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Identifying Elements of Voice and Fostering Voice Development in First-Grade Science Writing

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ABSTRACT

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in First-Grade Science Writing

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The purpose of this multi case study was to better understand voice in first grade science writing. Voice is the ability for individuals to synchronize specific narrative elements to express themselves with greater confidence and individuality. Three first-grade participants were chosen and their use of voice in science writing was examined across 8 weeks. Specific elements of voice were identified within atypical informational texts for primary grade learners in science. The 7 elements include descriptive words, placement of text and picture, creative punctuation, conversational tone, comparisons, imagery, and repeated text. The 7 voice elements were taught to a class of first-grade students. Findings from this study reveal that first graders can use descriptive words, creative punctuation, and conversational tone in their writing with great success before being formally taught, which indicates that these first graders are comfortable using these voice elements in their writing. These first graders also use text and picture placement, comparisons, and imagery prior to the weeks they are taught but with limited success. These first graders do not use repeated text until being formally taught, which indicates that it is a difficult voice element for them to include in science writing. Hand signals prove to be effective in helping these young children grasp the voice elements. Lessons used in the study are included. Mentor texts with examples of voice elements that children emulated during the study are also included and are helpful for these students. In addition to writing with words, these first graders also convey important information through their pictures. These young students can accomplish the requirements found in the Common Core State Standards to provide an opening, supply 3 facts about a subject, and write a conclusion. However, they can do this with a quality of voice that was not present in their writing prior to the unit.

Keywords: mentor text, science, writing, early childhood, voice, first grade

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CHAPTER 1

Introduction

Children are natural-born scientists and observers. Young children especially want to know how or why something works, and they seem to have an insatiable desire to learn about the world around them. In my first-grade classroom, students would excitedly share their knowledge of the natural world with me. I was impressed with the depth of their knowledge and their enthusiasm for the subject, whether it was snakes, volcanoes, or butterflies. These young students seemed to delight in discussing their newfound knowledge with their peers and with me. When it came to writing this information, however, I found students' writing to be rote and dry. The enthusiasm and excitement that students displayed in our conversations seemed to have disappeared in their writing. There was a disconnect between discussing information and writing information. I also noticed a disparity between my students' narrative writing (in which they wrote enthusiastically and with voice) and their informational writing. I discussed this with my fellow first-grade teachers and found the same to be true for students in their classrooms. When it came to the informational writing of our first graders, we expected our students to provide an opening statement, supply three facts about the subject, and use a closing statement. This form of writing, to me, seemed to limit a students' ability to share their knowledge about a scientific concept. I decided to dig deeper into reading and writing informational texts in a first-grade classroom setting, along with how the qualities of effective writing connected with the discipline of science.

Reading Informational Texts

Often the terms *informational text* and *nonfiction* are used interchangeably. It is important to note, however, that nonfiction is not a genre with a specific text purpose but rather a

literary umbrella that includes several genres, each with their own complexities (Maloch & Bomer, 2013). The purpose of each genre within nonfiction is to convey information. Informational text, then, is one of the genres within nonfiction. Other genres of nonfiction include (but are not limited to) biography, historical narrative, essay, memoir, argumentative, and explanatory writing. The primary purpose of informational text is "to communicate information about the natural or social world, typically from one presumed to be more knowledgeable on the subject to one presumed to be less so" (Duke, 2000, p. 205).

Duke and Tower (2004) separated nonfiction into five types of texts: informational texts, concept books, procedural texts, biographies, and reference materials. In 2000, Duke defined informational texts as containing the "function to communicate information about the natural or social world; . . . an expectation of durable factual content; . . . technical vocabulary; classificatory and definitional materials, comparative/contrastive, problem/solution, cause/effect; . . . frequent repetition of the topical theme; and graphical elements (e.g., diagrams, indices, page numbers, maps)" (p. 205).

Pappas (2006) analyzed the language of 400 picture informational texts written for primary grade children with *Generic Structure Potential* (GSP) to find similarities and variations within the genre. She found obligatory language features within informational texts for young children. Obligatory features include: introduction of the topic of the book, description of the attributes of the topic, expression of the characteristic or typical processes regarding the topic, and use of summary statements about the information found in the text. The GSP of a genre provides expectations of content and form, but there are texts within a genre that are atypical. In this case, *atypical* texts refer to informational texts that mix elements from different genres to create new texts (Pappas, 2006). These atypical texts were divided into six categories: parallel (in

which there are two lines of text, one typical and one atypical), particularized (in which a particular animal or object is examined with atypical and typical elements in one line of text), personal narrative (in which animals tell about themselves and are explored through the use of first person, as opposed to third-person), interpositional (in which both narrative and typical informational features are used sporadically and there is a sequence of time), episodic (which examines particular people interacting with particular animals, with a consistent use of informational mixed with narrative elements), and annotative (mostly narrative but includes various elements from typical informational books in boxes or other graphic features). The reasoning behind creating these texts is unknown (Pappas, 2006), but it may be that authors believe including narrative elements will make a text easier for young children to read and understand, or that young children will be more entertained by a text that includes narrative elements than by a typical informational text. In this study, I chose to highlight these types of atypical informational texts to create a bridge from the narrative (familiar) realm to the informational (unfamiliar) realm and to showcase how authorial voice can be used in informational texts.

Informational text has been defined to include narrative elements by other researchers as well. Duke (2000) divided informational texts into three types: informational, narrative-informational, and informational-poetic. Narrative-informational texts and informational-poetic texts both convey information about the natural and social world using informational characteristics, but also narrative or poetic elements. The Common Core State Standards (CCSS; National Governors Association Center for Best Practices and Council of Chief State School Offices, 2010; hereafter listed as National Governors) has used *informational text* to include genres with both narrative and expository structures, including science, social studies, and the

arts. In the CCSS, much attention is given to *literary nonfiction*, which refers to many genres "that attempt to represent the real world while also employing characteristics of literature, such as interesting and beautiful authorial style, rich characterizations (including the author's persona), metaphorical as well as literal meanings, and sometimes complex and indeterminate themes" (Maloch & Bomer, 2013, p. 209).

According to Kletzien and Dreher (2004), "informational text has motivating potential because children are curious about their world. Children who are interested in a particular topic are motivated to read about it in informational text" (p. 6). Indeed, some students engage with informational texts in ways that contribute to their overall literacy development more than if they had been exposed to narrative texts alone (Caswell & Duke, 1998). Duthie (1994) revealed that many children enjoy informational texts because they have the freedom to be selective about which pages they read, and they do not need to read the entire book as is normally the case in narrative texts. A study of informational text may also benefit student learning and competence across many content areas and disciplines. For these reasons, educators would do well to introduce informational texts early in a child's schooling to maximize the benefits the genre offers.

Despite these findings, informational texts are seldom used in elementary classrooms. In a study of first-grade classes, Duke (2000) found a scarcity of informational text on the walls of classrooms, in classroom libraries, and, most importantly, in classroom lessons and activities. She suggested that "continued low levels of achievement in informational reading and writing should not be attributed solely to the difficulty of these forms of text . . . Students perform poorly with informational text at least in part because they have insufficient experience with it" (p. 221). Early grade teachers may not have the same expectations as teachers of older students to study

and write informational text, but "not doing so constitutes a missed opportunity to turn on as many students as possible to literacy" (Duke, 2000, p. 205).

Some teachers may believe that informational texts are too difficult for young learners or that it detracts from the development of foundational reading skills (Correia, 2011). As a result, interactions with informational texts are scarce in many classrooms despite rich educational opportunities that may come from using such text (Duke, 2000). Indeed, many young and/or struggling readers prefer informational texts to narrative texts (Caswell & Duke, 1998; Duke, 2000) and reap many benefits from interacting with this genre.

Despite any reservations teachers may have about utilizing informational texts, the CCSS (National Governors, 2010) clearly outline the need for reading informational texts in classrooms. CCSS contain Anchor Standards for reading narrative and informational texts that outline general goals for students in schools. These Anchor Standards are organized into three categories: *key ideas and details, craft and structure,* and *integration of knowledge and ideas*. When divided by grade level, the Reading Standards become more specific, but are still based in the Anchor Standards. Reading Standards for first grade were the focus of this study because first graders were the research participants.

Under *key ideas and details*, first graders learn to make inferences and draw conclusions from the text, determine and analyze themes, summarize details, and analyze character or event development (this includes Reading Standards one, two, and three). Within *craft and structure*, students analyze text structure and search for how a point of view forms the type of text, as well as its content (this includes Reading Standards four, five, and six). Under *integration of knowledge and ideas,* students evaluate content from media, assess the argument and point of view in a text, and compare two or more texts that focus on similar topics (this includes Reading

Standards seven, eight, and nine). Finally, the tenth reading Anchor Standard outlines the need for students to read challenging texts, both literary and informational. These standards should be met with informational texts that are appropriately complex for first grade and support from adults.

Informational texts can be used as exemplars to young students learning to write within the discipline of science. When used for this purpose they are known as mentor texts. According to Marchetti and O'Dell (2015), mentor texts are "model pieces of writing – or excerpts of writing – by established authors that can inspire students and teach them how to write" (p. 3). This definition has been adopted for this study. While engaging with mentor texts, students may be involved in *close reading*; a term defined by Dollins (2016) as "a process that helps readers understand both the surface and the deeper levels of complex text" by asking the reader to interact with the text several times (p. 49). Similarly, a mentor text should be revisited several times throughout the writing process (Dollins, 2016; Gallagher, 2014). Researchers have outlined the importance of exemplary mentor texts to enhance both reading and writing development (Moses, Serafini, & Loyd, 2016). Mentor texts also engage students in high-quality writing and invite them into the world of authorship (Calkins & Hartman, 2003; Caswell & Duke, 1998; Dollins, 2016; Kletzien & Dreher, 2004; Paquette, 2007). Reading mentor texts aloud to budding readers and writers is a powerful way to excite and encourage their enthusiasm in literature (Moses et al., 2016).

Writing Informational Texts

Many teachers only encourage young students to write informational texts in their classrooms to "mitigate the substantial difficulty many students have with this form of text in later schooling" (Duke, 2000, p. 202). Although this is a valid motive, there are other compelling

reasons for teaching children to write in this genre early in their schooling. Often, young or inexperienced writers can discover and cultivate their own voice through a study of other authors and their works (Calkins & Hartman, 2003). High-quality mentor texts can be used to invite writers to try different methods of writing, expand the possibilities of writing, and make writing a less intimidating venture (Calkins & Hartman, 2003; Gallagher, 2014; Miller, 2013; Paquette, 2007).

Duthie (1994) explained that through early interaction with informational text, and opportunities to practice with it, young students can "grow to be excited, competent, creative readers and writers of nonfiction across all discipline areas" (p. 594). Informational texts provide an authentic platform from which students can learn to write, one which creates excitement and meaningful intent evident in their writing (Duke, 2004; Paquette, 2007). When children engage with a topic that interests them, they are motivated to pursue that topic. This motivation helps them develop their writing skills, as well as a love for writing, because they are sincerely and earnestly engaged with the material. If educators are to prepare students for life-long learning, then early introduction and analysis of nonfiction is a necessary part of that preparation (Duthie, 1994).

The CCSS (National Governors, 2010) stipulate that students should be writing informational texts. Like the reading Anchor Standards, the writing Anchor Standards are divided into three main categories: *text types and purposes*, *production and distribution of writing*, *and research to build and present knowledge*. Under the category of *text types and purposes*, students use sound reasoning to write arguments, convey information and ideas to write informational texts, and write narratives using details and writing events sequentially. The *production and distribution of writing* section engages students in the organizational process, the

writing process (planning, drafting, revising), and the publishing process. Lastly, under *research to build and present knowledge*, students conduct research projects to investigate questions, as well as to gather and draw evidence from several resources to support their writing (CCSS, 2010).

The CCSS (National Governors, 2010) contain three standards that outline goals for writing informational texts specific to the first grade. Writing Standard two states that students must "write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure" (p. 21). Writing Standard seven has students participating "in shared research and writing projects (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions)" (p. 21). Finally, Writing Standard eight asserts that students will (with guidance and support from adults) use the information they gathered to answer a question.

Students should be fully immersed in high-quality informational books as mentor texts if they are expected to produce expository writing. Dorfman and Cappelli (2009) stated, "If we want our students to write good nonfiction, we need to immerse them in the work of good nonfiction authors" (p. 3). Mentor texts can also be used to scaffold the development of a student's own authorial voice through the study of another authors' work (Dollins, 2016). Mentor texts introduce children to another authentic "teacher" in the classroom, another resource to help them develop their writing abilities (Pytash & Morgan, 2014).

Qualities of Effective Writing

In the United States, there is an emphasis on reading, writing, and mathematics within schools. In a survey research study, Coe, Hanita, Nishioka, and Smiley (2011) found that among these three subjects, writing was the area of "greatest deficiency noted for both applied and basic

skills among recent high school graduates. Among basic skills . . . more survey respondents (72 percent) cited deficits in writing skills than deficits in mathematics (54 percent) or reading (38 percent)" (p. ix).

Researchers have sought insight and solutions to writing instruction in schools. In 1987, Hillocks found that free writing (writing without stopping) should be combined with "an explicit focus on sentence structures, manipulation and organization of information into coherent arguments or narratives, and use of specific criteria to assess and revise writing in a recursive fashion" (Coe et al., 2011, p. 16). In 1990, Huot explained that analytic scoring focuses on qualities of good writing. The use of analytic scoring increases reliability between scorers by specifically identifying elements of good writing, using a numerical scale to judge the writing within each trait, and defining how each trait is manifested in the writing at each level. The original analytic scale was developed in 1974 by Diederich, who conducted a study in which writing was scored by several raters on certain characteristics found in quality writing. These characteristics included: ideas, organization, wording, flavor (the style the author gives to the writing, or voice), punctuation, spelling, and handwriting.

The findings of Hillocks (1987) and the writing characteristics outlined by Diederich (1974) served as a foundation for the 6+1 Traits of Writing model developed in the 1980s (Coe et al., 2011). In 1984, teachers and researchers sponsored by the Northwest Regional Educational Laboratory outlined six traits found in effective writing: ideas, conventions, organization, word choice, sentence fluency, and voice (Coe et al., 2011). In 2003, presentation (the seventh trait) was added. This 6+1 Traits of Writing Model was originally developed to assess writing but is now also used to guide instruction and to supplement existing writing curricula by providing additional content, structure, and assessment materials (Coe et al., 2011; Culham, 2003).

The Institute of Education Sciences defined well-crafted writing as containing "writing output, mechanics, vocabulary, sentence structure, organization, ideation, voice, and genre (or text) elements" (as referenced in Coe et al., 2011, p. 14). They also estimated the impact of each of the six writing traits on student achievement among fifth graders. It was found that using the 6+1 Traits Writing model caused a statistically significant difference in three of the traits: organization, voice, and word choice. Explicit instruction using the 6+1 Traits Writing model helped students make significant gains in these areas of writing. Common elements of good writing, across analytic scales, are the use of idea, organization, vocabulary (or word choice), sentence structure/fluency, and the use of voice. A statistically significant difference was found in achievement levels between the experimental and control groups for two of these elements (organization and voice) when taught with the 6+1 Traits Writing model (as referenced in Coe et al., 2011). Although these writing elements are improved with purposeful instruction, little research has been done on one of these elements: voice.

Voice is a way to convey ideas, feelings, or information in a way that is unique or authentic to the writer. Writers can imitate or adapt another's writing style as a playful way to develop personal voice or try different writing methods (Elbow, 1994). Voice is defined as the "writer coming through the words, the sense that a real person is speaking to us and cares about the message. It is the heart and soul of the writing, the magic, the wit, the feeling, the life and breath" (Education Northwest, 2012, para. 3). Paquette (2007) explained that "voice encourages students to write as they feel. Children need to learn that part of effective communication is enabling readers to feel what the writer feels" (p. 160).

Although voice is viewed as a key trait in effective writing, these definitions do not describe exactly how voice should be taught to students, what specific components voice

includes, and what voice looks like at different grade levels. A uniform definition of voice, as well as how voice is used by young students, should be explored.

Literacy and Science

Writing occurs within a discipline, with inherent characteristics present for each discipline that distinguish it from another. Writing within the discipline of science requires the use of unique features and language that separate it from other disciplines. According to the Next Generation Science Standards (NGSS, Lead States, 2013), writing in the primary grades (kindergarten through second grade) relies on past experiences, observations, and texts for students to communicate information. Students are required to do the following:

> Read grade-appropriate texts and/or use media to obtain scientific and/or technical information to determine patterns in and/or evidence about the natural and designed world(s), describe how specific images (e.g., a diagram showing how a machine works) support a scientific or engineering idea, obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question and/or supporting a scientific claim, and communicate information or design ideas and/or solutions with others in oral and/or written forms using models, drawings, writing, or numbers that provide detail about scientific ideas, practices, and/or design ideas. (NGSS, Lead States, 2013)

Informational writing does not usually contain characteristics found in narrative writing. There are, however, science trade books written for children that utilize characteristics from both genres. Donovan and Smolkin (2001) termed such books as *dual-purpose* texts to "indicate that the author intended to present facts but chose to do so in a fashion that would be humorous and entertaining for children" (p. 417). These types of texts can be a bridge from the narrative

discipline with which children are familiar to the informational discipline with which they are often unfamiliar. Informational texts for young children have also been classified as *typical* or *atypical* depending on how strictly the text adheres to the rules and conventions of the discipline (Pappas, 2006). Typical informational texts do not include elements of other genres and adhere strictly to the rules of science writing. Atypical informational texts include elements from other genres, most often narrative. Pappas (2006) asserted that typical informational texts are best for teaching the language and rules of writing within science, but atypical texts also have a place in science instruction either to extend exploration or show students the differences between disciplinary writing.

Atypical informational texts often differ from typical mentor texts in that they include characteristics of narrative writing (Pappas, 2006), particularly elements of voice. When writing about scientific concepts, the use of voice and narrative features may allow young children to express their knowledge about a subject and convey that to the reader (Montgomery, 1996). Atypical informational texts may provide a bridge between fictional or narrative texts to the realm of informational texts. Because students may be unfamiliar with informational texts, including familiar narrative elements may allow them to increase their engagement and understanding when writing about a scientific topic.

In 1993, Leal found that atypical texts elicited longer, more complex, and more thoughtful conversations about the presented topic in first, third, and fifth grade classrooms compared to a fictional story or typical informational book. She also found that the students retained more information after reading or listening to these types of texts. Donovan and Smolkin (2006) advised, however, that educators be aware of the limitations narrative texts have in science instruction as young children may focus on the storytelling aspect of a text instead of

the desired content. Based on this warning, I decided to use typical informational texts to support text organization and scientific content and atypical informational texts to demonstrate the stylistic differences between the genres, focusing on components of voice especially.

Statement of the Problem

Research has been done about what informational writing looks like in older grades but a closer look at what informational writing looks like in first grade was warranted. Since young children are typically exposed to more narrative texts, allowing them to use narrative elements to explain their scientific ideas and observations could be important to elicit important information about how young children learn to write within science. Interactions with high-quality informational mentor texts may provide students with opportunities to interact with and emulate these types of texts and narrative structures. Additionally, by inviting more use of voice in their writing, children may be able to express their enthusiasm and understanding about a topic while also learning the unique language of science. A definition of voice with clearly outlined components does not yet exist for first graders, and the development of one could do much to empower children to express their ideas across writing disciplines. Exploring voice in a first-grade setting could provide insight about how young children learn to cultivate voice in their informational writing.

Statement of Purpose

The purpose of this study was to determine elements of voice that could be used in first grade science writing because no definition of voice with specific elements unique to any age group or genre of writing seemed to exist. Another purpose of this study was to examine how first graders understood, used, or did not use the voice elements presented to them over a period of eight weeks.

Research Questions

This study was designed to answer two research questions:

1. What elements of voice are found in atypical informational texts for primary grade learners in science?
2. What did first-grade student writing look like over the course of instruction in regard to voice?

CHAPTER 2

Review of Literature

The purposes of the study were to investigate elements of voice found in atypical informational texts and to explore what voice in a first-grade context looks like. In this chapter, I will review literature related to science education and literacy, with a specific focus on science standards, informational texts, and traits of effective writing.

Science Standards

In 2012, the National Research Council (NRC) developed a document entitled *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas* (hereafter called the Framework). The aim of the committee charged with creating the document was to glean and extrapolate the important ideas and practices in K-12 education. These important ideas were gathered from a significant review of research on science learning (Lee, Quinn, & Valdés**,** 2013). The Framework consisted of three parts: a vision for science education, including guiding assumptions and organization; the content for science and engineering education; and "the means to realize the vision by addressing the integration of content, implementation, and equity" (Bybee, 2014, p. 212). The Framework used a three-dimensional view of science and engineering practices, crosscutting concepts, and core ideas in science disciplines. It also served as the foundation for the NGSS, created in 2013, making recommendations for standards development within the sciences. The NGSS was developed in a collaborative effort between science teachers, scientists and engineers, employers, and education leaders. The NRC compared the NGSS with the Framework to ensure consistency between the vision and content of both documents and then published the NGSS for public use in 2013 (Bybee, 2014).

The NGSS has outlined clear and comprehensive standards for science content and practices within schools. These standards give educators "flexibility to design classroom learning experiences that stimulate students' interests in science and prepares them for college, careers, and citizenship" (NGSS, Lead States, 2013, n.p). The NGSS website outlines the practices and standards of science education, provides grade level expectations for science concepts and capabilities, and provides resources that will help create and encourage scientifically literate students. One of the overarching practices outlined in the NGSS is *obtaining, evaluating, and communicating information*. This practice is important because "any education in science and engineering needs to develop students' ability to read and produce domain-specific text. As such, every science or engineering lesson is in part a language lesson, particularly reading and producing the genres of texts that are intrinsic to science and engineering" (National Research Council, 2012, p. 76). Within this practice, Primary grade expectations (K-2) are distinct from Elementary grade expectations (3-5) in terms of complexity and content. Grade level standards describe the means in which students are expected to obtain, evaluate, and communicate information.

To obtain and evaluate information, students in primary grades are expected to "read grade-appropriate texts and/or use media, describe how specific images (e.g., a diagram showing how a machine works) support a scientific or engineering idea, obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons)" (NGSS, Lead States, 2013, n.p). To communicate information, Primary grade students are expected to "design ideas and/or solutions with others in oral and/or written forms using models, drawings, writing, or numbers that provide detail about scientific ideas, practices, and/or design ideas" (National Research Council, 2012, p. 76). Obtaining, evaluating, and communicating

information following these guidelines allows students to become literate within the discipline of science.

Informational Text

One way primary grade students can obtain and evaluate information is through reading "grade-appropriate texts" (National Research Council, 2012, p. 76). Indeed, science concepts outlined in the NGSS can be introduced to young children through informational texts. Many have called for an intentional connection between science learning and literacy (Glynn & Muth, 1994; Holliday, Yore, & Alvermann, 1994; Yore et al., 2004), yet research about the role of informational texts to teach science concepts remains limited (Pappas, 2006).

Research about informational texts may be limited because of the scarcity of these types of texts within classrooms. In her 2000 study, Duke reported the dearth of informational texts available within first-grade classrooms, especially in low socio-economic areas. On average, of "the 79 days of observation combined, the total time spent with informational texts during whole-class written language activities was . . . 3.6 minutes per day. This is a very small fraction of the time students spent in school, in class, and with written language" (p. 215). These findings are concerning because they indicate that certain students are excluded from accessing both literacy and science concepts through informational texts. Additionally, these students may demonstrate a lack of preparation to engage with reading and writing informational text in later grades (Duke, 2000).

Since Duke's 2000 study, more researchers have attempted to measure the incidence of informational text found and used in classrooms. In 2010, Jeong, Gaffney, and Choi examined informational text availability and replicated Duke's (2000) collection procedures across second, third, and fourth grade classrooms. They found that informational text availability was highest in

second grade classrooms, as 22.3 percent of classroom libraries were composed of informational texts. Across three months of observations, however, it was discovered that second graders engaged with the available informational texts for an average of one minute per four hours of observation. Third and fourth graders were found to interact with informational texts for an average of 16 minutes per four hours of observation, even though informational text availability was more limited in these grades. These researchers claimed that "without substantial attention to these issues in early learning, some children will not have access to the academic content that they need and deserve to evolve as competent readers and writers" (p. 454).

Teachers may not be using informational texts in their classrooms for many reasons. According to Shymansky, Yore, and Good (1991), teachers may not recognize that reading and writing occur within a discipline; namely that the demands for reading and writing in science are distinct from those narrative texts. Teachers may not be aware that informational texts about various science topics are available because of the preponderance of narrative texts found and used in classrooms, especially in the younger grades (Donovan & Smolkin, 2001; Duke, 2000; Pappas, 2006). In fact, many teachers believe that young students prefer narrative texts over informational texts (Donovan & Smolkin, 2001) or that informational texts are too difficult for young children to understand (Correia, 2011) and, as a result, do not make them available for students. Finally, teachers may not know which texts qualify as informational texts because there is a lack of understanding about the nature of informational texts.

For the purposes of this study, *informational texts* refer to *atypical* texts that incorporate narrative elements (Pappas, 2006), *dual purpose* (Donovan & Smolkin, 2001), and *narrative informational* (Duke, 2000). Informational texts without elements from other genres are referred to here as *typical informational texts*. Although informational texts with narrative elements were

the focus of this study, informational texts were also used to provide additional information about the science topic of the week and provide a typical example of writing within the discipline of science.

Providing opportunities for young children to interact with informational texts is important because of the learning that can take place across science and literacy. Although many teachers believe that informational texts are too complicated for primary grades, or that these texts detract from foundational literacy skills, research has shown that some struggling students can make greater gains in their learning through informational texts than through narrative texts alone (Caswell & Duke, 1998). These students find a way into the world of literacy from which they would have been excluded otherwise. Researchers have also debunked the belief that children prefer narrative texts over informational texts (Correia, 2011; Pappas, 2006). When given a choice between the two, many children chose to engage with informational texts over narrative texts. Providing opportunities for young students to engage with informational texts promotes the development of scientific literacy, reading, and writing.

