Building Background Knowledge To Fill The Gaps

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BUILDING BACKGROUND KNOWLEDGE TO FILL THE GAPS

by
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A capstone submitted in partial fulfillment of the requirements for the degree of Master of Arts in Education.

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June 2014

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Overview

My mission as an educator has always been to create an environment in which the foundations for profound and sustained success are laid without exception for circumstance, ability, or demography. In my 10 years of teaching, I have been firmly rooted in Preschool, Kindergarten and First Grade and the work it takes to prepare our youngest students to be successful lifelong learners. I have discovered the significance of teaching young children, as well as the importance of intervening early to ensure a firm foundation in the language and literacy skills necessary to be successful in school. I have also discovered the challenges in meeting the needs of students who come with little prior learning experiences or exposure to mainstream American culture. On a daily basis, I face the challenges of educating students with a wide range of skill levels. Over the years, I have worked with many students from minority and low-income backgrounds and speaking English as a second language who come to school well behind their peers. This continues to push me to work harder and learn more about how to most effectively teach our most struggling and often disadvantaged students. I have found that over the years, our students of color lack the background experiences necessary to engage meaningfully from the start with literature and the language used in the classroom. Hardy states (2015, p. 29), “there is no greater investment—in the economy, in society, in the security of the nation—than in helping those in what Heckman calls “the lottery of birth” to achieve their full potential.” As an early childhood practitioner, I know that it is critical to intervene early, which pushes me to reflect on the most effective interventions for
these particular students and to look more closely at how to best build the background knowledge necessary for success. This leads me to ask *How does curriculum support early intervention strategies of at risk preschoolers?*

In the following section, I will describe my personal journey as to how I became interested in looking deeper into the most effective early interventions for students who enter school deficient in early language and literacy skills. I will explain what specifically led to my interest in researching the best ways to build background knowledge for 4-6 year old students and why this is important. I will highlight how my career path led to this interest and how my current experience in educating students lends itself to researching this topic.

**Launching my teaching career**

As a young, naïve teacher I set out to change a system that doesn’t effectively educate its students and learned very quickly that our most underperforming schools cannot be changed by one person alone. There are many factors that contribute to the success of students and I felt like a minor player in the system. Despite this, I worked hard and was able to impact the literacy achievement of my Kindergarten students. However, in a school system and community of instability, behavior madness and low support, I alone could not sustain the literacy proficiency of this population and so I moved on to a “better” district.

**Gaining support and feeling the gap**

The first years discouraged me, but they also increased my awareness of the critical need for early intervention. As I continued in my career, I taught at a school that had the resources, involvement, attitudes and leadership necessary to truly affect
student learning. It felt good, but I couldn’t help thinking about the differences between schools and what I could do about it. My students achieved at high levels, and continued to do so. They went back to communities who supported their achievement. The gap in quality of education and community support was clear and it kept nagging at me, and so once again I moved on to a more “diverse” school.

Finding the sweet spot

I currently teach at a school where there is a balance between necessary resources to educate effectively for students who need those resources. I have found a professional harmony with my past experiences of a poor quality school serving a low-income minority population and a high quality school serving a privileged white population. My current school has the resources, personnel and community support necessary to teach effectively, while still serving a population with low-income, English language learners and other minority students.

Professional Growth

Teaching in a higher performing district, has enabled me to grow myself professionally and reflect on my teaching experiences thus far. I have seen the significance of parent involvement in improving literacy and maintaining learning over the summer. I have implemented high quality volunteer programs and family nights to increase student achievement. I have sought opportunities to improve my teaching methods to better serve our most struggling readers and writers, through Reading Recovery training. I have worked beyond my capacity as a teacher to further the linguistic development of my most struggling students.

Significance of Early Intervention
Like most teachers, throughout my years there have been students who will remain in my heart forever. Some of these students remain there due to their incredible growth and progress and some due to the frustrations of trying a multitude of strategies to improve their achievement to no avail. These are the students who keep me going and push me to further educate myself.

One of these students is Sahgi (pseudonym). Sahgi entered Kindergarten with an Individualized Education Plan and little else. Sahgi came to me with so few words that I came to know his smile as indication of his needs. He was one of my lowest performing students and most disengaged students at the beginning of Kindergarten. By the end of First Grade, Sahgi’s literacy achievement was average of his peers. Sahgi had numerous interventions in Kindergarten through special education services and what I implemented as his classroom teacher. In First Grade, I made sure that he received a Reading Recovery spot with me, even when his special education services disqualified him. This five-year-old boy who did not speak upon entry to Kindergarten, ended up being so verbal that getting through a thirty-minute lesson, one on one was a challenge. He is a success story. But why? What were the interventions that made him go from a low achieving special education student to an average achieving student who no longer needed services?

Reflecting on Student Success

Sahgi is just one example of a student who entered school without the experiences necessary to extend his own learning in a typical American classroom. What I have come to realize in reflecting on the success of Sahgi and others like him, is that we must go beyond building item literacy knowledge in order to create true
success. Learning must be built upon prior knowledge and experiences in order to get to new knowledge. For Sahgi and other learners with backgrounds other than “mainstream” culture, it is our job as teachers to create experiences that allow students to access school and texts, in order to truly level the playing field. I have developed relationships with these students and their families in order to understand and appreciate the background knowledge they do come to us with. Reading Recovery gave me the luxurious opportunity to work one on one with students in order to intimately know them and use their known to build upon and create new learning. Many students who have not been successful lack the prerequisite experiences necessary to set a foundation for further learning.

**Kindergarten to Preschool**

I continued to teach Reading Recovery alongside half day Kindergarten until the state of Minnesota started paying for all full day Kindergarten settings. I ended up teaching full day Kindergarten for one year before accepting an Early Childhood position. My role is to coach teachers, design and lead professional development and be a leader of a curriculum design team, as well as teach preschool half of the day. I took this position on in order to have a greater effect on our earliest learners. This is where my career journey meets the rationale for my writing this capstone.

**Rationale**

My purpose in studying the question of: *How does curriculum support early intervention strategies of at risk preschoolers?* is to obtain a more comprehensive understanding of the most effective early interventions for students who enter school with language and literacy deficiencies. In my recent years as a teacher, I have
experienced the success of students who have received effective interventions and the failure of students who have not. As the students move through the grades, I see both the continual progress and the continual struggle to become literate. My experience has made clear to me that early intervention is critical, but it has left me wondering, why are some students still failing? As I pushed further to answer this question, something has stuck out to me. Students who are still struggling lack the prior experiences and background knowledge to draw upon in learning new information. This has led me to ask—what can we do to build the background knowledge necessary to be successful in literacy and language acquisition—particularly of students who enter school deficient in these skills?

Providing access and opportunity for all students must happen in the earliest years of learning. The research about kids living in poverty and their gaps in language cannot be ignored. We must work to erase the known effects of poverty so that public education does what it was intended for—equalize the access to upward mobility, social progress and opportunity to all Americans. Currently, politicians are working to enact universal preschool. The idea of early intervention has been an ongoing conversation in politics and schools, and is especially relevant today, when more students are entering school underprepared and the achievement gap is widening. There are numerous research studies to show the importance of early intervention, and there are studies on specific interventions that work. Because we know that the early years are critical to the establishment of literacy development, what I’d like to know is How does curriculum support early intervention strategies of at risk preschoolers?
In the context of education now, my research will add to the conversation of preparing our earliest learners so that they enter school ahead, instead of already behind. There are great things happening in our early childhood classrooms, but we cannot afford to try out interventions to see them fail. By looking at specific ways to build experience for our students that leads to language and literacy, we will be able to better target the deficits in early literacy. The achievement gap only widens, as students get older. Therefore, it is critical that our interventions are the very best at closing the gap and preparing students for continued success.

Conclusion

As I started my career in teaching, I hoped to “make a difference.” I thought I knew exactly what that meant, but discovered I was wrong. After many challenging and rewarding years as a teacher, I find myself reflecting on that same idea of “making a difference”—what can I contribute to education beyond what I do for my students every day? How can I be part of the larger context of changing the face of education? The intent of this capstone is to do just that. Looking specifically at critical early interventions for students who enter Preschool deficient in literacy is one way I’d like to contribute. There are researchers before me who have confirmed the importance of early intervention and who have detailed interventions that have proven to be effective. With my capstone, I am adding to the work that has been done before me about implementing effective early intervention strategies, by specifically gathering information on how to best build the background knowledge of our kids coming to school lacking the knowledge necessary to extend their learning.

By studying the question: How does curriculum support early intervention strategies
of at risk preschoolers? I will provide insight into using specific early interventions
to close the achievement gap from the start.

The following chapter is a literature review on topics essential to
understanding what are the most effective ways to build background knowledge and
experience for low-income, minority and English language learning students? The
review of literature will look at themes of early intervention, specific interventions,
early literacy and language development, oral language and vocabulary, school
readiness and effective vocabulary practices. By reviewing what previous
researchers have found, I will be able to establish a strong rationale for
answering the question: How does curriculum support early intervention strategies
of at risk preschoolers?
CHAPTER TWO:
Literature Review

Introduction

In my years of teaching Kindergarten, I have found that many students are entering school without the necessary vocabulary to be successful in literacy. I have worked hard to close literacy gaps of performance based assessments such as letter identification and writing vocabulary, but am still finding students struggling as they receive further literacy instruction. The books in our schools have concepts and words that many students do not bring the prior background knowledge in order to understand and decode. Therefore, I am studying the most effective way to increase the background knowledge of students entering Kindergarten from the start, by specifically targeting vocabulary instruction and answering the question, How does curriculum support early intervention strategies of at risk preschoolers?

In order to conduct a study of the best ways to build background knowledge for students who enter school deficient in the kinds of vocabulary necessary for school success, one must first look at previous research around early intervention, specific interventions, early literacy and language development, oral language and vocabulary, school readiness and effective vocabulary practices. The purpose of this chapter is to review these themes through the lens of other researchers in order to provide more information regarding the question: How does curriculum support early intervention strategies of at risk preschoolers?

There are those before me who have confirmed the importance of early intervention in background knowledge and vocabulary and who have detailed interventions that have proven to be effective. The following will review the works of
these researchers and what they found to be true in their studies around early intervention, building background knowledge and increasing vocabulary for our most at risk students.

**Early Interventions**

In order to review effective early interventions around building background knowledge, the definition of early intervention must be established first. An early intervention is a specific plan to teach a student or group of students who have been identified as at risk or behind their grade level peers (Clay, 2014; Lyons, 1989). Typically this term can be used to describe any intervention of a child before third grade. For the purposes of this capstone the interventions will be specifically looked at for students in Pre-Kindergarten through First Grade.

Schwartz (2005) stated, “early intervention is based on the premise that low-performing students can be identified and provided supplemental support after a relatively short exposure to classroom literacy instruction” (p. 257). In further review of literature one can draw conclusions about the potential benefits and downfalls of early intervention. Intervening early means that long-term intervention might not be needed. It can reduce the risk for low achieving students from the onset, leading to a closing versus widening of the achievement gap (Schwartz). Yet, early intervention can often be quite costly and involve more highly trained staff or programming that is not always a quick fix (Musti-Rao, S., & Cartledge, Ramey & Schwartz).

Musti-Rao and Cartledge (2007) stated, “The importance of identifying urban learners who are at risk for reading problems early cannot be overstated. Reading is a survival skill, and the failure to read during the elementary school years reduces a
person's chances of success in school and life” (p. 56). In reviewing the literature there seems to be overwhelming support for utilizing early intervention, especially with at-risk learners. If the impacts of early intervention are clear, then it leads us to ask, what are the most effective early interventions?

