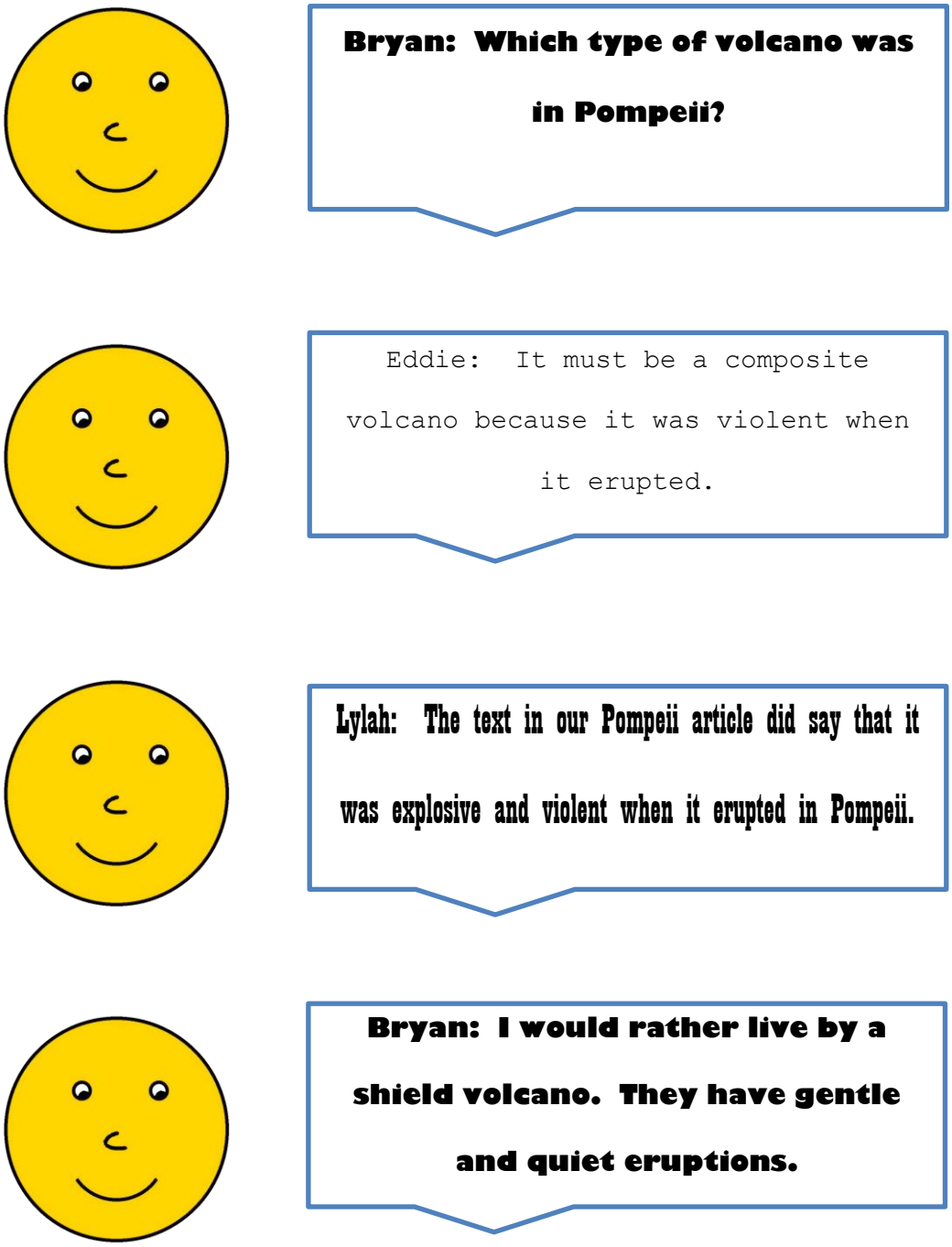


Figure 7: *Conversation about the "Comparing Volcanoes" diagram and our prior knowledge*

CHART SKILL 29

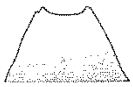
SuperScience

Name: [redacted] Date: 10/16/2014

Comparing Volcanoes

In "Volcano Alert!" (pp. 10-13), you read about Iceland, one of the most volcanically active places in the world. The chart below shows characteristics and examples of three common volcano types: shield, composite, and cinder cone. Study the chart, then answer the questions that follow.

Common Volcano Types

	SHIELD	COMPOSITE	CINDER CONE
Shape			
Description	broad and dome-shaped; up to 200 km (125 mi) wide	very tall with steep sides; about 1-10 km (0.6-6 mi) wide	short with steep sides; often less than 1 km (0.6 mi) wide
Lava	thin and watery	thick and sticky	thick and sticky
Typical Eruption	relatively quiet and gentle; lava travels far from the opening before cooling	explosive and violent; lava flows slowly down the sides as ash shoots high in the air	explosive but small; lava is thrown high in the air, breaks into fragments and falls
Examples	Mauna Loa (Hawaii) Olympus Mons (Mars) La Cumbre (Galápagos Islands)	Mount Fuji (Japan) Mount Hood (Oregon) Mount Etna (Italy)	Paricutin (Mexico) Crater Lake (Oregon) Sunset Crater (Arizona)

Source: LiveScience.com

1. Which type of volcano has the smallest width?
   The Cinder Cone
2. What is the difference between the eruptions of composite and cinder cone volcanoes?
   The Composite is explosive and vilant and Cinder cone is explosive and small.
3. Which volcano example in the chart is located on a planet other than Earth?
   Shield Volcano on Mars.
4. Viscosity is how resistant a liquid is to flowing. Which type of volcano in the chart has the least viscous lava? Which details in the chart gave you your answer? The Shield, Watery and thin.
5. Which volcano is more likely to put people at risk of breathing in ash: Mount Fuji or Mauna Loa? Why? Mount Fuji because the ash shoots up into the air.

PERMISSION GRANTED TO REPRODUCE FOR CLASSROOM USE ONLY. ©2014 BY SCHOLASTIC INC.

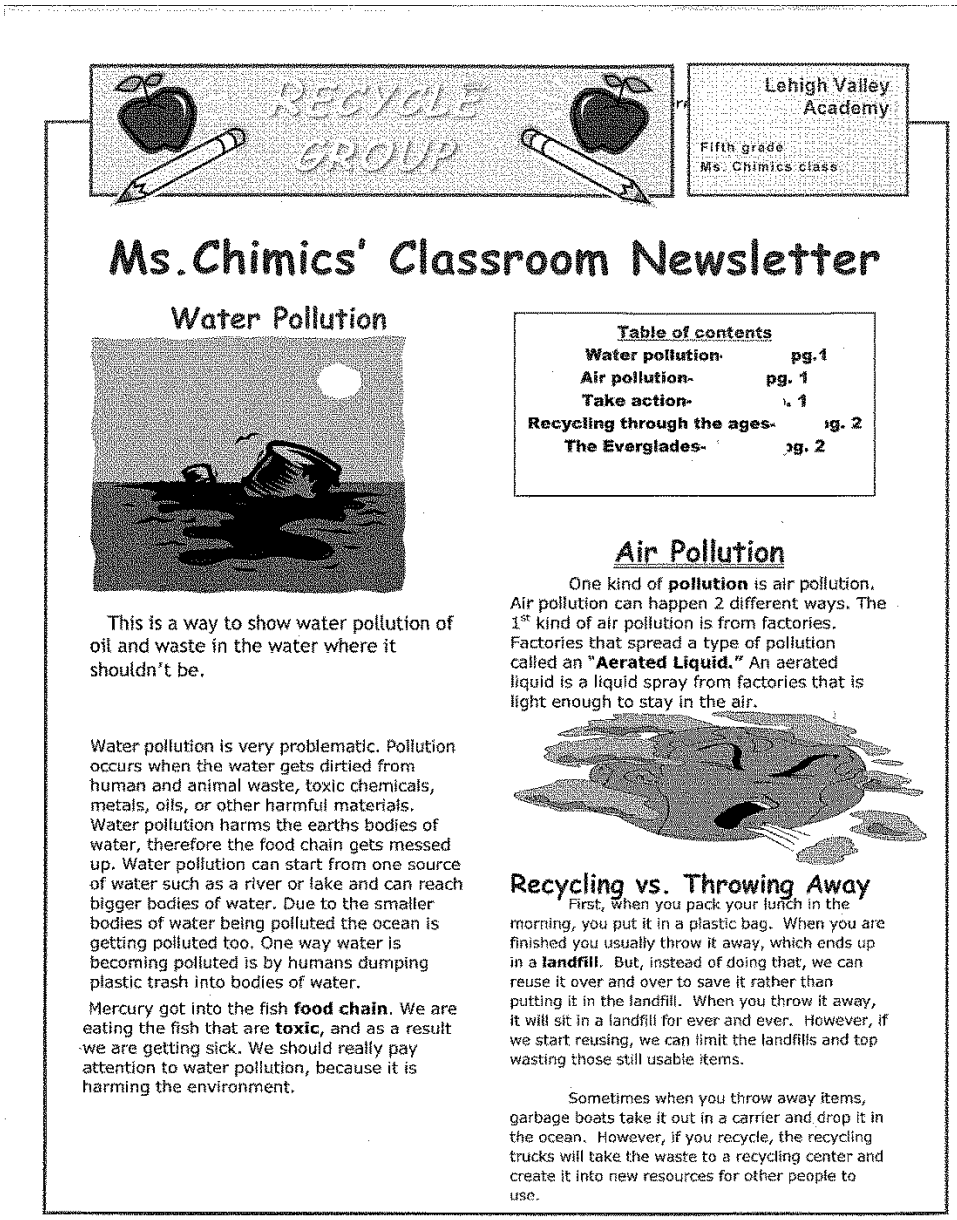
Figure 8: *"Comparing Volcanoes" Text Feature Analysis student sample*