Reading informational text. The creators of the CCSS (National Governors, 2010) asserted that students need exposure to and intentional teaching of informational texts to be successful readers, and they mandated that informational texts be utilized in a classroom setting. One way to engage students with informational texts is by reading them aloud as mentor texts. Mentor texts (books read aloud to highlight a written form or feature) can be used as a tool to promote effective writing within classrooms and across grade levels (Calkins & Hartman, 2003; Duthie, 1994; Frye, Bradbury, & Gross 2016; Harvey, 2002; Paquette, 2007).

Children engage with mentor texts using the lens of their experience. When approaching a text, the experiences of a child and the text itself come together to create meaning (Rosenblatt,

1968). To explain the transaction that takes place between reader and text, Rosenblatt created the terms *efferent* and *aesthetic* stances. Efferent refers to reading for a specific purpose or to obtain specific information. Aesthetic reading occurs when the text is read with attention on what is being experienced by the reader while reading (Rosenblatt, 1968). It is important to note that efferent and aesthetic are not mutually exclusive to each other. Indeed, many texts are read for both efferent and aesthetic purposes, though one is usually primary over the other. Interactions between reader and text can be meaningful across disciplines.

In terms of literacy within science, informational texts provide an opening for students to learn the language and processes of science. Informational texts that include photographs and illustrations may support children's scientific explorations (Varelas, Pappas, & Rife, 2005). Pappas (2006) stated that informational texts "could function in ways that are similar to those used in science inquiry conducted by scientists. That is, as scientists engage in . . . inquiry, written texts often serve as mediators in their grappling with the ideas, thoughts, and reasoning of others" (p. 226). For students to learn the language of science, they should be surrounded by texts that are exemplars of the social language of science (Gee, 2004). During this study, scientific language found in informational texts was discussed as a class. The creative methods the author used to convey information were examined and discussed as well.

Corden (2007) conducted a study in which students (ranging from ages seven to eleven years old) were given explicit instruction on literary devices in mentor texts. Corden found that "with support from teachers (e.g., providing models, demonstrating, and drawing attention to features of mentor texts) and through focused group discussion, children began to develop an awareness of how texts are constructed" (p. 285). Corden's findings echo assertions made by Dorfman and Cappelli (2007): "Mentor texts help writers notice things about an author's work

that is not like anything they might have done before and empower them to try something new" (p. 3). Paquette (2007) claimed that mentor texts capture student attention, provoke conversation and sheer reading enjoyment, and accommodate differences. "It allows students to visualize how authors use written language to write appealing and entertaining stories" (p. 156). Mentor texts benefit student readers of narrative text, but additional research should be conducted to investigate the process of how mentor texts can be used in the classroom with informational texts.

Writing informational text. Through repeated exposure to and study of a text, readers develop a repository of experiences to be drawn upon and reconstructed in their own writing (Rosenblatt, 1988). Mentor texts can become co-teachers in a classroom and provide a wide array of rich lesson opportunities (Culham, 2016). Mentor texts are "pieces of literature that we can return to again and again as we help our young writers learn how to do what they may not yet be able to do on their own" and "offer a myriad of possibilities for our students and for ourselves as writers" (Dorfman & Cappelli, 2009, pp. 2-3).

In 2007, Graham and Perin identified 11 classroom practices that most benefit writing ability. This was accomplished by conducting a meta-analysis of 123 experimental and quasi-experimental writing intervention studies. Among the practices identified in this study were teaching specific writing strategies, using mentor texts as models, and collaborative writing. Any age group can utilize mentor texts, even mentor picture books, to improve writing ability (Culham, 2004; Sturgell, 2008). Indeed, high quality picture books may prove more effective in writing instruction than long texts because picture books provide clear examples of effective writing in a concise and efficient way (Culham, 2004; Harvey, 2002).

Effective writing may be fostered through study of effective writing found in mentor texts. To help children write, students should be exposed to a wide array of texts. According to Maloch and Bomer (2013), "If we expect our students to write for any number of purposes . . . we must provide and teach around texts of varying kinds so that they can have models and mentors for their own composing" (p. 206). Children should be writing in several different genres early in their schooling (Duke & Tower, 2004; Kamberelis, 1998). When students are provided with opportunities to write, however, much of the writing they do is narrative. This is especially true in primary grades (Jeong et al., 2010).

Despite an emphasis on narrative texts, research has shown that when children are given opportunities to write informational texts, they are able to do so (Duke & Tower, 2004; Duthie, 1994). In her 1994 study, Duthie determined that children, even young children, are capable of understanding and creating informational texts when provided with meaningful interactions with the genre. She provided the students in her first-grade classroom with opportunities to interact with informational texts. She and her students engaged in an author study of Gail Gibbons' nonfiction books. After reading one of these mentor texts, Duthie modeled techniques used in the book or used a student work sample. Through careful study of informational mentor texts, students developed a list of techniques that informational writers use. Some of these techniques include: "label drawings, put information into sets or groups, put extra information at the end (tables), use drawings, use photographs . . . say it in an interesting way, put in a glossary, put in an index, lead with a question" (p. 593). Her students were inspired to write because they were interested in the topics they were researching.

Because children are often interested in scientific concepts and the natural world, they are motivated to research and write about those topics (Miller, 2013). "Teachers should . . . provide

purposeful writing opportunities to connect with students' interests, to enhance their literature appreciation, and to extend their writing skills" (Paquette, 2007, p. 163). These research projects provide an authentic opportunity for students to write (Pytash & Morgan, 2014) because they are required to research a topic and share their findings, much like true scientists. In addition, engaging a class in a shared research project is a requirement of both the NGSS and CCSS. Some young children, however, struggle with reading and do not have equal access to content that would allow them to write knowledgably about a topic. A read aloud of an informational mentor text would circumvent this problem and invite all students into the world of writing.

There is a lack of research about the use of informational texts as mentor texts, yet if children are to write informational texts themselves they must be surrounded by and exposed to high-quality informational texts (Gallagher, 2014; Harvey, 2002; Kamberelis, 1998). Through interactions with informational mentor texts, first-grade children can extend their scientific writing capabilities in accordance to and beyond what is required by the CCSS.

Traits of Effective Writing

In 1984, teachers from Oregon and Montana were assembled by researchers at the Northwest Regional Educational Laboratory to create an assessment instrument to evaluate student writing more systematically (Smith, 2003). These educators outlined six traits found in the writing samples they examined that exemplified effective writing. The traits they defined were: "ideas (main message), organization (internal structure of the piece), voice (personal tone and flavor of the author's message), word choice (vocabulary a writer chooses to convey meaning), sentence fluency (rhythm and flow of the language), and conventions (mechanical correctness)" (Education Northwest, 2012). These characteristics of effective writing became known as the Six Traits. Although the Six Traits were initially used to develop an assessment

tool, they are now commonly used by teachers as an instructional guide. Teachers use the Six Traits as major topics in which to guide writing instruction.

When word processing technology was developed to allow writers to more effectively and creatively display their writing, a seventh trait was added. Presentation or publication (how the writing actually looks on the page) was added as the seventh trait of effective writing (Culham, 2003). Educators realized that without a sense of audience there is little motivation for young writers to work hard on the traits. Although this seventh trait was added to the six original traits, these writing methods are not known as the seven traits of writing. Instead, these methods are now known as the 6+1 Trait Writing Model. Creators of the six writing traits wanted to avoid confusion and maintain the connection between this revised model and the original.

The 6+1 Trait Writing Model is not a writing curriculum that replaces existing writing programs. Instead, it is meant to be a supplemental set of tools for teachers to assess, conceptualize, and describe the qualities of writing (Coe et al., 2011). Teachers can study the traits with their students in many ways, including careful evaluation of mentor texts. "By facilitating book discussions and analyzing how authors use various qualities of good writing . . . teachers can encourage children to model their stories after the experts" (Paquette, 2007, p. 163). These traits outline effective writing for children. Although all the traits of writing are important, voice (as a narrative element) is especially important to young children as they write informational texts because it allows them to learn and discuss complex scientific ideas in a way that is familiar and approachable (Avraamidou & Osborne, 2009). Indeed, these young students may be able to express more of their ideas, observations, and passion when they are allowed to communicate in a way that is already familiar to them in a context in which they are comfortable (Martin & Brouwer, 1991).

Most of the traits in the 6+1Trait Writing Model have been clearly defined, but that is not the case with the trait of voice. Some refer to voice as a writer's identity (Graves, 1994; Murray, 1991; Romano, 2004). Graves (1983) define it as the "driving force" in writing and "the imprint of ourselves on our writing" (p. 227). Culham (2005) stated that voice takes place when the author conveys enthusiasm, energy, and confidence. In 2014, Education Northwest produced a rubric based on the 6+1 Trait Writing Model. The rubric outlined components of voice, including mood/feelings, self-expression, and an awareness of audience as indicators that a student understands how to use voice (p. 4). These definitions emphasized the importance of voice but did not clearly describe specific elements of voice and what voice may look like in the context of younger grades, specifically first grade. Much of the research about writing with voice has been conducted in upper elementary, middle, or high school contexts. There has been little exploration on what writing with voice looks like in a first-grade context.

What makes voice especially important in scientific writing is that its narrative nature demystifies the language and nature of science (Avraamidou & Osborne, 2009). Science education may unwittingly promote the idea that science is only for an elite few because of the rigors of its unique language. Lemke (1990) stated that science education can intentionally "make science seem dogmatic, authoritarian, impersonal, and even inhuman to many students. It also portrays science as being much more difficult than it is, and scientists as being geniuses. It alienates students from science" (p. xi). Avraamidou and Osborne (2009) argued that "much of this alienation can be attributed to the 'foreign' nature of the language that constitutes science itself. A major feature of such genres is the excision of the personal" (p. 1684).

In this study, elements of voice will be identified and taught with the purpose of building a bridge between a vernacular with which young children are familiar (narrative) and the

language of science. Because the language of science can be exclusionary (Lemke, 1990; Montgomery, 1996), I sought to make science more accessible to my students by allowing them to communicate their ideas in a familiar narrative style. My aim was to make science learning accessible, add to my students' knowledge of scientific language with support from their narrative backgrounds, and allow my students the freedom to express their individual voices within scientific writing.

CHAPTER 3

Methods

This was a multi-case study using qualitative measures. The purpose of this study was to identify elements of voice in atypical informational texts and explore the process of developing stronger voice in the writing of three first-grade students. The questions guiding this study were:

1. What elements of voice are found in atypical informational texts for primary grade learners in science?
2. What did first-grade student writing look like over the course of instruction in regard to voice?

First, to explain the methodology, I will focus on classroom context, then I will describe participants, procedures, selection of mentor texts, data sources used, data analysis, and limitations.

Classroom Context

I am a European-American female who taught first grade at the time of this study. I had four years of teaching experience, all of which were in first grade. This study was conducted in 2018 in my first-grade classroom with three of my students.

My school was located in central Utah, in an area with middle class and lower-income families. In 2017-18, this school of almost 750 students was labeled Title I and many students received additional academic services from Title I technicians. About 20 percent of students spoke a language other than English at home, and 20 to 25 percent of students received free or reduced-price school lunches. The school ran on a single-track system, with all students attending school from 9:00 am to 3:15 pm daily. There was a dual-language immersion program in place in the school, but all curriculum in my classroom was taught in English.

In my regular education classroom, six of my students were Hispanic, one was a Pacific Islander, and thirteen were Caucasian. There were 20 students in my class: 14 girls and 6 boys. Each day, four of my students received out-of-class Title I reading help, two received ESL services, and one attended a resource class. Twice a week, six of my students received speech services.

This school district used two literacy programs. The writing program and shared-reading materials came from the core literacy program, *Journeys*, a Houghton Mifflin Harcourt program (Baumann et al., 2012). Phonics instruction was provided through the *Really Great Reading* program (Zimmer, Forni, Vanden Boogart, & Hergert, 2014). Literacy was expected to be taught for a minimum of two hours each day, mostly in the first half of the school day. The 6+1 Traits of Writing were also used throughout the district.

From the beginning of the year to the beginning of the unit on developing voice in science writing, my class participated in a Writers' Workshop patterned after the guidelines provided by Calkins and Hartman (2003). Prior to the unit, students predominantly wrote personal narratives. Students were also given lessons about the mechanics of writing, especially capitalization, punctuation, and spelling. Writers' Workshop was a favorite time for many of the students. They enjoyed sharing their writing with one another and me. Frequently they set new goals and challenges for themselves as writers. Students also enjoyed learning about new ways to write.

Prior to the study, I introduced students to informational texts through two shared research projects. The disciplinary core ideas from the NGSS I included were LS1.A (which includes an animal's body adaptations) and LS1.D (which includes an animal's behavioral adaptations). I read many typical informational texts to the class and discussed the features found

within them (e.g. headings, labels, table of contents, glossary/index, diagrams, etc.). Eventually, the students chose a topic they wanted to write about as a class. The students shared what they wanted to know about the topic, which was usually posed as a question (i.e. How deep can a dolphin dive? How many kinds of dolphins are there? How can a bat see in the dark? What are the biggest and smallest bats?). I then used the list of questions to create a table of contents to guide their research. Two or three students were assigned one of the points from the group-constructed table of contents. Students used the Internet, books, magazines, and videos to find the information they needed. Students took notes on what they discovered and used these notes to help them create their final draft page that would go in our class book. Students were expected to use headings to introduce their points and present their information in a cohesive way. Some students included maps or diagrams in their work, others used "Fun Fact" blurbs and bubbles that they had seen in informational texts, and all included detailed drawings to match their text. When the pages were complete, we created a glossary by looking at glossaries of informational texts. The class enjoyed creating a class book and many students requested an opportunity to create informational texts individually next, which we did.

Through these research projects, the first graders gained an awareness of the features found in scientific writing. They used many of these features themselves and organized their writing according to what is found in typical informational texts. I also found, however, that their writing was often dry and lacked the excitement and depth of understanding they shared with me in conversations. Encouraged that my young students could understand complex features of informational texts through the use of mentor texts, I set my sights on providing instruction that could improve the quality of their writing within the discipline of science.

Participants

At the time of this study, I had 20 students in my class. Participants in this multi case study were chosen from my class based on four criteria: (1) an ability to write, as reflected in a high score on a writing rubric created by the school district; (2) my perception of their enthusiasm for writing; (3) their willingness to participate; and (4) a difference in achievement levels. Because this was a multi case study that involved collecting in-depth qualitative data, I decided on three as an appropriate number of participants. This is similar to the number that have been used in similar studies, when participants were chosen to be representative of classroom populations (Dyson, 1989, 1993, 1997, 1999, 2003). The students I chose were representative of my classroom because of their diverse academic levels and ethnic backgrounds. I also had fourteen girls and six boys in my class, so selecting three females was also representative of my classroom population. These three students were chosen as participants to provide me with the most access to what writing looked like during a unit on developing voice in my first-grade classroom.

Participants represented three achievement groups: below average, average, and above average. One student was Hispanic and the other two were Caucasian. Pseudonyms were used to preserve confidentiality.

Brittany was a high achieving student who was an eager and willing learner. She consistently received above average scores on her writing assessments conducted earlier in the year. Brittany was the fastest writer out of the three participants and attacked all tasks with intensity. She was fearless in trying new things, including elements of voice taught during the unit. She demonstrated great enthusiasm in her writing and enjoyed sharing her work with me

and with her classmates. She readily accepted constructive feedback and used it to enhance her future writing.

Madison was an average achieving student who showed great enthusiasm for writing and sharing her ideas. She received average scores on her district writing assessments at the beginning of the school year and began to earn higher scores as the year went on. Madison was the most thoughtful and methodical worker out of the three participants. She was very deliberate with her writing decisions, which sometimes paralyzed her because she could not make her writing exactly how she wanted it. Madison included elaborate drawings with all of her writing pieces and took great pride in her artistic ability.

Michelle was a slightly below average achieving student who loved writing time. She received below average scores on her district writing assessments from early in the school year but improved slightly as the year progressed. She wrote at the slowest rate out of the three participants and sometimes had difficulty identifying sounds within words. Michelle was referred to receive speech therapy services in week 3 of the study to help her identify and articulate these sounds. Michelle loved to be silly and included humor in her stories, both told and written down. She had difficulty receiving constructive feedback about her writing and often refused to change her writing decisions.

When the three students were identified as study participants, I sent home parent consent and student assent forms that explained the study and asked for parents' permission to allow their children to participate. The students also agreed to take part in the study (see Appendixes A, B, and C).

The participants were interviewed by me before the unit began, and again after the unit was completed. Aside from the interviews, participants took part in the unit along with the rest of

the class. They received the same instruction and were given the same amount of independent writing time. Their work was evaluated at the end of each week by myself and my thesis chair as a literacy education professional. Because the unit spanned eight weeks, each participant's work was assessed eight times.

Procedures

With no specific definition of what voice looks like in a text (especially in a first-grade setting) or what components constitute voice, I had to create my own definition of voice by analyzing science trade books for examples of voice. With help from my thesis chair, I examined multiple atypical informational texts and identified seven elements of voice found in these books targeted to young children.

This was done in an attempt to create a clear definition of voice and also identify mentor texts that could be used to teach children about how to write with voice. I consulted with librarians and other professionals who were knowledgeable in the field of children's literature to identify titles that they considered to be examples of high-quality informational books. With my thesis chair, I closely examined nine recommended atypical informational books, looking for specific instances when voice appeared to be clearly present in the writing. After identifying passages in these books that exemplified voice, we discussed what the author had specifically done to demonstrate voice in the writing. After examining these nine books, we identified seven specific elements of voice: descriptive words, placement of text and picture on the page, punctuation, a conversational tone, comparisons, imagery, and predictable text. The seven elements of voice provided an outline for the unit and age-level appropriate example of what voice may look like for first-grade writers.

The next phase of the study was carried out in my first-grade class over an eight-week period. One element was focused on each week through informational mentor texts, modeling, shared writing, and guided writing across three days. Each day, the element was taught to the whole class with 20 minutes devoted to each lesson, followed by 20-25 minutes devoted to individual student writing time, and five minutes to showcase student work. This was a workshop structure with which they were familiar.

Three lessons were taught each week on Tuesday, Wednesday, and Thursday. Monday was an early dismissal day in the district. Mondays and Fridays were left open as a "free choice" writing day, so children could finish any of the writing began throughout the week or they could work on writing pieces unrelated to the unit. Some lessons were moved to either Monday or Friday because of scheduling issues.

The unit lasted eight weeks with one of the seven voice traits taught each week. The eighth week was a "wrapping up" week to reteach and review. Voice elements were taught in order of what I perceived as the least to most difficult concepts for first-grade students to grasp. The order of voice elements taught were: descriptive words, creative placement of text and picture, punctuation, conversational tone, comparisons, imagery, and repeated text.

Each week followed the same general format. The first lesson of each week included a definition of the voice elements, a read aloud of the mentor text, and whole group practice with fill-in-the-blank sentences that targeted that specific voice element. Students were assigned to use the voice element in their own writing at the end of the lesson on the first day. Any additional resources or writing tools were introduced during the first lesson as well.

The second lesson of each week included an additional mentor text. I instructed the students to watch for the element during a read aloud of the mentor text. After the read aloud,

students completed two fill-in-the-blank sentences in their own unit writing packet that we called "Polar Packets" (see Appendix D). Students also completed the assignment from the day before if they had not completed it. At the end of the whole group lesson, students were again encouraged to use the voice element in their own writing.

The third lesson of each week did not include a read aloud. Instead, it included students writing their own sentences using the voice element. These sentences were written in students' polar packets. These sentences were shared in small groups and with the class and written on a class anchor chart. Following this lesson, students worked on incorporating the voice element in their writing during independent writing time. To see the unit week-by-week breakdown, see Appendix E.

Descriptive words were the first element taught during the unit, as I deemed it the easiest for first graders to grasp and use. I focused on descriptive verbs and adjectives during the three lessons and encouraged students to use them in their writing each day. To facilitate this further, I created synonym cards for students to use that would help them include descriptive words. I read *Hippos are Huge!* (London, 2015) to the class as a mentor text for descriptive words. We read the text and marked down any descriptive words we heard on a descriptive words anchor chart. We followed the same process on Day 2 when we read *Flying Frogs and Walking Fish: Leaping lemurs, tumbling toads, jet-propelled jellyfish, and more surprising ways that animals move* (Jenkins & Page, 2016). Onomatopoeia, which I included with descriptive words because it dealt with sounds and language, was taught during week 3 with creative punctuation and capitalization because I wanted to keep week 1 simple. Because the first graders in my class had seen ellipsis and words in all uppercase letters before, I believed they would grasp those concepts easily and

could handle another. Additionally, onomatopoeia often follows an ellipsis, so I thought that teaching them together would make sense to first graders.

Text and picture placement was the second element taught during the unit. During the lessons, I encouraged students to place words or pictures on the page in a way that makes sense and sends a message to the reader. We discussed writing words in accordance with what they mean (e.g. writing *small* in small letters) and read mentor texts with varied examples of text and pictures placement. I read *Fabulous Frogs* (Jenkins, 2015) as the mentor text to teach creative placement of the text, size of the text, and to show how pictures can be placed to convey meaning. *The Worm: The Disgusting Critters Series* (Gravel, 2016) was also used as a mentor text for its bold letters and use of speech bubbles. We read the texts and marked down examples of text and picture placement on the anchor chart. Creative capitalization was taught week 3 along with punctuation and onomatopoeia but results are included here. I also included blank pages in addition to lined paper for students to use to facilitate their use of text and picture placement.

Creative punctuation was the third element taught during the unit. Capitalization and onomatopoeia were taught in tandem with punctuation because the first graders in my class had seen words in all capital letters, exclamation points, question marks, and ellipsis in books we had read. As a result, I believed they would grasp those concepts easily and could handle extending them further. Prior to this study, students had been introduced to basic conventional punctuation. While teaching creative punctuation, I introduced how to use an ellipsis to create anticipation in their writing. We also talked about including periods to have the reader pause after each word for dramatic effect. I also reminded them that exclamation points and question marks can add interest and variety to their writing. To see examples of creative punctuation in a mentor text I

read *Chameleons are Cool* (Jenkins, 2001) to the class. The author used ellipses, dashes, and exclamation points to emphasize parts of text which we marked down on an anchor chart and displayed in our classroom.

Conversational tone was the fourth element taught during the unit. While teaching the students about conversational tone, I explained to them that they could pretend they were talking to the reader in their writing by asking the reader a question, inviting the reader to do something, or drawing the reader's attention to parts of their writing or drawing. After the students suggested a few examples of conversational tone, I read *Sharks!* (Schreiber, 2008) from the National Geographic series and we identified more instances of the author engaging in a conversation with the reader and included it on our anchor chart. I also read *Creature Features* (Jenkins, 2014) as a mentor text to show an author using conversational tone in a unique way. In the book, the narrator asks the animal a question about its appearance and the animal responds. All the writing is done in colloquial language with some scientific terms included throughout the text.

Comparisons was the fifth element taught during the unit. I explained that you can compare two things that have something in common. I shared some examples and had the students turn to each other and make a comparison about snowy owls (which we had studied the previous week). I then showed the students an actual polar bear head rented from a nearby museum for them to examine and touch. While they did, I encouraged them to tell me what the head, fur, and teeth looked like and felt like to elicit comparisons. Students said the fur was scratchy like straw, and the teeth were sharp like a pencil (Week 5, AN, Day 1). To show students comparisons in writing, I read *Surprising Sharks* (Davies, 2003) for the straightforward similes. I also read *Wonderful Worms* (Glaser, 1994). Any comparisons that the students noticed from these mentor texts were written down on an anchor chart.

Imagery was the sixth element taught during the unit. I reminded the students about the five senses and had the students turn to each other and list them. We then discussed how writers use their senses to describe things to the reader, so the reader can create an image in his or her mind. To show the students how imagery is utilized in writing, I used *Who Lives in . . . the Mountains?* (Hirschi, 1989) and *Vulture View* (Sayre, 2007) as mentor texts. After reading each of them, the students and I identified areas in which the author used imagery and included examples on our anchor chart. On Day 3 I modeled a simple and straightforward example for how to include imagery in writing to help students who still struggled with using it.

Repeated text was the seventh and final element of voice taught in the study. I taught repeated text primarily through the use of the mentor texts I chose as examples. While I read *I See a Kookaburra! Discovering Animal Habitats Around the World* (Jenkins & Page, 2005) Brittany noticed the "In the ___ I see" pattern of the book (Week 7, AN, Day 1) and we added it to our anchor chart. I also read *Ocean Animals from Head to Tail* (Roderick, 2016) and included the repeated text from it on the anchor chart as well. On the anchor chart, the class and I brainstormed additional ways to include repeated text in our writing. I made it as simple and straightforward as possible to provide the students with a clear example of repeated text to include in their writing. For a complete list of lesson plans, see Appendix F.

The unit was taught concurrently with a study on polar animals to give students information to use in their writing. Each week, the class would learn and write about a different polar animal. Students learned about the life sciences during this study. Two first-grade standards were focused on particularly. In one of the standards From Molecules to Organisms: Structures and Processes (1-LS1-1), students are to learn about how animals' adaptations help them survive in their environments and meet their needs (NGSS, Lead States, 2013). Under this

standard, there is a connection to the CCSS: ELA/Literacy (W.1.7) stating that students should participate in shared research and writing projects. The other standard that was focused on was From Molecules to Organisms: Structures and Processes (1-LS1-2) in which students are to "read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive" (NGSS, Lead States, 2013, n.p.).

To meet both standards, many different resources were used. Students watched videos and checked animal websites for information about each animal. This occurred outside of writing time, usually as one of their morning centers or during science time. For some of the weeks, swatches of fur, wings, hooves, or other artifacts were borrowed from a nearby university for students to touch and examine during their independent writing time. Most commonly, books about each animal were read aloud to the class. Children made their own notes while I read the text, and we also made notes as a class for students to refer back to. This was done in an attempt to give all students equal access to the material, regardless of reading ability. Read alouds occurred outside of the study as part of the regular classroom curriculum but were necessary to the success of the first-grade writers. Just as texts were used to teach about polar animals, carefully and thoughtfully chosen texts were also used to teach elements of voice which was the purpose of the study.