“Studies using tiered models of intervention have repeatedly shown that providing direct, explicit and systematic instruction in the evidence-based components of reading instruction (e.g., phonemic awareness, phonics, fluency, vocabulary, comprehension), to students at risk of reading failure in early grades, effectively prevents many long-term reading difficulties and reduces the likelihood of referral and placement in special education programs (Cooke, Kretlow, & Helf 2006, p. 138).”

In Denton’s report (2015), interventions that were successful for students with reading difficulties include: explicit instruction, extended opportunities for guided and independent practice, many opportunities to read and respond to text, and active student involvement (p. 232). Successful intervention in education today often relies on a tiered system in the school. Many refer to this model as a Response to Intervention (RtI) or Multi-Tiered Services of Support (MTSS) approach (Citicelli et. al, 2015). Tier 1 is where the core instruction takes place for all students. Tier 2 is small group or one on one instructional intervention to target specific needs of students who are below grade level. Tier 3 is a one on one approach to provide an intense and specific intervention for a target skill. Below is the model used by the Literacy Collaborative. The figure illustrates how the tiers layer on top of one
another so that tier 2 and 3 interventions are received in addition to tier 1 core instruction.

(Literacy Collaborative, 2009)

Coyne et. al (2010) stated, “RtI models support universal screening of all students in order to identify students who may be at risk and may require intervention in order to prevent future academic difficulties (p. 126).” Research suggests that students who are identified at risk for language and literacy difficulties based on screening measures benefit from supplemental instruction at the Tier 2 level. One Tier 2 intervention that has proven success is Reading Recovery.

Reading Recovery

Reading Recovery is a literacy program for the most at risk first graders (Reading Recovery, 2014). It provides daily one on one instruction for 30 minutes by a highly
trained teacher. The program can last up to 20 weeks and at its completion a child will either; successfully discontinue services and be reading at grade level, or exit the program with recommendations for further action, such as special education referral (Reading Recovery, 2014).

Reading Recovery is a comprehensive intervention. The daily lesson is structured and the teacher provides individualized instruction within this framework, based on careful observation of a child’s strengths and weaknesses, focusing on building from what the child knows (Clay, 2002). Marie Clay is the founder of the Reading Recovery program and she based her research on what successful readers do, rather than what helps struggling readers. Clay argues that it is important for struggling readers to be involved in continuous reading and writing procedures, which require active problem solving. The intent of Reading Recovery is for the teacher to support the child in becoming independent in their processing skills for reading and writing. Clay (2005) states, “the goal of teaching is to assist the child to construct effective networks in his brain for linking up all the strategic activity that will be needed to work on texts, not merely to accumulate items of knowledge” (p. 117).

Most of the literature supports the program and its effects on the long-term literacy of our most at risk students (Bingham & Patton-Terry, 2013; Cox & Hopkins, 2006; Lyons, 1989; Shanahan & Barr, 1995; Pikulski, 1994). In Shanahan and Barr’s (1995) review of the program, they found that the program is effective and merits support, but made some recommendations to increase its effectiveness and lower its costs. Some of these recommendations include more time spent with direct phoneme awareness and spelling knowledge, reducing the length of the intervention, and
starting it after one formal year of literacy instruction consistently. It is important to review possible drawbacks of the intervention, while maintaining a focus on what makes it effective for certain students.

Something that makes Reading Recovery a unique intervention is that it does focus on the child’s processing system (Clay, 2002). The intent of the program is to literally ‘rewire’ the brain and any confusion that has been previously established. Other interventions may focus on increasing item knowledge or ‘performance’ on an assessment. Reading Recovery (while increasing performance) intends to develop a child’s self-extending system so they will continue to learn without the support (Clay, 2002). This brings up the complex nature of how children learn to read and write. There is a lot of research to establish how children learn to be literate. Due to the focus of the early years, this capstone will focus on the literature about emergent literacy.

**Literacy and Language**

The acquisition of reading and writing skills is referred to as emergent literacy (Clay, 2005). The premise of emergent literacy is language. According to Rush (1999),

“Literacy development begins early on, as children learn to communicate with others through oral language. They build awareness of the connection between print and oral language as they observe competent readers using print to share and receive information and to engage in other interactions involving print (p. 4).”
Literacy does not exist without language and therefore, it is essential to look at the oral language development of young children.

Numerous studies have been done on the oral language development and vocabulary acquisition of young children and they show that young children coming from low income and English language learning environments have fewer words than those coming from higher socio-economic status and non-EL families (Beck & McKeown, 2007; Biemiller, 2004; Hart & Risley, 1995). This is critical to the study of literacy and early intervention. If children are lacking the words orally, they certainly will not be able to read or write them with an understanding of the word.

It is important to note that many students do bring oral language and vocabulary skills to school, but often they are not of the mainstream culture and are not represented in the language and texts of school. Stahl and Stahl (2004) stated, “All words are not valued equally. Instead what we want children to learn is the language of school. For many children this is a foreign language (p. 68).” For English Language Learners it truly is a foreign language, but also many of the students coming from backgrounds other than the middle class white American, find it difficult to access “school language.”

**Oral Language and Vocabulary**

The links between literacy and language are clear. In studying early intervention and background knowledge, it is important to establish what is causing a gap for some students, particularly those at risk. Researchers have linked oral language development and academic vocabulary as contributing factors to literacy deficits. Hardy stated (2012), “by the start of kindergarten the vocabulary gap is up
to 15,000 words—20,000 words for high income children, 5,000 for those from low-income households (p. 24).” According to Ramey and Ramey (2004), the process of learning to read has a strong correlation to a child’s early language development and children who are in a rich and interactive language environment build strong oral language skills (p. 474). If oral language is the premise for further literacy it is essential to target instruction for students entering school with low oral language or low levels of spoken English. If students enter school with limited oral language, they are likely to lack the vocabulary necessary to comprehend or even decode text.

“The need for quality vocabulary instruction in early elementary school is becoming more and more apparent. Children are entering school with a wide range of oral language skills, and many children begin kindergarten with levels of vocabulary knowledge that are significantly lower than those of their peers” (Cuticelli, Coyne, Ware, Oldham, Rattan, 2015, p. 150). Not only are students entering behind their peers, but they are unable to catch up because the students with more words continue to fill their word banks faster than those with fewer words. (Harvey, 1995). “Children who enter kindergarten with a small vocabulary don't get taught enough words -- particularly, sophisticated academic words -- to close the gap, according to the latest in a series of studies by Michigan early-learning experts” (Sparks, 2006, p. 16).

Cuticelli, Coyne, Ware, Oldham and Rattam (2015) make the case for using the RtI model approach in addressing early reading skills, and make clear that vocabulary instruction is lacking. They state the need to go beyond code-based skills and use the tiered system to support vocabulary. Students who are entering school
with lower language experiences will not gain vocabulary at the same rate of their peers in a Tier 1 instruction and therefore need more support in vocabulary instruction to erase their at-risk label (Cuticelli, et al). The topic of early intervention is widely researched and much of it is focused around academic skills. Yet, there is a growing body of research confirming the necessity of quality vocabulary instruction (Biemiller, 2004; McKeown, 2007; Ramey & Ramey, 2004; Stahl & Stahl, 2004). Particularly for students at risk, it is essential that vocabulary instruction happens early and is purposeful in order to close the gap before it widens.

School Readiness

In a longitudinal study of America’s Kindergartners, the National Center for Education Statistics (2000) stated, “Whether or not children succeed in school is in part related to events and experiences that occur prior to their entering kindergarten for the first time” (p. 2). Since children’s prior learning experiences set them up for school success, it is necessary to study the topic of school readiness. According to Ramey and Ramey (2004) school readiness is a pressing policy concern today because we need to be able to effectively educate all of our children to produce a functioning democracy. Furthermore, many of our Kindergarten students across the nation are entering school deficit in language and basic academic skills (Ramey & Ramey).

School readiness continues to be at the forefront of education discussions in politics and policy today. Too many students are entering unprepared and so politicians and educators alike are advocating for universal prekindergarten. Soon there will be a day where universal preschool is enacted across the nation.
Unfortunately, that day has not yet come and there are still too many students entering our kindergarten classrooms unprepared.

If students do not have prerequisite skills such as listening to stories or holding a writing utensil, teachers must take the time to help them learn these things in order to keep pace with peers and be ready for both current and future instruction. Some students have to learn twice (or more) as much as their peers and at a faster rate in order to be successful. Therefore, it is critical that our teachers provide the highest quality early interventions to bring these students up to speed quickly. We must take action from the start of school, so that we are not waiting for the students to fail.

**Vocabulary Instruction**

Acquiring vocabulary is a process that happens incidentally for most children as they grow. However, because students come from varying backgrounds, not all children are exposed to the same language, level or amount of words in the early years of life. Snell, Hindeman and Wasik (2015) stated, “the vocabulary and language foundation built in the earliest years of life has great bearing on children’s progress for many years to come, and this foundation may not be optimally strong for many children in poverty” (p. 561). In addition, students coming from families whose first language is not English need explicit vocabulary instruction (Vadasy, Nelson & Sanders, 2011). Vadasy et al (p. 93) wrote, “Limited instructional time and the urgency for catching up English learners with their beginning reading peers demand that vocabulary instruction be carefully targeted.” Therefore, it is necessary to explore what instructional methods have proven success in the area of vocabulary acquisition.
There have been several fairly recent studies on the best ways to teach vocabulary to students in the early grades (Coyne et al., 2010; Nielsen & Friesen, 2012; Silverman & Crandell, 2010; Silverman, 2007; Vadas et al., 2013). In Coyne’s (2011) study of vocabulary, a multi-tiered approach was found to be most successful in targeting vocabulary of students at-risk. The students in this study received core instruction (Tier 1), in addition to a Tier 2 intervention. The results were that students at-risk made as many gains as those who were labeled not at-risk (p. 155).

The National Reading Panel (2000) found “the rich contexts that storybooks provide along with the opportunity for active engagement with target vocabulary are both important components that enhance vocabulary gains (Coyne et al., 2010, p. 124). There is compelling research as noted above that specific vocabulary instruction is necessary to help close the language gap. The research is not as clear as to the best way to do this, but studies suggest that multiple exposures to vocabulary is important for student understanding and acquisition. The following section will examine the research of those that have studied vocabulary instruction in early grades to provide more insight into the best strategies for teaching our youngest learners.

Researching what works

Beck and McKeown (2007) created a vocabulary intervention in kindergarten and first-grade classrooms, in which the teacher used read-aloud time to provide “rich instruction” of vocabulary. The “rich instruction” included contextualizing, defining and giving examples of target words in books, having children repeat the words and give examples of the words. Silverman (2007) compared three vocabulary
instructional methods in Kindergarten classrooms: contextual instruction, analytical instruction and anchored instruction. Contextual instruction is when the teacher defines and connects words to student background knowledge. Analytical instruction involves contextual instruction with analysis of words through comparing and contrasting. Anchored instruction includes both contextual and analytical with attention to spoken and written form of words. Silverman and Crandell (2010) found a multi-dimensional approach to work best, yet also noted that the results varied dependent on the initial vocabulary level of the student. While all students demonstrated growth as measured by vocabulary pre and post tests, students who entered with higher vocabularies initially demonstrated more growth.

Coyne, McCoach, Loftus, Zipoli and Kapp (2009) also compared three methods of vocabulary instruction: incidental exposure, direct teaching through embedded exposure, embedded and extended instruction—where words are introduced in new context, a picture shown, and words are generalized. The study found embedded and extended instruction to be more effective than incidental exposure as Table 1 shows. Extended instruction was the most effective for children to fully understand the words, rather than gaining partial understanding in embedded instruction. Gains made by students in extended instruction were a full point higher in receptive, expressive and context knowledge as demonstrated in Table 1. Like Silverman and Crandell, Coyne et. al (2009) found results for students with initial higher vocabularies on pre-tests had larger gains overall than students with lower initial vocabularies as measured by pretests.
It is clear that using vocabulary multiple times throughout a day provides the largest gains for students. This research indicated that exposing students more than once to new words helps them build stronger understanding and retain the word to be able to use it in their own expressive vocabularies.