write an article, but were asked to write an article in a specific text structure, using key words that would signal the way in which it was organized. The students would also formulate their own text feature, which would enhance the magazines. By asking the students to truly transfer and apply their knowledge of the unique characteristics of informational texts, they were not only reading it for understanding, but creating it for understanding, which demonstrated a true mastery of the concepts.

Using graphic organizers and their text structures flipchart, most of the students were able to compose an article that followed that specific text structure, without too much scaffolding. Small group instruction was held with the students who were writing in each specific text structure to help them organize their ideas and find the most effective ways of utilizing the key words. Eddie struggled the most with his cause and effect article, and required one on one attention to help him draft his piece. He had the research necessary to compose a substantial article, but did not understand how to formulate a cohesive piece that truly indicated how one event led to another. This indicated that he still had not mastered this type of text structure, and he received additional support during the reading time to remediate this breakdown in comprehension.

For weeks and weeks we worked together to create our presentations and magazines. The magazines were published using Microsoft Publisher and truly illuminated the amount of effort and understanding that went into creating them

(see Figures 9 and 10). They had taken on the role of newspaper reporter, and it was soon time to see how they did when they took on the role of a teacher.



RECYCLE GROUP

Lehigh Valley Academy

Fifth grade
Ms. Chimics class

Ms.Chimics' Classroom Newsletter

Water Pollution

This is a way to show water pollution of oil and waste in the water where it shouldn't be.

Water pollution is very problematic. Pollution occurs when the water gets dirtied from human and animal waste, toxic chemicals, metals, oils, or other harmful materials. Water pollution harms the earths bodies of water, therefore the food chain gets messed up. Water pollution can start from one source of water such as a river or lake and can reach bigger bodies of water. Due to the smaller bodies of water being polluted the ocean is getting polluted too. One way water is becoming polluted is by humans dumping plastic trash into bodies of water.

Mercury got into the fish **food chain**. We are eating the fish that are **toxic**, and as a result we are getting sick. We should really pay attention to water pollution, because it is harming the environment.

Table of contents

Air Pollution

One kind of **pollution** is air pollution. Air pollution can happen 2 different ways. The 1st kind of air pollution is from factories. Factories that spread a type of pollution called an "**Aerated Liquid.**" An aerated liquid is a liquid spray from factories that is light enough to stay in the air.

Recycling vs. Throwing Away

First, when you pack your lunch in the morning, you put it in a plastic bag. When you are finished you usually throw it away, which ends up in a **landfill**. But, instead of doing that, we can reuse it over and over to save it rather than putting it in the landfill. When you throw it away, it will sit in a landfill for ever and ever. However, if we start reusing, we can limit the landfills and top wasting those still usable items.

Sometimes when you throw away items, garbage boats take it out in a carrier and drop it in the ocean. However, if you recycle, the recycling trucks will take the waste to a recycling center and create it into new resources for other people to use.

Figure 9: *Published Informational Magazine student group sample*

Ms. Chimics' Classroom Newsletter Page 2

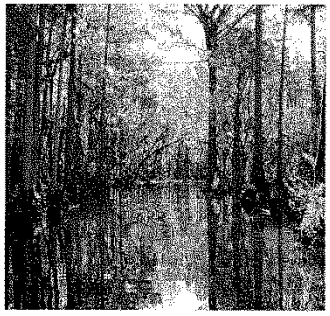
The Everglades

There are only one **Everglades** in the world, there is nothing like it. It was a blue green sea. This river was as clear as glass. Also, lots of birds and other animals roamed the Everglades like flamingos, egrets, snails, fish, crabs, and tiny insects lived in the Everglades. But there was an enormous amount of birds. They ate the tiny insects, crabs, and snails.

The Everglades was a perfect river. There were big and small animals like snails, and alligators, snails, flamingoes, pelicans and tiny bugs and so on.

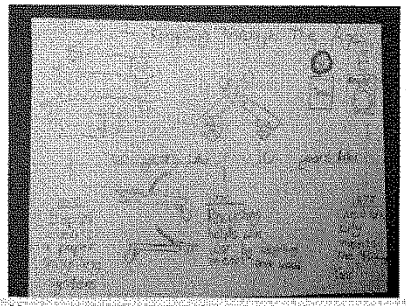
There were people who lived in the Everglades. They were called the Calusas. They have lived a graceful life in the Everglades. They could catch fish and make weapons out of sea shells. There were also people who feared the Everglades. They were called the **conquistadors**. They will walk as far as possible to get away from the Everglades.

So this specifically proves that the Everglades were a beautiful place until people have damaged it. Help the Everglades be like it used to be!



The Everglades

Recycling Through the Ages



Have you ever wondered how long people have been recycling, well this fascinating article can tell you all about it!

Recycling has been around for thousands of years. Japan came up with the first recycling system by creating a paper recycling system in 1031,it wasn't until 700 years later when people really needed to recycle during the revolutionary war. In 1877 New York City created a "**Picking Yard**" system to sort trash from recyclable things. 7 years later people invented a machine that recycles aluminum. In one of America's worst times, **The Great Depression**, people made money by recycling metal and other various items to sell.

Now more and more people recycle because of pollution and other problems in our world. Hopefully someday the world will be normal again and you can help! So if you see a plastic bottle, recycle it, because even the littlest things can help!

Glossary

The Great Depression-period of time when stock market dropped
Picking Yard-system that sorts trash from recycling
Toxic-poisonous
Food Chain-a sequence of orgasms in a community in,which each member feeds on the one below it
Aerated Liquid-A liquid that air passed through to make it pure
Pollution-to make impure or to contaminate
Everglades-marshy land
Landfill-a place to dispose of garbage
Recycle-process in order to regain a material for human use
Conquistadors-Spanish conquerors of Mexico

Figure 10: *Published Magazine student group sample*

The Students Become the Teachers

After weeks of preparation, it was time for the students to become the teachers and to make their new knowledge meaningful to the next generation. It was exciting to see the students' transitions from researchers who were approaching informational texts in a more strategic way to knowledgeable thinkers who were ready to communicate that knowledge to an audience. We had never presented to another grade, and I was unsure as to whether anxiety and nervousness would rear its ugly head and overtake the students after all the hard work and commitment they had put into the project.

The students had been so creative in their approach to their presentations. Students had worked together to create Powerpoints, Google Docs presentations, handouts, a recycling relay race, and a board game to share with the second graders. One group even created a whole newscast where they had different segments, such as a conversation with the "Reusing Family", ways to reuse items instead of throwing them away, and a crafting segment teaching students how to use the bottom of a plastic bottle to create a colorful stamp.

To my excitement and relief the students taught the younger generation with confidence, independence, and as effective communicators. They truly were risk-takers on this day! All this work that we had done over the past few months, all the think-alouds, guided practice, activities, and independent application of the strategies had led to these students being able to get up in front of 25 second

graders and persuade them to take action and be positive stewards of the environment, all with accurate textual evidence to back them up. All of the students found a way to make this moment meaningful for the second graders and to get them excited about the learning that they had done. The students had become the teachers, and they could not have filled a teacher's shoes more completely!

Reflective Readers

After seeing the confidence of the students during their presentations, it was time to reflect on what we have accomplished during the past few months. The students were asked to complete the Student Metacognitive Strategy Checklist (Appendix E) and reflect on their ability to use the metacognitive strategies and their ability to understand the unique characteristics of informational texts. The results would demonstrate that the students were aware of their abilities and challenges and they illuminated what the next steps should be so that we could continue growing into the strongest strategic readers possible.