Mentor Text Selection

Mentor texts were chosen based on four criteria: the perceived probability that a text could be replicated by first graders (or replicability of the text), simplicity and conciseness of the text, the subject matter of the text, and, most importantly, the inclusion of specific examples of one or more voice elements. Along with my thesis chair, I selected mentor texts that were clear and obvious examples of a particular voice element. Although there were many texts that

contained multiple voice elements, many of them were perceived as too difficult or complex for first graders to easily replicate. Books with simpler examples of a voice element or books with more age-appropriate language were selected instead. Similarly, shorter and more concise texts were chosen over longer ones. I had limited time for each lesson and needed mentor texts that did not take too long to read but still strongly exemplified a voice element. First graders' writing is often short, and I wanted to show them similar examples. Although the texts chosen were about animals and/or their habitats, none of the mentor texts were about polar animals to discourage students from copying the examples in the texts exactly. Animal and habitat books were also selected to align with first-grade's science standards (CCSS, National Governors, 2010).

To find high-quality examples of voice in informational texts, large quantities of books were examined to find mentor texts that met the above requirements. Two mentor texts were selected for each voice element, except for punctuation. Only one mentor text was used for punctuation because the students were already familiar with ellipses and the other mentor text was used to teach onomatopoeia that week. Each week, the mentor texts were read and studied to emphasize a particular voice element. To determine what first-grade writing looked like during the unit, data were collected before, during, and after the unit.

Data Sources

Three sources of data were used in this study to address the second research question. First, researcher field notes were used to record conversations the students had with classmates or with the teacher that explained their writing processes. Field notes also included observations or insights the teacher had during the unit. These written notes focused only on the three

participants during the lessons and writing time. Additional notes were taken during independent writing time each day while observing the participants.

Second, student work samples were collected at the end of each week to assess uses of the voice element studied, as well as voice elements from previous weeks. Students were provided with lined paper, lined paper with space for a heading and picture, and blank paper. Students used whichever paper best suited their needs during independent writing time. They were encouraged to focus on sharing facts about the animal of the week and to use the voice element taught that week. Student work samples were collected from each student in the study and assessed using a rubric containing specific elements of voice.

Third, I conducted one-on-one interviews with each participant before and after the study to gain further insight into the development of voice over an eight-week period. Efforts were taken to be impartial and unbiased during the interviews and allow students to answer the questions with no leading or guiding from me. In the pre-unit interview, I asked the participant questions about her own writing, particularly about how to make writing appealing to read. Following those questions, I read *Just One Bite* (2010) by Lola Schaefer to the participant and asked questions about what the author did that made the book interesting to read. In the post-unit interview, I asked the same questions regarding the participant's own writing to see if there was a change in her response. We then read *Just One Bite* again and I asked the same questions about the text that I had before. Finally, I asked the participant about her perceptions about the voice elements: Which voice elements were easy or difficult? How do authors make writing interesting to read? Which voice element will you use from now on? For a complete list of interview questions, see Appendix G.

Data Analysis

Researcher field notes were analyzed using the coding process guidelines provided by Creswell (2014). I used *a priori* codes to categorize and code notes. These *a priori* codes consisted of the seven identified elements of voice. I ensured that the codes were related to the elements I was looking for so that I did not lose unclassified data. That is, each code related to a particular voice element so I could be sure to include all data related to voice. Field notes were coded in three installments during the study. Each coding session took place with my thesis chair to ensure that the field notes were consistent. Elements of voice were coded, as well as unanticipated themes.

Like the field notes, I analyzed student work samples in three stages/installments. To analyze the work samples, I used a voice rubric created for this study. Because no clear and specific definitions of voice existed previously, there were no existing rubrics for assessing voice. Therefore, I made my own rubric, following the outline of the 6+1 Traits of Writing rubric. The rubric was used to assess whether the students were able to use voice elements independently. It contained each of the seven voice elements, with six points possible for each element. Collecting student work samples each week showed the progression of student work throughout the unit. Assigning scores to student writing was useful to determine how the student grasped the voice element. Over time, I was able to see which voice elements were used the most and the least in their work which indicated relative ease or difficulty in using the voice element. Writing samples also revealed students' ease or difficulty with a voice element by demonstrating whether students had used it correctly. I scored the samples but reviewed the writing sample scores with my thesis chair to establish reliability. See Appendix H for the voice rubric I created for this study and Appendix I for the 6+1 Traits of Writing rubric I used as a model.

Student interviews were analyzed using open coding. I recorded each conversation with the participants (pre- and post-unit interviews) and transcribed them to more easily find themes. As themes developed, I collapsed them into the seven general categories aligned with the voice elements. I also found themes outside of the seven voice elements that I collapsed into unanticipated findings.

Inter-rater reliability was established by having my thesis chair review my codes and categories. To provide trustworthiness to the data analysis, I then asked a fellow graduate student to use my categories to code a selection of my data. As an experienced kindergarten teacher, she was familiar with the writing capabilities of young students and could code their writing similar to me. I provided a key explaining each category I had used to code my data. I demonstrated my coding process and made sure she understood each of the steps. Once she was familiar and comfortable with the categories, we coded different sources of data together to discuss how to code any ambiguous data. Following this process, she coded roughly 10% of the collected data. I made sure to include all three data sources for her to code. I compared her codes against mine and we agreed 95% of the time. I based my data collection and analysis procedures on the works of Dyson (1989, 2003) and Purcell-Gates (1995). I also followed the points made by Patton (1987) on the results of analysis.

Limitations

There are several limitations to this study. As the first-grade teacher and primary researcher, my biases about the participants' work could have influenced how I analyzed the student work samples and coded our conversations. However, I also had insights that would have been inaccessible to researchers entering my classroom without knowing the students. I knew the personalities and capabilities of my students well, which provided me with high-quality data.

Another potential limitation is in how the elements were identified and the rubric was created. The texts I used could have influenced the elements of voice I identified. However, I used a large number of high-quality texts that are common to those in this genre. The development of the rubric may have differed from the process used by other scholars for other traits of writing. However, this process is not widely shared. I have made my process more transparent here for future scholars to learn from and critique.

An additional limitation comes from the brevity of the interview questions. Questions that more deeply probed the elements of voice may have revealed additional insights. However, I kept the questions simple as is appropriate for the young age of my participants. Finally, the order in which voice elements were presented during instruction may have also influenced the results. Nevertheless, moving from simple to complex elements seemed like a prudent choice for student learning.

CHAPTER 4

Results

The purpose of this study was to create a definition of voice in first grade science writing and examine what that writing looked like. Two research questions were explored:

1. What elements of voice are found in atypical informational texts for primary grade learners in science?
2. What did first-grade student writing look like over the course of instruction in regard to voice?

Each question was investigated using three measures. The results will be presented in three sections. First, which voice elements were found in first grade informational writing. Second, how these elements were received and used by each of the participants. Third, unexpected findings will be explored.

Elements of Voice

After examining nine atypical informational books, I identified seven specific elements of voice with the help of my thesis chair. These elements were meant to define voice within first grade science writing only. The elements included: descriptive words, text and picture placement on the page, creative punctuation, conversational tone, comparisons, imagery, and repeated text.

Descriptive words. Descriptive words are narrower than the word choice trait found in the 6+1 Traits Writing Model. This element includes choosing a word that personalizes knowledge and demonstrates that the writer internalized and interpreted the information themselves. In most of the informational texts we used to find elements of voice, the authors' voice was obvious through use of descriptive words. Writers are purposeful about the words chosen to convey an intended meaning. This includes descriptive adjectives or verbs (e.g.

slithered rather than *moved*), as well as onomatopoeia. Onomatopoeia was included because fits under the umbrella of vocabulary study and can help young children describe the sound of something.

Scientists must use descriptive words to describe a subject precisely and accurately. Descriptive words were included as an element of voice in informational writing to encourage students to write thoughtfully and deliberately. Teaching descriptive words to young children introduces them to scientific language by exposing them to words common among scientists that are not used in everyday language. When students become comfortable with these new terms and words, they can begin to include them in their informational writing as scientists do.

Hippos are Huge! (London, 2015) was used as the mentor text for descriptive words in the study. The author used precise and descriptive language to describe the way a hippo moves underwater by writing "She bounces gracefully along the bottom, kicking off with her hind legs, and gliiiiiiides . . . then dances on her tiptoes and kicks off again" (p.13). The second mentor text for descriptive words was *Flying Frogs and Walking Fish: Leaping lemurs, tumbling toads, jet-propelled jellyfish, and more surprising ways that animals move* (Jenkins & Page, 2016). This text clearly uses specific verbs to describe different ways that animals move that is straightforward enough for first graders to imitate. Onomatopoeia fit under the descriptive words umbrella because it used descriptive words to communicate what something sounds like. *Dig, Wait, Listen: A Desert Toad's Tale* (Sayre, 2001) was used to demonstrate onomatopoeia. Sayre used clear examples of onomatopoeia throughout the book, including "Is this the rain at last? Plop thunk. Plop thunk. Plop thunk gussssshhhhhhh! It is rain!" (n.p.).

Although these texts were not included in the study, additional examples of descriptive words in atypical informational texts include:

- *Over and Under the Pond* (Messner, 2017)
- *A Nest is Noisy* (Aston & Long, 2015)
- *A Beetle Is Shy* (Aston & Long, 2016)
- *Tree of Wonder: The Many Marvelous Lives of a Rainforest Tree* (Messner, 2015)
- *In the Small, Small Pond* (Fleming, 1993)
- *Thirsty, Thirsty Elephants* (Markle, 2017)
- *Woodpecker Wham!* (Sayre, 2015)
- *Wiggle Waggle* (London, 1999)

Text and picture placement. Text and picture placement goes beyond the presentation trait of the 6+1 Traits Writing Model. In addition to being visually appealing, the use of purposeful text and picture placement demonstrates that the writer wants to convey a message or specific information to the reader that cannot be shared with words alone. This is an element of voice because the writer is choosing to place his or her words or pictures on the page with the reader in mind and interacting with the reader through creative stylizing of both words and pictures. Text and picture placement indicate how the text should be read. Authors may indicate where to use voice inflection by italicizing a word, emphasizing a word by capitalizing or enlarging it, or using smaller script to de-emphasize text or invite the reader to whisper. Text or pictures can be placed on a page in a way that enhances the message writers want to send.

Scientific writing often includes descriptive pictures, labels, and captions. The intentionality of text and picture placement could indicate a depth of understanding about a subject, which even first graders can demonstrate by creatively manipulating words and pictures.

Although text and picture placement does not reside precisely in the realm of scientific writing, it could be a starting point in encouraging young writers to convey meaning.

Fabulous Frogs (Jenkins, 2015) was used as the mentor text to teach creative placement and size of the text. It was also used to show how pictures can be placed to convey meaning. For example, on one page the reader can see the back legs of a frog leaping off the page. The next page shows the whole frog explaining that it can jump far. *The Worm: The Disgusting Critters Series* (Gravel, 2016) was the second text used. The author made use of large capital letters to direct attention to a certain word and used speech bubbles to convey information. These texts were chosen for the clear and simple examples of text and picture placement. More examples of creative text and picture placement are:

- *Otters Love to Play* (London, 2016)
- *A Rock is Lively* (Aston & Long, 2012)
- *In the Small, Small Pond* (Fleming, 1993)
- *What Do You Do With a Tail Like This?* (Jenkins, 2003)
- *Rainforest* (Priddy, 2014)
- *The Blobfish Book* (Olien, 2016)

Punctuation. Punctuation is another way in which writers emphasize aspects of their writing and help readers know how to read it as the author would speak it. Beyond the conventional punctuation found in 6+1 Traits Writing Model, punctuation is an element of voice because it can be used creatively to convey a message of anticipation or strong feelings to the reader. To teach punctuation, *Chameleons are Cool* (Jenkins, 2001) was used as the mentor text in the study. The author used ellipsis, dashes, and exclamation points. For example, on one page the author wrote “Their skin is wrinkly and bumpy, and they’ve got big bulgy eyes, while lots of

them have the most ridiculous . . . noses!" (Jenkins, 2001, n.p.). Noses was written on the next page in bold text and included pictures of different chameleon noses. Other resources include:

- *Just One Bite* (Schaefer, 2010)
- *Hoot Owl, Master of Disguise* (Taylor, 2015)
- *I'm Trying to Love Spiders* (Barton, 2015)

Conversational tone. Conversational tone clearly demonstrates the writer's excitement for their topic and his or her desire to share that excitement with the reader. By conversing with the reader, writers assume a link of familiarity between themselves and the reader. Writers can invite readers to participate in the story by asking them questions or providing them with a task to complete. The author can do this as the narrator or through one of the characters. Students who write with conversational tone are writing with a purpose and audience in mind. Although this element of voice is not readily found in scientific writing, it can be seen where writers directs the reader to a certain aspect of the writing through questions and directions. Young children can do the same thing but with informal vernacular.

Sharks! (Schreiber, 2008) from the National Geographic series was the text chosen to teach conversational tone for its simplistic and straightforward questions and instructions to the reader. I also used *Creature Features* (Jenkins, 2014) in which a conversational tone can be seen through questions provided by the narrator and answers given by the animals themselves. For example, the narrator asks, "Dear mole rat: Have you ever thought about getting braces?" and the mole rate responds on the other side of the page "Not really. I dig tunnels through the earth with my teeth. Fortunately they are outside my lips, so I can burrow without getting dirt in my mouth" (Jenkins, 2014, n.p.). Additional resources include:

- *Hello, Bumblebee Bat* (Lunde, 2007)
- *One Small Place by the Sea* (Brenner, 2004)
- *Red-Eyed Tree Frog* (Cowley, 1999)
- *What Lives in a Shell?* (Zoehfeld, 1994)
- *Under the Water* (Ziefert, 1990)
- *A Seed Grows: My First Look at a Plant's Life Cycle* (Hickman & Collins, 1997)
- *A Chicken Followed Me Home!: Questions and Answers about a Familiar Fowl* (Page, 2015)
- *Are You a Dragonfly?* (Allen, 2004)

Comparisons. Writers and scientists use comparisons as a descriptive tool. In the narrative sense, comparisons can add humor or insight to writing. In the scientific sense, comparisons can be used to convey characteristics of a subject with clarity. Young children may better grasp an abstract or unknown concept through a concrete comparison. Students write like scientists as they compare something abstract, like the length of an animal, to an object that is familiar (e.g. an orca can be as long as two cars). In this way, students may begin to use the language of science naturally and comfortably. Comparisons is an appropriate voice element for science writing in first grade because it is another tool in which these writers show they are aware of and catering to an audience. By waking abstract concepts concrete, writers make their writing more understandable.

For this study, *Surprising Sharks* (Davies, 2003) was used to teach comparisons because of its consistent and straightforward use of similes. Davies wrote, "Who would expect a shark to . . . have built-in fairy lights . . . or blow up like a party balloon . . . or lie on the sea floor like a

scrap of old carpet" (p.10-11). I also used *Wonderful Worms* (Glaser, 1994) as a mentor text for its simple and frequent use of both simile and metaphor. Additional resources include:

- *A Rock is Lively* (Aston, 2012)
- *If You Hopped Like a Frog* (Schwartz, 1999)
- *Sea Horse: The Shyest Fish in the Sea* (Butterworth, 2009)
- *What If You Had Animal Teeth?* (Markle, 2013)
- *One Tiny Turtle* (Davies, 2005)

Imagery. In the 6+1 Traits Writing Model imagery is the result of precise word choice. In addition to word choice, imagery is used primarily to involve the reader in the writing by creating a sensory image that the reader can access. This is accomplished by the writer referring to one or more of the five senses. Imagery, although most often found in narrative writing, could be appropriate in scientific writing as the writer describes a subject in detail. Young children could use imagery to describe how or what an animal would see, hear, smell, feel, or taste in its habitat.

As a mentor text to teach imagery, I selected *Who Lives in . . . the Mountains?* (Hirschi, 1989). The author used auditory, olfactory, and visual descriptions of the mountain scene in the book. The other text used was *Vulture View* (Sayre, 2007) because the author described what the vulture was smelling in the story and described the temperature of the air. Additional informational texts with imagery include:

- *Sleep Bear!* (Alinsky, 2015)
- *Dandelions* (Kudlinski, 1999)
- *One Small Place in a Tree* (Brenner, 2004)

- *Giant Squid* (Flemming, 2016)
- *Parrots Over Puerto Rico* (Roth & Trumbore, 2013)

Repeated text. Repeated text is a broad term that can include repeated words, rhyming words, and cumulative sentence structure. The use of repeated text demonstrates voice because the writing is stylized to create a rhythm and flow. Beyond the sentence fluency trait found in the 6+1 Traits Writing Model, repeated text also employs descriptive words to intentionally create and repeat a pattern. Informational texts sometimes include the use of phrases that are repeated several times or a specific type of sentence structure that is repeated. Young children enjoy and respond to lyrical language and predictable patterns. Although repeated text is not commonly found in scientific writing, young children may be able to convey scientific ideas or concepts through this element by listing a subject's characteristics (e.g. a polar bear has sharp claws, a polar bear has clear fur, a polar bear has large paws).

In this study, *I See a Kookaburra! Discovering Animal Habitats Around the World* (Jenkins & Page, 2005) was used as a mentor text because it includes clear examples of predictable text. On every other page, the author uses the pattern, "In the ___ I see" and describes different animals found in that habitat. The other text that was chosen was *Ocean Animals from Head to Tail* (Roderick, 2016). It has simple repeating text in the form of a question before revealing each ocean animal. Additional resources to teach predictable text as an element of voice include:

- *Out on the Prairie* (Bateman, 2012)
- *If You Were a Panda Bear* (Minor, 2013)
- *Guess What Is Growing Inside This Egg* (Posada, 2006)
- *Polar Bears* (Newman, 2015)

- *Here is the African Savanna* (Dunphy, 1999)
- *Rain or Shine* (Granowsky, 2001)
- *Pick, Pull, Snap: Where Once a Flower Bloomed* (Schaefer, 2003)

Based on the elements of voice we identified in informational books for young children, the definition of voice for first grade science writing was an author's use of specific writing elements (i.e., descriptive words, text and picture placement, punctuation, conversational tone, comparisons, imagery, and repeated text) to connect with the reader and to express the personality of the writer. They can be taught in individual lessons to help expose young students to specific examples of voice, and to encourage them to emulate these examples in their own writing. The suggested texts are by no means a complete list of informational mentor texts that display elements of voice, but they were suited to fit the needs of this study.

First Graders' Use of Voice Elements

To learn more about how first graders use voice in their writing, I devised a unit that incorporated all seven voice elements across eight weeks. Elements were taught from what I deemed to be the easiest for first graders, to the most difficult. Prior to the unit, the three participants were interviewed to gauge their understanding of voice elements.

During the study, anecdotal notes and student work samples were collected and analyzed. Following the unit, the three participants were interviewed again to gauge their understanding of voice elements. I created figures that outlined the voice element scores that participants received each week during the unit. To assign a score, I used a rubric and looked at the frequency and accuracy in which the particular element was used in the participant's writing each week. I coded the interviews, student work samples, and anecdotal notes to find themes in the data for each participant. This led to both anticipated and unanticipated results. These results will be outlined

for the participants within each voice element. I will name the participant in the subheading along with a label. An H indicates that the participant was the highest writer of the three participants entering the study, M for medium, and L for the lowest writer of the three participants.

Additionally, to understand which form of data the information came from, the following abbreviations will be used: Student Work Sample (SWS), Anecdotal Notes (AN), Polar Packet (PP), Pre-Interview (PreI), and Post-Interview (PostI). After describing the anticipated results for each element of voice, unanticipated results will be outlined.

Descriptive words. Throughout the unit, most students in the class consistently used descriptive words in their informational writing, and even began using it in other aspects of their writing as well (Weeks 3, 5, 6, AN). Many students in the class, including Madison (M) and Michelle (L), used onomatopoeia in their writing prior to it being formally taught. Students also began noticing descriptive words in books we read together (apart from the unit) and books they read themselves (Week 7, AN; Post-I for all participants). *Figure 1* depicts the descriptive word scores received by each participant in their informational writing across eight weeks.

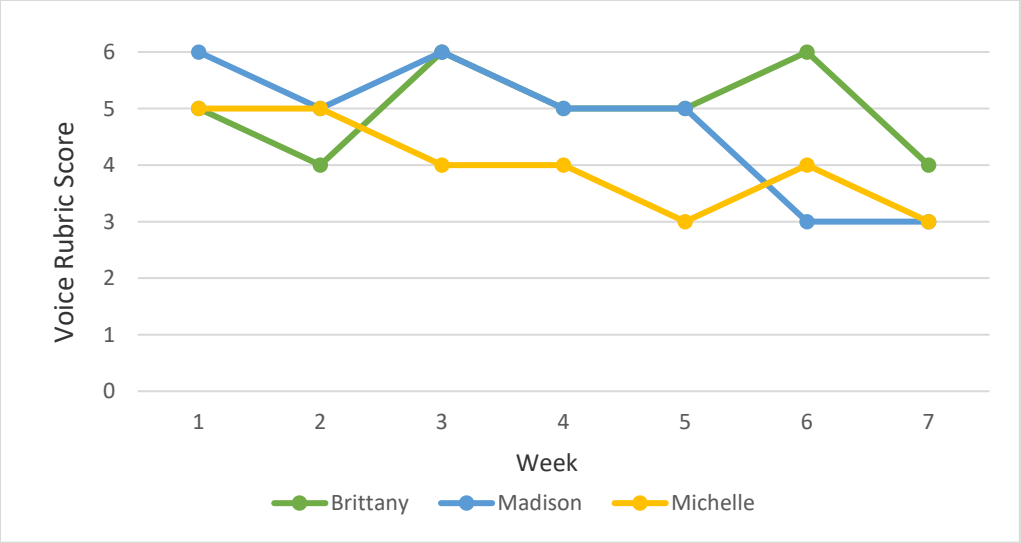

Figure 1. Weekly descriptive word scores for participants' writing.

Brittany (H). Brittany was consistent with her use of descriptive words throughout the unit. During the pre-interview, Brittany did not cite descriptive words as being important in writing and did not notice it in the text we read together. In week 1 however, after our descriptive word lessons, Brittany used descriptive words 27 times in her writing. She had 22 accurate uses of descriptive words and 5 inaccurate uses of descriptive words. Most of the inaccuracies were because she used the same descriptive words multiple times, such as 'extraordinary' and 'chilly' (Week 1, SWS).

In week 3 she began using onomatopoeia effectively to enhance her message to the reader. For example, next to a walrus hitting another with its tusks she wrote, "A walrus has wrinkly skin so it doesn't get hurt very easily. Scratch, scratch, scratch. Jab, jab, jab!" (Week 3, SWS, p. 3) and, "The caribou smells lichen under the snow. Scrape! Scrape!" (Week 6, PP, p. 13). She also used words that were more precise and scientific to convey meaning. For instance, while labeling her picture of a walrus she wrote 'snout' instead of 'nose' (Week 3, AN, Day 2).

Brittany shared with the class that her favorite voice element were descriptive words because they were easy for her to use and include in her writing (Week 7, AN, Day 1). In her

post interview, she repeated that descriptive words were the easiest element for her and described some examples of descriptive words by saying, “For descriptive words I can say like um an elephant is so big that they stomp” (PostI, lines 6-7) and, “If I was gonna do descriptive words, like, if I was writing about, let’s say I was writing about a caribou. Um, then I would say their horns are humongous or gigantor” (PostI, lines 21-22).

Madison (M). For the first five weeks of the unit, Madison used a variety of descriptive words and onomatopoeia frequently in her writing. During week six and seven her use of descriptive words and onomatopoeia dropped drastically. Even so, it was clear that she understood how to use descriptive words and onomatopoeia to convey meaning to the reader. Madison was very purposeful and deliberate with the words she included in her writing. For example, in week 1 she asked, “What should I say instead of big? Because even though penguins aren’t big I’m putting hugest because they’re bigger than all the other penguins” (Week 1, AN, Day 1). During week three she used precise language by saying, “Walruses lay on ice. They flop onto it!” (Week 3, SWS, p. 2). In week two, she used onomatopoeia before it had been formally taught to her. She used ‘Splish Splash’ as her heading on a page in which she talked about orcas jumping out of the water (Week 2, SWS, p. 1) and included “sniff, sniff, sniff” next to her drawing of a polar bear to communicate that it was sniffing the air for prey (Week 5, SWS, p. 2). Indeed, while she did not mention descriptive words or notice them in the text we read during the pre-interview, she noticed them many times in the post interview (PostI, lines 159, 163-164, 166, 170, 174-175).

Madison understood how to use descriptive words and onomatopoeia but revealed that descriptive words were actually the most difficult element for her to use (PostI, line 263). To elaborate she said, “I can’t usually think of a word for like, instead of Internet, pretend I was

writing about Internet, it's hard for me to write a descriptive word for that" (PostI, line 263). I asked her to give me an example of what she thought of as a descriptive word and she said, "Like, I think 'fast' there's like 'dash' would be a good one instead of people saying zooming" (PostI, line 293). While talking with her, it became apparent that her difficulty with descriptive words was in finding a word that was 'just right' in communicating what she wanted to the reader. This was evident at other points during the unit as well. She would often ask other students in the class to help her think of a descriptive word while she was writing but would be dissatisfied with their suggestions (Week 2, AN). She would also use the synonym cards to help her but became disillusioned with them because "none of those words sound really descriptive for me" (PostI, line 291). I was surprised that she perceived descriptive words as the most difficult element for her to use but, knowing her as the most thoughtful and methodical writer of the three participants, it began to make more sense why she would struggle with descriptive words.

Michelle (L). Michelle cited descriptive words as the easiest element for her to understand, but not to use (PostI, line 288). This was evident in her writing. She used descriptive words consistently, but less than the other participants. Despite having fewer descriptive words, she used them correctly most of the time, which indicates that she understood the element but chose not to use it as frequently as Madison (M) and Brittany (H). Another indication of her understanding was that she noticed or discussed descriptive words numerous times in her post-interview (lines 8, 15, 18, 23, 58, 107, 126, 136, 142, 162-163), when in her pre-interview she did not mention or notice any descriptive words.