**Vocabulary Instructional Components**

In most studies surrounding vocabulary instruction, reading aloud was a key component. In Snell, Hindeman and Wasik’s (2015) report they reviewed five key strategies from previous research for implementing vocabulary instruction during book reading. They include:

1. Define new words
2. Discuss and ask children questions about new words
3. Reread books
4. Engage children in retelling activities
5. Integrate new words into other classroom activities (p. 563).

In a similar study, Wasik et al. found an intervention called “rich instruction” that worked as part of a read aloud time. The teachers defined words in context providing...
examples, had students repeat and make judgments about the words, and create their own examples. (p. 320). There is a lack of research on vocabulary instruction separated from reading aloud in the early grades, most likely because students are not yet independently accessing text and can produce orally more than they can read or write. There are also remaining questions about how to implement strategies for the most effective results long term (Snell et al., 2015; Coyne et al., 2009).

Brabham, Buskist, Henderson, Paleologos, & Baugh (2012) recommend flooding classrooms with vocabulary drawing on multiple strategies, including semantic maps and feature analysis as recommended by Nagy years ago. They created a plan to teach ‘an abundance’ of words that includes: integration, repetition and meaningful use (p. 526). These researchers also draw upon Marzano and Beck & McKeown’s work on the effective practice of relating new words to old words (Brabham et. al). They propose that flooding our classrooms with rich and systematic vocabulary instruction daily “has the potential to expand word learning for students with rich vocabularies and accelerate vocabulary acquisition for students with less developed vocabularies” (Brabham et. al, 2015, p. 532).

According to multiple sources of research, vocabulary instructional practices must be intentional, connected to read alouds and provide opportunities for multiple exposures and connected to known vocabulary. However, there is limited information on specifics, particularly in a preschool setting.

Limitations across the literature

Vocabulary instruction in the early years is not widely studied, despite the amount of research regarding oral language gaps (Beck & McKeown, 2007; Biemiller, 2001;
Brabham et. al, 2015; Neuman & Dwyer, 2009, Wright, 2012). In addition, the recent studies of instruction have found inconsistent methods both in curriculum and practice (Brabham et. al, 2015; Stahl & Fairbanks, 1989; Sparks, 2013, Wright, 2012). There remains debate about whether vocabulary is best taught in depth or breadth (Beck & McKeown, 2007; Biemiller, 2004, Coyne et. al, 2009).

Since there is not an abundance of research around vocabulary instruction in Preschool, it will be important to use the previous research that is available in creating a curriculum to increase the vocabulary of students. In addition, looking at previous research and practice around effective early interventions may support in filling the gaps that are seen in early vocabulary instruction.

Rationale for Research

By looking at the research around early intervention, language and literacy, and vocabulary instruction we see the need for impacting vocabulary development from the start of school, particularly for students entering school with less developed language. “Hart and Risley's findings are a particularly striking illustration of what numerous other studies have shown as well: that the vocabulary and language foundation built in the earliest years of life has great bearing on children's progress for many years to come, and this foundation may not be optimally strong for many children in poverty” (as cited in Snell, Hindeman & Wasik, 2014, p. 561). Like Marie Clay did in her study of what strong readers do, Hart and Risely looked at what families are doing to promote literacy learning. “In their study of children 9 to 36 months, the amount and quality of caregiver language that children were exposed to in the home was significantly related to the children’s vocabulary development (as
cited in Rush, 1999, p.5). By using an asset building model like Reading Recovery, focusing on building language of students identified at-risk, and intervening early, I hope to positively impact the vocabulary development of at risk students in Preschool, and therefore, impact their overall literacy success.

Too many of our students enter school behind and in turn, start Kindergarten behind their peers. Despite large gains that can be made in academic areas, students are not able to accelerate like their peers, because they have less skill and language to build upon. We can and should continue to build item knowledge for our students, but it cannot be at the expense of their later literacy progress. Students need rich, interesting experiences with lots of language opportunities, built by adults who work at the zone of proximal development for each child, in order to lay the foundation for future literacy growth.

**Summary**

“The use of research-based, effective vocabulary-building strategies in classrooms would result in more learning for all students, but it is clear that the greatest need for such strategies is for those students who enter school behind in their language development (Snell et al., p. 561).”

Vocabulary is clearly a critical link in early and later literacy success. Additionally, it is clear that we must intervene early with methods that have proven effective. Early interventions like Reading Recovery have proven success in literacy and language building of our most struggling students. The following section will outline a curriculum intended to fill the gap for students entering behind in their amount of
known words by addressing the question, *How can a curriculum support early intervention strategies of at risk preschoolers?*

Chapter 3 will discuss the methodology in creating a curriculum. It will outline the intended audience, procedures used and rationale behind them in order to create a unit that will target the vocabulary instruction of at risk preschoolers. The literature reviewed has provided a strong base of support for why it is necessary to create a curriculum that targets the needs of at-risk preschoolers. The literature has also helped to ground the curriculum in what works based on current practices and interventions today.
CHAPTER THREE:
Methodology

Introduction

The literature findings previously reviewed have shown that early intervention is critical to student success in literacy. Yet, even schools that have early interventions in place still have students who are not successful, or end up plateauing due to lack of background knowledge. Because we are still seeing holes in the performance of at-risk students in literacy, research is needed to determine why gaps remain and how we can close them. Through my years of teaching Kindergarten, I have already implemented and developed strategies to target our most at-risk students in the area of literacy. Yet my experience and the relevant literature confirm that students continue to fall behind.

I changed my role in the education system in the hopes to provide more impact on our youngest learners—specifically those falling behind. As a Multi-Tiered Systems of Support Lead in Early Childhood I had the opportunity to lead a team of teachers in researching and developing curriculum that would address the gaps of our preschool learners. After reviewing various existing curriculums and conducting a Literature Review, the team established that writing our own curriculum would best support the needs of our students. Chapter 3 will address the methodology and procedures used to complete one unit of study within the curriculum by specifically looking at the question: How does curriculum support early intervention strategies of at risk preschoolers?

Reviewing Existing Curriculum
An early childhood team of teachers, administrators and lead teachers reviewed three preschool curriculums in order to inventory what already existed and whether it might meet our needs. The curriculums reviewed were Creative Curriculum, My Big Day, and Discovering our World. We reviewed the components, read individual lessons, used a common rating tool, and discussed the pros and cons of each curriculum. According to the National Center on Quality Teaching and Learning, an effective curriculum has comprehensive domains of learning, specific learning goals, well designed learning activities, intentional teaching, ongoing assessment, family involvement, is culturally and linguistically responsive, individualizes instruction, and is appropriate for program staff, children and families (Choosing a Preschool Curriculum, 2012).

The review of existing curriculum helped our team align our goals. We found formatting we liked and components we knew would best support our teachers and students. The team concluded that in order to best meet the needs of our students, creating our own curriculum would be the best choice.

**Reviewing Current Research**

The team expanded our review of current research to include anyone in the Early Childhood program who was interested. This served two purposes: to promote buy in from all staff and to set a foundation of understanding around current research as we moved to write a curriculum everyone would be expected to use. The review included five research areas: curriculum framework, standards, instruction, equity, and developmentally appropriate practice. Teams of 5-8 people were assigned a research topic and articles were provided for the team. There was a lead team who
screened any additional research before putting it out for review. Teams read and discussed articles over 3 meetings using guiding questions as a basis for conversation. Each team presented the information to the entire Early Childhood Team who had conducted the current research review. Themes were documented and this process set the stage for entering curriculum writing.

**Curriculum Framework**

Reviewing existing curriculum and current research gave the team ideas on what we wanted our curriculum to include, as well as how we wanted it to look. As a team, we narrowed down what components we would start writing and how we wanted to present this in formatting to teachers.

**Intended Audience**

The curriculum was used with the preschool students in a large suburban district. The population of students is similar to the district demographics of 32% students of color, 23% free or reduced lunch, 8% students eligible for English Learner services. These demographics represent the district as a whole, but each school’s demographics can vary greatly. For example, there are several schools in the district who have received a 50% or more free and reduced lunch status. Also, something to note is that the preschool programming targets at risk students, so these populations are a bit higher in the preschool classrooms.

**Instructional Setting.** The curriculum created is intended for use in an inner-ring suburb of a large midwestern city in the United States. Currently in the elementary and middle schools, students receive literacy instruction through a continuous improvement model, called Literacy Collaborative (Fountas & Pinnell, 2015). Most
of the specialized services provided (i.e., special education and English language) are provided through a push-in or co-taught model where specialized teachers go into the classroom to support Units of Study and curriculum taught in the classroom. In the preschool classrooms, students with special education needs are serviced through a co-taught model or itinerant services in which the teachers come into the classroom. There is currently no specialized service for students who are identified as English Language learners in preschool. Some of the classrooms have one licensed teacher and 2 teaching assistants. The co-taught special education classrooms have 2 licensed teachers and 2 teaching assistants. There are typically between 16-20 students in a classroom. Students attend a morning or afternoon session for 2.5 hours.

Participants. The curriculum was written by a core team consisting of: 12 teachers, administrators and lead teachers. The lead teachers and administrators lead the process with additional research and professional development presented throughout the curriculum work. The teachers on the team all were currently teaching 4 year olds in some capacity and had a diverse range of experience, including special educators, previously Kindergarten teachers, parent educators and 3 year old teachers. The curriculum went through several reviews by other district leaders such as the Equity Coordinator and Teaching and Learning Coordinator, as well as the Early Childhood staff, Advisory council and parents.

Rationale.

According to Frede and Ackerman, “Not all curriculum models have been empirically evaluated or even based on a systematic and comprehensive review of
research of how young children learn” (2007). In addition, Vgotsky’s research directs us to the importance of social language in the learning process. A specific preschool curriculum designed to target language instruction and individualization is a great need in our pre-kindergarten classrooms. It is with this in mind that I am developing a specific curriculum to target building background knowledge of our most at risk students.

Understanding by Design

Understanding by Design (UbD) is a framework to plan curriculum, assessment and instruction (McTighe & Wiggins, 2012). The framework is a backward design model working through three stages. The first stage is to identify what students need to know—what are the essential questions or understandings that students need as an outcome of the teaching and learning? Stage two is establishing what will tell you that the students have learned (assessment method) and stage three is how you help students get to the essential learning (McTighe & Wiggins).

In my curriculum design, I started with the Early Childhood Indicators of Progress—specifically targeting the Literacy and Social Emotional Standards. Once I established what is essential for students to know in the first six weeks of school, I developed a plan to assess how I will know that they have learned. Lastly, I created read aloud lessons, guided group lessons and active learning centers that would help students understand essential learning.

Instructional Practices

Through review of current research, experience teaching Kindergarten and the success I have seen from Reading Recovery as an intervention, there are a variety of
instructional methods used in the development of this curriculum. By using read alouds, direct instruction, starting with the known, students will acquire the necessary knowledge to close gaps and prevent future at risk literacy learning.

**Read Alouds.** McGee states, “each day of the repeated read aloud systematically builds and extends children’s awareness and understanding of vocabulary. Across three days of reading the same book, the strategies used in repeated read aloud provide children with an opportunity to engage more actively in the reading experience” (2007). The curriculum has been intentionally designed to use one book through three or more days to ensure children the opportunity to build on what they already know and engage in conversation that supports building more knowledge.