DATA ANALYSIS

Throughout the course of the action research study, I collected various forms of data. To ensure validity in the results, it was imperative to have a myriad of data sources to support any conclusions made at the completion of the study (Hendricks, 2009). These data sources included a pre- and post- student reading survey, observational data from whole group, small group, and individual interactions, student artifacts in Reading, Writing, and Science/Social Studies, a self-reflection on strategy use, and pre- and post- student assessments.

Student Reading Survey

At the beginning and the end of the study, the students reflected on the Student Reading Survey (Appendix D). The purpose of this survey was to provide insights into the reading habits of the students, the current strategies that they were utilizing before, during, and after reading, and their overarching feelings and impressions about the informational genre. The survey included questions about their perceptions of themselves as a reader, strategies they employ when faced with challenging words or concepts, and what genre they prefer to read in their free time.

This survey revealed that many of the students at the beginning of the study, were either unaware of the multitude of strategies that they could use throughout the reading process, or were faulty in their strategy use. There were some students who also demonstrated that they would give up or skip sections of

a text if they were unable to make meaning of it, rather than to use strategies to try and make sense of it. This helped me to reflect on areas that I needed to focus on, such as instructing the students on when a certain strategy is most appropriate and how to correctly use the strategy to construct meaning, which were major components of the study.

The results on the post survey provided me with the opportunity to recognize changes in attitude, strategy use, and genre preferences after the students interacted with informational texts with an emphasis on strategy use. While some students stayed the same in their perception of themselves as readers, some students showed an increase in confidence and rated themselves higher on the scale of being a strong reader. Most students were more able to verbalize effective strategies that would be appropriate during before reading, while reading, and after reading a text. Though some students still preferred reading fictional stories for their creativity, action, and entertainment factors, some students changed their preferences from fictional stories to informational texts, with some now reflecting that they enjoy both of the genres equally. The results of the survey also showed that some students who did not enjoy informational texts and would prefer not to read them, now thought that they were "okay" as a genre. These results showed that many students increased in confidence, their awareness of effective metacognitive strategies, and were more open to interacting with informational texts as a genre (see Tables 3-5).

Survey Question	Response	Pre-Study	Post-Study
On a scale of 4 to 1, rate yourself as a reader.	4 (Strong)	6	10
	3 (Good)	11	11
	2 (Okay)	3	0
	1 (Not very strong)	1	0
Do you prefer fictional or informational texts?	Fictional	14	10
	Informational	6	8
	Both	1	3
Choose the response that describes you best.	"Likes to read informational texts a lot"	6	5
	"Reading informational texts is okay"	12	15
	"Prefer not to read informational texts"	4	1

Table 3: *Data collected from Pre-Study and Post-Study Student Surveys*

Student Name	Pre-Study Rating as a Reader	Post-Study Rating as a Reader
Lily	2 (Okay)	3 (Good)
Hannah	3 (Good)	4 (Strong)
Carter	3 (Good)	4 (Strong)
Max	2 (Okay)	4 (Strong)
Eddie	1 (Not very strong)	3 (Good)
Sophie	2 (Okay)	4 (Strong)
Caleb	4 (Strong)	3 (Good)

Table 4: *Data collected on Pre-Study and Post-Study Student Survey based on "Rate yourself as a reader."*

Observational Data Analysis

My daily observational notes proved to be valuable at illuminating the ways in which the students were utilizing the strategies in their everyday reading and interactions with text. They provided me with the opportunity to reflect on

the learning that was taking place, especially during Guided Reading groups, and to adjust the methodology according to the needs of the students.

Student Name	**Pre-Study Genre Preference**	**Post-Survey Genre Preference**
Eddie	Fiction	Informational
Bryan	Fiction	Informational
Carter	Fiction	Informational
Mia	Fiction	Both Genres

Table 5: *Data collected on Pre-Study and Post-Study Student Survey based on "Do you prefer reading fictional or informational texts?"*

Some students were demonstrating an inability to accurately determine importance of the multitude of facts that they came across, so we were able to focus on highlighting and crossing out information in Guided Reading to lead them toward mastery. While composing our informational magazines, some of the students demonstrated their understanding of text structures and created exemplary text features to add to the magazine, so they were given the opportunity to serve as an editor within their groups.

My non-participant observational data provided me with the opportunity to reflect on how well some of the students were internalizing the instruction from the think-alouds. While working on the magazines, it became clear that there was a small group of students who were still struggling to recognize the varying text structures, and who were misusing the key words and clues, which were leading them to choose the wrong structures. For example, some of the students assumed that it was always chronological order, just because there were dates involved,

which can sometimes be an invalid assumption. The students were unable to effectively draft their magazine articles because they were not clear on what format they should be using and how to create an article in that structure. By supporting that small group and providing them with additional graphic organizers, the students were then able to be more productive during their writing time.

Student Work Analysis

By collecting and analyzing student work artifacts, I was better able to recognize whether the students understood the strategy use and were able to effectively utilize those strategies to enhance their comprehension of texts while working independently. Students completed graphic organizers, Guided Reading responses, and Reader's Notebooks entries during their guided practice. As a summative assessment, the students composed an informational article on an environmental topic and then created a text feature to enhance their magazines.

By analyzing the magazines that were produced, it helped to further provide information as to what students were still struggling to differentiate the text structures of informational texts. This assessment continued to provide additional evidence to support small group activities and instruction to help these students master the skill of categorizing texts by the structure used.

Self-Reflection on Strategy Use Analysis

At the end of the study, each of the students completed a self-reflection on how comfortable they felt with each of the metacognitive strategies and with the unique characteristics of informational texts by stating whether they could use the strategy "with difficulty" or "without difficulty". The students then provided evidence to support their reflections. This self-reflection illuminated the confidence levels of the students when engaging with informational texts and while utilizing metacognitive strategies (see Table 6 and Figure 11).

The students felt most comfortable with visualizing and questioning as metacognitive strategies and reported feeling confident in regards to the unique characteristics of informational texts. Several students did not feel as confident with activating prior knowledge. Caleb reflected that this could be caused by the fact that he reads more fictional books. Lucas reflected, "I am iffy on this because when a passage title is 'Birds', I don't know a lot about them but if it was 'Snakes' I could write the Bible on it." Synthesizing also proved to be a more difficult strategy, which will require much more modeling and guided practice for the students to master.

Strategy or Characteristic	Reported "With Difficulty"	Reported "Without Difficulty"	Reported "Difficulty Sometimes"
Visualizing	0	18	1
Questioning	1	17	1
Activating Prior Knowledge	5	12	3
Determining Importance	4	11	4
Synthesizing	5	12	2
Text Structures	1	15	3
Text Features	1	17	1
Vocabulary	1	15	3

Table 6: *Data collected from the Student Strategy Checklist based on self-reflection of strategic reading with informational texts*

SRI Analysis and Interpretation

The students were assessed using the Scholastic Reading Inventory (SRI), which is a computerized assessment to determine the Lexile Levels of the students. Each student took the SRI at the beginning of the study and at the end of the study to identify growth in their reading abilities. This assessment was a school requirement and all students were assessed using the SRI before and after the study, regardless of their beginning Lexile Level.

What are the kids saying about METACOGNITION?

I don't struggle with visualizing because I practice it. Sometimes when it is really descriptive, I can even smell.

I synthesize when I learn new things and I improve and get better prior knowledge.

I wonder about many things, especially vocabulary. I wonder what words mean, what a characters' actions are going to be, and if information is going to be important.

I think I synthesize okay because my thinking changes and grows when I read.

We have been making a flip chart about metacognitive strategies and I have been studying it.

When I read, I think about what I can ask myself. First I have to determine what is important to make a question on all the important info.

WHEN A STORY HAS TEXT FEATURES I HAVE LEARNED TO READ IT RIGHT AWAY BECAUSE YOU NEVER KNOW IF IT WILL ASK YOU FOR WHAT IT SAYS, LIKE MAPS, GRAPHS, AND OTHER TEXT FEATURES.

I am great at this because if I am reading a story with vocabulary I usually look at the entire sentence and see if there are any clue words in it to define it.

MY KNOWLEDGE GROWS EVERY TIME I READ A NEW BOOK.

I am good at questioning because when you question you have to find important things to question which is like determining importance and I am good at that.

I am good at visualizing because we have been drawing pictures in our notebook. We try to think past what we already know.

When I read, I store the information I read and use it in other books, stories, and events while gaining more information.

I AM GOOD AT SYNTHESIZING BECAUSE I CAN COMBINE PARTS OF STORIES TO FIGURE THINGS OUT.

Figure 11: *Selected student responses on the Student Strategy Checklist*

According to the data, 18 students showed growth in their reading, with 12 of those students meeting or exceeding their growth goal that had been set at the beginning of the year. One student even increased her Lexile Level by 341 Lexiles! Seven students showed no growth on the SRI assessment. In regards to the study, this could be impacted by the fact that the students are interacting with a new passage for every question, which may have led some students to approach each new passage in a less strategic way because of the abundance of text. Throughout our time together, we had spent a prolonged time interacting with the texts and annotating the text, which is not something they can easily do when faced with a text on a computer screen.