Of the three participants, Michelle used descriptive words the least overall but, even so, she consistently used them distinctly from the other two participants. For instance, during week

two she wrote about how orcas use echolocation. For her heading she wrote "orca-location" and explained that "echolocation is when we do a high pitch that is like this eeeeee!" (Week 2, SWS, p. 2). Like Madison (M), she used onomatopoeia in her writing without it being formally taught.

She also included many technically descriptive words in her writing. In week 4 she told how owls tear their food with their claws (SWS, p. 2) and in week 1 she described penguin feathers as stiff and smooth (PP, p. 1). While writing about penguins she said, "I noticed I wrote 'fat' in my writing so I changed it to chubby because penguins are just chubby" (Week 1, AN, Day 3). During week six she wanted to include the word 'grazing' in her writing so she could include "a science word and put it in the glossary" (Week 6, AN, Day 2).

Text and picture placement. Although creative capitalization was easier for the class to grasp, text and picture placement proved to be more difficult for students to use accurately and purposefully in the first few weeks of the study (Week 3, AN). Around week four, many students became used to using blank pages and utilized the entire page with creative text and pictures that complemented each other. Madison (M) did a pop up in her writing which had not been taught or demonstrated in a mentor text. Following her example, several other students created pop ups or page flaps purposefully. See *Figure 2* for text and picture placement scores for each participant across eight weeks.

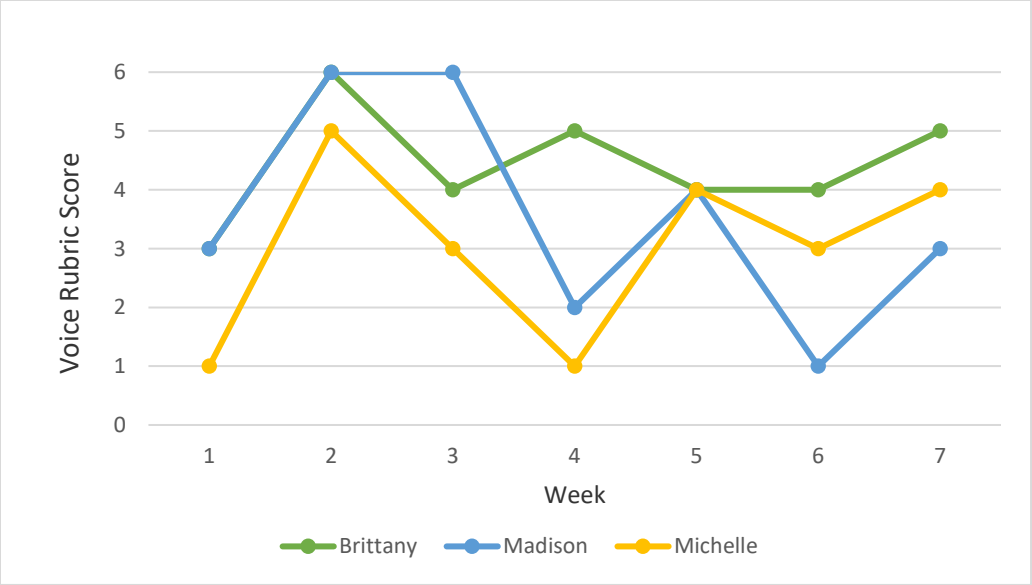

Figure 2. Weekly text and picture placement scores for participants' writing.

Brittany (H). Brittany understood and did well with picture placement generally, but initially struggled with an intentionality of picture placement. In week two she drew orcas all over one of her pages, but it did not convey any information. She told me she was mimicking pictures found in *Fabulous Frogs* (Jenkins, 2015) but the placement was inaccurate for orcas (Week 2, AN, Day 1). In other attempts at picture placement, however, she was very successful and used it intentionally and correctly. In week two she drew a bus next to an orca to demonstrate its length (Week 2, SWS, p. 3). During week five, she created a pop up in which a seal was jumping out of a breathing hole with a polar bear standing next to it (SWS, p. 1). This was a very accurate representation of information we had learned about polar bears.

Brittany was also successful in her manipulation of text. She used dashes between her letters for words like l-o-n-g (Week 2, SWS, p.3) and g-l-i-d-e (Week 4, SWS, p. 2) so that readers would stretch out the word as they read it. She frequently capitalized an entire word for emphasis and did this before it was formally taught. For example, in week two (prior to a capitalization lesson) she wrote, "Orcas are HUGE!" (Week 2, SWS, p. 1).

Brittany said that text and picture placement was one of the easiest voice elements for her to understand (PostI, lines 114, 116). She noticed text and picture placement in several mentor texts we read together and mentioned using it throughout the study. In week seven she told me, "I'm doing text and picture placement [on] my [page] because I'm doing the words around my picture. Even upside down!" (AN, Day 1). In her post-interview, she mentioned that she used text and picture placement to make people want to read her writing (lines 9-10, 12) and noticed it more explicitly in the same text we had read in the pre-interview (lines 48, 50, 52, 76, 94-95).

Madison (M). Out of the three participants, Madison was the most successful at utilizing text and picture placement to convey meaning and information to her audience. For example, during the second week of the study she said, "I wrote orcas are huuuuuge because I wanted to make it big so if my mom and dad read this story I want them to read it like orcas are huuuuuuuuge not just huge" (Week 2, AN, Day 1). That same week, she did j-u-m-p in an arc going out of the lines on the page (Week 2, SWS, p. 1). She explained that she did it that way "to show what 'jump' is" (Week 2, AN, Day 2).

She was the most creative with her use of text and picture placement, and even included a pop up in her writing. Pop ups were not discussed or included in any mentor texts used in the study which means she created one spontaneously. After describing how a walrus moves on the ice, she attached a popsicle stick to a walrus pop-up so the reader could move it (Week 3, SWS, p. 2). Several students piggybacked off her idea in following weeks.

Madison was intentional with her picture placement and relied on her pictures to share information. In week five, I noticed that she had drawn a dinner plate and polar bear paw next to each other to demonstrate size (AN, Day 3). She drew an arctic fox in its brown summer coat

beside an arctic fox in its white winter coat to show the difference between the two (Week 7, SWS, p. 2).

Madison really enjoyed text and picture placement (PostI, line 260) and cited it as the easiest voice element for her (PostI, line 278). She began capitalizing entire words before that concept had been taught and often used text and picture placement to creatively convey her message to the reader. When I asked her which elements she would use in her future writing, she held up the text and picture placement card and said, "I know I'll be using this one!" (PostI, line 349).

Michelle (L). Other than creative capitalization, Michelle did not often include text and picture placement in her writing. While she did not use it often, she was creative and mindful of the reader when she did. For instance, in the fifth week of the study she created a flap for the reader to lift up. On top of the flap she drew claws and wrote, "What has enormous paws and clear fur? Can you guess? By the tippy toes…" and under the flap she wrote "A polar bear! Roar!" (Week 5, SWS, p. 2).

Michelle did not use capitalization before it was formally taught. Once she knew how to use it, however, she used it often. She sometimes used capitalization unnecessarily, or without purpose. While considering which sentence to include on one of our anchor charts, she suggested, "We should write 'Hey Snowy Owl, do you…CAMOUFLAGE?' so we can have punctuation and capitals!" (Week 4, AN, Day 1). While she demonstrated that she understood how to use capitalization, she did not use it with discernment or clear intentionality. In her pre-interview, she noticed that the cover used large words so the reader would notice them (line 23) and later manipulated text in her own writing by making a size word large or small to communicate meaning. In week seven, she wrote the word 'little' very small in her heading

about arctic fox cubs (Week 7, AN, Day 2). While she used capitalization frequently in her writing, she was inconsistent with her use of text and picture placement.

Punctuation. The class had been exposed to ellipses prior to the study and many students, including Brittany (H) and Michelle (L), began using them before they were introduced in week three. Many students in the class struggled with using conventional punctuation consistently but many frequently included question marks, exclamation points, and ellipses in their writing. See *Figure 3* for creative punctuation scores for each participant across eight weeks (Week 3, AN).

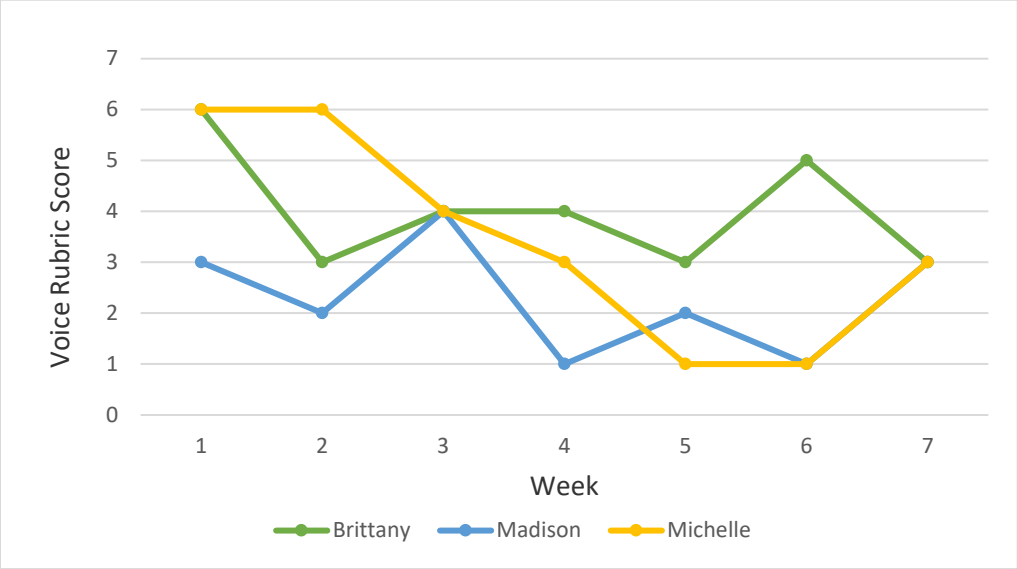

Figure 3. Weekly punctuation scores for participants' writing.

Brittany (H). Brittany was consistent with her use of ellipses and exclamation points throughout the study. Although she did not mention punctuation as being an important element of writing in her pre-interview, she began using creative punctuation in weeks one and two without being formally taught how. While she used punctuation with some success in earlier weeks of the study, she became more successful and purposeful in her use of creative punctuation once she was formally taught how to use them. For example, in the first week she

wrote, “Penguins are . . . cool” (Week 1, SWS, p. 3) whereas in the third week, following a lesson about ellipses, she wrote, “A walrus plops across the ice . . . PLOP!” (Week 3, PP, p. 5). She was more descriptive and conveyed more information about the animal she was writing about during week three than week one.

She also became more purposeful in her use of exclamation points. In week five, she wrote, “Polar bear teeth are as sharp as a knife. Chomp! Chomp!” (Week 5, SWS, p. 1). The next week she wrote, “The North Pole and the South Pole are the chilliest places in the world. BUT! the caribou are not cold” (Week 6, SWS, p. 1).

Brittany noticed creative punctuation in the mentor texts we read for the study, in other books we read during other parts of the school day (PostI, line 145), and in the text we read during the post-interview (PostI, lines 30, 37, 39, 46, 57, 59, 61)**.** Punctuation seemed to be a voice element that she understood and was able to use in her own writing.

Madison (M). Overall, Madison used creative punctuation the least out of the three participants. She used ellipses three times in her writing across eight weeks (during week 3, week 7, and week 8). During the eighth week, which was a review week, she said, “I’m adding punctuation while I write – I haven’t tried doing many exclamation points, question marks, or dot dot dots” (Week 8, AN, Day 2). Punctuation in general seemed to be difficult for her. In week six, she told me she was struggling with knowing where to put punctuation in her writing, both creative and conventional (AN, Day 3). In our post-interview, she shared that out of seven voice elements, punctuation was the “fifth easiest” for her (line 283-284).

She realized the importance of punctuation in writing, however, and said, “I realized I didn’t have a lot of punctuation in my other writing and that’s hard for people to read so I added more punctuation this time so it’s easier to read” (Week 4, AN, Day 2). She also noticed

punctuation in the text we read during our post-interview (lines 67) and other books we had read as a class outside of the study (line 323).

Michelle (L). In the first few weeks of the study, Michelle used creative punctuation frequently. Although she did not mention punctuation or notice it in the book we read in our pre-interview, Michelle displayed an understanding of creative punctuation prior to a formal lesson about how to use them in writing. During week one, she used creative punctuation ten times by using exclamation points, question marks, and ellipses in her penguin writing. She said, "I like to put dot dot dots in my sentences because it's stopping. I think about sentences that will have dot dot dots in them" (Week 1, AN, Day 2). In week 2 she wrote, "Our babies are called calves? Who knew?!" (SWS, p. 3). Her use of punctuation dropped steadily throughout the study but began increasing again in week seven and eight. In week eight she included an ellipsis to create anticipation before the reader lifted one of the flaps she included on her page (Week 8, SWS, p. 1).

Michelle accomplished much of her creative punctuation through asking questions of the reader. She used question marks far more than the other two participants. Indeed, question marks accounted for five out of ten punctuation marks in week 1 and three out of six marks in week 2. When I questioned her about using so many question marks in her writing, she explained that, "I have a lot of question marks in mine because he asks a lot of questions" (Week 1, AN, Day 3). She was referring to speaking to the reader as the penguin she was writing about. Much of her punctuation appeared in tandem with conversational tone.

Conversational tone. Many students in the class displayed conversational tone before it was taught in week four (Week 1, 2, 3, AN). They invited the reader to participate and asked the reader questions. Some wrote as tour guides, taking the reader from page to page and pointing

out different facts. For instance, in week three Brittany wrote, “Today I would like to tell you about walrus parts” and “Let’s take a look at the other walrus stuff” (SWS, p. 1). After explaining various parts of a walrus she concluded, “See? There are so many different parts of a walrus” (SWS, p. 4). Some students, including Brittany and Michelle, also spoke to the reader as the animals they were writing about. Many students modeled some of their pages after *Creature Features* (Jenkins, 2014) by speaking to an animal like the narrator and responding as the animal they were writing about. For conversational tone scores for each participant across eight weeks, see *Figure 4*.

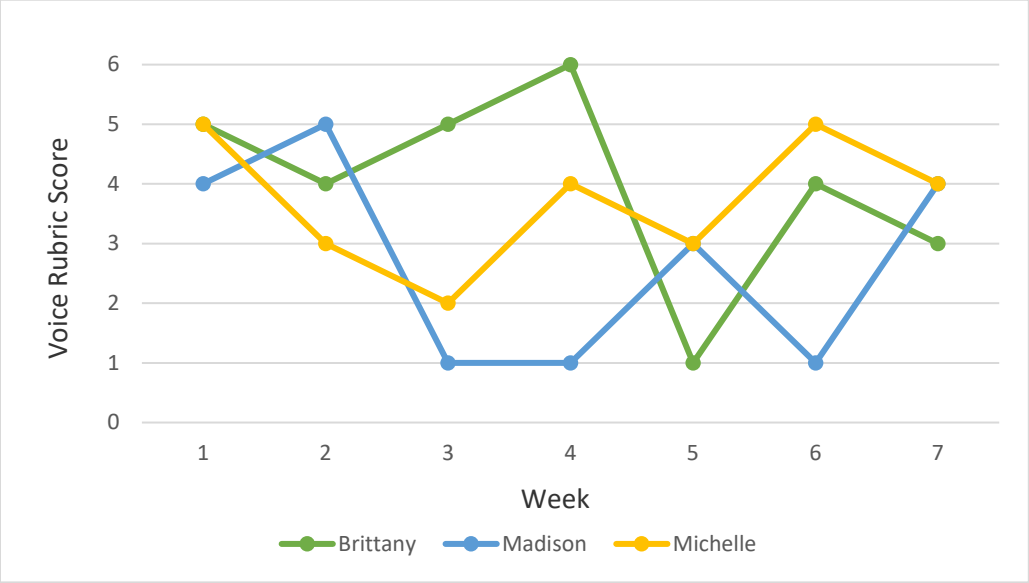

Figure 4. Weekly conversational tone scores for participants’ writing.

Brittany (H). Overall, Brittany did well with using conversational tone effectively. Before we had discussed using conversational tone as an element of voice, she was attempting to use it in her writing (Week 3, AN, Day 3). Some of these attempts were successful and others were not. For instance, early in the study she would talk with the reader without conveying any real information. In week 1 after sharing a fact about an orca, she spoke to the reader by writing,

"Can you believe it . . . You have to because it's REAL!" and on the next page she wrote, "Just so you know it's real" (Week 2, pp. 3-4).

Despite some missteps early on, Brittany engaged with the reader in a variety of ways with success. This is demonstrated clearly in week 4 when she wrote about snowy owls. She spoke to the reader like a tour guide by writing, "Today I would like to tell you about different parts of a snowy owl, starting with the wing" (Week 4, SWS, p. 1). She also wrote, "Notice that the claws are different sizes" (SWS, p. 3) which invited the reader to engage with her writing. That same week she modeled a part of her writing after one of the mentor texts used to teach conversational tone. Like in *Creature Features* (Jenkins, 2014), she acted as the narrator and asked the snowy owl a question and the snowy owl responded. She wrote, "Hey Snowy Owl, why are your feathers white?" and responded, "So I can camouflage with the snow" (Week 4, SWS, p. 3). It was clear that Brittany recognized conversational tone in mentor texts used during the study. She also recognized it in the post-interview text we read (lines 81, 95) and in other books we read in class (PostI, line 148).

Madison (M). When conversation tone was formally introduced during the fourth week of the study, Madison exhibited having misconceptions about having a conversation with the reader. After a read aloud of *Creature Features* (Jenkins, 2014) she asked, "Do you have to make it like the animal is talking?" (Week 4, AN, Day 1). I clarified that conversational tone included questions and invitations as well. Then, while reading the post-interview text she misidentified parts of the text as conversational tone (PostI, lines 133, 135, 137, 139). She realized her mistake, however, and then identified the correct part of text as conversational tone without prompting (PostI, line 144).

Out of the three participants, Madison used conversational tone the least in her writing. There were three weeks in which she used no conversational tone even though, according to her, it was the second easiest element for her to understand (PostI, line 278-279). Indeed, there is evidence that she understood how to converse with the reader despite her misconception. For instance, in week one of the study she wrote, "We're going to learn about penguins" (Week 1, SWS, p. 1) and during week two she wrote, "You can tell it's an orca by looking at its eye because they have white" (Week 2, SWS, p. 2). Additionally, she recognized conversational tone in the post-interview text we read (PostI, lines 133, 135, 137, 144) and in *Creature Features* (Jenkins, 2014) because she used the same question-and-answer format from the mentor text in her own writing (Week 5, AN, Day 1). She also recognized is in her own writing and said, "I did talking to the reader when I told about baby owls!" (Week 8, AN, Day 1). She had written, "Let me tell you about baby . . . OWLS!" (Week 8, SWS, p. 1).

Michelle (L). Michelle used conversational tone the most consistently among the three participants. She primarily conversed with the reader through questions. Aside from week seven, she included at least one question to the reader in her writing each week. For example, in week one she wrote, "What is for lunch for penguins? We eat krill, fish, and sea creatures? [*sic*]" (SWS, p. 2). During week six she wrote, "Did you know that caribou graze?" (SWS, p. 1). I advised her that she could form her sentences in a way that used fewer questions (Week 3, AN, Day 1) but she continued to use questions as her main channel to converse with the reader.

While she primarily used questions to engage the reader, she used conversational tone in other ways as well. She spoke to reader as if she were a penguin in week one without having been taught how to include it in her writing (SWS, pp. 1-4). She did the same thing in week two while telling the reader about orcas. She wrote, "We orcas use echolocation to find each other

and to find our food. We eat a lot of food. Our cousins dolphins use echolocation too? Yes!" (Week 2, SWS, p. 1). She also used invitations in her writing. In week seven while writing about arctic foxes she wrote, "The enemies are lynx, arctic wolves, and bears so please do not shoot them" (Week 7, SWS, p. 1). When I asked her about her sentence she told me, "I don't want people to shoot them because there are not many of them. I'm telling this especially to my dad and brothers!" (Week 7, AN, Day 2).

In her post-interview, Michelle stated that conversational tone was her favorite element to use in her writing and that it was easy for her understand (lines 222, 224)**.** Referring to conversational tone she said, "This one was easy because you just had to kind of like, you had to, you just had to say 'did you know?' Or you talk to the reader like 'that is cool!' Like that" (PostI, lines 231-233).

Comparisons. Some students in the class used comparisons in their writing before it was taught in week five. Many students, including all three participants, shared in their writing that orcas were as long as six first graders (Week 2, AN). While teaching about orcas, I had six first graders lay down in a line as a visual display of the length of an orca. Several students included this comparison in their writing about orcas. Collectively, the participants received their best comparison scores in week six of the study, the week after comparisons had been formally taught to them. See *Figure 5* for comparisons scores for each participant across eight weeks.

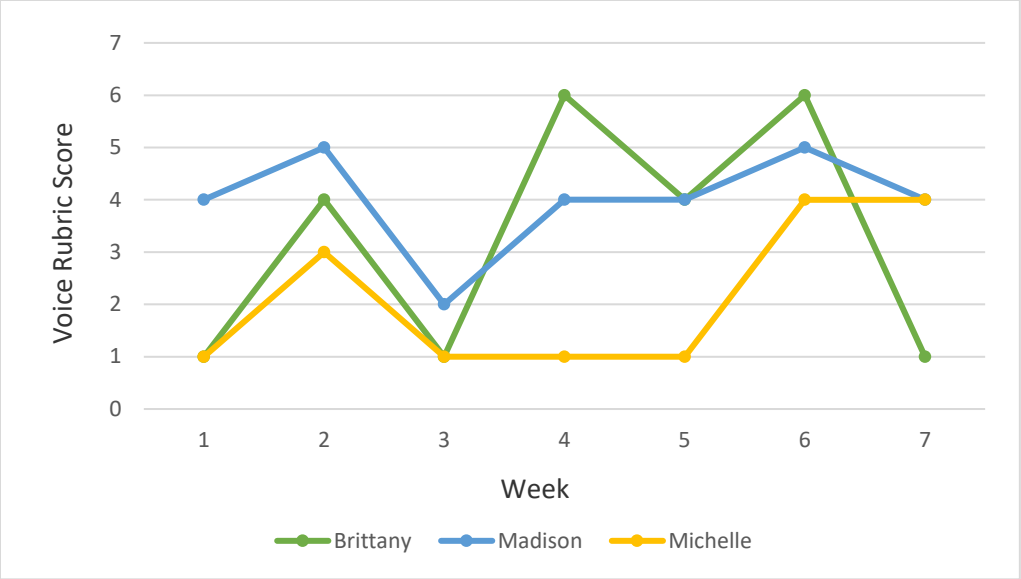

Figure 5. Weekly comparison scores for participants' writing.

Brittany (H). Brittany used comparisons sporadically during the eight weeks of the study. She used comparisons in week two and four before they were taught in week five. She shared that orcas were as long as six first graders (Week 2, SWS, p. 2) and shared, "I can write and say their claws are as sharp as a pointy pencil!" (Week4, AN, Day 1). That same week she also noticed, "Snowy owls claws are different sizes so I told the reader it's like fingernails" (AN, Day 3). When she included comparisons in her writing she usually did so with great success. During weeks one, three, and seven however, she did not include comparisons in her writing.

Brittany mentioned comparisons as something that both she and other writers do to make their writing interesting (PostI, lines 2, 17-19). Indeed, she did add interest to her writing through the use of comparisons. In week six, she made several comparisons while writing about caribou. For instance, she said that lichen looks like coral (Week 6, AN, Day 1) and that, "Caribou fur is like gray grass and poky like pine needles" (Week 6, SWS, p. 2). In week five she wrote that polar bear teeth are "sharp as a knife" (Week 5, SWS, p. 1).

Brittany demonstrated through her work and comments in class that she understood what comparisons were and how to use them. During a class discussion she said, "Comparisons are comparing two things like my pencil is sharp like an owl claw" (Week 5, AN, Day 3). In week six she shared, "I'm trying to think of a comparison for their fur. I know! It's warm like a snuggly blanket! I'm drawing my blanket from when I was a baby" (Week 6, AN, Day 2).

Madison (M). Out of the three participants, Madison used comparisons in her writing with the most consistency. She used comparisons spontaneously before being formally taught about them. In week one she wrote that a penguin's "brood pouch is like a bed" (Week 1, SWS, p. 2). In week two she told a classmate, "I put down that orcas are as big as six first graders because that's what we discovered so I want my parents to know that too" (AN, Day 1). While writing about a snowy owl's prey she wrote, "Lemmings are as big as a crayon box" (Week 4, SWS, p. 1). After being taught about comparisons in week five of the study, she continued to use comparisons in her writing with success. For example, in week five wrote that polar bear paws were as big as dinner plates (Week 5, SWS, p. 1). While writing caribou facts she wrote, "They use their hooves as a shovel" (Week 6, PP, p. 11) and in week seven she wrote about how arctic foxes put bird eggs in a hole like a refrigerator to get later (Week 7, SWS, p. 1).

Madison used many comparisons while speaking and learning about the animals we studied. While examining the polar bear head, she asked me how long a polar bear was. I told her and (remembering how we compared the length of an orca to six first graders) she decided, "It's as long as me and (classmate) stacked on each other!" (Week 5, AN, Day 1). In our post-interview we discussed how echolocation was like the orca's glasses (lines 367, 371-372). After a few moments she mused, "Maybe you can, instead of using comparisons in writing, you can use it in talking" (PostI, line 396).

Michelle (L). Michelle used comparisons the least in her writing when compared to the other two participants. She included that an orca is long as six first graders (Week 2, PP, p. 3) like many other students did, but then did not use another comparison in her writing until week six. She did, however, use it in her speech during weeks four and five. While learning about snowy owls in week four, she noticed that her shirt had sleeves that hung like an owl's wings. She also noticed, "It has spots on it so I'm like a girl owl because they have spots all over!" (Week 4, AN, Day 2). In week five she brought up that polar bear paws are as big as dinner plates during a class discussion about comparisons (Week 5, AN, Day 2).