**Direct Instruction.** Nielsen and Friesen (2012) stated, “the focus of the ultimate goal of reading, comprehension, has been limited to reading-comprehension strategies. Strategies alone are not enough for students without the strong base in aspects of language development that impacts later reading comprehension” (p. 269). This implies that we have to directly teach vocabulary to students at risk. The read aloud lessons and guided group lessons explicitly teach new vocabulary in the curriculum designed. Stahl and Fairbanks (1986) studied vocabulary instruction and found that direct instruction is most effective when it involves word definitions and explanations of words in context. Therefore, when there is new vocabulary within a read aloud or guided group lesson, an explicit definition and explanation or picture support is provided.
**Writing.** Marie Clay (2005) outlines a process for writing and cutting up a sentence in her Literacy Lessons Designed for Individuals text used for Reading Recovery. The process of writing in the early grades is taking oral language to print. In order to develop a story idea as emergent literacy learners, students must first engage in a meaningful conversation. The curriculum unit utilizes Clay’s theories about early writing and engages students in meaningful conversations to develop story ideas. The conversation between a student and expert other (the teacher) provides individualized instruction to lift the language of the child.

**Starting with the Known.** Another important component of Clay’s Literacy Lessons for Individuals is to anchor instruction on what the child already knows. In fact, the first two weeks of lessons, known as Roaming around the Known, are designed at simply solidifying what the child knows in the areas of literacy and language (2005, p. 32). This same idea is used in writing the curriculum. Although nothing specific can be written for what is known due to each child’s individual differences, the unit is built on the premise that any new knowledge is built upon the knowledge students already bring.

**Conclusion**

Early intervention practices have been closing the gap in item knowledge literacy for many young learners. Yet, as they continue to develop as readers, literacy success remains elusive. My own experiences and academic research points to background knowledge as being a major obstacle to literacy achievement levels, particularly for at risk students. If background knowledge is an important factor in reducing the language and literacy gaps of our earliest learners, we need to have strong curriculum
and instruction based on research. By creating a unit of study that is based on
methods that have proven success, I propose that we can support our most at-risk
learners by building the knowledge necessary for future literacy success.
Results

Introduction

Chapter Four will provide the results in creating a curriculum address the research question, *How does curriculum support early intervention strategies of at risk preschoolers?* As previously described, writing the curriculum was a process undertaken by a team of people that involved some initial review and research of existing curriculum and best practice research for early childhood. After this work, I designed a process for the team to work through as we designed the first unit of our curriculum. The process involved pairing some professional development alongside the actual writing of the curriculum. Chapter Four will review the process itself, as well as the writing results of the curriculum. The curriculum is included in the appendices.

In chapter three, I gave a brief overview of the Understanding by Design framework. The Understanding by Design template is included in Appendix A. Chapter three will address the three Understanding by Design stages as the team worked through them. A summary of the first stage will be given of desired results, outcomes and learning goals. Next, the second stage will be addressed of how progress will be measured. Lastly, the third stage will be summarized with the specific learning activities in mind.

Beginning the Process

The writing started with a full three days of grounding ourselves in what a curriculum framework is and what we and our district believe about teaching and learning. In this process we were able to start laying the foundation for our
curriculum. By aligning our beliefs with best practice research, we were able to identify learning theories to base our curriculum work on, create a framework that aligned with these theories, establish a schedule that would support the framework, create essential understandings for each unit and map them according to what made sense for the unit topic. Then we could start writing within the framework to detail read aloud lessons, guided group lessons and active learning centers. As discovered in the Literature Review, early intervention strategies for teaching vocabulary require a tiered approach (Cuticelli, Coyne, Ware, Oldham, Rattan, 2015). This research aligns with our curricular framework of utilizing read alouds, guided groups and active learning to teach concepts and vocabulary.

Beliefs

Our district work with the Literacy Collaborative emphasizes quality Tier 1 instruction which is defined as: all students receive high quality, scientifically based instruction, differentiated to meet their needs and are screened on a periodic basis to identify struggling learners who need additional support (ISD 196). Our Early Childhood Program defines our core beliefs as: quality learning environments consist of child initiated learning activities facilitated by teachers in a manner that children find engaging, fun and meaningful. Children construct meaningful knowledge that is relevant to their world by connecting what they know to new information and learning within the context of social relationships (ISD 196, Early Childhood Department).

Framework
Our beliefs led us to create four essential components of our curriculum framework which include: engaging, collaborative learning opportunities, clear expectations about what we want students to know, ongoing formative assessment, and guided instruction within the zone of proximal development. The framework was created out of what we wanted students to understand, to know, and to be able to do, which is based on work from Understanding by Design as well as Michael Dufour’s work on Professional Learning Communities (McTighe and Wiggins, Dufours). The table below illustrates how the three stages were used to design the curriculum.

<table>
<thead>
<tr>
<th>Stage One-Desired Results, Outcomes, Goals</th>
<th>Big Ideas—Community, Living Things, Environment Essential Understandings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage Two-How will progress be measured</td>
<td>Early Childhood Indicators of Progress</td>
</tr>
<tr>
<td>Stage Three-Lessons</td>
<td>Read Aloud, Guided Groups, Active Learning</td>
</tr>
</tbody>
</table>

After looking at existing curriculum, units created for grades K-5 in the district, and state standards, we decided on three big ideas: community, living things and environments. These three concepts are the foundation of all the units created, because they concepts we want children to understand for lifelong learning. Then we created six units of study that allows children to access these broader concepts. Within each unit we created essential understandings to help frame our lessons and outline what we want children to know. Next we embedded standards within the units and weeks to specifically target what we want children to be able to do. In order to dig down to the actual lessons, we needed to create a common understanding of
how the learning would be embedded throughout the day. We created a common daily schedule to support teachers in implementing the curriculum. In identifying essential components and big ideas, creating units with essential understandings, embedding the standards, and creating a common daily schedule, we laid a foundation for creating each unit.

**Daily Schedule**

In a preschool classroom there are 2.5 hours of instruction and it was critical for our team to agree on how that time would look, in order to create and implement a curriculum. Since one of our essential components is engaging, collaborative learning opportunities, we had to ensure the time in the day allowed for children to engage in their own learning. This is what led us to create the title Active Learning for the period of the day typically referred to as play time or choice time. If we wanted children to be active members of their own learning we needed a large amount of time for them to do just that. Research points to extended periods of time are what allow children to become more deeply engaged (Snell and Wasik, 2015). We also included a short, targeted instruction time for guided groups, typically known as small group time. We intentionally shifted the title to guided groups to align with the K-5 curriculum and support teachers in understanding the intent of another one of the essential components: guided instruction within a zone of proximal development. This aligns with the research of Clay (2002) of starting with what a child knows. Another component of the schedule that we targeted for lessons was read aloud in order to support teachers with clear expectations of what we want students to know, by creating focus statements and guiding questions.
Aligning Essential Understandings

After determining what was most important for students to know in the first six weeks of school, we mapped them across the unit into weeks, essentially creating a title per week. The title was similar to an idea of a ‘theme’. However, it was important for us to distinguish the difference between themes, such as farm or space and essential understandings, such as understanding feelings and feeling safe. The essential understandings are part of a much bigger concept we want students to understand that fits into our enduring understandings of community, living things and environment. Therefore we choose not to call each week a theme, but rather just named it along with each week to give a sense of what students were learning through their engagement in read alouds, guided groups and active learning. Weaving the essential understandings through the different areas of instruction was critical to answering the question, How does curriculum support early intervention strategies of at risk preschoolers? This aligns with the research that increasing oral language and vocabulary happen through multiple exposures (Stahl & Stahl, 2004).

Stage 2-How will Progress will be Measured: Standards and I Can Statements

Mapping the essential understandings across the weeks allowed us to start looking at the *Minnesota Early Childhood Indicators of Progress*, which are the standards for Early Childhood (MDE, 2017). This is where McTighe and Wiggins (2011) suggest that you are to ‘think like assessors’ to decide if your students have met the outcomes define in stage one (p. 48). We started to align standards into weeks according to what made sense for the essential understanding that week. Then we wrote *I can* statements to make the standard more child friendly. This was new to
most of the team members, so we tried it together and then went back to it the next day after reviewing some sample *I can* statements and looking at how children’s work would demonstrate understanding of a standard. The *I can* statements align with work in the elementary grades, as well as make it clear to children what to expect.

**Understanding by Design—Stage Three**

This final stage is the point of the process that addresses my research question, *How does curriculum support early intervention strategies of at risk preschoolers?* Here is where specific strategies are detailed in lesson plans (including read alouds, guided groups, and active learning) that address supporting preschoolers growth and acceleration. The literature review in chapter two of this capstone gave me the understanding of how early intervention strategies can support learners, what interventions are most powerful and the best way to implement strategies to maximize learning. Now I was able to apply that understanding and support the team in creating lessons that moved beyond activity oriented planning, as suggested by McTighe and Wiggins (2011).

**Read Alouds**

As discovered in the Literature Review, the National Reading Panel (2000) found “the rich contexts that storybooks provide along with the opportunity for active engagement with target vocabulary are both important components that enhance vocabulary gains (Coyne et al., 2010, p.124). We set out to create active read alouds with rich vocabulary instruction to match the research. We started by selecting high quality texts that would match the essential understandings for each week. In order to write the lesson plans, we did some reading of interactive read aloud research and
discussion about what makes a text high quality. Then I modeled writing a focus statement and guiding questions for a text based on the standards selected. Next we tried working through a text together and last, the teams were sent to work on focus statements and guiding questions for three books per week. We used the gradual release model in supporting the curriculum team to write the read aloud lessons. This helped us prepare for the next component, which would intentionally use the gradual release of responsibility—guided groups.

Guided Groups

Guided groups are designed to support learning through a process of explicit instruction (tell), model what you want them to understand (show) and support the child with practice (do) and gradual release of responsibility. According to Denton, “explicit instruction, extended opportunities for guided and independent practice” create successful interventions for students (2015, p. 232). This research provided a foundation for creating guided groups. The other research that supported this work is the RtI tiered intervention model. In a preschool setting, guided groups fall under a Tier 2 category of providing small intervention groups with ongoing progress monitoring (Literacy Collaborative, 2009).

By first looking at the essential understanding and standards, we asked the team to think like a teacher and like a child. What materials would entice the child? How will the teacher use opportunities to support the learning? After brainstorming some ideas we wrote a lesson that included the essential understanding, standards, I can statements, opening, focus statement, process, guiding questions and closing. The opening was written with the intention of hooking the children into the lesson.
The focus statement directed student learning so students had clear expectations of learning. The process was written as a guide of what might occur during the lesson, being flexible enough to allow for individual differences and differentiation. The closing emphasized what the intention of the lesson was reiterating the focus statement. Some lessons also included an assessment point to support ongoing formative assessment.

Active Learning

Active Learning was written with the intention for students to independently practice what was learned as part of read aloud and guided group lessons. This links back to Denton’s research of interventions that are successful provide many opportunities for active student involvement and independent practice (2015, p. 232). We chose standards that aligned with six centers in the classroom: the arts, math, blocks, writing, reading, and science. Then we wrote the materials necessary and potential activities the students might engage in to support the essential understanding and standards. We also included texts that would support thinking about an essential understanding and the work in the center. We wrote guiding questions for the first three weeks and second three weeks of the unit to be posted, in order to support teachers in guiding children’s learning.

Conclusion

With guidance and embedded professional development, I led a team to deeply understand and create a curriculum framework for our four year old programs. We started with the theoretical foundation and framework, grounded ourselves in a daily schedule that would allow for learning opportunities that ranged on the gradual
release continuum, and then created lessons with essential understandings, standards, I can statements and assessment points for read alouds, guided groups and active learning.