Codes, Bins, and Theme Statements

Throughout the course of this study, I coded my field log and the various other forms of data that was collected. This proved to be an illuminating experience as similarities and trends began to emerge within the data. After reviewing the data multiple times with a variety of lenses, I was able to formulate codes, bins, and theme statements that aligned with the data.

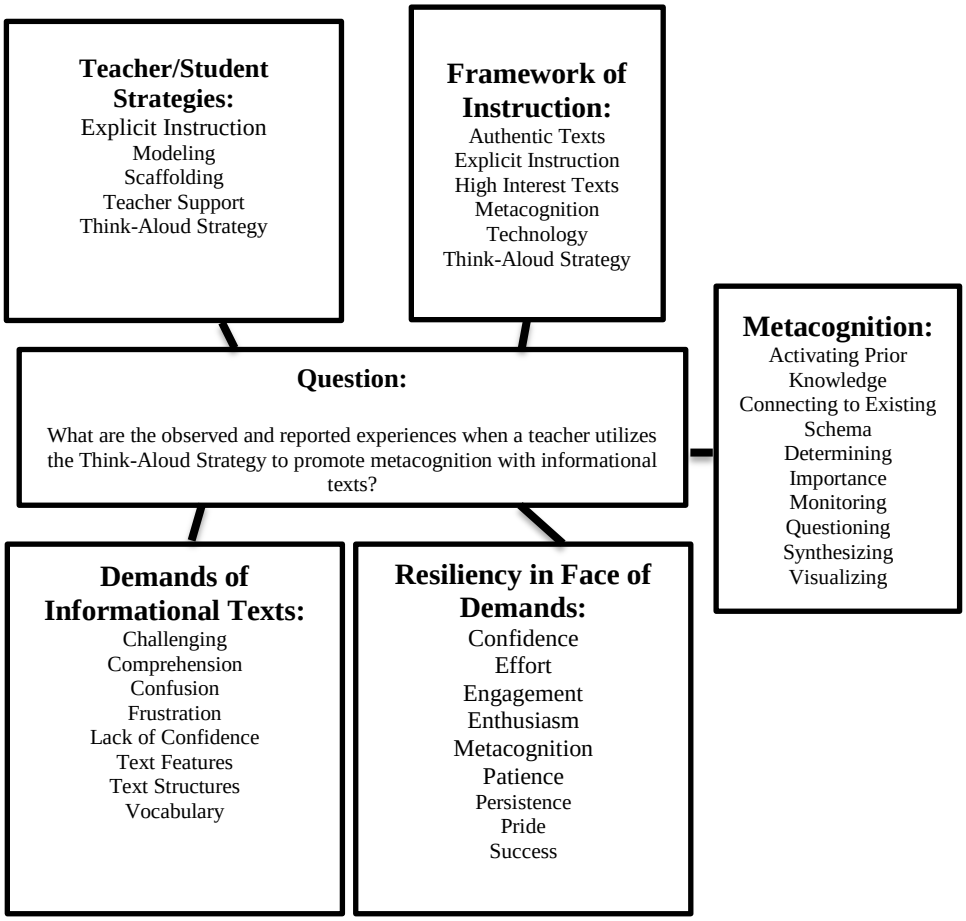


Figure 12: *Coded Bins*

Demands of Informational Texts:
Informational texts pose unique, challenging, and complex demands, which can negatively impact their learning experiences and leave students feeling confused, frustrated, uninterested, and not very confident in their abilities.

Resiliency in Face of Demands:
Students can overcome the challenges of informational texts by utilizing metacognition and having a greater awareness of text features, text structures, and how to interact with unknown vocabulary, which allow them to be resilient in the face of the demands.

Framework of Instruction:
The integration of metacognitive strategies, explicit instruction in strategy use through think-alouds, authentic texts, utilization of technology, and opportunities for texts to be connected by topic, fosters a classroom environment that promotes students to be risk-takers and grow in their confidence when faced with challenging texts.

Teacher/Student Strategies:
Teacher think-alouds, modeling, and scaffolding of metacognition and the unique characteristics of informational texts fosters students to use strategies to help them interact more critically with material and maintain effort and persistence when working cooperatively and independently.

Metacognition:
The implementation of metacognition strategies throughout the reading process promotes interaction between text and reader.

Figure 13: *Theme Statements*

FINDINGS

The purpose of this action research study was to recognize how fifth grade students responded to explicit instruction on metacognitive strategies and the unique, yet demanding, characteristics of informational texts and to see how capable they were at transferring the modeling and guided practice to their own independent reading and interactions with texts. I designed this study because there has been increasing frequency to which students are being asked to interact with challenging informational texts and some students were coming to fifth grade without the ability to use metacognition to promote comprehension. To better prepare my fifth graders to be engaged and active readers, even in the face of challenge and demands, the explicit instruction, through the means of think-alouds, would provide them with a clearer understanding of appropriate strategy use and the benefits of interacting with the text in a strategic way.

Demands of informational texts: Informational texts pose unique, challenging, and complex demands, which can negatively impact their learning experiences and leave students feeling confused, frustrated, uninterested, and not very confident in their abilities.

Informational texts had always posed a challenge to me as to what was the best way to instruct the students so that the demands of this genre would not undermine their ability to make meaning. There are so many features and structures correlated with informational texts and an abundance of domain-

specific, Tier 3 vocabulary, which can lead students to experience negative feelings toward the genre even before they attempt to read it. When students are faced with such challenges and have not had adequate exposure or practice with strategic ways to interact with these characteristics, informational texts can feel like locked doors to students, where they feel they do not possess the keys, so why even bother. These unique characteristics drew me to this genre and I wanted a better understanding of how to best instruct my students in this area to promote confidence and enthusiasm for these texts that could offer such unlimited insights into our world.

Resiliency in the face of demands: Students can overcome the challenges of informational texts by utilizing metacognition and having a greater awareness of text features, text structures, and how to interact with unknown vocabulary, which allow them to be resilient in the face of the demands.

When students are provided with the necessary tools to engage with a text and are more aware of what it takes to construct meaning, they can be resilient in the face of challenges. During this study, the students demonstrated that they could find success, even with very complex and demanding texts, when they were committed to remaining active in the process and when they utilize appropriate strategies. Students were more willing to take risks with their textual interactions and to share their insights with the class because they felt that their ideas were supported more by the strategic interaction they had while reading. At the

beginning of the study, some students were quiet and unwilling to answer questions based on informational texts, in whole group and small group situations. As we progressed and began using the metacognitive strategies more in our whole group lessons, those students became more active in our discussions and more engaged in our learning. Because they could now recognize ways in which a reader interacts with a text, they had more evidence to support their ideas and were more willing to try it out in their own reading, which was especially evident in small group situations. Within our learning environment, some students demonstrated an increased feeling of comfort, which allowed them to practice their strategy use without feeling embarrassed or unsure. The students began to discuss their strategy use and which strategies worked best for them on a specific text, which provided even more insight into appropriate and effective use of metacognition for their peers. Creating an environment where students were talking about their metacognitive use with one another and exploring various perspectives and viewpoints through conversations and discussions promoted more meaningful experiences with the material and with one another. The environment became a community of learners with shared vocabulary and shared purposes and who encouraged and helped one another to have significant transactions with the text.

> "An experience is always what it is because of the transaction taking place between an individual and what, at the time, constitutes his environment,

> whether the latter consists of a person with whom he is talking about some topic or event, the subject talked about being a part of the situation; or the toys with which he is playing; the book he is reading; or the materials of an experiment he is performing" (Dewey, 1938, p. 44).

To provide for these opportunities to discuss and explore our strategy use, the most important element in overcoming the challenges of this genre was time. Though it was not always easy to fit it into our daily experience, the students needed adequate time to interact with these structures, features, and vocabulary. I began to integrate reading informational texts into Guided Reading, Writing, and Science/Social Studies time. Even with the cross-curricular applications, twelve weeks is not truly enough time to reinforce all the understandings that they need to be successful when interacting with this genre. However, by the end of the study, the students had a stronger foundation in text features, text structures, and how to determine unknown vocabulary, than I have seen in my students in the past, which is a foundation that we can continue to build on throughout the rest of the year.

Framework of instruction: The integration of metacognitive strategies, explicit instruction in strategy use through think-alouds, authentic texts, utilization of technology, and opportunities for texts to be connected by topic, fosters a classroom environment that promotes students to be risk-takers and grow in their confidence when faced with challenging texts.