In weeks six, seven, and eight she demonstrated that she understood comparisons and how to use them by including them correctly in her writing. While writing about caribou she explained, "Caribou eat moss. It is soft like a blanket" (Week 6, SWS, p. 1). In week seven she explained that an arctic fox will use its "tail like a blanket" (PP, p. 13) which keeps it "toasty warm like a fire" (SWS, p.2). She also noticed comparisons in the text we read during our post-interview (lines 82, 128-129, 131).

Imagery. Before imagery was formally taught to the first graders, they usually used imagery to describe what an animal or its surroundings looked like. Some described what parts of an animal felt like. For instance, Madison (M) included in her writing that "if you touch a walrus's tusks they are wooden and hard" (Week 3, SWS, p. 1). None of the participants mentioned or described imagery in their pre-interviews. They also did not discuss it with me or with each other prior to week six, which is when imagery was taught. See *Figure 6* for imagery scores for each participant across eight weeks.

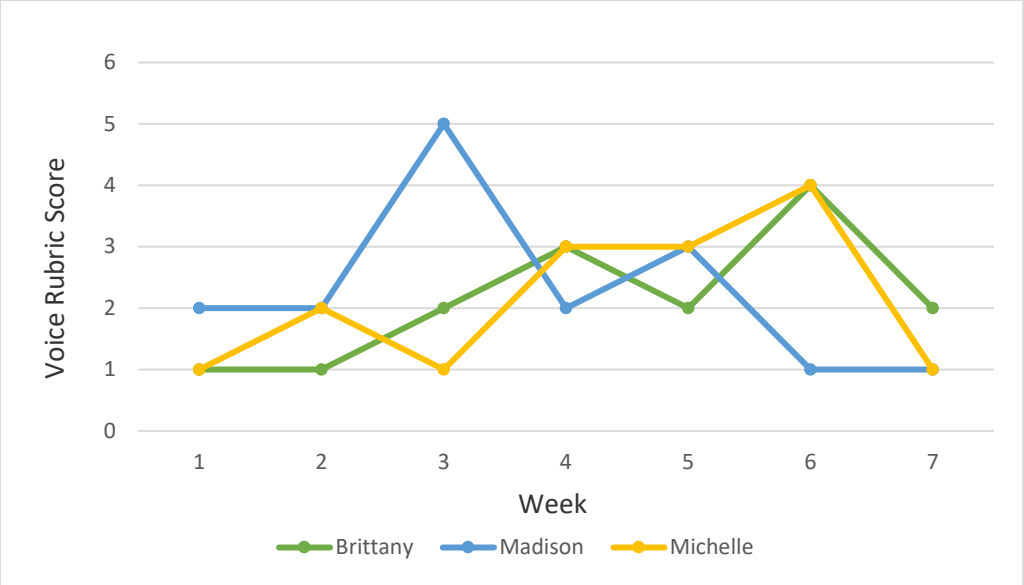

Figure 6. Weekly imagery scores for participants' writing.

Brittany (H). Brittany used imagery with some success before it was taught during week six. She most often used color words to describe the animal she was writing about. For instance, while writing about polar bears she wrote, "They are not white but their fur is clear" (Week 5, PP, p. 9). Once she drew upon her auditory sense and described what it sounds like when a snowy owl flies. She wrote, "They glide through the air silently" (Week 4, SWS, p. 5).

After imagery had been taught in week six, Brittany used it with more intentionality. In her polar packet she wrote, "The caribou sees white snow" and "They smell lichen under the snow" (Week 6, PP, p. 11). While describing lichen, she wrote that it feels spongy (Week 6, SWS, p. 3) and that an arctic fox's coat keeps it warm (Week 7, SWS, pp. 1-2).

While talking with Brittany, she demonstrated an understanding of imagery and how it is used in writing. For instance, in a group discussion she described a canyon scene in detail and said, "I painted a picture in my own head" (Week 6, AN, Day 2). During our post-interview, she defined imagery as using your five senses and mentioned a story (separate from the texts used in the study) in which blind mice use their other senses to identify an object (lines 130-131).

Although Brittany spoke of and wrote about imagery with success, she said that imagery was one of the hardest elements for her (PostI, line 128). During our post-interview she referred to imagery as 'senses' until she asked what it was called and I reminded her (line 108). She also could not recall if she had used imagery in her writing (PostI, lines 152-153). Despite imagery being difficult for her, she said she would try to use it in her future writing (PostI, line 167).

Madison (M). Madison used imagery with some success before it was taught in week six. In week three especially, while writing about walruses she described what they look like, how their tusks feel, and how walrus's skin sounds. She wrote, "If you scratch a walrus's skin it will go scratch, scratch, SCRATCH!" (SWS, p. 1). She also described how dark it is underwater for walruses trying to find food (Week 3, SWS, p. 3). Other than week three, her use of imagery was limited to using color words to describe what the animal looked like that she was writing about.

Madison struggled with understanding and using imagery intentionally in her writing. She did not discuss imagery with me or with her classmates during the study. Although she was present when I introduced and defined imagery to the class, she was absent for the other two lessons about imagery and how to use it in writing (Week 6, AN, Day 1 and Day 2). During our post-interview, she had to be reminded about what imagery was (lines 146, 150) and told me it was one of the hardest elements for her (line 310). She said, "Imagery is hard because, like, to me it's hard for me to say like the penguins, how do they, like I don't know how to use, uh, imagery like that" (PostI, lines 312-313). She clarified by saying, "I know what imagery is, it's using your senses, it's just I don't know *how* to use it" (line 316). Since imagery was difficult for her, she said she will not use it in her future writing (PostI, lines 354-355).

Michelle (L). Like the other two participants, Michelle relied largely on using color words to visually describe her subject to the reader. During week four she gave a detailed

description of what snowy owl chicks look like. She wrote, “Their eyes are yellow and green, and they have sharp claws. They have a little white spot on its face” (Week 4, SWS, p. 1). While writing about polar bear cubs she wrote, “Did you know that babies are pink when they are born?” (Week 5, SWS, p. 1).

There were two weeks during the study in which Michelle deviated from using color words and used different senses in her writing. In week two she described what echolocation sounds like by writing, “Echolocation is when we do a high pitch that is like this ‘eeeeeee!’ (SWS, p. 2). Then, in week six, she wrote, “The caribou sees snow like marshmallows” and “They smell food under the snow” (PP, p. 11).

Although she did not use imagery consistently or with great success in her writing, Michelle demonstrated that she understood what imagery was. While reading a mentor text, she noticed that the author was referring to the sense of touch (Week 6, AN, Day 1). She also said, “You can describe a place using words” and “Imagery is something you can picture and use your 5 senses” (Week 6, AN, Day 2). In her post-interview she said that she did not remember using much imagery in her own writing (line 250) but had noticed it in other texts we read during the school day (lines 276). She specifically mentioned chapter books that we read together as a class and said, “It helps me kind of think about what she’s thinking of, because there’s not always pictures in chapter books so it’s good to have, like, talking about it in chapter books a lot” (PostI, 280-281).

Repeated text. Repeated text was the only element the first graders did not use prior to it being formally taught to them. None of the students, including the three participants, included it in their writing or discussed it with me or each other. They did not notice repeated text in the mentor texts we read until I had introduced it in week seven. Some students, including Brittany

and Madison (M), included repeated text in their writing for week seven. Other students, like Michelle (L), did not include any repeated text in their writing. For repeated text scores for each participant across eight weeks, see *Figure 7*.

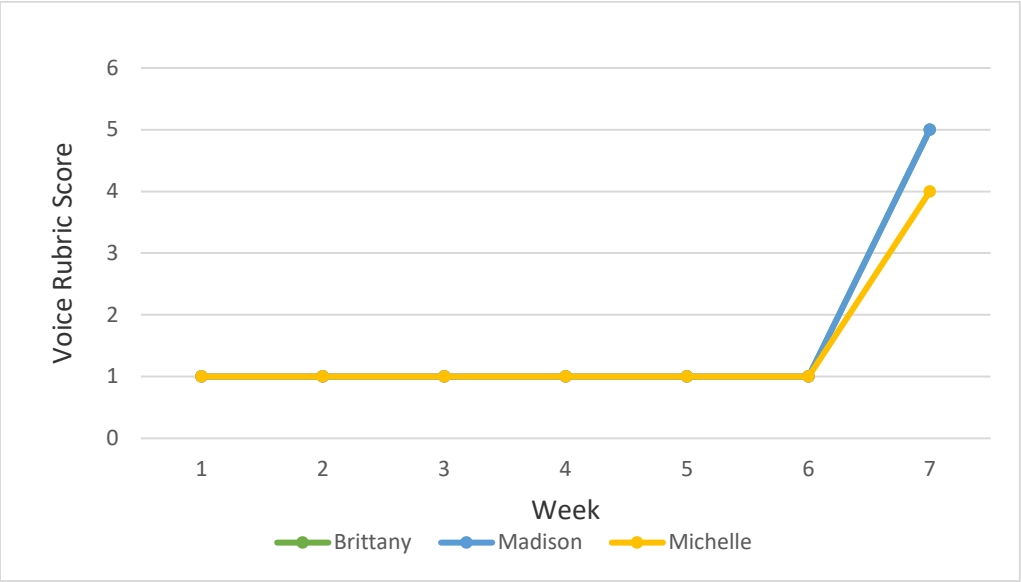

Figure 7. Weekly repeated text scores for participants' writing.

Brittany (H). Like the other first graders in the class, Brittany did not use or discuss repeated text until it had been taught in week seven. Her line is not visible in the figure above because it is identical to Madison's line. When I asked her which element was the most difficult for her she said, "Oh. Definitely repeated text" (PostI, line 122). She went on to explain, "That's why, um, I only used it once" (PostI, line 124). Brittany said that repeated text was challenging for her to use, but she found examples of it in a mentor text we read (Week 7, AN, Day 1) and in the text we read during her post-interview (lines 39-40, 96).

In addition to noticing repeated text in texts, Brittany also attempted to use it in her writing. She used repeated text after it had been introduced in week seven. In her polar packet she wrote, "An arctic fox is cool. An arctic fox is awesome. An arctic fox is unbelievable" (Week 7, p. 13). She also wrote, "Arctic foxes are cool. Arctic foxes are hungry. Arctic foxes are

wild. Arctic foxes are cute" (Week 7, SWS, p. 2). Brittany used repeated text, but she was unsuccessful in conveying meaningful information in that way.

Madison (M). While Madison did not display any repeated text until it was introduced in week seven, she demonstrated that she understood it and how to use it in her writing. When I asked the class to define repeated text Madison explained, "Repeated text is something where you repeat a word like I picked a blueberry from a bush, I picked a strawberry from a bush" (Week 7, AN, Day 2). She noticed repeated text while I read *I See a Kookaburra! Discovering Animal Habitats Around the World* (Jenkins & Page, 2005) to the class (Week 7, AN, Day 1). She also noticed it in the post-interview text we read (lines 45, 114-115) and said, "It goes something can eat this much this! Something can eat, something can eat." (line 118).

Among the three participants, Madison was the most successful in including meaningful repeated text in her writing. While writing about arctic foxes eating birds' eggs she wrote, "Did you know they save it? Did you know how they save it? Did you know it's like a refrigerator? They dig a hole in the ground and eat it later" (Week 7, SWS, p. 1). In her polar packet she included, "Arctic foxes eat, arctic foxes shed, arctic foxes scratch" (Week 7, p. 13). While she did not actually include it in her writing, she recalled, "In arctic fox week I said, like, uh, arctic foxes eat lemmings, arctic foxes eat this, arctic foxes eat this, and arctic foxes eat this. That's what an arctic fox eats" (PostI, lines 424-425). When I asked her whether repeated text was difficult or easy for her she said repeated text was her third easiest voice element (PostI, line 281)**.**

Michelle (L). Michelle was the only participant who did not use repeated text in her writing. She was not alone, however. Several students in the class did not include repeated text in their writing. When I asked her about not using repeated text, she told me it was because, "At the

end, like we couldn't, I couldn't really do it because I had a little bit more pages left to do" (PostI, lines 246-247). I asked for clarification and she confirmed that she understood how to use repeated text but did not have the space to include it in her writing during week seven (PostI, line 248).

Michelle demonstrated that she understood repeated text in other ways. For instance, she came up with our movement we used to symbolize repeated text (Week 7, AN, Day 1) and suggested that we write, "How do they dig burrows? How do they hunt? How do they shed?" in our polar packets (Week 7, Day 3, p. 13). She also noticed repeated text in the post-interview text we read (lines 118, 121) and said, "I could understand repeated text, it was just a little hard to do it" (PostI, line 244) because of the limited space and time she had (PostI, line 248). Referring to repeated text, she decided that in her future writing, "I'll probably use this one since I didn't use it so much in my writing" (PostI, line 299).

General Unexpected Findings

During the course of the unit and by collecting and analyzing the data, both expected and unexpected findings surfaced in regard to what voice looks like in a first-grade setting. Here I will outline unexpected findings that arose throughout the course of the study. First, I will discuss visual representations of the voice elements. Second, I will describe the importance of creating hand signals for each voice element. Third, each participant's writing process.

Visual representations. At the end of each week, the class and I would decide on a pictorial representation of the element we had learned about. I would draw it in a box located on an anchor chart for that specific element. Students would turn to each other and discuss how to represent the voice element in a drawing. Unexpectedly, all pictures the students decided on as representative of a particular voice element included the animal we had learned about in tandem

with the element acting out the element or with tag words around it specific to that element. I was particularly impressed with the picture the students came up with for week six, in which we learned about imagery and wrote about caribou. Michelle suggested that I draw a caribou head with antlers that had five points on each of them to represent the five senses we use for imagery (Week 6, AN, Day 3).

Other than creating the picture, however, students rarely used the pictures to help them use a particular voice element during the unit. After creating them together, I believed that the students would use the pictures to refer to as we learned new elements. The pictures were used in the post unit interviews with the participants, however, with success. After reading the text during the interview, I spread out the element cards with the same pictures on them that we had discussed as a class. Madison (M) and Michelle (L) recognized most of the cards and Brittany (H) recognized all of them. All three participants used the cards to talk about the voice elements. Madison (M) even arranged them in order from the easiest to most difficult elements for her (PostI, lines 272-273). The picture representations were helpful to jog students' memories about elements but were not especially helpful during the unit.

Hand signals. During week three, one of the students suggested we create hand movements for each of the elements so when they heard or saw them in books they could alert their classmates (AN, Day 1). Hand signals were unanticipated but became very helpful for the first graders. The students created one for descriptive words, text and picture placement, onomatopoeia, and creative capitalization and punctuation all at once, as we had learned those elements already. From then on, we created a new hand movement at the beginning of each week to represent the new voice element.

The hand signal for descriptive words was making the motion of opening a book. For text and picture placement, students put their hand in random areas in front and next to them three or four times. Students drew punctuation symbols in the air to indicate creative punctuation. For conversational tone, students made their hands "talk" to each other. Students decided to link their forefingers together to demonstrate comparing two things to each other. The hand signal for imagery was to point to the body part that corresponded with the imagery used in a text (i.e. pointing to their ear for auditory imagery). Repeated text was shown by students drawing a circle in the air repeatedly.

Hand signals were used more frequently as the study went on. Initially the movements were used only while we read books to indicate that the student had noticed a voice element. As the study progressed, students also began to use the hand signals in conversations with their classmates and with me. This was especially noticeable in the post-interviews I conducted with the three participants. Each of them used the hand signals while we read the interview text, but also while we discussed the elements. Hand signals became a non-verbal method of expression for the first graders.

Writing processes. All the participants emphasized aspects of their authorship in unexpected ways. They displayed an acute awareness of their audience, a greater reliance on mentor texts for words and pictures than expected, an emphasis of pictures as a means of conveying information, and the use of personification. Michelle also included facts about polar animals into her play. These findings were apparent in the class as a whole, but I studied them in depth with the participants.

Awareness of audience. Brittany (H) demonstrated an awareness of audience in her writing by writing in a way that could be understood and appreciated by her family, particularly

her younger sisters. She conscientiously made writing decisions that catered to her sisters at different points during the study. For instance, she told a classmate to write and draw what walruses look like so "little kids can know what you're talking about, like my little sisters" (Week 3, AN, Day 1). In week six she said, "My little sisters don't know what coral is so I'll print a picture of it so they can see what it looks like" (Week 6, AN, Day 1). Brittany also emphasized parts of her text or pictures for the benefit of her reader. She printed out an outline of Antarctica for the first page of her penguin writing and said, "I'm writing where they live first because if I just have a picture of Antarctica the readers wouldn't know if it was the North Pole or the South Pole" (Week 1, AN, Day 3). In week two she said, "I wrote that orcas are HUGE because I want people to read it like HUGE and not just orcas are huge" (AN, Day 1), and "I'm coloring BIG and l-o-n-g pink so people notice those words more" (AN, Day 2).

Madison (M) was thoughtful of the needs of her audience during her writing process and made decisions with them in mind. She wrote primarily for her parents and younger siblings and included features in her writing she thought her family would enjoy. For instance, in week three Madison made a pop up of a walrus and attached a popsicle stick to it so it could be maneuvered (SWS, p. 3). She explained, "I'm making a pop up because my little sister needs things to make her entertained" (Week 3, AN, Day 2). While writing about orcas she said, "I put down that orcas are as big as six first graders because that's what we discovered so I want my parents to know that too" (Week 2, AN, Day 1). She was thoughtful about including information that would be helpful for the reader. She suggested to a classmate, "You could write about what orcas eat or where they live. That would be important for people to know!" (Week 2, AN, Day 1). She was also thoughtful about how her audience would read her writing. She asked, for instance, "I want the reader to read my story fast. How can I have them do that?" (Week 7, AN, Day 1).

Michelle (L) knew her writing was intended for a specific audience and made her writing decisions accordingly. Like many of the first graders, including the other two participants, Michelle wrote her book with her family in mind. She said, "I'm writing that people shouldn't hurt arctic foxes. I'm especially telling my dad and brothers not to hurt them!" (Week 7, AN, Day 3). While creating a heading about caribou migration, her tablemates suggested that she put 'Vacation' as her heading, but she declined and explained that her younger brothers would think caribou really go on vacation (Week 6, AN, Day 2). Michelle made other thoughtful decisions about what her reader would need to know about the animals she wrote about. In week two she made several decisions for her reader. "I'm going to label the animals on my page because some people might not know what the animals are" (AN, Day 2), and "I'm asking the reader if they know what a baby orca is called because they probably didn't know an orca baby is called a calf" (AN, Day 3). She exhibited this same thoughtfulness in week three when she explained, "I can't put 'calf' because the person won't know what I'm talking about. I'll explain that a baby walrus is called a calf so they're not confused" (AN, Day 1). Michelle also wanted to include humor for her readers. When I asked her how she made people want to read her writing she responded, "Make it look like it's going to be funny" (PreI, line 2).

Mentor texts. Brittany (H) and Madison (M) demonstrated new ways to draw the reader's attention to areas of their writing or drawings through mentor texts. Brittany modeled parts of her writing and pictures after mentor texts we read as a class and in books she read on her own. In the first week of the study she said, "I'm going to use a blank paper to make a beautiful penguin picture because I saw that in one of my take-home books" (Week 1, AN, Day 1). In week four she modeled her writing after the writing style in *Creature Features* (Jenkins, 2014) by asking the snowy owl a question about its appearance and writing as the snowy owl to respond. She

wrote, “Hey Snowy Owl, why are your feathers white?” and, as the snowy owl, responded, “So I can camouflage with the snow” (Week 4, SWS, p. 3). During week two, she drew half of an orca on one page and the rest of the orca on the other page (Week 2, SWS, p. 1), because it looked like it was “moving between the pages” (Week 2, AN, Day 1). She modeled this after a picture we had seen in *Fabulous Frogs* (Jenkins, 2015) in which the frog jumped from one page to another. Brittany was creative and deliberate with other aspects of her pictures as well.

Brittany conveyed information about her subject through her pictures. While writing about arctic foxes, she drew a mother arctic fox with seven cubs, because we learned arctic foxes can have seven to fifteen cubs at a time (Week 7, SWS, p. 1). In week five she drew a polar bear next to a seal’s breathing hole and created a pop up of a seal jumping out of the breathing hole (SWS, p. 1). She was showing the reader how a polar bear will wait for seals near their breathing holes, a fact we had previously learned about polar bears. Brittany had emphasized the importance of drawing detailed pictures in her pre-interview as well (lines 3, 11-14). She appreciated the pictures in the text we read during the pre-interview and explained, “There’s not a lot of words on every page but the most detail” (line 82). She even exclaimed, “This one should’ve gotten a Caldecott!” (line 84).

Madison modeled parts of her writing and drawings after mentor texts. During week 4, she imitated a heading from *Sharks!* (Shreiber, 2008), which was one of the mentor texts used to teach conversational tone. She told me, “I included fancy headings like we read in *Sharks!*” (Week 4, AN, Day 2). She drew from other books as well. Talking about one of her headings she explained, “I made my little title colorful because I’ve seen that in books before” (Week 7, AN, Day 3). Madison also duplicated pictures she saw in texts. Along with several other students in the class, she duplicated a picture we had seen while learning about polar bears. It depicted a

polar bear sniffing for its prey with the different prey animals lined up on the other side of the paper (Week 5, SWS, p. 2). In week six, she drew the two kinds of fur that caribou have side by side and drew the fur up close to show detail (SWS, p.1), which we had observed in *Surprising Sharks* (Davies, 2005).

Importance of pictures. Madison (M) and Michelle (L) included great detail in their pictures during the study. Madison paid particular attention to the drawings, photographs, and artwork in the mentor texts we read as a class, which was unexpected. She told me, "Since we see books with all real pictures, I could use all real pictures in my writing," and "The illustrator in the book we read used paint in her picture so maybe we could use paint in our pictures" (Week 5, AN, Day 2). She also spoke of the importance of pictures in a text during our pre- and post-interviews. When I asked her how to she made her writing interesting she said, "You can make bigger words and make your pictures colorful and make the words onto your pictures" (PostI, lines 2-3). Madison did indeed use colorful and detailed pictures. Her pictures brimmed with facts about the animal she was writing about. For instance, during week three she created a page about walrus predators. On this page she included many facts about walruses. She depicted a walrus swimming away from orcas quickly by putting lines near its back flippers to show movement. She drew a walrus with thought bubbles inside the orca's stomach. She also drew a walrus and her calf on an ice floe with a hungry polar bear nearby, imagining eating them (Week 3, SWS, p. 2). When I talked to her about her drawing, she made it clear that each aspect of the drawing was done with purpose. She explained that the orca was chasing the walrus because "that's it's enemy. And the walrus is going fast because he is thinking he'll be in the orca's belly!" (Week 3, AN, Day 2).

Although Michelle emphasized humor in her writing and pictures, she also included many facts in her pictures. In week one, she included a picture that she split down the middle of penguin parents doing different tasks. On one side, the female penguin hunted for fish, and on the other side the male penguins stood in a huddle (Week 1, SWS, p. 2). During week two, Michelle included a picture of an orca with its prey. The orca and prey animals were talking back and forth. One memorable exchange was between the shark and orca. Michelle drew the shark thinking, "I'm going to eat that orca!" and next to it another thought bubble with a superhero that said, "Duh, duh, duh!" (Week 2, SWS, p. 1). She explained, "I'm making the shark say, 'I'm going to eat those orcas' because he thinks he's big enough to eat one but orcas actually eat them!" She included the superhero because the shark felt brave (Week 2, AN, Day 2). She then wrote the orca saying, "Watch out sharks!" and the shark saying "Yikes!" (Week 2, SWS, p. 1). In writing and drawing this way, she conveyed information while still using humor in her writing through the animals' reactions and dialogue.

Personification. Michelle (L) relied on using animals as characters in her writing to convey information and included humor in her writing. Early in the study, Brittany used personification as well. When I asked Brittany about why she chose to have the animals in her writing talk with each other, she explained, "I had the penguin talk in my writing because I thought it would be more funny to have a penguin tell facts" (Week 1, AN, Day 1). In the second week of the study, she included a family of orcas calling out to each other (Week 2, SWS, pp. 1-3). When I asked her about it, she said, "The dad orca is finding the other orcas. They all got lost because they jumped too far and they're all in different places." As the study went on, she used personification less and voice elements more.

Michelle used personification to convey information and infuse humor in her writing. She began using personification during week one and continued to use it consistently until week six. She made her purpose in using personification clear when she said, “My penguins are going to talk to each other because that will be a more fun way to tell facts” (Week 1, AN, Day 1). The animals she included in her drawings reacted to the events on the page. For instance, while writing about snowy owls, she included a page about what snowy owls eat. She included every kind of prey an owl eats and drew each with speech bubbles expressing concern about the owl. For example, some said “Uh oh!” or “Aaahh! The owl is going to eat us!” (Week 4, SWS, p. 2). She explained, “I’m going to make the bugs scared in my picture because snowy owls eat bugs” (Week 4, AN, Day 3).

Creative play. Michelle (L) also incorporated facts we learned about polar animals into her play. Other students did this through the course of the study as well. During week four, she noticed that her shirt had wide sleeves like owl wings. She said, “It’s like I have wings on my shirt so I’m going to be a snowy owl at recess and they can be my prey” (AN, Day 2). She looked at the spots on her shirt and declared herself the “mom” owl (because female snowy owls have brown spots) and enlisted a boy in a white shirt to be the “dad” owl (because male snowy owls are primarily white). Other students became involved in the role play and played as snowy owls during recess (Week 4, AN, Day 2). I also noticed during the study that Michelle included a page about the babies of the animals we studied each week. As I pondered this, I realized that she may be writing from her own experience. At the time of this study, Michell’s mother was pregnant, making babies a focal point in her life. This seemed to affect what she wanted to learn and write about and remained consistent through the study.