We were able to use research as a foundation for our work. Utilizing the tiered approach as recommended by Cuticelli, Coyne, Ware, Oldham and Rattam (2015), we could target the question: *How does curriculum support early intervention strategies of at risk preschoolers?* Due to the background and understanding of the team, we were not able to go as in depth into vocabulary instructional methods as I had hoped. Snell, Hindeman and Wasik’s approach to strategically teaching vocabulary was an idea that came up continually in the process of writing and discussing instructional methods, but never officially made it into the curriculum (2015, p. 563). This would be an additional layer I would like to add as we look at revision and additions to the curriculum.

In the final chapter of my capstone I will draw conclusions in answering the question, *How does curriculum support early intervention strategies of at risk preschoolers?* I will reflect on the process of writing the capstone and writing the curriculum. Chapter Five will outline my personal growth, insight gained from writing a curriculum, implications for my study, limitations, future work needed and how the results will be communicated.
CHAPTER FIVE
Conclusions

Introduction

Through the process of writing this capstone, I have worked to answer the question, *How does curriculum support early intervention strategies of at risk preschoolers?* My experiences in teaching have led me to explore this question and to provide greater impact in the field of education. Thinking back to my introduction of this capstone and goals of being an educator, I can say that I am well on my way to impacting students in a profound way. In fact, by becoming a leader in the teaching community, I have been able to provide even more impact on not only my students, but also students across the program. I have learned about curriculum design and how to lead a team to create curriculum with outcomes that impact our most at risk students. I have implemented high quality curriculum personally, as well as training to support my colleagues in implementation. I discovered that there is little research on the early intervention of preschoolers and so the literature review drove me to create curriculum that specifically supported early intervention strategies of preschoolers. In the last chapter of this capstone, I will summarize my personal growth from this process, describe implications and challenges, as well as what the next steps might be.

Personal Growth

Writing a capstone and curriculum have challenged me personally and professionally. I have had many roadblocks that have prolonged this process and forced me to change focus from action research to a curriculum capstone. It made
most sense to align my career journey with my capstone writing, as I ended up becoming a leader in the curriculum writing team. This has allowed me to explore in depth about what it takes to not only write a curriculum framework, but to lead a team of teachers to deep understanding of research behind curriculum.

The literature review helped deepen my understanding of what early intervention means and how it is best implemented. The research confirmed my own beliefs that children entering kindergarten were falling behind and how critical it is that instruction be intentional in preschool (National Center for Education Statistics). The Understanding by Design framework was learning that helped deepen my understanding of writing curriculum and has me thinking differently about instructional practice. Being able to support learners in the big ideas will ensure their future success and goes beyond creating ‘fun’ activities. It also supports early intervention, as the intentionality of instruction is clear when using backwards design methods.

Implications

By writing a curriculum for program use with a dedicated team of professionals willing to dig into research, the impact ended up being greater than intended. In helping to standardize what is being taught in our early childhood classrooms, teachers are using best practice to impact our students, especially those most at risk. The team is able to provide greater support than myself alone, because teachers are able to reach out for questions more easily and multiple models of implementation are being used across the program. In addition, the success of curriculum use and excitement over the materials spread into our three year old
programming. This has led them to write a curriculum of their own, using the four year old curriculum as a framework.

Now that there is a program wide curriculum, it would be beneficial for the district to conduct further studies on its impact for future programming. Being able to track the progress of preschoolers who participated in the district programming going forward into Kindergarten will give stakeholders a better picture of its overall effectiveness. This data is also useful information to collect for state initiatives, such as Voluntary Preschool.

Limitations

As with any endeavor, there were challenges in writing this capstone. I encountered personal challenges, the team experienced areas of challenge, and there were limitations with the research.

The team had challenges in the process and I found myself personally challenged with the personalities of passionate educators. The balancing act of supporting the opinions educators with years of experience alongside weighing current research and trends about what best supports the learning of students was something that kept repeating itself. I learned to be mindful to listen to opinions and let everyone have a voice, while constantly reminding the team of the literature we had reviewed about what supports our youngest learners. The overall philosophy of early childhood of children learning through hands on experience in a constructivist manner really drove the heart of our conversations. What was interesting was there were often lessons suggested or presented that we carefully deconstructed and found them to be very teacher directed versus allowing the children to construct their own
knowledge. Coming back to children being the center of learning was a reminder our team needed again and again. In the end, our product ended up truly matching our philosophy.

Another challenge in writing curriculum with the team was the gap in background knowledge of the teachers. Since I had come from an elementary background, there were experiences and trainings I had that many of the preschool teachers had not. Formal use of assessment and using data to drive instruction are some examples. Vocabulary development in a more direct instruction model is something else that was unfamiliar to many teachers. As discussed in Chapter Four, in future drafts of the curriculum, it would be helpful to add direct vocabulary instructional methods. All three of these areas were critical components in the research of how to target learners. It took my classroom implementation and evidence of student learning to convince teachers about the importance of their inclusion in the curriculum. This convinced teachers to try some things out in their own classrooms, where they could see the evidence for themselves of student learning.

Another particular challenge is the lack of research specific to four year olds and early intervention methods. As discussed in the literature review, much of the research is conducted at elementary grades. While this research is useful, it would be beneficial to have future research conducted in a preschool setting. In particular, there is more research needed on vocabulary intervention in preschool. The literature points to the importance of this instruction, but does not necessarily define specific instructional methods for this age group.
Next Steps

The team wrote the curriculum as a first draft so that teachers and children could experience it and then we could come back together to revise and edit. I think this benefited implementation because teachers were willing to take on risks and try lessons that they might not have otherwise tried. We gathered feedback in order to come back to the table and re-write to make our first draft even better. In this process I learned that curriculum is truly a framework. It is a living document that will have to be continually adjusted to fit the learners you have. Each year will be different and the most important component is who is in front of you in the classroom. As teachers we must constantly keep track of the knowledge our students bring in with the learning goals in mind. Good curriculum will take these things into account.

As mentioned in the implications section, it will be useful to track data of students as they move through programming to see the effects of the curriculum. We are currently implementing stronger assessment protocols, which will enable us to see the progress of students. Keeping track of these records will inform decisions about continued modification and adjustment of curriculum and assessment, in order to best support our preschoolers.

Conclusion

In setting out to answer the question, How does curriculum support early intervention strategies of at risk preschoolers? I have learned many things. I have learned to lead and work on a team through various challenges. I have found the core components of a successful curriculum to include read aloud, guided groups and active learning. I have discovered the evolving nature of curriculum and how it must
match the needs of the students. I have found the intervention strategies that are critical for learning rely on using and interpreting individual student data. Most importantly, I have circled back to my mission as an educator, which is to lay the foundation for profound success for all students regardless of circumstance, ability, or demography. By creating a curriculum that is program wide, I have helped to support all teachers and learners in the endeavor of lifelong learning.

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Appendix A

Understanding by Design Template

Essential Understanding:

Standards:

Process:

Focus Statement:

Guiding Questions:
READ ALOUD

ESSENTIAL UNDERSTANDING
Children will recognize continuing changes in our world as well as learn about predictable patterns and cycles that surround them. They will understand that beginning something new may mean an end to something familiar such as preschool to kindergarten, seasons, and cycles of growth.

STANDARDS
ST 5.15 Articulates and shares aloud explanations based on reasoning and evidence.
I can tell you what I think and why.

BOOKS/RATIONALE
Choose books about noticing changes and seasons.

*We're Going on a Nature Hunt by Steve Metzger
*Mud by Mary Ray
*When Spring Comes by Kevin Henkes

WEEK 1

PROCESS

DAY 1
Focus Statement: Today when we read, think about what we see and do outside in the spring.

Guiding Questions:
• If we go on a nature walk now, what do you think we will notice outside that will be different than when we went on nature walk in the Fall?
• What is happening now outside?
• What do you think will be happening soon?

DAY 2
Focus Statement: Today when we read, we will look at the pictures to discover what is changing in our world.

Guiding Questions:
• What did you notice about the pictures?
• What is changing?
• Do we see changes happening outside of our school? What changes do we see?

DAY 3
Focus Statement: Today we will be talking about the seasons. Let’s think about what is the same and different as the seasons change.

Guiding Questions:
• Let’s compare what happened in the book to our tree photos that we have been taking each season.
• How does our clothing change when the season changes?
ESSENTIAL UNDERSTANDING
Children will recognize continuing changes in our world as well as learn about predictable patterns and cycles that surround them. They will understand that beginning something new may mean an end to something familiar such as preschool to kindergarten, seasons, and cycles of growth.

STANDARDS
L3.16 Shares information about experiences, people, places and things in a sequence.
I can share information in a sequence.

BOOKS/RATIONALE
Look for books that describe changes in spring.

*People in Spring, Martha Rustad
*Hello Spring, Shelley Rotner
*And Then It's Spring, Julie Fogliano

UNIT OF STUDY 5
READ ALOUD
WEEK 2

PROCESS
DAY 1
Focus Statement: Today when we read, let’s discover what happens now that it’s spring.
Guiding questions:
• Are the changes we discovered in the book the same as what is happening outside here?
• Are we still waiting for some changes to happen?
• What has ended? Is Winter done?

DAY 2
Focus Statement: Today when we read, let’s listen and observe what changes are happening and try to predict what will happen next.
Guiding questions:
• What changed in the book? How did ________ start out and then how did it change?
• What changes have we noticed as the seasons have changed? The changes make a repeating pattern.

DAY 3
Focus Statement: Today when we read, let’s think about what our families do to prepare for spring.
Guiding question:
• Tell me something your family does to prepare for spring.
**ESSENTIAL UNDERSTANDING**
Children will recognize continuing changes in our world as well as learn about predictable patterns and cycles that surround them. They will understand that beginning something new may mean an end to something familiar such as preschool to kindergarten, seasons, and cycles of growth.

**STANDARDS**
M 8.8 Uses words or pictures to describe a simple pattern
I can show or talk about a pattern.

**BOOKS/RATIONALE**
Choose books about Predictable Patterns

- *Every Season* by Shelley Rotner (Unit 2)
- *A Grand Old Tree* by Mary Newell DePalma
- *Old Bear* by Kevin Henkes

**READ ALOUD**
**WEEK 3**

**PROCESS**

Questions for: *Every Season, A Grand Old Tree*

**Day 1**
Focus Statement: Today when we read, see if you can notice the four different seasons.
Guiding questions:
- Tell us the names of the four different seasons.
- What is the pattern of the seasons?

**Day 2**
Focus Statement: We live in Minnesota and have four different seasons: spring, summer, winter, fall. Today when we read we will see that these seasons create a repeating pattern.
Guiding Questions:
- Are we still waiting for some changes to happen?
- Will we ever see winter again?

**Day 3**
Focus Statement: Today when we read, let’s think about our tree that we have been watching at school during the different seasons.
Guiding questions:
- What changes have you noticed happening to our tree at school?
- What other changes may happen?
- “And when we get to the end, what happens? We go back to the beginning. And we call that a cycle. Can you think of other things that we do over and over again? (The cycle of a day, get up, go to school, go to bed.)”
READ ALOUD

PROCESS CONTINUED

Questions For: Old Bear

Day 1
Focus Statement: Today when we read, let’s see what the character, Old Bear, dreams about.

Guiding Questions:
- What did you notice about the pictures? What do you notice about bear?
- What else is changing?

Day 2
Focus Statement: Today when we read, let’s watch for the order/pattern Bear dreams about the seasons.

Guiding questions:
- What do you notice about Bear?
- Of the seasons that Bear dreamt about, what season are we in now?
- What season came before this one, which season is coming next?