The emphasis on explicit instruction of metacognitive strategies, through the use of think-alouds, provided students with the ability to see inside the mind of a proficient reader. By thinking-aloud challenges that I was facing while reading a text, it created a safer environment where students realized that comprehension must be constructed and created, and that could be a time consuming process that did not always just happen. The strategy instruction helped the students to see that they had the ability to make meaning of texts, even if they were challenging, but they had to remain active and committed to make it happen. Using a variety of high-interest, authentic periodicals provided the students with the type of text that was interesting to them and enhanced their understanding of topics that we were currently engaging with in a myriad of ways. By using technology to support our understanding, such as videos and the text on the Smartboard to complement the text in front of them, the students demonstrated more motivation to continue remaining active with the text. These shared experienced carried over to their small group interactions and were then reinforced during independent reading time.

During small groups, when students recognized that they possessed the ability to make meaning of text, they became more confident thinkers who took risks with their learning, which led to them being more persistent in overcoming the challenges that the text might offer. Throughout this study, students who started the year off as quiet and timid when asked questions about texts, became

more lively and engaged participants, especially in small group situations. For example, Jack, who only answered questions if he was forced to, began to offer his insights and questions during Guided Reading. By providing the students with tools that they could use in the face of challenge and opportunities to talk about strategy use within the groups, they no longer were wandering through a text without direction. By discussing the fact that informational texts can be difficult and challenging, students who were struggling no longer felt that they were alone. This allowed for students to feel more comfortable with the fact that they could engage with a text in a variety of ways, and that it was okay not to understand the text after reading it one time. Once they no longer felt alone in their struggles, many students showed that they were more willing to open up and at least give it a try. It is amazing what students can do if they feel confident.

Teacher/student strategies: Teacher think-alouds, modeling, and scaffolding of metacognition and the unique characteristics of informational texts foster strategy use in students to help them interact more critically with material and maintain effort and persistence when working cooperatively and independently.

The explicit instruction on metacognition and how to effectively engage with informational texts called upon the students to become more active in the process of meaning-making. It was evident on several of the pre-study surveys, that some of the students were not remaining active with a text, but rather reading

it once and when meaning wasn't created, giving up and moving on. Modeling how to be a strategic reader provided students with the opportunity to increase their engagement with texts to promote understanding, even when things would get rough. By sharing the strategy use with the students, the strategies became more transparent for them and they began to see the myriad of ways that they could be utilized in a variety of situations. Most students became more able to verbalize strategies that worked well for them and situations where they were effective, and were better able to understand what it truly meant to be an active and engaged reader.

Metacognition: The implementation of metacognitive strategies throughout the reading process promotes interaction between text and reader.

Within this action research study, I chose several metacognitive reading comprehension strategies that would help students to be more active with texts while they were reading them. The metacognitive strategies were chosen based on what the research suggested were the most effective metacognitive strategies to use with informational texts. The metacognitive strategies I chose to emphasize were visualizing, questioning, determining importance, activating prior knowledge and connecting to existing schema, monitoring understanding, and synthesizing.

In the pre-study survey, it became evident that there were students who either were not being strategic in their reading to construct meaning or were faulty

in their strategy use. These responses suggested that there were students who were either unaware of the ways in which they can remain engaged with a text, or who believed that comprehension just comes naturally and does not need to be constructed, which would contribute to the fact that many students would skip parts of a text that did not make sense to them the first time. Throughout the course of the study, the students began to demonstrate an increased awareness as to the ways in which a reader makes meaning of what they read, and were not as discouraged when a text did not make sense the first time. As a result, many students demonstrated more confidence in responding to questions about the meaning of a text, even when they were unsure. Many students were better risk-takers in the classroom because they understood that their full comprehension of the text might not come automatically or quickly, but that it was okay to be unsure as long as you were willing to then use other strategies to continue building that meaning. This became most evident in our small-group time together during Guided Reading where students who were more bystanders during our discussion time together were more willing to discuss and converse about the pieces and take risks with unknown words and phrases. This also led to increased small group instruction on individual strategy use so that they recognized when certain strategies were most important and how to monitor understanding and fix breakdowns in comprehension when necessary.

NEXT STEPS

As a result of this action research project, the way in which I instruct students has been enhanced in ways that are immeasurable. It truly became a learning environment where the students were teaching me new insights daily that helped me to make my instruction even stronger and more meaningful. The power of explicit instruction, through the use of think-alouds and modeling, was a meaningful way to instruct strategy use with my students of all reading abilities. Hagaman, Luschen, and Reid (2010) emphasize that through increased modeling and explicit instruction, teachers are able to release gradual responsibility to the students, provide them with adequate time to engage in strategy use, and guide them toward making those strategies their own. Teaching students to be more strategic in their interactions with texts, through the emphasis on metacognition, helped most of the students remain active with the text in a way that supported comprehension. The explicit explanation of when certain strategies were most appropriate to use also helped benefit the students to minimize their faulty strategic attempts. The focus on metacognition will forever be engrained into my reading instruction because it gave them the tools to grapple with texts in a meaningful way, which has improved confidence and willingness to take risks.

Before beginning the process of action research, the instruction of informational texts was an area that I wanted to grow in professionally. The challenges of this genre left me feeling as though I knew I could instruct my

students more successfully in this area. By focusing on these unique demands, I found a voice in helping my students to navigate such challenges. By providing my students with more time to become acquainted with text structures, text features, and strategies to tackle unknown words, I found that these characteristics became part of our everyday interactions with texts. The more that we worked with them, the more it became part of our classroom language. I have grown in my confidence to instruct the students on reading and comprehending informational texts because of this focus and emphasis, and I have found more meaningful and authentic ways for them to engage with the texts so that their enthusiasm can carry them through the difficult times.

Throughout the process, the ability to embed the instruction in a multitude of our disciplines was extremely beneficial. Explicitly instructing during whole group reading, then transitioning into small group Guided Reading where we could interact with informational texts and put our strategies into action, then incorporating the strategy use and informational texts into writing magazines, and finishing our day with Science and Social Studies research and implementation, provided the students with a continuous emphasis on strategy use with informational texts. The ability to formulate lessons and activities that allowed for reading to become a daily part of the other disciplines enhanced the students' abilities to implement those strategies in a way that helped them internalize the instruction. Building this connection and imparting it to all subjects was not a

difficult thing to plan, and will definitely be something that I continue to do in the future.

As I reflect on this experience and on the impact it will have on me as a teacher this year, and in my future, I am confident that I am a stronger teacher for it. I will continue to explicitly instruct my students in strategic approaches to reading using metacognition, both in literature and informational texts. These strategies will help my students across all disciplines of their education. This experience has continued to help me reach my professional goals and make the most out of every moment with my students.

REFERENCES

Bakkan, J. P., & Whedon, C. K. (2002). Teaching text structure to improve reading comprehension. *Intervention in School and Clinic, 37*(4), 229-233.

Beers, K. (2003). *When kids can't read: What teachers can do.* Portsmouth, NH: Heinemann.

Bluestein, N. A. (2010). Unlocking text features for determining importance in expository text: A strategy for struggling readers. *The Reading Teacher, 63*(7), 597-600.

Boulware-Gooden, R., Carreker, S., Thornhill, A., & Joshi, R. M. (2007). Instruction of metacognitive strategies enhances reading comprehension and vocabulary achievement in third-grade students. *The Reading Teacher, 61*(1), 70-77.

Cummins, S., & Stallmeyer-Gerard, C. (2011). Teaching for synthesis of informational texts with read-alouds. *The Reading Teacher, 64*(6), 394-405.

Davey, B. (1983). Think aloud- Modeling the cognitive processes of reading comprehension. *Journal of Reading, 27*(1), 44-47.

Dymock, S., & Nicholson, T. (2010). "High 5!" Strategies to enhance comprehension of expository text. *The Reading Teacher, 64*(3), 166-178.

Eilers, L. H., & Pinkley, R. (2006). Metacognitive strategies help students to comprehend all text. *Reading Improvement, 43*(1), 13-29.

Fang, Z. (2008). Going beyond the Fab Five: Helping students cope with the unique linguistic challenges of expository reading in intermediate grades. *Journal of Adolescent & Adult Literacy, 51*(6), 476-487.

Hagaman, J. L., Luschen, K., & Reid, R. (2010). The "RAP" on reading comprehension. *TEACHING Exceptional Children, 43*(1), 22-29.

Hall, K. M., Sabey, B. L., & McClellan, M. (2005). Expository text comprehension: Helping primary-grade teachers use expository text to full advantage. *Reading Psychology, 26*(3), 211-234.

Harvey, S., & Goudvis, A. (2000/2007). *Strategies that work: Teaching comprehension for understanding and engagement.* Portland: ME: Stenhouse.

Greene, K. (2013). Common Core: Fact vs. fiction. *Instructor Magazine*. Retrieved from http:// www.scholastic.com/teachers/article/common-core-fact-vs-fiction.