Summary of Results

Voice, as it pertains to first grade science writing, consists of descriptive words, text and picture placement, punctuation, conversational tone, comparisons, imagery, and repeated text. Of these elements, first graders, regardless of achievement level, used descriptive words, creative punctuation, and conversational tone in their writing with great success before they were formally taught. Text and picture placement, comparisons, and imagery occurred prior to the weeks they were taught but with limited success. The first graders did not use repeated text until it was formally taught in week seven. Hand signals proved to be very effective in helping young children grasp the voice elements while visual representations did not. Each of the participants displayed an unanticipated awareness of audience and made writing decisions based on their readers. Their astute use of pictorial features from our mentor texts was also unexpected. Each of the participants used personification, especially early in the study. In addition to their words, the first graders conveyed important information through their pictures.

CHAPTER 5

Discussion

In this study, a definition of voice in first grade science writing was articulated. The seven elements of this definition were taught systematically over the course of seven weeks, with an eighth week to review and revise. Three participants of varying writing abilities were studied to gain insight into what first graders' voice looks like in their science writing. This discussion will be separated into three sections: a definition of voice, voice elements and first graders, my reflections, and implications for practice for teachers, publishers, and researchers.

Definition of Voice

An important aim of this study was to create a workable definition of the term *voice* as it pertained to first grade science writing. Researchers have emphasized the importance of voice (Culham, 2005; Graves, 1983; Spandel, 2008) but have not clearly describe specific elements of voice or what voice may look like in specific contexts, including the context of younger grades.

After examining atypical informational texts for primary age learners, my thesis chair and I outlined seven elements of voice for science writing in first grade. The seven elements that surfaced included descriptive words, text and picture placement, creative punctuation, conversational tone, comparisons, imagery, and repeated text. Following a close examination of the seven voice elements, a more complete definition of voice for this study was formed: Voice is the ability of first graders to synchronize specific elements of effective writing to express themselves with confidence and individuality. This study contributes to the literature by proposing a definition of voice that is teachable and measurable for first grade.

Voice Elements and First Graders

Another aim of this study was to make science writing more effective by allowing students to communicate their ideas in a familiar narrative style while at the same time adding to their knowledge of scientific language with support from their narrative backgrounds. As a result, I read mentor texts to them that contained both narrative elements and science content. I taught them how to use voice elements (often found in narrative writing) to convey science ideas. I expected some voice elements to be easier and some more difficult for first graders to include in their writing.

Based on the results of the frequency and accuracy in which the element was used, descriptive words seemed to be the easiest element for first graders to understand and use. Students often noticed and used the hand signal for descriptive words while we read books together, both mentor texts for the study and other books we read during the school day. Of all seven elements, descriptive words were used the most consistently and at high levels of success. Indeed, Brittany (H) and Michelle (L) reported that descriptive words were the easiest element for them during the study. Madison (M) said that descriptive words were the hardest element for her, because it was difficult to choose the perfect word, but she clearly understood how to use them and used them often in her writing. Descriptive words may have been easier to include in writing than other elements, resulting in them being used more consistently. This element was also taught first in the unit, which allowed more time for students to include it in their writing.

Text and picture placement was taught during the second week of the study and proved to be more challenging for the first graders than I had anticipated. Although many students understood text and picture placement, they struggled with using it purposefully in their writing. Many students had to learn how to use a blank page in their writing effectively. Madison (M) did

not use as many blank pages as Brittany (H) and Michelle (L), but she showed the most intentionality with her text and picture placement. For instance, she wrote j-u-m-p in an arc on her page while writing about how orcas jump out of the water (Week 2, SWS, p. 1) and was the first to spontaneously create a pop-up image of what she described with words on the page (Week 3, SWS, p. 3).

Madison (M) reported that text and picture placement was the easiest element for her. Brittany (H) and Michelle (L) relied more heavily on capitalizing their words to manipulate the text rather than place it creatively, which indicates that text and picture placement may have been more difficult for them to use effectively as a means to convey their message.

Many first graders, including the three participants, used creative punctuation before it had been taught to them, which indicates that they were already familiar with it and comfortable using it in their writing. Indeed, Michelle used creative punctuation ten times in her writing during week one and seven times in week two. She said, "I like to put dot, dot, dots in my sentences because it's stopping. I think about sentences that will have dot dot dots in them" (Week 1, AN, Day 2). The class frequently used the hand signal for punctuation while we read books as a class that included creative punctuation. Overall, the class seemed to understand punctuation and how to use it in their writing.

All three participants used conversational tone at high levels at the beginning of the study. Although she said it was not the easiest element for her, Michelle (L) reported that conversational tone was her favorite element to use. Many first graders used conversational tone in their writing effectively before it was taught in week four. Most young children already have the ability to engage one another in conversation, which may explain why conversational tone came more naturally to them than other voice elements. Interestingly, although students could

use conversational tone in their writing, it was more difficult for them to detect it in mentor texts that we read during the study. Students may be so familiar with conversational tone that they do not notice it in texts. Some students, including Michelle (L) and Brittany (H), unexpectedly used personification to converse with the reader early in the study. It seemed that these two students were using the animals as characters in their writing to act out different scenarios and engage in dialogue with each other and the reader. As the study progressed, the use of personification diminished but (with the exception of Madison (M)) conversational tone levels remained fairly constant in their writing.

Comparisons was another element that the first graders used before it was formally taught to them. This may be because comparisons are used naturally in conversation and, as a result, were used in the students' writing early on because they drew from their narrative language backgrounds. Students used comparisons to change abstract ideas or concepts into concrete ones. Indeed, in class discussions we would often use comparisons for the size of an animal. In week two, I had six students lay down in a line to demonstrate how long an orca can be. After seeing a visual representation, many students remembered this fact and included it in their writing. 'How many first graders long?' became a common phrase when learning about a new animal during the study. Comparisons occurred naturally early in the study, but many students became more successful in using them in their writing as the study after it was taught in week five.

Imagery was one of the most difficult elements for students to use in their writing. Madison (M) expressed that imagery was one of the hardest elements for her and the only one she would not use in her future writing. Early on, students most often included imagery in their writing by describing the color of an animal. Few other senses were used in the first graders' writing before imagery was taught in week six. Students rarely signaled that they noticed

imagery in texts we read together. Imagery levels remained relatively low for the three participants' writing throughout the study. A reason for this could be that, after it was taught in week six, students did not have as much time to use it in their writing as they did with the other elements. Students also wrote more early in the study than later in the study when imagery was taught, so there was more opportunity to include other elements that were taught earlier in the study.

Repeated text was the only element that did not occur in any form prior to it being taught in week 7. Repeated text was one of the most difficult elements for first graders to use in their writing. Once repeated text was taught, some first graders still did not include it in their writing and others struggled with using it to convey meaningful information to the reader. Brittany reported that repeated text was the most difficult element for her and Michelle said that although she understood what repeated text was, it was difficult to include it in her writing. One of the reasons she gave for this was that she had only one week in which to include repeated text in her writing. She said, "At the end, like we couldn't, I couldn't really do it because I had a little bit more pages left to do" (PostI, lines 246-247). Perhaps if repeated text had been taught earlier in the study or students had more time to include it in their writing, they would have used it with more success.

Overall, descriptive words, conversational tone, and punctuation seemed to be the easiest elements for first graders regardless of ability level to understand and use. They also occurred naturally in first grade writing before I had taught the students how to use them, but students used these elements with more success after they had been taught. Text and picture placement, comparisons, and imagery also occurred in student writing earlier than anticipated and occurred with more intentionality and success after formal lessons about these elements. This indicates

that students were familiar with these elements but could not use them as effectively as other elements. Repeated text proved to be the most difficult element for first graders. It did not occur naturally in their writing and many students still did not use it successfully or at all after it had been taught. The outcome of these results could change depending on the order in which they are taught. For instance, if repeated text was taught earlier in the unit the first graders may have had more time to learn to use it effectively in their writing. Similarly, descriptive words may not have occurred at such high levels in first grade writing if it had been taught later in the study.

Reflection

Once the study was completed, I reflected on how the first graders in my class used voice in their science writing, how I would improve the study in the future, and which practices were useful in teaching the elements.

Although the seven identified voice elements were found in atypical informational texts for young learners, not all of them were necessary to include in first grade science writing. Some of the elements included in the study were more useful for first graders than others. Indeed, repeated text appeared difficult for the students to utilize as an asset to their writing. Instead of helping students convey information, many students struggled to use repeated text to enhance their message and instead used it simply because I challenged them to. Text and picture placement and creative punctuation were helpful for some students but not all. Although creative pop ups or flaps were used, some first graders focused on the form rather than the function of these text features which, in science writing, is to share information. In addition, many students used ellipses for fun, but it was not necessarily a crucial element for them to include in science writing. After teaching elements of voice and studying first grade science writing, I realized that

I could have been exclusionary in the elements of voice I chose to include in the study. Other elements of voice could be more effectively incorporated in first grade science writing.

Descriptive words, imagery, conversational tone, and comparisons were elements that were helpful to the first graders during the study. These elements were identified in atypical informational texts and became necessary for first grade science writing. Descriptive words were important for students to precisely and accurately convey information about their subject. Students relied on descriptive words consistently during the study. Descriptive words seemed to guide students into other elements of voice. When taught about descriptive words, students naturally began to include more descriptions of an animal which led to the use of imagery. Although imagery was a difficult for element for some first graders to use, it was useful in conveying information and communicating with the reader. Indeed, if imagery was introduced earlier in the study first graders could have become more comfortable with using imagery in their writing. Additionally, some students used conversational tone to teach their reader technical and descriptive words within science (e.g. echolocation, brood pouch, pinniped, etc.). Conversational tone was helpful for students to use a familiar conversational style to communicate information with personality. Comparisons were frequently used in our class discussions prior to a formal lesson about comparisons in writing. While teaching about an animal, I found it useful to compare an animal's size to a concrete object. Students used this same technique in their writing to help them convey information about an animal. Comparisons became a crucial element of voice within science writing. Students often included a descriptive word in their comparison, such as snowy owl claws being as sharp as pointy pencils.

Upon reflection, only some of the voice elements were necessary or particularly helpful for first graders to include in their science writing. If I were to teach first graders about voice in

science writing in the future, I would shorten the unit by excluding text and picture placement, creative punctuation, and repeated text. I would focus instead on descriptive words, conversational tone, comparisons, and imagery as elements to enhance writing within science. If I still decided to teach all seven voice elements, again I would allow one week per voice element but would include break weeks in which students could write within a different genre or write less frequently. In this way, the writing fatigue I observed among my students could be avoided. I would also introduce hand signals as each new element was taught from the beginning instead of halfway through. Hand signals became very helpful for first graders as an additional tool for comprehension and expression of their understanding. Hand signals were helpful for me because they indicated which elements were noticed frequently and which students were noticing them or not noticing them.

In addition to hand signals, other practices were useful in teaching the voice elements. It was important to allow my students sufficient time to learn and use each element of voice. One week seemed an adequate amount of time for the students to grasp the element and practice using it in their writing. Three lessons each week also seemed sufficient for students to familiarize themselves with a voice element. The consistency of the process and predictability of the lesson format seemed helpful for first graders. As I taught each new voice element I created an anchor chart with input from the class. These anchor charts became helpful for students to refer to as the study went on. Each anchor chart included a simple sentence about the animal we studied that showcased the element, examples of the element in the mentor texts we read, and a pictorial representation of the element. The simple sentence and mentor text examples of the voice element were important to include but the pictorial representation could be skipped, as students did not often refer to it.

Different resources I provided during the study became helpful for the first graders as they learned about voice. I provided the students with a variety of writing paper that would best suit their purposes during independent writing time. I included lined paper with a box for a picture, pages that included a Fun Fact box for them to use, pages with lines only, and blank pages. At the beginning of the study, most students used pages with a picture box and lines as they were most familiar with those. As the study progressed however, students began using the blank pages more often. Blank pages allowed them more freedom to include text and picture placement in their writing. Another resource that students found helpful were the word cards introduced in tandem with descriptive words. As many young students do not often have a varied vocabulary, the word cards supported students while they explored new words. I included many adjective cards but would include a greater number of verb cards to include a wider range of movement words. Some students became frustrated that they could not find cards to help them describe how an animal moved.

Polar Packets became important organizers for students. As we researched different animals, students recorded the facts in their Polar Packets. While writing, students had those facts to refer to. Additionally, the students practiced a voice element in their Polar Packets during lessons two and three of each week. In this way, they could easily refer to previous voice elements. Lastly, mentor texts were an invaluable resource while teaching voice elements to first graders. The mentor texts were carefully and thoughtfully chosen as exemplars of a certain voice element. Many of them included several of the elements however. Students emulated parts of the text and pictures in their own writing to a greater degree than anticipated. In their post-interviews, each of the participants referenced at least one of the mentor texts as being helpful to

their learning about a voice element. Mentor texts were essential to the success of the first graders' comprehension and use of the voice elements.

Implications for Practice

This study has been an important first step in identifying elements of voice in the context of first grade science writing and exploring what voice in first grade science writing looks like. Based on the findings and reflections of this study, the following sections are suggestions for researchers, teachers, and publishers.

Researchers. Researchers could expand knowledge about voice in writing by modifying the methodology of this study or by addressing related research questions. Suggestions for further research include:

1. Conduct the study in a shorter or longer time frame. The rapid or gradual introduction of the voice elements could alter student understanding and use of them. A shorter unit could allay writing fatigue, but a longer time frame could allow for more lessons on each element.
2. Additional voice elements may have been excluded in this study. Researchers could identify different voice elements and teach them in addition to the existing seven elements or use them to replace some of the existing voice elements. A researcher could also study only some of the elements included in this study and exclude the others. Indeed, introducing fewer voice elements may be beneficial for young learners.
3. Instead of using atypical informational texts to identify elements of voice in science writing, researchers could use typical informational texts. Doing this could illustrate any common voice elements between atypical and typical

informational texts or yield completely different elements of voice.

4. Specific elements of voice have not been outlined for any age group prior to this study so researchers could conduct a similar study with a different age group for different results. Specific definitions of voice could be created for students of different ages or grades.
5. Researchers could identify elements of voice within different genres of writing required by the CCSS, as each discipline has a unique set of requirements that would necessitate a unique set of voice elements. This includes different types of informational writing as well (e.g., narrative-informational texts and informational-poetic texts). Once voice elements were taught within one genre, researchers could determine whether students could use a voice element in another genre of writing, or which elements were more easily transferred. Specific definitions of voice could be created for each writing genre.
6. Include a different configuration of participants. Researchers could broaden the scope of the study with more participants from the same class or different classes. Male participants could provide further insight into how young children use voice elements in their writing. Participants from different age groups could provide important information about which elements of voice appeal to certain age groups, or which elements carry across age groups. Older students may require a different definition of voice.
7. Alter the order in which the elements are presented. Researchers could begin with elements that they deem more difficult and end with elements they perceive as

easier for their participants. Researchers could also put the elements in a random order with no gradation.

8. Researchers could conduct interviews with participants differently. A different text from the pre- and post- interview could be used to establish whether a participant could identify elements of voice in an unfamiliar text. Researchers could ask questions differently or create new questions to ask the participants. Instead of one-on-one interviews, group interviews could be conducted instead.
9. As an indication of the longevity of the elements, researchers could administer writing assessments at different intervals once the voice elements are presented to the participants.

Teachers. Based on the results of this study, certain practices were helpful for young students. The following are suggestions for classroom teachers that would like to teach their students to include voice elements in their science writing:

1. Use descriptive word cards. The descriptive word cards introduced in week 1 (with the descriptive word element) were helpful for students who had a limited vocabulary. Many students found them useful for adjectives, but I did not include enough verb cards to describe animal movements (i.e. slither, flop, waddle). Including plenty of adjective and verb cards and making them available to students could support students that are unsure about including new words in their writing.
2. Use mentor texts. Mentor texts were very helpful to the participants in the study, and the class in general. Many students modeled their text and drawings after examples they had seen in the mentor texts we read together. Lists of high-quality

mentor texts that contain voice elements are included in chapter 4. The students in my class modeled their writing and drawings after *Creature Features* (Jenkins, 2014) and *Surprising Sharks* (Davies, 2005) especially.

3. Change the timing of introducing elements of voice. Many students began the study with several pages about each animal, but as the study progressed they included fewer pages and wrote less overall. To avoid this fatigue, it might be beneficial to take weeks off in between teaching the voice elements or eliminate some elements. Text and picture placement, creative punctuation, and repeated text could be excluded to shorten the unit. The elements I found most essential in first grade science writing were descriptive words, conversational tone, comparisons, and imagery.
4. Emphasizing writing with an audience in mind. Include a real audience for first graders to address in their writing. In this study students wrote primarily for their families, as they were invited to a polar party we held at the end of the study. Having a real audience helped students be mindful of including information for prospective readers.
5. Use hand signals to remember writing elements. Although the creation of hand signals was unanticipated in this study, it became extremely important to the first graders' understanding of the voice elements. Indeed, research supports the use of kinesthetic motions to aid comprehension.

In 2008, researchers found that comprehension movements significantly increased primary students' comprehension abilities (Block, Parris, & Whiteley, 2008):

> Primary-age children's abilities to understand concrete (e.g., mother) and abstract words (e.g., peace) are related to whether readers can generate clear mental representations of these terms. Kinesthetic motions are effective tools for creating mental representations for abstract concepts. Because comprehension processes are abstract, it is reasonable to propose that if kinesthetic learning aids could be designed to depict these mental abilities (nonlinguistic input) then the effectiveness of direct, transactional strategy instruction (linguistic input) should increase (p. 461).

Teachers, they found, also benefited from signaling because it allowed them to 'read' their class and know what their students are thinking. Interpreting hand motions is a way for teachers to know and respond to their students' needs (Block et al., 2008).

These findings were consistent with what I observed in my own class. By using hand signals, students took abstract concepts and made them concrete. I noticed that when a student could not recall the exact name of a voice element, they showed me the hand signal instead. It appeared that doing the movements while I read aloud to them encouraged them to pay attention and anticipate the elements while we read together. They also started making the movements when they noticed elements in books they read themselves. I began to observe which elements the students noticed frequently and which elements they did not, and it helped me gauge how well the class understood a particular voice element.

Publishers. The results of this study indicate that young children can include voice elements in their science writing when given opportunity and resources. To increase these resources, suggestions to publishers include the following:

1. Include more atypical informational texts in teacher manuals, so that teachers can use more of this type of text in their instruction.

2. Provide more detailed descriptions of voice when creating resources for teachers. Provide specific examples of the elements of voice described in the manual and provide a rubric with which to score writing.
3. Include voice as a trait of effective writing in a variety of genres. Each genre may have its own voice elements, and those could be outlined and explained for teachers as well as students.

Conclusion

In Chapter 1, I expressed confusion and concern that the students in my class did not write with enthusiasm and voice in science. During this study, however, my students demonstrated that they were capable of escaping the formula of 'opening line, three facts, closing line' and instead convey information in creative and thoughtful ways that often demonstrated a deep understanding of the subject. Encouraging my first graders to draw upon their narrative vernacular in their science writing seemed helpful in bridging the divide between speaking and writing about science. In the process of teaching my students how to use voice in their science writing, they became more immersed in the writing of science and more comfortable with the language of science.

My students did well with the voice elements, especially elements that are used while speaking and occur naturally within science writing. Many of the elements appeared in their writing before I had formally taught them, which indicates that young children already have a natural sense of voice that needs only to be encouraged and improved. My students wrote with purpose and creativity, even including pop ups and flaps for readers to use. They created hand signals for the voice elements and used them when they noticed elements in books we read

together, both during the study and outside of the study. They included detailed and information-rich pictures along with their text and made writing decisions to cater to their audience.

Clearly, first graders are capable of much more than is required of them in regard to writing in science. The quality of their writing was much better after this unit on voice. An issue facing American teachers is that writing instruction has become formulaic, creating voiceless writing. The elements and format of this study allowed first graders to meet and surpass the necessary objectives, to put writing into a larger context, and to allow students to put their unique mark on their writing. My hope is that this study will encourage teachers, especially teachers of young children, to provide ample opportunity for their students to engage with and create informational texts that goes beyond the minimum requirements of the CCSS.

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APPENDIX A

Parental Permission for A Minor

Introduction

My name is McKenna Maguet and I am currently a graduate student at Brigham Young University. My program includes selecting and conducting a research study. I have chosen to study the effects of informational mentor texts on first grade writing. As your child's teacher, I have selected your child because she has demonstrated enthusiasm and aptitude for writing. My committee chair, Timothy Morrison, will be supervising and aiding my study.

Procedures

If you agree to let your child participate in this research study, the following will occur:

I will interview you child about her writing at the beginning of my research study. I will record our voices during the interview. During the pre-interview I will ask four questions concerning voice in a mentor text. During the post-interview I will ask nine questions concerning voice in a mentor text and voice traits used during the unit.

Your child will participate with the rest of the class during our usual writing time. No extra writing time will be required. I will study your child's writing at the end of each week.

This research study will be eight weeks long. Your child will not need to spend any extra time outside of class to participate in this study. All work will be done in our classroom during our usual writing time. I will assess your child's writing at the end of each week with my committee chair.

Risks

The risks for your child in this study are minimal. The first graders who participate may feel some uncertainty as they answer questions about their writing during the two interviews. As I ask the interview questions, I will reassure them that it is okay if they do not know how to answer. Instead, my purpose is to learn how to encourage young writers to emulate mentor texts in their own writing. As I assess your child's writing at the end of each week, I will be paying attention to how a writing skill has been used. As I record this information, a pseudonym will be used in place of your child's name to preserve confidentiality. Your child may withdraw from the study at any time without affecting his/her standing in school or grades in class.

Confidentiality

Each student will be given a pseudonym so that student names will not appear on writing samples. These writing samples may be used in publications or presentations of the research, but audio recordings will not. Copies of the writing samples will be kept in a secure location in the classroom. The voice recordings from the interviews will be kept on my password protected computer. Access to both the writing samples and voice recordings will be limited to myself and my committee chair. I will transcript audio recordings from the interviews and I will keep the data from this study for three years after collection.

Benefits

My hope is that your child will become a better and more purposeful writer during this study. I anticipate that this study will give the field of education key insights into how young children

learn the craft of writing. I hope that other teachers will use informational mentor texts outlined in my study to encourage young children to improve their writing abilities.

Compensation

There will be no compensation for participation in this project.

Questions about the Research

Please direct any further questions about the study to McKenna Maguet at 406-207-3977 and mckenna.maguet@nebo.edu or to Timothy Morrision at 801-473-9216 and timothy_morrison@byu.edu.

Questions about your child's rights as a study participant or to submit comment or complaints about the study should be directed to the IRB Administrator, Brigham Young University, A-285 ASB, Provo, UT 84602. Call 801-422-1461 or send emails to irb@byu.edu.

You have been given a copy of this consent form to keep.

Participation

Participation in this research study is voluntary. You are free to decline to have your child participate in this research study. You may withdraw your child's participation at any point without affecting your child's grade or standing in school.

Child's Name: _____

Parent Name: _____ Signature: _____ Date: _____

APPENDIX B

Child Assent Form

What is this research about?
I am a graduate student at Brigham Young University and I will be doing a research study in our class. A research study is a special way to find the answers to questions. I am wondering if reading and studying good books helps first graders become better writers. You are being asked to join my study because you really enjoy writing and want to become a better writer!
If you decide you want to be in this study, this is what will happen. We will read a book together at the beginning of the study. I will ask you questions about the book and you will answer them the best you can. I will record our voices during our conversation. We will do the same thing when the study is over. During the study, you will do the same thing our class does during writing time. You will not need to spend any extra time writing and will not miss any recess or specialty class to write. I will look at your writing after school each week. An expert at BYU will also look at your writing!
Can anything bad happen to me?
You may feel nervous when you read your story to me and I ask you questions, but if you do not want to answer a question or you do not know how to answer the question, that is okay! You will not get in trouble.
Can anything good happen to me?
I am hoping that you will become a better writer during this study! I also hope to learn something that will help other first grade students someday.
Do I have other choices?
You can choose not to be in my study.
Will anyone know I am in the study?
I will not tell anyone that you are in my study. When I am done with the study, I will write a report about what I have learned. When I write my report, I will not include your name so nobody will know that you participated.
What happens if I get hurt?
There is very little chance that you will be hurt. Your parents have given permission for you to be in this study. They feel that you will be safe.
What if I do not want to be in the study?
You do not have to be in my study if you don't want to. If you choose not to, I will not collect your work or ask you questions about your writing. Being part of this study is up to you. If you do not want to, you will not be in trouble. If you say yes but change your mind later, that is okay too. All you have to do is tell me.
Before you say yes, please ask me about anything that you do not understand.
If you want to be in this study, please print and sign your name:
Name (printed):_____ Date: _____

APPENDIX C

Recruitment Materials

Instructions to students (to be given by the classroom teacher)

I am going to do a research study in our classroom. A research study is a special way to find answers to questions. I am wondering if reading good books helps students become better writers. You are being asked to join the study because you really enjoy writing and want to become a better writer!

If you decide that you want to be in my study, this is what will happen. I will ask you questions about a book we read together and you will answer them the best you can. I will record our voices during our conversation. I will also do this at the end of the study. During the study, you will do the same thing that the rest of our class does and you will not need to spend any extra time writing outside of writer's workshop. I will look at your writing each weekend and so will an expert at BYU.

In order to be in this study, you will need to get permission from your parents. You will need to take a parent permission letter home for your parents to sign and also a child assent letter for you to sign. The assent letter tells your parents and me (the researcher) that you also agree to be a part of my study. You should bring both signed forms back to school tomorrow.

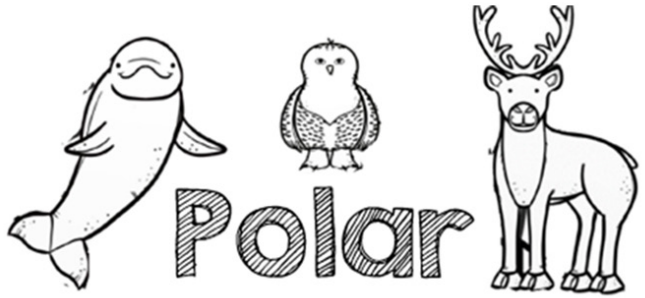
Thanks for taking these papers home to talk to your parents about. Please ask one of your parents to sign the form and please sign your assent from. Return them to me tomorrow. Do you have any questions? Thank you!