Day 3
Focus Statement: Today when we read, let’s think about our tree that we have been watching at school during the different seasons.

Guiding questions:
- What changes have you noticed happening to our tree at school?
- What other changes may happen?
ESSENTIAL UNDERSTANDING
Children will recognize continuing changes in our world as well as learn about predictable patterns and cycles that surround them. They will understand that beginning something new may mean an end to something familiar such as preschool to kindergarten, seasons, and cycles of growth.

STANDARDS
ST 5.15 Articulates and shares aloud explanations based on reasoning and evidence.
I can tell you what I think and why.

BOOKS/RATIONALE
Choose books about how people are growing.

* "I'm Growing" by Aliki
* "Leo's Tree" by Deborah Pearson

UNIT OF STUDY 5

READ ALOUD

WEEK 4

PROCESS

DAY 1
Focus Statement: There is a pattern to how people grow and change. Today when we read this book, I want you notice how the tree/boy is growing and changing. All living things grow.
Guiding questions:
How did the character change?
- What changes as someone or something gets older?
- What things was he not able to do as a baby that he learned to do as he grew?

DAY 2
Focus Statement: Today when we read, remember that tree/boy is growing and changing. Listen carefully and notice the changes as they happen.
Guiding questions:
- What did you see in the pictures that showed us the character grew?
- What did you hear in the story that helped us know the character is changed?

DAY 3
Focus Statement: Today when we read, think about how you've grown or changed.
Guiding questions:
- How have you changed since you were born?
- What can you do now, that you couldn't do before?
**READ ALOUD**

**ESSENTIAL UNDERSTANDING**
Children will observe how living things change and grow including ourselves (height, work samples, tree photos). Children will remember and reflect on the progress of their learning and development throughout the year. They will recognize and celebrate their new skills, talents, and independence.

**STANDARDS**
SS 3.13 Reflects on the impact of past, present and some future events on self and family
I can tell you about my experiences and how I’ve grown and changed.

**BOOKS/RATIONALE**
Choose books about children who are growing.

*Another Important Book*
by Margaret Wise-Brown

*Jabari Jumps*
by Gaia Cornwall

**OPTION OF SHARED WRITING ABOUT GROWTH**
Use photos of children and children's work to put together a class book about how they've changed and grown over the preschool year.

**UNIT OF STUDY 5**

**READ ALOUD**

**WEEK 5**

**PROCESS**

Questions For: Another Important Book

**Day 1**
Focus Statement: Today when we read, I want you notice how the character grows and changes through the book.

Guiding questions:
• What did you notice about the difference between the character at the beginning of the book and at the end of the book?
• How did the character grow and change?

**Day 2**
Focus Statement: Today when we read, I want you to think about when you were little and what you could do. Think about what you can do now that you couldn’t do before.

Guiding questions:
• What do you remember about when you were three/four?
• What do you remember about when you first started preschool?

**Day 3**
Focus Statement: Today when we read, I want you to think about what you might be able to do when you get older.

Guiding questions:
• What is something you think you might be able to do when you are in Kindergarten?
• How about when you are a grown up?
READ ALOUD

WEEK 5

PROCESS CONTINUED

Questions For: Jabari Jumps

Day 1
Focus Statement: Children grow a lot and as they grow they make changes. Today when we read this book, I want you to notice about how Jubari changes in the book.

Guiding questions:
• When the story starts, how does Jubari feel about jumping off the diving board?
• What does he do to help him feel ready to jump?

Day 2
Focus Statement: Today when we read, I want you to think about a time you tried something new that you were afraid to try, just like Jubari.

Guiding questions:
• Tell us something you were afraid to try?
• Do you still feel that way?
• How do you think Jubari feels at the end of the story?

Day 3
Focus Statement: Today when we read, I want you to think about what Jubari does to get ready to jump off the diving board.

Guiding questions:
• When you are scared, what can you do to help you feel brave?
• Who helps you when you are feeling scared?
• How do you feel after you try something new?
ESSENTIAL UNDERSTANDING
Children will remember and reflect on the progress of their learning and development throughout the year. They will recognize and celebrate their new skills, talents, and independence.

STANDARDS
S8.11 Shows increasing ability to initiate and engage in positive interactions with peers and adults.
I can talk and work together with different people.

BOOKS/RATIONALE
Choose books that recognize and celebrate individual and community growth.

**see note below

*Good People Everywhere
by Lynea Gillen

*The Thank You Book
by Mo Willems

*Kindergarten Countdown
by Anna Hayes

** Possible RA: consider asking your kindergarten team to write a note, list, or short picture book to introduce kindergarten at your school. “What happens in Kindergarten?”

READ ALOUD
WEEK 6

UNIT OF STUDY 5

Questions For: Kindergarten Countdown
Day 1
Focus Statement: Today when we read, think about what the characters are celebrating and what we are excited to celebrate.

Guiding Questions:
• What goals did you accomplish this year?
• What did you learn this year?
• What are you proud of?

Questions For: Good People Everywhere
Day 2
Focus Statement: Today when we read, I want you to think about the people in our school that have been good to us.

Guiding Questions:
• Who in our school are we thankful for?
• What are some ways we can show someone we appreciate them?

Questions For: The Thank you Book
Day 3
Focus Statement: Today when we read, think about who has helped you learn and grow this year and how we could thank them.

Guiding Questions:
• How can you say thank you to your friends?
• Why is it important to be thankful?
Guided Group 1.1 Nature Walk and Checklist

STANDARD/S
ST 6.9 Identify what to look for, measure, or test to answer questions
I can research to find the answers to questions.

PROCESS
Focus Statement: Today we are going to notice the changes that are happening now that it is spring.

Activity: Review the fall checklist. Discuss what might be different and write their predictions. Go on a nature hunt around your school and mark what you find on the checklist.

GUIDING QUESTIONS
• Think about what we found on our nature hunt in the Fall/Winter.
  What is the same? What is different?
• What do you think we might find? What might we add to this list?
  How have some of the same things changed?

MATERIALS
Clipboards, GG 1.1 Nature Walk Checklist- 2 versions, writing utensils, fall and winter classroom tree pictures

Guided Group 1.2 Seasonal Tree Drawing

STANDARD/S
ST 5.16 Uses more detailed drawing, writing, models or creative expressions to present ideas.
I can create something that expresses my ideas.

PROCESS
Focus Statement: Today we will notice and draw how a tree changes in each season.

Activity: Read the book Tap The Magic Tree then show the children the four pictures of the same tree during different seasons. Have the children draw the tree in each season.

GUIDING QUESTIONS
• What changed on the tree during each season?
• Why does the tree change each season?

MATERIALS
Tap The Magic Tree, 11x17 paper folded in four rectangles (have them folded so they only see one rectangle at a time), pictures of tree in each season, crayons
UNIT OF STUDY 5

Guided Group 1.3 Shake and Spill Game

STANDARDS

M 6.7 Demonstrates ability to combine and separate items within a small set without changing the total number in the set (up to 5)
I can find different ways to make the same number.

M 5.7 Verbally estimates quantities without counting, although inconsistently and allowing for mistakes
I can say how many there are.

PROCESS

Focus Statement: Today we are going to play a game where we see how many of each color we have.

Activity: Shake and Spill set of 5 counters with two different colored sides for each child.

GUIDING QUESTIONS

- How many red do we have?
- How many white do we have? (after shaking the counters)
- How many red counters do you think we’ll see the next time we shake it?

MATERIALS

Two-sided colored counters, cups, GG 1.3 Shake and Spill directions, GG 1.3 Shake and Spill recording sheet master, red markers or red crayons
Guided Group 2.1 Experimenting with seeds

STANDARD/S
ST 5.14 Talks with others about questions, actions, ideas, observations, or results
I can discuss with others what I am learning

PROCESS
Focus Statement: Today we are going to do an experiment. Plants are growing outside; do you think we can grow plants inside? Let's see what we can grow inside.

Activity: Planting Seeds
Read the book, One Bean or Plant the Tiny Seed
As a group, choose what to use for planting; a damp paper towel, dirt, styrofoam, shredded paper, sand, water, baggies, cups, pot etc. Have children choose where the beans could be placed for observation during active learning. Children will document/draw their observation on day one. Consider keeping this paper and allowing students to continue to document and observe during active learning.

GUIDING QUESTIONS
• What do you think seeds need to grow?
• What else do we need?
• What makes you think that would help it grow?
• Where do we need to put our plants?

MATERIALS
"One Bean," by Rockwell OR "Plant the Tiny Seed," by Ellie Gellman, ziploc baggies, sharpies, paper towels or cotton balls, bean seeds, sand, dirt, planting pot optional

Guided Group 2.2 Rhyming

STANDARD/S
L5.12 Identifies and continues sound patterns in words
I can continue a sound pattern in words.

PROCESS
Focus Statement: Today we are going to listen for rhyming words. Rhyming words sound the same at the end. Let's see if we can hear the words that rhyme.

Activity: Let's look at these three cards (2 of which rhyme) and say the word for each picture. Which two rhyme?

GUIDING QUESTIONS
• What words sound the same at the end?
• Can you think of another word that rhymes?

MATERIALS
GG 2.2 Rhyming picture cards, background knowledge from Jack Hartmann's "Make a Rhyme, Make a Move" https://youtu.be/R4zsLZzU5xE

L5.12 Identifies and continues sound patterns in words
I can continue a sound pattern in words.
UNIT OF STUDY 5

Guided Group 2.3 First, then book

STANDARD/S
ST 3.16 Makes a prediction when prompted
I can make a prediction when asked.

PROCESS
Focus Statement: We’ve been learning all about changes. I would like to show you this fun book about many different things that can change.

Activity:
Read the book, First the Egg
Make their own “first, then” book by drawing two pictures on the pre-folded “first the... then the” page (print and fold one per student), students can decorate the cover and add their name

GUIDING QUESTIONS
• Can you think of other things that change?
• Tell me about what you are drawing

MATERIALS
“First the Egg” by Seeger, GG 2.3 “first, then” folded paper book master, writing materials.
Guided Group 3.1 Planting Grass Seed and Introducing Grass Journals

**STANDARD/S**
- ST 4.11 Sees outcomes as the result of one’s behavior or actions. I can tell what I did and what happened.
- M 14.3 Uses language to compare data I can tell you about my information.

**PROCESS**
Focus Statement: Today we are going to plant some of our own grass seed to observe at school. We will be watching how the grass seed changes.

Activity: Each child plants their own grass seed in a cup. Introduce grass journal. Children write their name, look closely at the cup and draw their first day observations.

**GUIDING QUESTIONS**
- What do you think will happen to our grass seed?
- How will we know?
- What do you notice about the plant/pot today?
- How will we use our grass journals to keep track of what happens to our grass?

**MATERIALS**
- Grass seed, GG 3.1 My Grass Journal printed resource, markers/crayons out for drawing, cups for planting, dirt, squat bottles

Guided Group 3.2 Shake and Spill Game

**STANDARD/S**
- M 6.7 Demonstrates ability to combine and separate items within a small set without changing the total number (up to 5)
  I can find different ways to make the same number.
- M 5.7 Verbally estimates quantities without counting, although inconsistently and allowing for mistakes. I can say how many there are.

**PROCESS**
Focus Statement: Does anyone remember the game that we learned called Shake and Spill? Today we are going to play it again.

Activity: GG 3.2 Shake and Spill Game, consider having students play the game in partners this time

**GUIDING QUESTIONS**
- How many red do we have?
- How many white do we have? (after shaking the counters)
- How many red counters do you think we’ll see the next time we shake it?