Keene, E. O., & Zimmermann, S. (2007). *Mosaic of thought: The power of comprehension strategy instruction*, Portsmouth: NH: Heinemann.

Keene, E. O., & Zimmermann, S. (2013). Years later, comprehension strategies still at work. *The Reading Teacher, 66*(8), 601-606.

Lapp, D., Fisher, D., & Grant, M. (2008). "You can read this text-I'll show you how": Interactive comprehension instruction. *Journal of Adolescent & Adult Literacy, 51*(5), 372-383.

Lapp, D., Fisher, D., & Johnson, K. (2010). Text mapping plus: Improving comprehension through supported retellings. *Journal of Adolescent & Adult Literacy, 53*(2), 423-426.

McKeown, R. G., & Gentilucci, J. L. (2007). Think-aloud strategy: Metacognitive development and monitoring comprehension in the middle school second-language classroom. *Journal of Adolescent & Adult Literacy, 51*(2), 136-147.

McTavish, M. (2008). "What were you thinking?: The use of metacognitive strategy during engagement with reading narrative and informational genres. *Canadian Journal of Education, 31*(2), 405-430.

Ness, M. (2011). Teachers' use of and attitudes toward informational text in K-5 classrooms. *Reading Psychology, 32*(1), 28-53.

Olshavsky, J. E. (1977). Reading as problem-solving: An investigation of strategies. *Reading Research Quarterly, 12*(4), 654-674.

Prado, L., & Plourde, L. A. (2011). Increasing reading comprehension through the explicit teaching of reading strategies: Is there a difference among the genders? *Reading Improvement, 48*(1), 32-43.

Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). Generation M2: *Media in the lives of 8- to 18- year olds.* Menlo Park, CA: Kaiser Family Foundation. Retrieved from www.kff.org/entmedia/mh012010pkg.cfm

Sibold, C. (2011). Building English Language Learners' academic vocabulary: Strategies and tips. *Multicultural Education, 18*(2), 24-28.

Walker, B. J. (2005). Thinking aloud: Struggling readers often require more than a model. *The Reading Teacher, 58*(7), 688-692.

Wilhelm, J. D. (2001). Improving comprehension with Think-aloud strategies. New York: NY: Scholastic.

Wilson, D., & Conyers, M. (2014). "The boss of my brain". *Educational Leadership, 72*(2), Retrieved from http://www.ascd.org/publications/educational-leadership/oct14/vol72/num02/£The-Boss-of-My-Brain.aspx.

RESOURCES

Adams, J. (2014). Manatee emergency. *SuperScience, 25*(6), 4-7.

Atwell, N. (2007). *The reading zone.* New York, NY: Scholastic.

Crane, C. (2014). Up, up, and away. *SuperScience, 26*(3), 14-5.

Crane, C. (2014). Bye-bye, balloons? *SuperScience, 33*(3), 4-7.

George, J. C. (1997). *Everglades.* New York, NY: Harper Collins.

Hoyt, L. (1999). *Reflect, revisit, retell: Strategies for improving reading comprehension.* Portsmouth, NH: Heinemann.

Jango-Cohen, J. (2014). Saving sloths. *SuperScience,25*(4), 4-7.

Lauber, P. (1996). *Hurricanes: Earth's mightiest storms.* New York, NY: Scholastic Paperbacks.

Mead, M. (2014). Volcano alert! *SuperScience, 26(1),* 10-13.

Modigliani (2014). Unearthed from the ashes. *SuperScience, 25(*4), 10-3.

Ogle, D. M. (2000). Make it visual: A picture is worth a thousand words. In M. McLaughlin & M. E. Vogt (Eds.), *Creativity and innovation in content area teaching*. Norwood, MA: Christopher-Gordon.

Pagano, L. (2014). *Table texting*. Retrieved from https://www.teacherspayteachers.com/FreeDownload/Table-Texting.

Rapp, H. (2014). *RAN (reading and analyzing nonfiction) strategy*. Retrieved from https://www.teacherspayteachers.com/Product/RAN-Reading-and-Analyzing-Nonfiction-strategy-746835.

Stead, T., & Hoyt, L. (2011). *Explorations in nonfiction writing*. Portsmouth, NH: Heinemann.

Warren, S. (2014). Koala caretakers. *SuperScience, 26*(1), 4-7.

APPENDIX

Appendix A: HSIRB Approval

Part I: RESEARCHER

1. **Proposer:** Stephanie Chimics	2. **Department:** Master of Education (M. Ed.)
3. **Mailing address:** [redacted]	4. **Phone:** [redacted]
5. **E-mail address:** schimics@gmail.com	
6. **This is a (please check):** __x__ New Proposal _____ Resubmission of a rejected Proposal _____ Renewal _____ Request for modification	7. **Research Start/End Dates:** Make sure you clearly define the start and end dates. Format as month, day, year. **Start:** September 2, 2014 **End:** December 23, 2014
7**. Title of Proposal:** Putting Our Thinking Caps On: Using Think Alouds to Promote Metacognition with Informational Texts	
8. Faculty Advisor: Charlotte Rappe Zales, Ed. D.	

Part II: PROPOSAL TYPE

1. This research involves **ONLY** the use of **educational tests** (cognitive, diagnostic, aptitude or achievement).

_____ Yes
__x__ No

2. This research collects interviews or surveys **ONLY** of **elected or appointed public officials** or candidates for such.

_____ Yes
__x__ No

3. This research involves **ONLY** observations of **public behavior**.

_____ Yes
__x__ No

4. This research involves **ONLY existing data, documents, records or specimens**.

_____ Yes
__x__ No

5. List the **research funding sources**, if any.

There are no funding sources for this research project.

6. The results of this research will be published.

__x__ Yes
_____ No
_____ Uncertain

If you marked "yes" or "uncertain", please provide a brief description of the possible forum of publication (for example, peer-reviewed journal, conference presentation, etc.)

Description of publication forum:

The results will be published as a Master of Education document available online and in the Reeve's Library.

In this next section, you will provide extensive details about the research project. Please make sure that your explanations/descriptions are clearly written and grammatically correct so that the committee can accurately follow and assess your proposal.

Part III. DETAILS OF THE RESEARCH PROJECT

1. In this section, you have the option of either addressing each of the following subheadings individually or together (since there may be some overlap) in your proposal narrative. If providing a narrative, please make sure that each of the following topics is clearly identified in the narrative.

a. Objectives: The objective of this action research project is to observe and report the experiences when utilizing the Think Aloud strategy to foster metacognition in fifth grade students when interacting with informational texts.

b. Design: This project is an action research project.

c. Procedures (makes sure you clearly describe what is required of subjects):

- Students will participate in a survey about their attitudes on reading and interacting with informational texts.
- Students will be observed during classroom activities.
- Students will discuss the importance of informational texts.
- Students will analyze the distinguishing characteristics of informational texts including text structures, text features, and domain-specific vocabulary.
- Students will examine the use of metacognitive strategies while interacting with the distinct characteristics of informational texts.
- Students will create a text structure flipchart.
- Students will interact with informational texts including *Dynamath, Super Science,* and *Time for Kids.*
- Students will generate questions based on informational texts.
- Students will experience teacher Think Alouds, using informational texts.
- Students will use the Table Texting strategy to discuss informational texts and generate questions.
- Students will visualize the structure and the content in an informational text.
- Students will utilize graphic organizers to guide their understanding of text structure.
- Students will create Gallery Images, where they draw three visualizations to represent content read in *Time for Kids.*
- Students will interact with text features, including table of contents, glossary, index, headings, special fonts, illustrations, captions, graphic sources and text boxes.
- Students will create a Text Feature Foldable to help with their identification of text features.
- Students will activate their prior knowledge on a topic and connect new information to their existing schema.
- Students will understand that schema is like a mental filing cabinet.
- Students will use the Reading and Analyzing Nonfiction Text organizer (RAN organizer) to activate prior knowledge.
- Students will use the activity Text Mapping to promote discussion about text structures and text features with a small group.
- Students will monitor their understanding of the text and employ fix-up strategies to remediate breakdowns in comprehension.
- Students will utilize context clues to determine the meaning of unknown words.
- Students will listen to the “Context Clues Song” on Youtube.