Follow-up instructions to students (to be given by the classroom teacher)

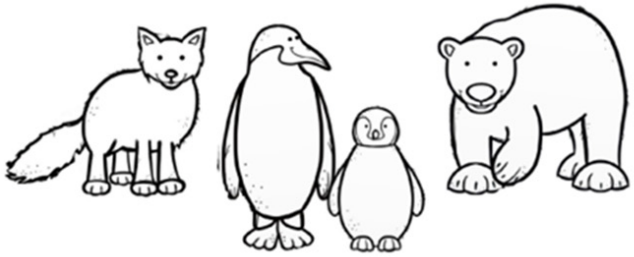
If you did not bring back the signed parent permission letter and the child assent letter, please bring them back to school tomorrow so that the study can begin. Do you need another copy of the parent permission letter or the child assent letter? Thank you!

APPENDIX D

Polar Packet



Polar Animals



Author/Scientist:

_____

Writing Strategy: Descriptive Words

Animal: Emperor Penguin

Penguin babies are _____ and _____.

Look at the penguin's feathers! They are _____ and _____.

Write your own!

Facts:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Writing Strategy: Conversation with the Reader

Animal: Snowy Owl

Telling the reader:

1. Let me tell you what owls use their beaks for!
2. _____

_____

Asking the reader:

1. Did you know our feathers are white to blend it with the snow?
2. _____

_____

Write your own!

Facts:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Writing Strategy: Imagery

Animal: Caribou

Use your 5 senses!

1. You can hear caribou hooves crunch on the snow.
2. The arctic feels cold but the caribou is warm because of its thick fur.
3. _____

_____

4. _____

_____

Write your own!

Facts:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Writing Strategy: Predictable Text

Animal: Arctic Fox

1. _____

_____. This is an arctic fox.

2. _____

_____. This is an arctic fox.

3. _____

_____. This is an arctic fox.

Write your own!

Facts:

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

APPENDIX E

Unit Outline

Objectives	Mentor Texts (see notes)	Modeling	Guided Practice (see notes)	Independent Practice	Data Collected
Descriptive Words (adjectives and verbs) **Learn about: Emperor Penguins**	Hippos are Huge! by Jonathan London Flying Frogs and Walking Fish by Steve Jenkins and Robin Page	Define Element Hippos are Huge! p. 8 – monstrous, razor-sharp p. 10 – gracefully, gliiiides p. 11 – bursts, spouting Flying Frogs and Walking Fish Notice descriptive words of how animals move throughout book Additional Materials: Paint cards with three hues – each has a synonym (e.g. big: gigantic, huge, enormous)	**Day 1**: Penguins ___ across the ___ice. Penguins are ____ and _____! **Day 2**: (in student notebooks) Penguin babies are _____ and _____. Look at the penguin's feathers! They are ____ and ____. **Day 3**: (in student notebooks) Students write their own penguin sentence and share it with their group then with the class (write some on the whiteboard).	**Day 1:** As you start writing about penguins, add pizzazz with at least two adjectives! **Day 2:** As you continue to write about penguins, add pizzazz with at least two verbs! **Day 3:** As you finish your writing about penguins, add at least one more verb and adjective.	**Interview Participants** **Day 1:** Anecdotal notes, student work samples (SWS), use rubric to grade work **Day 2:** Anecdotal notes, SWS, grade **Day 3:** Anecdotal notes, SWS, grade student work with committee chair
Text and Picture Placement (placement on a page) **Learn about: Orcas**	Fabulous Frogs by Martin Jenkins The Worm: The Disgusting Critters Series by Elise Gravel	Define Element Fabulous Frogs: p. 8 - huge is written HUGE p. 10 – tiny is written small p. 13-14 – words follow movement and sounds of the frogs The Worm: The Disgusting Critters Series: p. 5-6 – information is presented in speech bubbles	**Day 1**: Orcas have big, sharp teeth. (manipulate big and sharp) Orcas can _____ (write word across page in a way that matches the word) **Day 2**: (in student notebooks) Orcas can jump out of the water! (manipulate jump on the page) Orcas are as big and long as a bus. (manipulate big and long) **Day 3**: (in student notebooks) Students write their own orca sentence and share it with their group then with the class (write some on the whiteboard).	**Day 1:** As you start writing about orcas, change how you write a word to match what it means. **Day 2:** As you continue to write about orcas, include speech bubbles or write important words with big letters. **Day 3:** As you finish writing about orcas, add describing adjectives/verbs and manipulate words	**Day 1:** Anecdotal notes, student work samples (SWS), use rubric to grade work **Day 2:** Anecdotal notes, SWS, use rubric to grade work **Day 3:** Anecdotal notes, SWS, use rubric for committee chair and I to grade work
Punctuation (onomatopoeia, ellipsis, exclamation point, capitalization) **Learn about: Walrus**	Dig, Wait, Listen: A Desert Toad's Tale by April Pulley Sayre Chameleons are Cool by Martin Jenkins	Define Element Dig, Wait, Listen: A Desert Toad's Tale: p. 3, 5, 10, 11 - animal movement is written with onomatopoeia p. 14 – sounds of rain written with onomatopoeia Chameleons are Cool: p. 10-12 – ridiculous…NOSES! p. 23-25 -opens its mouth and…thwap!	**Day 1**: Walruses _____ across the ice. ____! (word choice, onomatopoeia) Walruses can even…____! **Day 2**: (in student notebooks) A walrus is ___, ___, and…___! Walruses make a lot of sounds. ____! (onomatopoeia) **Day 3**: (in student notebooks) Students write their own walrus sentence and share it with their group then with the class (write some on the whiteboard).	**Day 1:** As you start writing about walruses, add what it sounds like when walruses move or make noises. **Day 2:** As you continue to write about walruses, add ellipsis before you write a sound word **Day 3:** As you finish your writing about walruses, include a sound word and …	**Day 1:** Anecdotal notes, student work samples (SWS), use rubric to grade work **Day 2:** Anecdotal notes, SWS, use rubric to grade work **Day 3:** Anecdotal notes, SWS, use rubric for committee chair and I to grade work

Conversational Tone (as narrator or character in writing) Learn about: Snowy Owls	**Creature Features by Steve Jenkins** **Sharks! by Anne Schreiber**	**Define Element** **Creature Features:** **p. 4 – discuss conversation between narrator and characters (animals)** **p. 6 – sounds like the animals are talking to you (ask or tell you to do something)** **Sharks!** **Note conversational tone throughout, particularly "Did You Know" bubbles** **p. 1 – asks reader a question**	**Day 1: Did you know that snowy owls _____?** **Look at the owl's ____. They are used for __. (invite reader to do something)** **Day 2: (in student notebooks)** **Let me tell you what owls use their beaks for! (conversation with reader)** **Pretend to be owl and ask a question (e.g. Did you know our feathers are white to blend it with the snow?)** **Day 3: (in student notebooks)** **Students write their own owl sentence and share it with their group then with the class (write some on the whiteboard).**	**Day 1: As you start writing about snowy owls, ask the reader a question about snowy owls.** **Day 2: As you continue to write about snowy owls, tell the reader to do or look at something in your writing.** **Day 3: As you finish your writing about snowy owls, pretend like your talking to the person reading your story. Make sure to sound excited!**	**Day 1: Anecdotal notes, student work samples (SWS), use rubric to grade work** **Day 2: Anecdotal notes, SWS, use rubric to grade work** **Day 3: Anecdotal notes, SWS, use rubric for committee chair and I to grade work**
Simile and Metaphor Learn about: Polar Bears	Wonderful Worms by Linda Glaser Surprising Sharks by Nicola Davies	Define Element Wonderful Worms: p. 1 – worms are fat and wiggly like fingers and toes (have kids wiggle fingers to show comparison) ____ Surprising Sharks: p. 10-11 – like a party balloon, like a scrap of old carpet p. 21 – as clear as a restaurant sign Additional Materials: Polar bear pelt and head, kids look and touch	**Day 1**: Polar bears are as big as ____! Their teeth are as sharp as _____! **Day 2**: (in student notebooks) Polar bear fur is white as _____. Did you know polar bears can swim like ___? **Day 3**: (in student notebooks) Students write their own polar bear similes. They share it with their group then with the class (write some on the whiteboard).	**Day 1:** As you start writing about polar bears, compare a part of a polar bear to something else (simile). **Day 2:** As you continue to write about polar bears, compare a different part of a polar bear to something. **Day 3:** As you finish writing about polar bears, include a question/ suggestion to the reader and a simile	**Day 1:** Anecdotal notes, student work samples (SWS), use rubric to grade work **Day 2:** Anecdotal notes, SWS, use rubric to grade work **Day 3:** Anecdotal notes, SWS, use rubric for committee chair and I to grade work
Imagery Learn about: Caribou	Who Lives in…the Mountains? by Ron Hirschi Vulture View by April Pulley Sayre	Define Element Who Lives in…the Mountains? p. 5 – describes what mountain goat is smelling p. 7 – temperature of mountain Vulture View: p. 12-14 – describes what vulture is smelling p. 15-16 – uses adjectives to describe what things smell like	**Day 1**: Penguins ___ across the ___ ice. Penguins are ____ and _____! **Day 2**: (in student notebooks) You can hear caribou hooves crunch on the snow. The arctic feels cold but the caribou is warm because of its thick fur. **Day 3**: (in student notebooks) Students write their own penguin sentence. They share it with their	**Day 1:** As you start writing about caribou, describe what a caribou might see in the arctic. **Day 2:** As you continue to write about caribou, add describe what it feels like in the arctic. **Day 3:** As you finish writing about caribou, use one of	**Day 1:** Anecdotal notes, student work samples (SWS), use rubric to grade work **Day 2:** Anecdotal notes, SWS, use rubric to grade work **Day 3:** Anecdotal notes, SWS, use rubric for committee chair and I to grade work

Repeated Text Learn about: Arctic Fox	**I See a Kookaburra! Discovering Animal Habitats Around the World by Steve Jenkins and Robin Page** **Ocean Animals from Head to Tail by Stacey Roderick**	**Define Element** **I See a Kookaburra! Discovering Animal Habitats Around the World:** **p. 5, 9, 12, 16 – discuss the repeated line that occurs to introduce new animals (in the desert I see…, etc.)** **Ocean Animals from Head to Tail:** **Asks a repeated question throughout**	**Day 1: Arctic foxes are ____.** **(do three sentences that end with that phrase)** **Day 2: (in student notebooks)** **This is an arctic fox.** **(end three sentences with that phrase)** **Day 3: (in student notebooks)** **Students write their own arctic fox sentences that repeat. They share it with their group then with the class (write some on the whiteboard).**	**Day 1: As you start writing about walruses, add what it sounds like when walruses move or make noises.** **Day 2: As you continue to write about walruses, add ellipsis before you write a sound word** **Day 3: As you finish your writing about walruses, include a sound word and …**	**Day 1: Anecdotal notes, student work samples (SWS), use rubric to grade work** **Day 2: Anecdotal notes, SWS, use rubric to grade work** **Day 3: Anecdotal notes, SWS, use rubric for committee chair and I to grade work**
Wrapping Up	Any mentor texts that highlight voice elements that students struggle with	Finish all writing. Draw upon all elements of voice. Review any elements students struggle with.	Model elements of voice that students struggle with Review mentor texts that contain elements of voice that students find difficult	Finish all writing. Also complete the cover, table of contents, glossary.	**Day 1:** Anecdotal notes, student work samples (SWS), use rubric to grade work **Day 2:** Anecdotal notes, SWS, use rubric to grade work **Day 3:** Anecdotal notes, SWS, grade work **interview participants**

APPENDIX F

Lesson Plans

District Lesson Plan

What Taught (What do you want students to learn?	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 1: Emperor Penguins and Descriptive Words (Day 1) Lesson Objective: Students will be able to define descriptive words. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Hippos are Huge Writing paper Polar packets Paint cards with synonyms Before Lesson: Find facts about emperor penguins through the internet, videos, books Students filled out polar packets with emperor penguin facts prior to the lesson During Lesson: Gather students to the carpet Define descriptive words, discuss simple examples as a class Read mentor text, add descriptive words from the text to the anchor chart Write "Penguins are __ and ___" on the anchor chart and have students help fill in the blanks Have students turn and tell each other about descriptive words, walk around and check for understanding Introduce the paint cards, explain use and procedure After Lesson: Dismiss students to begin writing about penguins Challenge them to use a descriptive word in their writing Encourage them to use their polar packets to remind them of penguin facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 1: Emperor Penguins and Descriptive Words (Day 2) Lesson Objective: Students will be able to identify descriptive words in texts. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Flying Frogs and Walking Fish Writing paper Polar packets Before Lesson: Remind students about what descriptive words are, how they are used During Lesson: Gather students to the carpet Discuss descriptive words, discuss examples from Lesson 1 Read mentor text, add descriptive words from the text to the anchor chart Send students to their desks and take out Polar Packets, fill out Day 1 together Have students turn and tell each other about descriptive words, walk around and check for understanding After Lesson: Dismiss students to begin writing about penguins Challenge them to use a descriptive word in their writing Encourage them to use their polar packets to remind them of penguin facts Remind them to use the paint cards to help with descriptive word ideas	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 1: Emperor Penguins and Descriptive Words (Day 3) Lesson Objective: Students will be able to use at least one descriptive word in their writing. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Writing paper Polar packets Before Lesson: Remind students about what descriptive words are, how they are used During Lesson: Gather students at the carpet Remind students about what descriptive words are On anchor chart, create a symbol for descriptive words Send students to their desks and take out Polar Packets, have students fill out Day 2 on their own Have students turn and tell each other about descriptive words, share their Polar Packet sentences with each other Walk around and check for understanding After Lesson: Dismiss students to begin writing about penguins Challenge them to use a descriptive word in their writing Encourage them to use their polar packets to remind them of penguin facts Remind them to use the paint cards to help with descriptive word ideas	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants Copy writing samples and Polar Packet page from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 2: Orcas and Text and Picture Placement (Day 1) Lesson Objective: Students will be able to define text and picture placement. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Fabulous Frogs Writing paper Polar packets Before Lesson: Find facts about orcas through the internet, videos, books Students filled out polar packets with orca facts prior to the lesson During Lesson: Gather students to the carpet Define text and picture placement, discuss simple examples as a class Read mentor text, add text and picture placement examples from the text to the anchor chart Write "Orcas are huge and long" on the anchor chart and have students change underlined words to HUGE and l-o-n-g Have students turn and tell each other about text and picture placement, walk around and check for understanding After Lesson: Dismiss students to begin writing about orcas Challenge them to use an example of text and picture placement in their writing Encourage them to use their polar packets to remind them of orca facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 2: Orcas and Text and Picture Placement (Day 2) Lesson Objective: Students will be able to identify text and picture placement in texts. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: The Worm: Disgusting Critters Series Writing paper Polar packets Before Lesson: Remind students about what text and picture placement is, how it is used During Lesson: Gather students to the carpet Discuss text and picture placement, discuss examples from Lesson 1 Read mentor text, add text and picture placement examples from the text to the anchor chart Send students to their desks and take out Polar Packets, fill out Day 1 together Have students turn and tell each other about text and picture placement, walk around and check for understanding After Lesson: Dismiss students to begin writing about orcas Challenge them to use an example of text and picture placement in their writing Encourage them to use their polar packets to remind them of orca facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 2: Orcas and Text and Picture Placement (Day 3) Lesson Objective: Students will be able to use at least one example of text and picture placement in their writing. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Writing paper Polar packets Before Lesson: Remind students about what text and picture placement is, how it is used During Lesson: Gather students at the carpet Remind students about what text and picture placement is On anchor chart, create a symbol for text and picture placement Send students to their desks and take out Polar Packets, have students fill out Day 2 on their own Have students turn and tell each other about text and picture placement, share their Polar Packet sentences with each other Walk around and check for understanding After Lesson: Dismiss students to begin writing about orcas Challenge them to use a text and picture placement example in their writing Encourage them to use their polar packets to remind them of orca facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants Copy writing samples and Polar Packet page from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 3: Walruses and Punctuation, Capitals, and Onomatopoeia (Day 1) Lesson Objective: Students will be able to define punctuation, capitals, and onomatopoeia. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Dig, Wait, Listen: A Desert Toad's Tale Writing paper Polar packets Before Lesson: Find facts about walruses through the internet, videos, books (walrus noises on YouTube) Students filled out polar packets with walrus facts prior to the lesson During Lesson: Gather students to the carpet Define punctuation, capitals, and onomatopoeia, discuss examples Read mentor text, add punctuation, capitals, and onomatopoeia examples from the text to the anchor chart Write "Walruses scoot across the ice. __, __, __" and "The walrus dove into the water…___!" Have students add onomatopoeia to the blank spaces, include capitals and punctuation in the second sentence Have students turn and tell each other about three elements, walk around and check for understanding After Lesson: Dismiss students to write about walruses Challenge them to use an example of either punctuation, capitals, or onomatopoeia Encourage them to use their polar packets to remind them of walrus facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 3: Walruses and Punctuation, Capitals, and Onomatopoeia (Day 2) Lesson Objective: Students will be able to identify punctuation, capitals, and onomatopoeia in texts. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Chameleons are Cool! Writing paper Polar packets Before Lesson: Remind students about what punctuation, capitals, and onomatopoeia are, how they are used During Lesson: Gather students to the carpet Discuss punctuation, capitals, onomatopoeia, discuss examples from Lesson 1 Read mentor text, add examples of elements from the text to the anchor chart Send students to their desks and take out Polar Packets, fill out Day 1 together Have students turn and tell each other about the elements, walk around and check for understanding After Lesson: Dismiss students to write about walruses Challenge them to use an example of punctuation, capitals, or onomatopoeia in their writing Encourage them to use their polar packets to remind them of walrus facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 3: Walruses and Punctuation, Capitals, and Onomatopoeia (Day 3) Lesson Objective: Students will be able to use at least one example of capitals, punctuation, or onomatopoeia in their writing. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Writing paper Polar packets Before Lesson: Remind students about what punctuation, capitals, and onomatopoeia are, how they are used During Lesson: Gather students at the carpet Remind students about punctuation, capitals, and onomatopoeia are On anchor chart, create a symbol for punctuation, capitals, and onomatopoeia Send students to their desks and take out Polar Packets, have students fill out Day 2 on their own Have students turn and tell each other about punctuation, capitals, and onomatopoeia, share their Polar Packet sentences with each other Walk around and check for understanding After Lesson: Dismiss students to begin writing about walruses Challenge them to use an example of punctuation, capitals, or onomatopoeia in their writing Encourage them to use their polar packets to remind them of walrus facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants Copy writing samples and Polar Packet page from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 4: Snowy Owls and Conversation with the Reader (Day 1) Lesson Objective: Students will be able to define conversation with the reader. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Creature Features Writing paper Polar packets Stuffed Snowy Owl from Museum Before Lesson: Find facts about snowy owls through the internet, videos, books, snowy owl model from the museum Students filled out polar packets with snowy owl facts prior to the lesson During Lesson: Gather students to the carpet Define conversation with the reader, discuss examples Read mentor text, add conversation with the reader examples from the text to the anchor chart Write "Did you know that a snowy owl ___?" and "Look at this! Snowy owls ___." Have students add snowy owl facts in the blank spaces Have students turn and tell each other about conversation with the reader, walk around, check for understanding After Lesson: Dismiss students to write about snowy owls Challenge them to use an example of conversation with the reader Encourage them to use their polar packets to remind them of snowy owl facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 4: Snowy Owls and Conversation with the Reader (Day 2) Lesson Objective: Students will be able to identify conversation with the reader in texts. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Sharks! (Nat Geo Kids Series) Writing paper Polar packets Before Lesson: Remind students about what conversation with the reader is, how they are used During Lesson: Gather students to the carpet Discuss conversation with the reader, discuss examples from Lesson 1 Read mentor text, add examples of elements from the text to the anchor chart Send students to their desks and take out Polar Packets, fill out Day 1 together Have students turn and tell each other about conversation with the reader, walk around and check for understanding After Lesson: Dismiss students to write about snowy owls Challenge them to use an example of conversation with the reader in their writing Encourage them to use their polar packets to remind them of snowy owls facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 4: Snowy Owls and Conversation with the Reader (Day 3) Lesson Objective: Students will be able to use at least one example of conversation with the reader in their writing. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Writing paper Polar packets Before Lesson: Remind students about what conversation with the reader is, how it is used During Lesson: Gather students at the carpet Remind students about what conversation with the reader is On anchor chart, create a symbol for conversation with the reader Send students to their desks and take out Polar Packets, have students fill out Day 2 on their own Have students turn and tell each other about conversation with the reader, share their Polar Packet sentences with each other Walk around and check for understanding After Lesson: Dismiss students to begin writing about snowy owls Challenge them to use an example of conversation with the reader in their writing Encourage them to use their polar packets to remind them of snowy owl facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants Copy writing samples and Polar Packet page from participants

District Lesson Plan

What Taught (What do you want students to learn?	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 5: Polar Bears and Comparisons (Day 1) Lesson Objective: Students will be able to define comparisons. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Wonderful Worms Writing paper Polar packets Stuffed Polar Bear head from Museum Before Lesson: Find facts about polar bears through the internet, videos, books, polar bear model from the museum Students filled out polar packets with polar bear facts prior to the lesson During Lesson: Gather students to the carpet Define comparisons, discuss examples Read mentor text, add comparison examples from the text to the chart Write "Polar bear fur looks white as ___ but is actually clear like ___." Have students add similes in the blank spaces Have students turn and tell each other about comparisons, walk around and check for understanding After Lesson: Dismiss students to write about polar bears Call over small groups of students to feel the polar bear head, encourage the use of similes (rough like __, big as __) Challenge them to use an example of conversation with the reader Encourage them to use their polar packets to remind them of snowy owl facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 5: Polar Bears and Comparisons (Day 2) Lesson Objective: Students will be able to identify comparisons in texts. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Surprising Sharks! Writing paper Polar packets Before Lesson: Remind students about what comparisons are, how they are used During Lesson: Gather students to the carpet Discuss comparisons, discuss examples from Lesson 1 Read mentor text, add examples of elements from the text to the anchor chart Send students to their desks and take out Polar Packets, fill out Day 1 together Have students turn and tell each other about comparisons, walk around and check for understanding After Lesson: Dismiss students to write about polar bears Challenge them to use an example of comparisons in their writing Encourage them to use their polar packets to remind them of polar bear facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 5: Polar Bears and Comparisons (Day 3) Lesson Objective: Students will be able to use at least one example of comparisons in their writing. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Writing paper Polar packets Before Lesson: Remind students about what comparisons are, how they are used During Lesson: Gather students at the carpet Remind students about what comparisons are On anchor chart, create a symbol for comparisons Send students to their desks and take out Polar Packets, have students fill out Day 2 on their own Have students turn and tell each other about comparisons, share their Polar Packet sentences with each other Walk around and check for understanding After Lesson: Dismiss students to begin writing about polar bears Challenge them to use an example of comparisons in their writing Encourage them to use their polar packets to remind them of polar bear facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants Copy writing samples and Polar Packet page from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 6: Caribou and Imagery (Day 1) Lesson Objective: Students will be able to define imagery. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Who Lives in…the Mountains? Writing paper Polar packets Caribou antler from Museum Before Lesson: Find facts about caribou through the internet, videos, books, caribou antler from the museum Students filled out polar packets with caribou facts prior to the lesson During Lesson: Gather students to the carpet Define imagery, discuss examples Read mentor text, add imagery examples from the text to the chart Write "The caribou ___ a ___." Have students add one of the senses to the first blank and a word that fits the sentence in the second blank Have students turn and tell each other about imagery, walk around and check for understanding After Lesson: Dismiss students to write about caribou Call over small groups of students to feel the caribou antler Challenge them to use an example of imagery Encourage them to use their polar packets to remind them of caribou facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 6: Caribou and Imagery (Day 2) Lesson Objective: Students will be able to identify imagery in texts. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Vulture View Writing paper Polar packets Before Lesson: Remind students about what imagery is, how it is used During Lesson: Gather students to the carpet Discuss imagery, discuss examples from Lesson 1 Read mentor text, add examples of elements from the text to the anchor chart Send students to their desks and take out Polar Packets, fill out Day 1 together Have students turn and tell each other about imagery, walk around and check for understanding After Lesson: Dismiss students to write about caribou Challenge them to use an example of imagery in their writing Encourage them to use their polar packets to remind them of imagery facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 6: Caribou and Imagery (Day 3) Lesson Objective: Students will be able to use at least one example of imagery in their writing. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Writing paper Polar packets Before Lesson: Remind students about what imagery is, how it is used During Lesson: Gather students at the carpet Remind students about what imagery is On anchor chart, create a symbol for imagery Send students to their desks and take out Polar Packets, have students fill out Day 2 on their own Have students turn and tell each other about imagery, share their Polar Packet sentences with each other Walk around and check for understanding After Lesson: Dismiss students to begin writing about caribou Challenge them to use an example of imagery in their writing Encourage them to use their polar packets to remind them of caribou facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants Copy writing samples and Polar Packet page from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 6: Caribou and Imagery (Day 1) Lesson Objective: Students will be able to define imagery. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Who Lives in…the Mountains? Writing paper Polar packets Caribou antler from Museum Before Lesson: Find facts about caribou through the internet, videos, books, caribou antler from the museum Students filled out polar packets with caribou facts prior to the lesson During Lesson: Gather students to the carpet Define imagery, discuss examples Read mentor text, add imagery examples from the text to the chart Write "The caribou ___ a ___." Have students add one of the senses to the first blank and a word that fits the sentence in the second blank Have students turn and tell each other about imagery, walk around and check for understanding After Lesson: Dismiss students to write about caribou Call over small groups of students to feel the caribou antler Challenge them to use an example of imagery Encourage them to use their polar packets to remind them of caribou facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 6: Caribou and Imagery (Day 2) Lesson Objective: Students will be able to identify imagery in texts. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Vulture View Writing paper Polar packets Before Lesson: Remind students about what imagery is, how it is used During Lesson: Gather students to the carpet Discuss imagery, discuss examples from Lesson 1 Read mentor text, add examples of elements from the text to the anchor chart Send students to their desks and take out Polar Packets, fill out Day 1 together Have students turn and tell each other about imagery, walk around and check for understanding After Lesson: Dismiss students to write about caribou Challenge them to use an example of imagery in their writing Encourage them to use their polar packets to remind them of imagery facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 6: Caribou and Imagery (Day 3) Lesson Objective: Students will be able to use at least one example of imagery in their writing. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Writing paper Polar packets Before Lesson: Remind students about what imagery is, how it is used During Lesson: Gather students at the carpet Remind students about what imagery is On anchor chart, create a symbol for imagery Send students to their desks and take out Polar Packets, have students fill out Day 2 on their own Have students turn and tell each other about imagery, share their Polar Packet sentences with each other Walk around and check for understanding After Lesson: Dismiss students to begin writing about caribou Challenge them to use an example of imagery in their writing Encourage them to use their polar packets to remind them of caribou facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants Copy writing samples and Polar Packet page from participants