**MATERIALS**
- GG 3.2 Shake and Spill directions, GG 3.2 Shake and Spill data sheet copy per pair, two-sided color counters, cups, red markers or crayons
Guided Group 3.3: Plant Cycle Dice Game

STANDARDS
M1.14 Recites number word aloud, forward, up to at least 29 (allow for some mistakes), without objects.
I can count.

S7.9 Builds friendships through play, learning activities and conversation with peers
I can play and talk with friends

PROCESS
Focus Statement: Today we are going to play a dice game with our friends. It will be important to listen and watch what everyone is doing so we can check to make sure we all color the same number of spaces on the game board.

Activity: Plant Cycle Dice Game (also frog and butterfly are available in printed resources) Each child gets their own paper. Taking turns, each child rolls the die and then all students in the group color in that many squares on the cycle paper. Students compare data to make sure they are each counting the same amount of spaces. They can choose a different life cycle to play again.

GUIDING QUESTIONS
• Which numbers make you move farther?
• Does your board match the friend who is next to you?
• What number do you see?

MATERIALS
GG 3.3 Plant Life Cycle printable game board for each child, one yellow foam die for each group, markers or crayons for coloring

Note: AL-GG 3.3 Life Cycle Laminated boards for later use as a game with moving pieces.
UNIT OF STUDY 5

Guided Group 4.1 Name Writing and Self Portrait

**STANDARDS**
- SS3.13 Reflects on the impact of past, present and some future events on self and family.
  I can tell you about my experiences and how I've grown and changed.
- S 2.6 Shows increasingly accurate understanding of own strengths, preferences, limitations and personal qualities.
  I can recognize my own skills and talents

**PROCESS**
Focus Statement: You have learned a lot during preschool this year. Today we will write our names and draw a picture of ourselves. Then when you’re done, you'll get to see whether your work has changed. You are so awesome

Activity: Children will draw a picture of themselves and write their name. When complete, let them compare with drawing and name sample from the Autumn so they can see the growth.

**GUIDING QUESTIONS**
- Do you notice anything different about how you wrote your name?
- What is different about the picture you drew of yourself?
- How have you changed over the year?

**MATERIALS**
- Paper and crayons, a picture and name sample for each child from the Fall

Guided Group 4.2 Sorting/More and Less

**STANDARDS**
- M 5.7 Verbally estimates quantities without counting, although inconsistently and allowing for mistakes.
  I can say how many there are.
- M 5.4 Sorts information by one or more attributes
  I can sort in different ways.

**PROCESS**
Focus Statement: Today we are going to use these objects to sort and to tell which have more and less.

Activity: Set objects out that can be sorted by color or type. Show the children the objects and talk about the characteristics that you will be using to sort. Place a pile of objects in front of each child and have him or her sort them according to the attribute that you decided. Look at the piles. Talk about which piles have more and which ones have less.

**GUIDING QUESTIONS**
- Tell me how you sorted your objects.
- Is there another way that you can sort your objects?
- How many do you have in that pile? And the other pile?
- What group has more/less?

**MATERIALS**
counters/objects to count
GUIDED GROUP 4.3 CHILDREN'S GROWTH

STANDARD
M13.3 Participates as group member in the collection of data that is put on a chart or graph.
I can add my information to a chart.

PROCESS
Focus Statement: Today we are going to look back at how tall we were when school started. We are going to find out if anyone in our class has grown!

Activity: Provide measuring tools and materials to measure as a group. Use vocabulary such as longer, shorter, taller, etc. Measure each child and add their new height to the chart. Compare how much each child has grown.

GUIDING QUESTIONS
• What happened to everyone's height as the year went on?
• Who grew the most?
• Who grew the least?

MATERIALS
Measuring tape or height chart, rulers, heights of children from the Fall, measuring tools and materials to measure
UNIT OF STUDY 5

Guided Group 5.1 Now I Can

STANDARD/S
S 2.6 Shows increasingly accurate understanding of own strengths, preferences, limitations and personal qualities.
I can recognize my own skills and talents.

PROCESS
Focus Statement: We took that picture of you when school started a long time ago. Now, look at the picture we just took. What do you notice about the two pictures? Today we will think about and write down something that each of you can do now that you could not do when school started.

Activity: Now I Can… sheet for each child
Children discuss and write/draw the things they can do now that is the end of preschool.

GUIDING QUESTIONS
• What new skills did you learn this year?
• What did you practice over and over that helped you accomplish new skills?

MATERIALS
GG 5.1 Now I Can… printed resource- 2 versions, drawing utensils, photos of each child from September and May

Guided Group 5.2 How many...now?

STANDARD/S
M 6.5 Understands that the quantity of a set of (more than 4) objects has been changed.
I can notice when a set changes.

PROCESS
Focus Statement: Today we will play a game called What is missing? I am going to put some toys on this tray and you will count them. Then, I will hide them and change the number of toys. Let’s see if you can figure out what changed.

Activity: Teaching how to play "what is missing" with quantity—put out a set of 5 to 8 counters on a tray and have children look closely and count them. Cover the counters with a screen, use your hand to take away or add counters to the group. Uncover the counters and have children count them. Take turns choosing the number of toys and being the “changer.” Ask children to tell you what has changed.

GUIDING QUESTIONS
• How do you know that?
• How many? (more or less)

MATERIALS
counters, tray, paper/fabric screens (enough for partners to play)

DIFFERENTIATION
each child has their own counters, children use white boards to document the number of toys that they see each time
Guided Group 5.3 Bug Number Puzzles

STANDARD/S
M6.4 States the number that comes next or before up to 10
I can tell you the number that comes next or before.

PROCESS
Focus Statement: Today we are going to try putting together some new bug puzzles. You will need to look at both the picture and the number to make the picture.

Activity: Each child has a bug puzzle (pre laminated and cut out) to put together. Children may trade puzzles and try another one.

GUIDING QUESTIONS
• Which number does your puzzle start at?
• How did you know which piece came next?
• Can you tell me the numbers that you see?

MATERIALS
GG 5.3 Bug Puzzles colored (8 different difficulty levels)- laminated
UNIT OF STUDY 5

Guided Group 6.1 Thank You Letters

STANDARD/S
S8.11 Shows increasing ability to initiate and engage in positive interactions with peers and adults.
I can talk and work together with different people.
S3.10 Exhibits growing ability to understand and anticipate others’ emotional reactions to situations or behaviors.
I can tell you how someone else may feel.

PROCESS
Focus Statement: Today let’s think about someone who has helped us this year at school. We are going to write a thank you letter to ________ to tell him/her how much we appreciated them here at school.

Activity: Shared writing for a school community member (janitor, principals, etc)

GUIDING QUESTIONS:
• Who in our school has helped us this year?
• Why is it important for us to thank them?
• What can we do or make to tell them we thank them?

MATERIALS
Colored paper, markers, crayons etc., GG 6.1 Thank You Cards in multiple languages

Guided Group 6.2 Friendship Drawing

STANDARD/S
S7.9 Builds friendships through play, learning activities and conversation with peers.
I can play and talk with friends.

PROCESS
Focus Statement: We are celebrating friendship by using kind words. Today we will tell our friends what we like to do with them.

Activity: Let children choose a friend and ask them to think about their friendship and draw a picture of them playing together.

GUIDING QUESTIONS
• How do you know someone is a good friend?
• What do you say to your friends that lets them know you appreciate them?
• When you’re together, what do you play?

MATERIALS
Paper, crayons or markers
Guided Group 6.3 Class Book for Future Preschool Students

STANDARD/S
SS3.13 Reflects on the impact of past, present, and some future events on self and family
I can tell you about my experiences and how I've grown and changed.

PROCESS
Focus Statement: We have learned so much in preschool. Today we will write down some of the things that we have learned so that you can let the new preschool children know about what they are going to learn.

Activity: Creating a class book for the incoming preschool students to read next fall.
"Alex knows..., Alex learned..., Alex says",___________________. (child can draw or use invented spelling)

GUIDING QUESTIONS
- What do we do in preschool?
- What's the most important thing you've learned in preschool?
- What do you think new children should know about our class?

MATERIALS
GG 6.3 Writing Templates versions 1-3 printable resource, or blank paper, writing tools, class photo of the current class for the cover
## THE ARTS

### STANDARDS

A2.5 Discuss differences among artistic expression.  
I can tell how our art projects/activities are different.

A1.5 Integrates a variety of art experiences during play.  
I can be artistic.

### WEEK 1-6

#### IDEAS

<table>
<thead>
<tr>
<th>Ideas</th>
<th>Materials</th>
<th>Questions</th>
<th>Books</th>
</tr>
</thead>
</table>
| Discovering Spring  | Found materials from nature walk paint, drawing and coloring materials | • What do you notice about how the trees are different?  
                            Spring Nature items displayed, paint, brushes model magic, etc.  
                            Twigs with nature items attached to paint with  
                            Collect nature items and use pipe cleaners to make a bracelet  
                            Forks, paint, paper  
                            20 ounce soda bottles dipped in paint to stamp with, green paint to add stems  
                            Tissue paper, glue to paint with, flower shapes  
                            Liquid watercolors, tape, paper  
                            Rainbow colored paper, glue, rainbow shape  
                            Cotton balls, cloud shapes, glue  
                            Paper plates, yellow paint, glitter, yellow triangles | Painting a Rainbow, Ehlert  
                                                         Imaginary Garden, Larsen  
                                                         My Garden, Henkes  
                                                         Extra curriculum books |
| Paint with Spring   |                                                                           |                                                                                                     |                                            |
| Colors              |                                                                           |                                                                                                     |                                            |
| Still Life Painting |                                                                           |                                                                                                     |                                            |
| Clay Creations      |                                                                           |                                                                                                     |                                            |
| Nature Paint Brush  |                                                                           |                                                                                                     |                                            |
| Nature Bracelets    |                                                                           |                                                                                                     |                                            |
| Fork Tulips         |                                                                           |                                                                                                     |                                            |
| Water Bottle Flowers|                                                                           |                                                                                                     |                                            |
| Tissue Paper Flowers|                                                                           |                                                                                                     |                                            |
| Tape Watercolor Resistance|                                                               |                                                                                                     |                                            |
| Paper Ripping Rainbows |                                                             |                                                                                                     |                                            |
| Cotton Ball Clouds  |                                                                           |                                                                                                     |                                            |
| Paper Plate Sunshines|                                                                           |                                                                                                     |                                            |

#### QUESTIONS

- What do you notice about how the trees are different?
- What’s happening outside when the leaves turn ___?
- Do you remember what we painted with in the fall, which items are the same and which are different?
- Are some of these brushes easier or harder to paint with? Why?
- How is it working to paint with a fork?
- What do you notice happens when you push the bottle down slowly/softly?
- How did you decide what to do?
- What do you think will happen when we remove the tape? Why?
- How did you decide how big to make those papers?
- Tell me how those cotton balls feel.
- What do you notice happens when you shake the glitter fast? Slow?
# THE ARTS

## WEEK 1-6

<table>
<thead>
<tr>
<th>IDEAS</th>
<th>MATERIALS</th>
<th>QUESTIONS</th>
<th>BOOKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Representing the Seasons</strong></td>
<td>Paper divided into sections to draw seasons</td>
<td>• What do you notice about how the trees are different?</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Why are the leaves changing?</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• What's happening outside when the leaves turn ____?</td>
<td></td>
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<tr>
<td></td>
<td>Four Season Tree: tissue paper (green, white, yellow/orange/red, pink/blue)</td>
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<td></td>
</tr>
<tr>
<td><strong>Representing Patterns</strong></td>
<td>Wiki Stix to create</td>
<td>• How does that feel?</td>
<td></td>
</tr>
<tr>
<td>Wiki Stix</td>
<td>Coffee filters, butterflies, eye droppers, pipe cleaners</td>
<td>• Tell me about what you are creating.</td>
<td></td>
</tr>
<tr>
<td>Coffee Filter Butterflies</td>
<td>Yellow and black paint, oval shapes, pipe cleaners</td>
<td>• Tell me about the pattern you used to paint your bee.</td>
<td></td>
</tr>
<tr>
<td>Bumble Bee Painting</td>
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</tr>
</tbody>
</table>
**STANDARDS**

S7.9 Builds friendships through play, learning activities and conversation with peers.
I can play and talk with friends.