- Students will use antonyms, synonyms, word parts, definitions, and examples to help define unknown words.
- Students will determine importance and prioritize information based on the main idea.
- Students will sorts item for a vacation based on importance and justify their reasoning.
- Students will use the analogy noodles, water, and a strainer to understand that a book has noodles and water in it and the noodles are essential to our understanding so we have to drain out the water.
- Students will read an article from *Scholastic News* and determine importance of the sentences.
- Students will understand the significance of synthesizing information.
- Students will demonstrate knowledge that our knowledge continues to grow and change as we read and learn.
- Students will use a synthesizing organizer to demonstrate how to use evidence to support changes in our thinking.
- Students will prioritize details to formulate a cohesive synthesis of informational texts using coding of the text.
- Students will code text based on the importance of the information.
- Students will identify the main idea of an informational text.
- Students will work in small groups to create an informational magazine about a subject they are passionate about.
- Students will research the subject using classroom books and the Lehigh Valley Academy database.
- Students will demonstrate understanding of metacognitive strategy use, text features, text structures, and domain specific vocabulary on the newsletter.
- Students will independently read texts that they have selected on their own.
- Students will interact with informational texts by responding to them in their Reader's Notebook.
- Students will reflect on their reading habits and strategy use using the Student Strategy Checklist.
- Students will think aloud their metacognition with partners to promote active engagement while reading.
- Students will take the same survey to identify their attitudes about reading and informational texts.

d. Outline procedures/steps to reduce risks to subjects:

To reduce risk to subjects, all data will be securely stored in a locked compartment in a desk. At the completion of the action research project, all of the data will be destroyed to reduce risks to subjects. The data will be kept confidential and anonymous, with the subjects all receiving a pseudonym to protect their identities.

2. This research involves the following GROUP(S) vulnerable to risk. Check all that apply.

__x__ Subjects under the age of 18
_____ Prisoners
_____ Pregnant women
__x__ People with mental, cognitive, intellectual, or physical disabilities
_____ Volunteer sample so vulnerable group membership may be unknown

***Research Design Note**: If you are asking for **volunteer participants**, you will not necessarily know whether or not your participants are under 18, pregnant and/or disabled. In fact, your volunteers may themselves not know whether they fall into one of these categories. Therefore, if you are asking for volunteer participants, you need to think carefully about whether or not your research project could adversely affect someone in any of these categories, and if so, how you might try to either screen out these individuals and/or design the project so that the risk to these individuals is minimized.*

2a. If you checked any or all of the groups identified above, explain why you need to use the group and the methods you will use to minimize risk. If your research design proposes no special risks to these vulnerable individuals even if they happen to be included in your sample, please state why:

These are the students enrolled in my regular elementary school classroom.

3. This research might affect people with special vulnerabilities (for example, pregnant women, people with allergies, people taking some medications, people with cognitive impairments such as ADHD, etc.)

***Research Design Note**: Think carefully here again about whether or not your research design could negatively affect people with special vulnerabilities. For example, does your research design require so much concentration and/or computation that it might result in considerable stress for someone with a cognitive impairment? Are people completing your instrument in solitude or in a group setting? Might comparative performance result in excessive stress?*

_____ Yes
__x__ No

If you checked "Yes", explain the methods you will use to minimize risk to these people.

4. Describe your subject pool including:
   a. the intended number of subjects
   b. subject characteristics/demographics

There will be twenty five subjects. Both genders will be represented in the subject pool. The students will be ages 10 to 11. The subjects are all enrolled in my regular elementary school classroom.

5. Describe in detail the methods you will use to recruit your subjects.

The subjects are enrolled in my regular fifth grade classroom.

6. This research involves **deception** of subjects.

_____ Yes
__x__ No

If you checked "Yes", describe the nature of the deception and your debriefing procedure. You will need to provide the debriefing statement with the full proposal submission. Even if the debriefing will be done orally, you need to submit the text of the verbal statement that will be read to participants.

7. Explain by whom and how the subjects will be informed of the purposes of this research project. *(Remember to provide a copy of the informed consent form with this proposal form.)*

The subjects will be informed of the purposes of this research project through conversations that I will hold with them. Parents and guardians of the subjects will receive Informed Consent, which will verbalize the purposes of this project. Parents and guardians will sign permission on the Informed Consent.

8. This research collects information, which (check all that apply)

_____ deals with **sensitive aspects** from the participant's point of view.
__x__ identifies the subject by **name** or **number codes**.
_____ might place the subject at **risk of liability** if made public.
_____ might place the subject's **financial standing or employability** at risk if made public.

Research Design Note: *Think carefully about whether or not your research deals with topics that may be sensitive from the participant's point of view. Sometimes it is not obvious to the researcher that the subject of their research may be a sensitive topic for others.*

If you checked any or all of the categories above, explain the methods you will use to

a. safeguard the data you collect (you need to describe this safeguarding procedure in detail, including but not limited to a description of how the data will be protected (for example, in a locked cabinet), whom will have access to the data, and how and when the data will be destroyed)
b. inform subjects of available support services (If your participants are drawn from the Moravian College community, please provide contact information for the Counseling Center, Campus Safety and the Health Center—contact information available on the HSIRB website. For participants drawn from other communities, please provide the comparable support service information.)
c. minimize the risk of identification of subjects.

a. To safeguard the data, all of the data will be securely stored in a locked cabinet in my desk.

b. To inform subjects of available support services, Informed Consent will go home to the parents and guardians of the subjects and will be returned with signatures. They will be informed that the subject may withdraw at any time during the research project, without consequence.

c. To minimize the risk of identification of subjects, all subjects will be given a pseudonym which cannot be linked to the subject.

Appendix B: Principal Consent Form

Principal Informed Consent

[redacted]

In addition to being a fifth grade teacher, I am currently a graduate student working toward earning my degree in Master of Education in Curriculum and Instruction at Moravian College. A central requirement of this program calls upon us to be reflective as educators and to ask ourselves how we can continue to grow and develop in our profession to offer the best and most meaningful experiences to our students. In response to this reflection and commitment to lifelong learning, I will be conducting a systematic action research study on the impact of utilizing the Think Aloud strategy to promote metacognition in the students while interacting with informational texts. The Think Aloud strategy helps me to model the inner dialogue that proficient readers have in their minds as they interact with challenging and complex texts. My goal is to help the students recognize how to think about their own thinking while reading so that they remain active during the process and can enhance their comprehension of the content. In doing so, the hope is that students will not only interact more efficiently with complex informational texts, but also will find more enjoyment and success in the process.

Below you will find some questions and answers that will be provided to the parents and guardians to enhance their understanding of the process.

How will this change the typical reading schedule that my child will receive? The activities and lessons that will be used during this research study will be systematically designed and executed to foster metacognition in the students when faced with challenging texts. Students will be given the opportunity to engage with more informational texts and reinforce the strategy use during our Science and Social Studies time to enhance *Getting Organized* and *Cultural Crossroads*. The normally scheduled reading time will correlate with the curriculum already in place.

Is this research confidential? The results of this research study will be published in my graduate thesis. However, any and all material and data that relates to your child's identity will be kept in the strictest confidence. He or she will be given a pseudonym, and all paperwork will be kept in a secured and locked desk drawer.

What if I do not want my child to participate? Please be aware that you are under no obligation to agree to have your child participate in this research study. Parents and guardians may choose to withdraw the child from the study at any time with no consequence. However, due to the fact that reading is a part of the curriculum, all students will complete the same work whether or not they serve as participants in the study. Only data collected from participants will be included in the research study.

If you have any questions or concerns regarding my research study, please do not hesitate to contact me at [redacted] or by email through [redacted]. You may also contact my Moravian College advisor, Dr. Joseph Shosh, at shoshj@moravian.edu. I genuinely appreciate your support and cooperation in allowing me to model being a lifelong learner for my students.

Sincerely,

Ms. Stephanie Chimics

Consent to Execute the Classroom Research Study

Please check the appropriate line below and sign the form:

✓ I give permission for you to carry out the action research study.

_____ I DO NOT give permission for you to carry out the action research study.

I have read the above information, and understand it.

[redacted] 8/13/14

Principal Signature Date

Appendix C: Parent/Guardian Consent Form

Dear Parents and Guardians,

In addition to being a fifth grade teacher, I am currently a graduate student working toward earning my degree in Master of Education in Curriculum and Instruction at Moravian College. A central requirement of this program calls upon us to be reflective as educators and to ask ourselves how we can continue to grow and develop in our profession to offer the best and most meaningful experience to our students. In response to this reflection and commitment to lifelong learning, I will be conducting a systematic action research study on the impact of helping students to think about their thinking, which is known as metacognition, while reading informational texts. In doing so, the hope is that students will not only interact more efficiently with complex informational texts, but also will find more enjoyment and success in the process. Though these strategies are already taught and reinforced as part of the curriculum, we will be reinforcing the strategy use during content area explorations. The students will be required to read informational texts and use strategies which enhance their understanding of our Science/Social Studies units. The goal is that they will increase their comprehension of informational texts by thinking about their thinking while reading them.

How will this change the typical reading schedule that my child will receive? The activities and lessons that will be used during this research study will be systematically designed to help the students think about their thinking when faced with challenging texts. Students will be given the opportunity to engage with more informational texts and reinforce the strategy use during our Science and Social Studies time to enhance *Getting Organized* and *Cultural Crossroads*. The normally scheduled reading time will correlate with the curriculum already in place.