District Lesson Plan

What Taught (What do you want students to learn?	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 7: Arctic Fox and Repeated Text (Day 1) Lesson Objective: Students will be able to define repeated text. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: I See a Kookaburra! Writing paper Polar packets Arctic fox pelt from Museum Before Lesson: Find facts about arctic fox through the internet, videos, books, arctic fox pelt from the museum Students filled out polar packets with caribou facts prior to the lesson During Lesson: Gather students to the carpet Define repeated text, discuss examples Read mentor text, add repeated text examples from the text to the chart Write “In the arctic I see __. In the arctic I see __” and “An arctic fox is __, an arctic fox is __, an arctic fox is __.” Have students complete the sentences Have students turn and tell each other about repeated text, walk around and check for understanding After Lesson: Dismiss students to write about arctic foxes Call over small groups of students to feel the arctic fox pelt Challenge them to use an example of repeated text Encourage them to use their polar packets to remind them of arctic fox facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 7: Arctic Fox and Repeated Text (Day 2) Lesson Objective: Students will be able to identify repeated text in texts. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Mentor text: Ocean Animals from Head to Tail Writing paper Polar packets Before Lesson: Remind students about what repeated text is, how it is used During Lesson: Gather students to the carpet Discuss repeated text, discuss examples from Lesson 1 Read mentor text, add examples of elements from the text to the anchor chart Send students to their desks and take out Polar Packets, fill out Day 1 together Have students turn and tell each other about repeated text, walk around and check for understanding After Lesson: Dismiss students to write about arctic foxes Challenge them to use an example of repeated text in their writing Encourage them to use their polar packets to remind them of arctic fox facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 7: Arctic Fox and Repeated Text (Day 3) Lesson Objective: Students will be able to use at least one example of repeated text in their writing. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Chart paper for anchor chart Writing paper Polar packets Before Lesson: Remind students about what repeated text is, how it is used During Lesson: Gather students at the carpet Remind students about what repeated text is On anchor chart, create a symbol for repeated text Send students to their desks and take out Polar Packets, have students fill out Day 2 on their own Have students turn and tell each other about repeated text, share their Polar Packet sentences with each other Walk around and check for understanding After Lesson: Dismiss students to begin writing about arctic foxes Challenge them to use an example of repeated text in their writing Encourage them to use their polar packets to remind them of arctic fox facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants Copy writing samples and Polar Packet page from participants

District Lesson Plan

What Taught (What do you want students to learn?	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 8: Review All (Day 1) Lesson Objective: Students will be able to define all seven voice elements. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Polar Packets Writing paper Before Lesson: Students filled out polar packets with all animal facts prior to the lesson During Lesson: Gather students to the carpet Have students define all elements, discuss different examples Walk around and check for understanding After Lesson: Dismiss students to finish writing about polar animals Challenge them to use examples of the voice elements in their writing Encourage them to use their polar packets to remind them of animal facts	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 8: Review All (Day 2) Lesson Objective: Students will be able to identify all voice elements in texts. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Writing paper Polar packets Before Lesson: Remind students about what the elements are, how they are used During Lesson: Gather students to the carpet Discuss all voice elements, discuss examples from Lesson 1 Have students turn and tell each other about all voice elements, walk around and check for understanding After Lesson: Dismiss students to write about polar animals Challenge them to use examples of any of the voice elements in their writing Encourage them to use their polar packets to remind them of animal facts Encourage students to finish up their writing	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants

District Lesson Plan

What Taught (What do you want students to learn?)	How Taught (How will students learn it?)	How Evaluated (How will I know if they have learned)
Week 8: Review All (Day 3) Lesson Objective: Students will be able to use at least one example of all of the voice elements in their writing. Common Core: CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. CCSS.ELA-LITERACY.W.1.7 Participate in shared research and writing projects.	Guided Learning (Introduction): Materials List: Writing paper Polar packets Before Lesson: Remind students about what the voice elements are, how they are used During Lesson: Gather students at the carpet Remind students about what the voice elements are Have students turn and tell each other about the voice elements Walk around and check for understanding After Lesson: Dismiss students to begin writing about polar animals Challenge them to use an example of any of the voice elements in their writing Encourage them to use their polar packets to remind them of animal facts Finish writing today!	Take anecdotal notes on each of the participants, notes on the class Collect writing samples from participants Copy writing samples and Polar Packet page from participants

APPENDIX G

Interview Questions

PRE UNIT INTERVIEW (conduct before unit begins):

1. How do you make it so that people want to read your stories?
2. What kinds of things does an author do to make a story interesting?

After reading the interview mentor text (separate from the unit mentor texts):

1. Did you notice anything the author did to make the story interesting?
2. What kind of things do you do in your own writing that makes your stories fun to read?

POST UNIT INTERVIEW (conduct after the unit ends):

1. How do you make it so that people want to read your stories?
2. What kinds of things does an author do to make a story interesting?

After reading the interview mentor text (separate from the unit mentor texts):
(Lay out pictures of each of the seven voice traits for students to identify)

1. Did you see any elements of voice in the book we just read? If so, which ones? Where?
2. Do you remember which one of the voice elements was the easiest to understand?
3. Do you remember which one was the hardest to understand and use?
4. Which ones do you think you'll use from now on in your writing?
5. Out of all the voice elements, which one of these was easier for you?
6. Out of all the voice elements, which one of these was hardest for you?
7. Which elements do you notice in books we read together? Or in books you read yourself?

APPENDIX H

Newly Created Rubric

Traits Rubric for Voice						
Key question: Is the finished piece interesting and appealing to read?						
	Not proficient			Proficient		
Voice Elements	1 Beginning	2 Emerging	3 Developing	4 Capable	5 Experienced	6 Exceptional
Descriptive Words (verbs and adjectives, onomatopoeia)	No evidence of descriptive words	Little evidence of descriptive words in writing, words are used incorrectly	Relies on simple and familiar words, more difficult words may be attempted	Uses simple and familiar words correctly, attempts more difficult words with some success, uses descriptive words	Uses simple and familiar words correctly, often uses a variety of descriptive words correctly	Uses precise, fresh, creative words throughout writing, uses a variety of descriptive words
Text and Picture Placement	No evidence of picture or text placed on the page to convey meaning	Little evidence of drawings or text placed in a way that begins to convey meaning, attempts are incorrect	Begins to place drawings or text on the page in a way that conveys meaning of the text	Places drawings or text logically to convey meaning	Uses drawings or text to improve meaning of text and to convey ideas	Places drawings or text creatively to effectively enhance meaning of text and ideas
Creative Punctuation	Does not use creative punctuation	Attempts random creative punctuation but is unsuccessful	Uses some creative punctuation correctly, little variety in ending punctuation	Has end creative punctuation marks that are usually correct, some variety in ending punctuation	Correct use of creative punctuation and sometimes uses punctuation to convey meaning of text, uses a variety in ending punctuation	Uses punctuation correctly and creatively to effectively convey meaning in the text, uses a variety of punctuation
Conversational Tone	Writing makes no sense, no evidence of conversational tone	Uses simple decodable words, little evidence of conversation with the reader, attempts are incorrect	Uses simple and familiar words, attempts to converse with the reader (including questions or invitations for the reader) but may do this incorrectly	Attempts to converse with the reader (including questions or invitations for the reader to do something) with some success	Invites readers to participate with either questions or invitations in part of writing	Invites readers to participate with questions and invitations throughout writing successfully
Comparisons	No evidence of comparisons	Little use of comparisons, attempts are incorrect	Uses simple and familiar words, attempts to use comparisons but may do this incorrectly	Attempts to use comparisons with some success	Successfully uses comparisons in part of writing	Uses comparisons to enhance the message of the text throughout writing
Imagery	No use of imagery or descriptive language	Little use of imagery or descriptive language, attempts are incorrect	Uses common words or phrases, limited success with descriptive language	Uses some descriptive language, writing is more vivid through use of descriptions	Multiple uses of descriptive language, writing is more vivid through use of descriptions	Consistently produces detailed images that stay with the reader and enhance the message of the text

Repeated Text	No evidence of repeated text	Little use of repeated text, attempts are unsuccessful	Begins to use predictable text in a way that emphasizes message of the text	Uses predictable text logically to convey meaning in part of writing	Uses predictable text effectively to improve meaning of text and to convey ideas	Consistently uses predictable text creatively to effectively convey meaning of the text

APPENDIX I

6+1 Traits of Writing Rubrics

Traits Rubric for Ideas: K–2

Key question: Does the writer engage the reader with fresh information or perspective on a focused topic?

	Not proficient			Proficient		
	1 Beginning	**2 Emerging**	**3 Developing**	**4 Capable**	**5 Experienced**	**6 Exceptional**
	Does not communicate an idea through writing, drawing, or dictation	**Attempts to present the idea, but it is vague and there is no support through writing or drawing, or support offered is not connected**	**Conveys the idea in writing in a general way (e.g., through a sentence), but support is lacking or not convincing**	**Presents a simple idea (e.g., a story, information, or opinion) with some details in writing**	**Conveys a rich, clear main idea (e.g., tells a story, provides information, or offers an opinion) using multiple sentences with supporting details**	**Conveys a clear, focused, and well-developed idea (e.g., through a story, information, or opinion) in writing that is fresh or original**
A. Main idea	Uses scribbles or shapes that imitate letters; may write letters randomly; may dictate ideas or labels for pictures	Uses some recognizable letters or words; may include line forms that imitate text; drawing (if present) may be labeled but may not relate to writing	Tries to convey a simple experience or information about a topic using words, but meaning is not entirely clear; drawing (if present) may relate to writing	Conveys a clear idea (e.g., through a story, information, or opinion); drawing (if present) is appropriate to the topic	Conveys a focused main idea; drawing (if present) supports idea	Presents a focused, complete, and fresh or original idea; drawing (if present) enhances focus
B. Details and support	Presents drawing or writing that is lacking details	Provides one or more clues or details in a drawing but does not support main idea; presents no written details	Offers one or two simple details in writing but does not develop them sufficiently (e.g., provides lists without additional explanation); drawing (if present) may add details with limited connection to writing	Includes several written details and/or reasons supporting the idea; drawing (if present) relates to main idea	Features many specific written details and/or reasons that develop or support the idea; drawing (if present) provides additional detail	Uses specific, interesting, important details and/or reasons to develop or support ideas and demonstrate understanding; drawing (if present) adds meaning

Traits Rubric for Organization: K–2

Key question: Does the organizational structure enhance the ideas and make them easier to understand?

	Not proficient			Proficient		
	1 Beginning	**2 Emerging**	**3 Developing**	**4 Capable**	**5 Experienced**	**6 Exceptional**
	Has no obvious structure or organization	**Appears to attempt a structure in writing or drawing, but it is incomplete or confusing**	**Begins developing a structure, but it is basic or confusing in places**	**Demonstrates a basic structure in writing that supports ideas; includes transitions in the structure**	**Uses a structure that flows well, with varied transitions and sound sequencing**	**Provides a structure that highlights the message, with rich and varied transitions and sequencing that enhances meaning**
A. Beginning, middle, and end	Has no sense of beginning, middle, or end; drawings may appear random and/or disconnected	Shows a beginning sense of structure in writing or drawing, but it is incomplete or out of order	Begins developing a structure though organization is hard to follow; experiments with a beginning (e.g., "Once upon a time") and/or a middle; includes no clear ending except possibly "The End"	Includes a beginning, middle, and end, though they may not flow together smoothly or be entirely clear	Has a beginning, middle, and end that work together to communicate consistently; includes lead and concluding sentences	Has an inviting beginning, a middle with appropriate details, and a developed ending that is effective, interesting, or thoughtful
B. Transitions	Does not demonstrate ability to order or group words and/or drawings	Attempts to group like words and/or drawings; may attempt limited transitions	Includes limited transitions but relies primarily on simple words (e.g., so, and, then); drawing (if present) may attempt to link ideas	Uses often predictable transitions (e.g., linking and temporal words); drawing (if present) may link ideas	Uses frequently varied transitions to connect main ideas and details; drawing (if present) builds connections	Connects ideas in logical, interesting ways with a variety of transitions; drawing (if present) elaborates connections
C. Sequencing	Shows no sense of sequencing in writing or drawing	Has sequencing that seems random in writing and/or drawing	Includes attempts at sequencing in writing and/or drawing that are confusing or seem out of order	Uses logical sequencing that can be followed by reader in writing; drawing (if present) may also reflect logical sequencing or placement	Puts writing in an order that clarifies meaning; drawing (if present) also extends meaning	Uses organizational structure and sequencing to enhance or extend meaning and clarify main idea; drawing (if present) enhances meaning
D. Title (optional)	Has no title	Has an unrelated or confusing title	Includes a basic title such as The Dog, The Beach, which connects to the main idea	Creates a title that refers to the main idea	Develops an interesting title	Uses an original, insightful, or clever title

	Traits Rubric for Voice: K–2					
	Key question: Does the reader clearly hear this writer speaking in the piece?					
	Not proficient			Proficient		
	1 Beginning	2 Emerging	3 Developing	4 Capable	5 Experienced	6 Exceptional
	Does not suggest feeling, mood, or awareness of audience through writing or drawing	**Has limited clues to feeling/mood in writing or drawing; contains few, if any, individual qualities and has limited audience awareness**	**Expresses predictable feeling/mood in writing and/or drawing; makes some attempt to connect with the reader**	**Begins to show individual expression in writing, including some awareness of the reader**	**Includes individual or unique expression; connects with reader**	**Engages reader fully and reflects the writer's unique personality**
A. Feelings/mood	Expresses little or no feeling/mood	Offers hints of feeling/mood through words, phrases, and/or drawing, but is not clear	Expresses predictable feelings or personal opinions in writing and/or drawing, though may be repetitious	Conveys identifiable feelings or personal opinions in writing; drawing (if present) may support feelings or opinions	Features writing that is individual and expressive; drawing (if present) highlights individuality	Uses writing intentionally to display a variety of emotions; drawing (if present) enhances emotional appeal
B. Individual expression	Does not show personal expression through writing or drawing	Demonstrates emerging individual expression in writing and/or drawing, though it may lack personal connection to or interest in the topic	Contains some personal feelings or occasional point of view in writing or drawing	Expresses individual perspective and/or opinion in writing; drawing (if present) conveys individuality	Helps reader understand personal feelings or point of view, even if they are unpopular or controversial; drawing (if present) enhances personality	Takes risks that enhance meaning and commitment; conveys writer's unmistakably individual, highly original point of view and/or purpose; drawing (if present) heightens commitment
C. Engagement/ audience awareness	Has unclear response to task in writing or drawing; shows no audience awareness in writing and/or drawing	Treats topic generically in writing or drawing; audience awareness appears unclear or accidental in writing and/or drawing	Attempts to connect with reader but is unsuccessful; may express a general awareness that writing/drawing will be seen by someone else	Connects with reader in some places; conveys awareness of reader; drawing (if present) supports connection	Connects with reader in an engaging treatment of topic; drawing (if present) enhances connection and/or engagement	Creates close connection with reader, demonstrating unique perspective on topic; shows a clear sense of audience throughout; drawing (if present) supports perspective

Traits Rubric for Voice: K–2

Key question: Does the reader clearly hear this writer speaking in the piece?

	Not proficient			Proficient		
	1 Beginning	**2 Emerging**	**3 Developing**	**4 Capable**	**5 Experienced**	**6 Exceptional**
	Does not suggest feeling, mood, or awareness of audience through writing or drawing	**Has limited clues to feeling/mood in writing or drawing; contains few, if any, individual qualities and has limited audience awareness**	**Expresses predictable feeling/mood in writing and/or drawing; makes some attempt to connect with the reader**	**Begins to show individual expression in writing, including some awareness of the reader**	**Includes individual or unique expression; connects with reader**	**Engages reader fully and reflects the writer's unique personality**
A. Feelings/mood	Expresses little or no feeling/mood	Offers hints of feeling/mood through words, phrases, and/or drawing, but is not clear	Expresses predictable feelings or personal opinions in writing and/or drawing, though may be repetitious	Conveys identifiable feelings or personal opinions in writing; drawing (if present) may support feelings or opinions	Features writing that is individual and expressive; drawing (if present) highlights individuality	Uses writing intentionally to display a variety of emotions; drawing (if present) enhances emotional appeal
B. Individual expression	Does not show personal expression through writing or drawing	Demonstrates emerging individual expression in writing and/or drawing, though it may lack personal connection to or interest in the topic	Contains some personal feelings or occasional point of view in writing or drawing	Expresses individual perspective and/or opinion in writing; drawing (if present) conveys individuality	Helps reader understand personal feelings or point of view, even if they are unpopular or controversial; drawing (if present) enhances personality	Takes risks that enhance meaning and commitment; conveys writer's unmistakably individual, highly original point of view and/or purpose; drawing (if present) heightens commitment
C. Engagement/ audience awareness	Has unclear response to task in writing or drawing; shows no audience awareness in writing and/or drawing	Treats topic generically in writing or drawing; audience awareness appears unclear or accidental in writing and/or drawing	Attempts to connect with reader but is unsuccessful; may express a general awareness that writing/drawing will be seen by someone else	Connects with reader in some places; conveys awareness of reader; drawing (if present) supports connection	Connects with reader in an engaging treatment of topic; drawing (if present) enhances connection and/or engagement	Creates close connection with reader, demonstrating unique perspective on topic; shows a clear sense of audience throughout; drawing (if present) supports perspective

Traits Rubric for Sentence Fluency: K–2

Key question: Does the author control sentences so the piece flows smoothly when read aloud?

	Not proficient			Proficient		
	1 Beginning	**2 Emerging**	**3 Developing**	**4 Capable**	**5 Experienced**	**6 Exceptional**
	Has no sentences or sentence parts (e.g., uses disconnected words)	**Includes part of a sentence that is decodable (e.g., "Cus it is clu"); writing contains no sense of rhythm**	**Contains most of a single, decodable sentence (e.g., "Like bunne becuz ther riree Fas"); begins sentences in the same way, with choppy rhythm**	**Correctly uses simple sentence patterns but with little variety; may have mechanical rhythm**	**Employs multiple sentence patterns, including a variety of sentence beginnings; has rhythm that is fluid and easy to read aloud**	**Uses a variety of sentences that flow smoothly and are enjoyable to read aloud; includes sentence phrasing (e.g., dialogue, questions) to enhance meaning**
A. Sentence structure	Shows writing that mimics letters and words; may string marks or letters across the page, moving left to right	Has short, phrase-like sentences, some of which are decodable	Uses simple sentences, usually correctly	Uses simple sentences correctly; may experiment with varied sentence patterns	Conveys simple and varied sentences effectively	Uses correct sentence structure that is varied throughout writing; is frequently creative
B. Sentence variety	Contains no sentences or sentence fragments	Uses short, repetitive patterns; has no sense of rhythm; may be incomplete or inappropriate in places	Begins sentences the same way, with few exceptions; uses sentences that are about the same length, resulting in choppiness	Varies sentence lengths and beginnings	Has a variety of sentence beginnings and lengths, which results in even rhythm and effective communication	Purposefully uses a variety of sentence beginnings and lengths to enhance and extend meaning
C. Connecting sentences	Is apparent that any transition words are accidental choices among other random words	May include some simple transitions (e.g., and, but) in partial sentences	Includes a few simple transitions that serve as links between phrases (e.g., and, then); has some repetition	Uses simple transitional words and/or phrases appropriately	Uses transitional words and/or phrases to improve readability	Uses varied transitional words and/or phrases smoothly and effectively to enhance rhythm and readability of writing
D. Sentence rhythms	Produces random words that cannot be read as writing	Features writing that sounds disjointed and awkward; piece is difficult to read aloud; has fragments that are difficult to string together	Is difficult to read aloud due to uneven sentence structure; is bogged down by repetitive writing	Has somewhat mechanical rhythm, though writing is easily read aloud	Incorporates rhythm and flow frequently that feels natural to read aloud	Uses natural rhythm and cadence to create a flow that is easy and pleasurable to read aloud

	Traits Rubric for Conventions: K–2					
	Key question: How much editing is required before the piece can be shared as a final product? (Note: For the trait of Conventions, grade level matters. Expectations should be based on grade level and include only skills that have been taught.)					
	Not proficient			Proficient		
	1 Beginning	2 Emerging	3 Developing	4 Capable	5 Experienced	6 Exceptional
	Demonstrates little or no understanding of grade-level conventions	**Has many types of convention errors scattered throughout text**	**Handles conventions well at times but makes errors that impair readability**	**Applies standard grade-level conventions (e.g., spelling, punctuation, capitalization and grammar) accurately on most occasions**	**Shows few errors with only minor editing needed to publish; may try more complex tasks in conventions**	**Uses conventions effortlessly without significant errors; may use conventions to creatively enhance message**
A. Spelling	Uses letter strings (i.e., pre-phonetic) indicating gaps in knowing letter/sound relationships; has emerging print sense	Attempts phonetic spelling (e.g., MTR, UM, KD) that is mostly decodable; may include some simple words spelled correctly	Has spotty spelling of grade-level, high-frequency words; spells some high- frequency words correctly and uses phonetic spelling (e.g., MOSTR, HUMN, KLOSD) on less common words	Shows generally correct spelling of grade-level, high-frequency words; uses phonetic spelling on less frequent words (e.g., MONSTUR, HUMUN, CLOSSED)	Usually spells grade-level, high-frequency words accurately; spells less frequent/difficult words logically with some correctly spelled	Spells nearly all words correctly, including grade-level, high-frequency words and more difficult words
B. Punctuation	Has no punctuation present	Attempts some random punctuation	Experiments with end punctuation (e.g., period, question mark, exclamation mark)	Has end punctuation that is usually correct	Uses end punctuation that is usually correct; attempts other punctuation, sometimes correctly (e.g., commas, colons, quotation marks)	Has end punctuation that is usually correct; often correctly uses advanced punctuation (e.g., commas in series, quotation marks); may use punctuation for style and effect
C. Capitalization	Contains no evidence that capital letters are for a particular purpose, if used at all	Uses upper and lower case letters inconsistently	Has inconsistent capitalization but shows signs of appropriate use (e.g., some starts of sentences, names, or titles)	Uses capitals at the beginnings of sentences and for some names and/or titles	Uses capitals at the beginning of sentences and fairly consistently for names, titles, and/or proper nouns	Uses capitals consistently for name, titles, and/or proper nouns, as well as sentence beginnings; may use creative capitalization (e.g., all upper case for emphasis)
D. Grammar/usage	Demonstrates no understanding of basic grammar	Uses some grammatical constructions	Attempts standard grammar, but effect is uneven, overly simplistic, or has many missing parts	Often uses noun/pronoun agreement, verb tenses, and subject/verb agreement correctly in simple constructions	Uses correct grammar nearly all the time	Shows consistent and correct use of grammar at grade-level expectations and frequently beyond

	Traits Rubric for Presentation: K–2					
	Key question: Is the finished piece easy to read, polished in presentation, and pleasing to the eye?					
	Not proficient			Proficient		
	1 Beginning	2 Emerging	3 Developing	4 Capable	5 Experienced	6 Exceptional
	Strings letters or words together with no sense of spacing; uses drawings/ graphics (if present) that may not support writing and are randomly placed	**Begins to make letters, but they are randomly placed; drawings/ graphics (if present) are not well connected to writing**	**Shows some discrepancies in letter shape; has mostly correct spacing of letters and words; drawings/graphics (if present) match writing and fit layout**	**Produces readable piece, with letters, words, and sentences properly spaced; drawings/graphics (if present) include pictures, charts, tables, graphs that are logically placed with writing**	**Is easy to read, with appropriate spacing; drawings/graphics (if present) connect to and support writing**	**Uses polished handwriting with all elements properly spaced and good use of white space; drawings/ graphics (if present) are placed purposefully to enrich the text**
A. Handwriting	Has no consistent shape to marks or letters; shows alphabetic understanding may be incomplete	Shapes some letters properly, but others are difficult to recognize or inaccurate	Shows inconsistencies in letter shape, but many letters are identifiable	Has consistent letter shape that makes most letters and words readable	Uses letters that are well formed and easy to read	Features handwriting that can be read easily, is attractive, and shows style
B. Spacing	Strings together letters and words without spacing or margins	Shows random attempts to use spacing between letters and words and incorporate margins on page	Has some letters and words that are readable; uses mostly correct spacing	Includes proper spacing for most letters, words, and sentences	Has words and sentences that are easy to read, appropriately spaced, and correct; indents first line of piece	Features words and sentences that are consistently and evenly spaced throughout; uses margins that frame the piece; consistently indents or blocks paragraphs (if used)
C. Drawings and graphics (optional)	Places drawings randomly on the page in a way that does not support print attempt	Positions drawings or graphics so that they break up the flow of writing and are distracting	Begins to place drawings or graphics to reflect topic and meaning of text	Places drawings or graphics logically	Uses drawings or graphics to improve connection to ideas	Places drawings or graphics creatively to effectively enhance meaning