S4.13 Talks through simple tasks and conflicts, seeking adult support as needed.
I can talk about what is happening and get help when needed.

S4.12 Sustains attention and persistence with a task of interest for at least 5 minutes.
I can explore something I like for a long time.

**UNIT OF STUDY 5**

<table>
<thead>
<tr>
<th>IDEAS</th>
<th>MATERIALS</th>
<th>QUESTIONS</th>
<th>BOOKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birds/Nests/Eggs</td>
<td>“Nest building”: provide sticks, legos, yam, feathers, paper shreds, other loose parts for building. Plastic eggs. Stuffed birds: Robin, Bluejay, Cardinal, etc (MN native preferable)</td>
<td>• If you were a bird, what materials would you like in your nest? • How can we make sure the nest will be strong enough to hold the eggs?</td>
<td>nests, eggs, and birds Sing, by Raposo Grumpy Bird, Tankard Basil’s Birds</td>
</tr>
<tr>
<td>Nature</td>
<td>Rocks, sticks, twigs, grass, flowers, etc.</td>
<td>• Tell me about what you are creating. • Why did you use that?</td>
<td>Nature or Spring</td>
</tr>
<tr>
<td>Plants and Trees</td>
<td>Tree blocks, sticks, branches, and flowers</td>
<td>• Why is helpful to work with a friend?</td>
<td>Trees, Plants, Cycles Tree, Teckentrup</td>
</tr>
<tr>
<td>Animals Animals coming out of hibernation</td>
<td>Toy bears, squirrels, birds, rabbits</td>
<td>• What do we notice animals doing now that spring has arrived?</td>
<td>Spring animals (squirrels, rabbits, birds, frogs, caterpillars, butterflies, etc.)</td>
</tr>
<tr>
<td>Measuring Height</td>
<td>Blocks, measuring tape, ruler, yardstick</td>
<td>• How many blocks tall do you think you are? • What do you notice about your friend’s height?</td>
<td>Measurement</td>
</tr>
</tbody>
</table>
## UNIT OF STUDY 5

### BLOCKS

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Pond</td>
<td>plastic/toy pond animals, foam blue sheet, plastic plant life, small rocks</td>
<td>• What kind of animals might live near your pond?</td>
<td>In a Small, Small Pond By Denise Fleming</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• What does the pond offer to the animals?</td>
<td></td>
</tr>
<tr>
<td>Caterpillar-Butterfly</td>
<td>plastic/toy butterflies and caterpillars, pretend leaves and flowers, paper towel tubes</td>
<td>• How could you make a cocoon for the caterpillar?</td>
<td>Butterfly life cycle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• What could you use to build a garden to attract the butterflies?</td>
<td></td>
</tr>
</tbody>
</table>
**STANDARDS**

S4.13 Talks through simple tasks and conflicts, seeking adult support as needed.
**I can talk about what is happening and get help when needed.**

S6.9 Appropriately labels increasingly complex emotions in others (e.g., pride, embarrassment, jealousy).
**I can tell how others are feeling.**

S6.10 Responds appropriately to others' emotions
**I can tell how others are feeling and respond appropriately.**

### UNIT OF STUDY 5

**DRAMATIC PLAY**

<table>
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<tr>
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<tbody>
<tr>
<td>Garden or Garden Center</td>
<td>Plastic flowers&lt;br&gt;Dirt&lt;br&gt;Children's tools, gloves, shovels, watering can&lt;br&gt;Seed packets&lt;br&gt;Broom dust pan&lt;br&gt;Some real flowers&lt;br&gt;Flower pots&lt;br&gt;Felt/Nylons to make a vegetable planter</td>
<td>• How do flowers grow?&lt;br&gt;• What do flowers/plants need to grow?</td>
<td>Garden, flowers, spring&lt;br&gt;All About Roots, Throp&lt;br&gt;All About Stems, Throp&lt;br&gt;All About Seeds, Throp&lt;br&gt;All About Leaves, Throp&lt;br&gt;Flowers, Clay</td>
</tr>
<tr>
<td>Science Lab</td>
<td>Lab coats&lt;br&gt;Slides&lt;br&gt;Magnifying glasses&lt;br&gt;Science experiments like volcanos, or carnations in colored water watch process of them turning color</td>
<td>• What is happening?&lt;br&gt;• How did that occur?&lt;br&gt;• What did you notice?&lt;br&gt;• What need to change or adjust?</td>
<td>Scientists, experiments, etc.&lt;br&gt;What is a Scientist, Lohn</td>
</tr>
<tr>
<td>Flower Shop</td>
<td>Pretend or real flowers,&lt;br&gt;Garden gloves&lt;br&gt;Flower pots&lt;br&gt;Squirt bottles&lt;br&gt;Seeds&lt;br&gt;Pictures of flowers&lt;br&gt;Vases and buckets for arranging/displaying, Signs with prices, etc.</td>
<td>• Who would you like to give flowers to?&lt;br&gt;• If these were real flowers, what would they need?</td>
<td>Flowers, spring&lt;br&gt;All About Roots, Throp&lt;br&gt;All About Stems, Throp&lt;br&gt;All About Seeds, Throp&lt;br&gt;All About Leaves, Throp&lt;br&gt;Flowers, Clay</td>
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</table>
STANDARDS
S1.11 engages in increasingly independent and self-directed activities.
I can play independently.

MATERIALS
Books about Spring, plants, and Kindergarten
# MATH

## WEEK 1-6

### STANDARDS

- **M1.16** Is able to name the next number word for numbers up to 9
  - I can tell you the name of the next number.

- **M6.4** States the number that comes next or before up to 10
  - I can tell you the number that comes next or before.

- **M7.10** Uses comparison vocabulary (longer/shorter, taller/shorter, farthest/closest)
  - I can describe how objects compare by size.

### IDEAS

<table>
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</table>
| Bug Number Puzzles           | Bug Puzzles (resource) | • What number comes next?  
• What number comes before this one?  
• Can you count starting with this number? | Curriculum books related to spring, change, bugs, seeds/plants, flowers, patterns, etc. |
|                              | Unit 5 Math AL - Bug Puzzles (also for GG 5.3) |                                                                          |                                            |
| Measure Seed Height          | Began in GG 2.1, have papers that you started available for measuring and documenting, markers, unifix cubes, measuring tape, ruler | • How many cubes tall do you think the tallest plant will be?  
• What will you use to measure each plant?  
• How many inches tall is that plant?  
• Which one is taller, shortest, biggest? |                                            |
## MATH

### IDEAS

**Flower Number Line:** Students create a number line by choosing a random numbered flower from a can. Students begin their garden line with that number and find the next number that is needed to count beginning with the numbered flower chosen.

**Counting Collections**

- Flower or bug counters.
- Egg carton or cupcake tins or small containers to put collections in.

**Pattern Blocks**

- Use pattern blocks to make flowers with different shape petals.

### MATERIALS

- Green or brown play dough, numbered flowers on sticks (Unit 5 Math AL-Flower Numerals), can or tub to hold the flowers.

### QUESTIONS

- What number comes next?
- What number comes before this one?
- Can you count starting with this number?
- How many did you count?
- How did you do that?
- Why did you choose to count those?
- Tell me about the shape you made.
- Can you change it?

### BOOKS
## STANDARDS

ST 1.7 Verbally identifies obvious differences and similarities.
I can say what is the same and different.

## SCIENCE WEEK 1-6

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</thead>
<tbody>
<tr>
<td>Planting</td>
<td>Plant different kinds of seeds in soil—observe what happens and document changes (label with picture and word)</td>
<td>• Which seed do you think will grow higher/faster?</td>
<td>Seeds, Planting, etc.</td>
</tr>
<tr>
<td></td>
<td>Have seeds planted in sand, soil, flour, or sugar to observe</td>
<td>• Which material will help the seed grow?</td>
<td>All About Roots, Throp</td>
</tr>
<tr>
<td></td>
<td>Bean seeds, paper towels, ziploc bags, egg cartons, cups, gloves, or other containers</td>
<td>• What do we need to do to help our seed grow?</td>
<td>All About Stems, Throp</td>
</tr>
<tr>
<td></td>
<td>Recording sheets to document</td>
<td></td>
<td>All About Seeds, Throp</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>All About Leaves, Throp</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>One Bean, Rockwell</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plant the Tiny Seed, Matheson</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Planting Seeds, Clay</td>
</tr>
<tr>
<td>Celery/ Flower Color Changing</td>
<td>Celery or carnations, food coloring, water Recording sheets to document</td>
<td>• What do you notice?</td>
<td>Flowers, Vegetables, Colors</td>
</tr>
<tr>
<td>Tadpole to Frog</td>
<td>Tadpole to frog plastic objects (if available)</td>
<td>• What do you notice?</td>
<td>Tadpoles, Frogs, Life Cycles</td>
</tr>
<tr>
<td></td>
<td>Magnifying glasses</td>
<td>• How can you tell?</td>
<td>A Frog’s Life, Acorn</td>
</tr>
<tr>
<td>Caterpillar to Butterfly</td>
<td>Butterfly journals out to document, magnifying glasses, butterfly habitat, markers and crayons</td>
<td>• What do you think is going to happen next?</td>
<td>Caterpillars, Butterfly, Life Cycles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• How will we know?</td>
<td>A Butterfly’s Life, Acorn</td>
</tr>
</tbody>
</table>
UNIT OF STUDY 5

SENSORY

STANDARDS
S5.24 Shows increasing ability to stop and think
I can stop and think before I react.
S8.11 Shows increasing ability to initiate and engage in positive interactions with peers and adults
I can talk and work together with different people.

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<tbody>
<tr>
<td>Dry/Wet</td>
<td>Dry/Wet Leaves, Dirt/Mud, Dry/Wet Noodles</td>
<td>• How does this feel in your fingers?</td>
</tr>
<tr>
<td>Bubble Water</td>
<td>Bubbles, water, possibly sponges and things to wash</td>
<td>• Is this easy to pour? Why?</td>
</tr>
<tr>
<td>Worms</td>
<td>Wet sand/mud with rubber worms, pots, pans</td>
<td>• Where have you seen these things?</td>
</tr>
<tr>
<td>Birds</td>
<td>Toy birds, birdseed</td>
<td></td>
</tr>
<tr>
<td>Cars and Sand</td>
<td>Sand, cars, trucks, etc.</td>
<td></td>
</tr>
<tr>
<td>Clean Mud</td>
<td>Powdered soap and ripped up toilet paper</td>
<td></td>
</tr>
</tbody>
</table>
**STANDARDS**
P5.16 Draws letters and/or part of name with some reversals.
I can use writing tools with control.

**WEEK 1-6**

**WRITING**

<table>
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| Celebration Board   | Pictures of children for them to write captions “Philip can do the monkey bars now”, large paper hanging, markers, pens, etc. | • What do you want to write?  
• Can you read this name? | Celebrating Books            |
| Thank You Notes     | Cards, papers, stickers, name cards, thank you cards in different languages | • Why are you thankful?  
• Who has been helpful to you?  
• Why?             | Thank You Books  
The Thank You Book, Willems |