Is this research confidential? The results of this research study will be published in my graduate thesis. However, any and all material and data that relates to your child's identity will be kept in the strictest confidence. He or she will be given a pseudonym, and all paperwork will be kept in a secured and locked desk drawer.

What if I do not want my child to participate? Please be aware that you are under no obligation to agree to have your child participate in this research study. Parents and guardians may choose to withdraw the child from the study at any time with no consequence. If you choose to withdraw your student, please contact me at [redacted] or through email at [redacted]. However, due to the fact that reading is a part of the curriculum, all students will complete the same work whether or not they serve as participants in the study. Only data collected from participants will be included in the research study.

If you have any questions or concerns regarding this research study, please do not hesitate to contact me at [redacted] ext. [redacted] or through email at [redacted]. You may also contact my Moravian College advisor, Dr.

Joseph Shosh, by email at [redacted]. The Moravian College Ethical Review Board has approved this research as ethical and requires that I provide the following contact information should there be any questions or concerns. In this event, you may contact the 4-6 Principal, [redacted] or through email at [redacted]

I would like to genuinely thank you for your support and cooperation in allowing your student and myself to continue being lifelong learners together.

Sincerely,

Ms. Stephanie Chimics

Consent to Participate in Classroom Research Study

Please check the appropriate line below and sign the form:

_____ I give permission for my child's data to be used in the study. I understand that I will receive a signed copy of this consent form for my own records.

_____ I DO NOT give permission for my child's data to be used in the study.

I have read the above information, and understand it.

_____ _____ _____

Appendix D: Pre-Study and Post-Study Student Reading Survey

Name:_____

Student Questionnaire-Pre/Post

1. What makes someone a strong reader?

2. On a scale of 4 to 1, rate yourself as a reader. Circle the number.

4	3	2	1
Strong	Good	Okay	Not very strong

3. Do you understand everything that you read? Explain.

4. What do you do if you do not understand what you are reading?

5. What do you do before you read a new book or a new chapter in a book?

6. What do you do while you are reading?

7. What do you do after you finish reading?

8. Do you prefer reading fictional or informational texts? Explain your answer.

9. Choose the response that describes you the best:

_____ I am someone who likes to read informational texts a lot.

_____ I am someone who thinks reading informational texts is okay.

_____ I am someone who would prefer not to read informational texts.

10. What strategies do you use when you read to help you understand informational texts.

Appendix E: Student Metacognitive Strategy Checklist

Name:_____

	With Difficulty	**Without Difficulty**	**Evidence**
Metacognitive Strategies			
Visualizing			
Questioning			
Activating Prior Knowledge			
Determining Importance			
Synthesizing			
Informational Texts			
Text Structures			
Text Features			
Vocabulary			

Appendix F: Reading and Analyzing Nonfiction Graphic Organizer

RAN Strategy

What I Think I Know	Confirmed	Misconceptions	New Information	Wonderings

Appendix G: Determining Importance Activity

Determining Importance Scenario

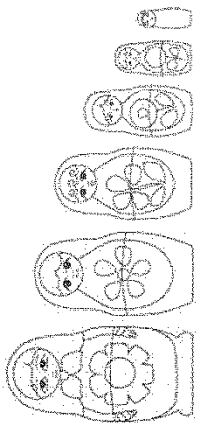
Name:_____

- Strong readers are able to recognize the important pieces of information that are essential to the main idea and the pieces of information that may be interesting, but are not necessary. What you read may be *very important*, *kind of important*, or *not important at all.*
- In this activity, you are going to practice the metacognitive strategy of determining importance. Sort the following items under the categories based on how important they would be to take on a trip to Hawaii.
- Then, justify why you placed each item under the category you chose. Explain what made certain items very important and others not important at all.

suntan lotion	wool sweater	swimming suit
sneakers	gum	Goldfish crackers
sunglasses	umbrella	plane ticket
Ipod	earmuffs	money

Very Important	Kind of Important	Not Very Important

Appendix H: Synthesizing Graphic Organizer



SYNTHESIZING

STRONG READERS CHANGE AND GROW THEIR THINKING AS THEY READ.

FIRST, I WAS THINKING...	NOW I AM THINKING...	I AM BEGINNING TO THINK...	NOW I AM THINKING...	MY NEW THINKING IS...
BECAUSE....	BECAUSE...	BECAUSE...	BECAUSE...	BECAUSE...

Appendix I: Nonfiction Summary Graphic Organizer

Introduction	Introduce title & author (if given), and state what the article is mostly about.
Body	1st Important Fact or Idea: Details: 2nd Important Fact or Idea: Details: 3rd Important Fact or Idea: Details:
Closing	Closing Statement (Restate the main idea of the article):

Appendix J: Table Texting Graphic Organizer

Name _____

Table Texting

Question:

My Response:

Reply 1:

Reply 2:

Reply 3:

EXPECTATIONS:

- Only share comments related to the question posed.
- Respectfully agree, disagree or ask a follow up question in your reply
- Be scholarly in your response. Use background knowledge and/or text clues to support your ideas.

Appendix K: "Comparing Volcanoes" Text Feature Analysis

SuperScience

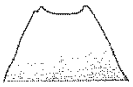
CHART SKILL

Name: _____ Date: _____

Comparing Volcanoes

In "Volcano Alert!" (pp. 10-13), you read about Iceland, one of the most volcanically active places in the world. The chart below shows characteristics and examples of three common volcano types: shield, composite, and cinder cone. Study the chart, then answer the questions that follow.

Common Volcano Types

	SHIELD	COMPOSITE	CINDER CONE
Shape			
Description	broad and dome-shaped; up to 200 km (125 mi) wide	very tall with steep sides; about 1-10 km (0.6-6 mi) wide	short with steep sides; often less than 1 km (0.6 mi) wide
Lava	thin and watery	thick and sticky	thick and sticky
Typical Eruption	relatively quiet and gentle; lava travels far from the opening before cooling	explosive and violent; lava flows slowly down the sides as ash shoots high in the air	explosive but small; lava is thrown high in the air, breaks into fragments and falls
Examples	Mauna Loa (Hawaii) Olympus Mons (Mars) La Cumbre (Galápagos Islands)	Mount Fuji (Japan) Mount Hood (Oregon) Mount Etna (Italy)	Parícutin (Mexico) Crater Lake (Oregon) Sunset Crater (Arizona)

Source: LiveScience.com

1. Which type of volcano has the smallest width?

   _____

2. What is the difference between the eruptions of composite and cinder cone volcanoes?

   _____

3. Which volcano example in the chart is located on a planet other than Earth?

   _____

4. Viscosity is how resistant a liquid is to flowing. Which type of volcano in the chart has the least viscous lava? Which details in the chart gave you your answer? _____

5. Which volcano is more likely to put people at risk of breathing in ash: Mount Fuji or Mauna Loa? Why? _____

PERMISSION GRANTED TO REPRODUCE FOR CLASSROOM USE ONLY. ©2014 BY SCHOLASTIC INC.

Appendix L: Magazine Project Description

You and a partner will be writing an informational magazine about a topic of your choice involving *Use It, But Don't Lose It* you will be composing five different articles after your research to share how knowledgeable you are about your topic.

Each of your five articles will be written using a different text structure. You must have one article written in each of the following:

Description
Problem and solution
Chronological
Cause and effect
Compare and contrast

You must also include the following text features in your magazine:

At least 3 pictures (printed or hand drawn)
Captions for each picture
A diagram, map, timeline, or chart
A glossary with domain specific vocabulary and definitions
Special fonts (bold, italics, highlighted)
One text box

Appendix M: Magazine Project Rubric

Use It, But Don't Lose It Informational Magazine Project

Group Names:_____

Topic: _____

	1	2	3	4
Quality of Research	Students have used less than three different informational texts and/or do not provide textual evidence in the articles.	Students used at least three different informational texts but do not provide textual evidence in the articles.	Students used at least three different informational texts and provide textual evidence in their articles.	Students used at least four different informational texts and provide textual evidence in their articles.
Articles	There are one to two articles written.	There are three articles written.	There are four articles written.	There are five or more total articles written.
Text Structures	One to two of the text structures have been used in the articles.	Three of the text structures have been used in the articles.	Four of the text structures have been used in the articles.	All of the text structures have been utilized in the articles.
Text Features	Two or less of the text features necessary are included in the magazine.	Three of the text features necessary are included in the magazine.	Four to five of the text features necessary are included in the magazine.	All of the text features are included in the magazine.
Conventions	There are more than four errors in conventions in the magazine.	Many of the conventions in the magazine are correct with only three to four errors.	Most of the conventions are correct in the magazine with only one to two errors.	All of the conventions are correct in the magazine.

Comments: