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Promoting Language Development in PreKindergarten and Kindergarten Classrooms Through Basic Materials:
A Tool for Early Childhood Teachers in New Orleans

By

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Abstract

This independent study will offer PreKindergarten and Kindergarten educators in New Orleans a tool for better understanding why it is important and how to offer language rich opportunities in their classrooms. I will start by describing observations from three New Orleans schools, highlighting where language is missing. I will then look at research on the negative effects of "academic kindergartens" and the importance of language development, especially for children living in poverty, during the PreKindergarten and Kindergarten years. I will provide information on language development in early childhood and discuss why and how to create a language rich classroom, discussing both the teacher's role and how basic materials encourage language. I will do an in-depth look at how blocks and painting can be incorporated into the classroom to promote language and how these materials can both address and help integrate every learning strand and which common core and state standards are met. I will also offer suggestions of other materials that can be incorporated to promote language development in the classroom.

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Introduction

I had the opportunity to work in New Orleans schools as they were rebuilding after Hurricane Katrina. School leaders and teachers were passionate and energized to take advantage of the opportunity to turn around what had been one the worst school systems in the country. However, I found that although the intentions were good, the levels of stress over academic outcomes and lack of understanding of child development led to learning environments that felt uninviting and didn't honor children as learners. Most of the schools operated under a college-prep, compliance model. For example, children were often sent out of class and thus learning time, for infractions like not wearing a belt as in accordance with the dress code or not walking in a straight, silent line in the hallway. Also, the idea of college-prep had been translated into teaching children to the test so that they could get into college, not how to be innovative and critical thinkers who are able to engage in research, discussion and reflection.

After two years away from New Orleans, I came back to observe in some newer schools. What I found was an improvement from two years prior. Schools seem to be moving out of "crisis mode" and starting to think about the long-term effects of how they are educating children. With that said, an understanding of child development and the needs of the children being served is still lacking. The following are observations from three different schools which highlight what still needs to be addressed.

A Publicly Funded Prekindergarten at a Privately Owned Childcare Center

The teachers were warm and upbeat. The children's behaviors and attitudes showed that they felt happy and safe in the environment. The children were responding to the teacher in a positive way. The room was filled to the brim with materials and resources, set-up into work centers. The walls were covered in print and pictures.

     The day began with a whole group morning meeting that included mixed opportunities for listening, moving, and sharing answers to the teacher's questions. The meeting lasted roughly thirty minutes, after which the children went to centers.

     Although there were many other possibilities, the centers opened during this time were blocks, bingo, old maid, library and making a "Hickory Dickory Dock Clock." I immediately went over to the block area as that is a big part of the PreKindergarten classroom that I work in. I observed four children building with wooden blocks. The children freely took whatever blocks they needed from the shelves. When it came time to build, there were a few words exchanged about needing materials that another child had or needing more space. Other than that, very little talking was taking place. I did not observe the teachers come over to engage with the children. I am not sure if this is common practice or if it just happened to be a day when the teachers were busy with other things. When I approached the children and asked them to tell me about their work, I received mostly one-word answers, i.e. "a castle," or complaints about another child in the area.

     Next, I went over to the table where the "Hickory Dickory Dock" clock was being created. This was a required activity and the children who were there were the only ones who had not yet completed it. The activity consisted of cutting out small numbers (1-12) and a big hand and little hand. The children then had to place the numbers on the clock face and glue them down. Finally, the children had to attach the clock hands with a pushpin. Four children sat at the table to do this activity. Teachers checked in a few times to let children know that they needed to cut closer to the numbers or to rearrange numbers so that they were in the correct order.

     All of the children were having difficulty with this activity, but I noticed one in particular and sat with him. His fine motor skills were not strong enough to cut smoothly and closely

around the numbers. He didn't have a concept of how the numbers should be placed evenly around the clock. I offered him resources he could use around the room to help him with this process, like the clock on the wall and my watch. We discussed what the clocks looked like and he placed the numbers in order, but not evenly spaced out. Regardless, his face softened and he held up his work to look at it. It was apparent he felt proud of his work. Then the teacher came by and said that it was incorrect and for me to make sure he placed each number in the correct spot. Immediately, the child hung his head low. When I pointed my finger to the correct placement he seemed frustrated, even resistant. He stopped talking with me. When the clock was completed "correctly," his face tensed again and he would not look at me. He quickly got up and moved on.

This experience made me think about this learning environment. Yes, the children felt safe and were working. There was an abundance of materials available. But, were the children actually challenged to think? What were the priorities, assessment or process? The clock was a final product, but did it really assess where this child was in his development? What did he learn from this experience? And, where was the language? Although some language was heard at the tables with Old Maid and Bingo, in both the block area and clock activity there was little to no language heard among the children, between a child and teacher or the children to themselves.

A Kindergarten Classroom at a Community Charter School

The day began with a 40-minute morning meeting. The teacher's voice was calming, but also enthusiastic about the new material. She was flexible with children moving around or sitting in different positions. The children had jobs (i.e. day counter, weather person, etc.) and the teacher introduced new material about spring. She then asked them questions that required them to repeat back the information she had just shared. The children then went directly to their seats

to do morning work, a worksheet focused around the letter "J". The children wrote the letter, both uppercase and lowercase, traced words that started with the letter, performed a before and after alphabet exercise and then wrote a sentence on the back. About half of the students sat and completed the worksheet, and maybe five of those were smiling as they worked, the others seemed as though they were doing it for the teacher's approval as it was observed that they eagerly went up to show the teacher as soon as they were finished and waited for her approving response. Then there was the other half of the class that was not focused. Some because they did not understand the worksheet and there wasn't enough support for them to stay focused and complete it and the others that were very capable, but were not interested.

The teacher chose a few of the worksheets to review with the class. They looked for capitalization, word spacing and end punctuation. Then the children sat on the rug and did a phonics lesson. For 35 more minutes the children sat on the rug and listened or gave prescribed responses to the teacher's questions. After the phonics lesson, the children broke into centers. The children were able to work at computers, use stencils, dry erase boards, sort foam letters, sort spring and winter pictures, sort colored eggs, work on puzzles of maps, and read in the library. The teacher also chose a few students at a time to do a worksheet at a table where she was sitting.

A boy was at the spring and winter picture sort. All of the pictures of winter pictures involved snow and some sort of winter activity, like shoveling snow or ice-skating. The spring pictures involved images like green grass, leaves on trees, and rain. I watched as the boy placed the pictures under each category. He was having a hard time because there were not enough spaces for all of the pictures he wanted to put under the winter category. This was because he had all of the snow pictures under winter because he knew that snow happened in winter, but he

also placed the rain picture and one of the green tree pictures under winter also. I spoke with him a little bit about spring and winter. He replied that in spring eggs hatch and flowers grow and in the winter there is snow. I asked him about the rain picture and he said in New Orleans it rains in the winter and the trees are green.

In another part of the room, a little girl was sorting brightly colored plastic eggs into an egg carton with corresponding color names taped to the bottom. She completed the activity two times and then decided that she wanted to go around and ask her friends if they would like an egg. When the teacher saw this, she immediately redirected the child back to the area where the activity had been set out and told her to use the materials as they should be used.

Reflecting on this experience, what struck me most was how quiet the classroom was. Also, there were many missed opportunities for discussion and learning. For the boy working on the spring and winter sort, his inability to do the activity "correctly" was actually an incredible discovery that winter and spring look differently in different places. This discovery should have been discussed with an adult and then shared with the group to allow the opportunity for others to share their ideas. For the girl with the plastic eggs, she was showing interest in engaging in language-rich conversations with others, but inflexibility in the structure of this work time prevented this from happening. The work time was set-up so there was no opportunity for the teacher to engage in conversations with individual students. Also, there were almost too many choices, many of them requiring independent work, so that the children were spread out and very little interaction was happening.

A K-1-2 Classroom at a College-prep Charter School

I visited a college-prep charter with a combined kindergarten, first and second grade model. Each classroom had two teachers and about thirty students evenly split between the three

grade levels. The whole group met on the rug for morning meeting. While waiting for the group to unpack, the teacher wasted no learning time and began a game of "I Spy" for those that were ready on the rug. One of the clues given asked a child to find something square on the board. The child confused a rectangle for a square and the teacher took this opportunity to have a mini-lesson about squares. The teacher instructed the children through call and response and movement, tracing the squares on the rug with their fingers. He even extended the lesson into talking about cubes. The children were participating and excited as seen through their smiles and giggles. Once the whole group was on the rug, they began the morning meeting and ran through the daily routine. At points, the Kindergarten students were called on and praised for their ability to answer questions or do tasks that "only second graders" could do at the beginning of the year.

After morning meeting, the students split into grade level groups for their literacy block. While the first and second grade got right to work, silently at their tables, one of the teachers kept the Kindergarten students on the rug for a short meeting. The teacher had created a picture and word chart of the tasks the students must complete during this literacy block. As a class, everyone was working on narrative sequencing and so it was the plan that the Kindergarteners would meet with the teacher in small groups to continue work on their "How to" books. Independently, the children were expected to complete an open-ended writing entry in their journal, a worksheet in the "Day of the Week" folder, a *Words Their Way* sort, practice sight words and read a book on their reading level. The older grades had the same plan, just with more difficult material. The children were allowed to interact with each other while doing their work, but not much talking could be heard.

Reflecting on this visit, there were many positive things happening in this learning environment. There was the opportunity for the older students to model how to do certain tasks.

The teachers were upbeat and involved chants and movement into their teaching. The structure

of the literacy block allowed for a mix of independent and small group work, giving the teacher a

chance to offer individualized attention to each student.

With that said, the Kindergarten work didn't feel like Kindergarten, it felt like second

grade. The teachers did allow the children to interact with each other while doing work, but

because the work was all independent, the children did not take advantage of this. And although

the independent work kept the children occupied while the teacher met with small groups, the

teacher was unavailable to observe or support children with their other tasks. Thus, many of the

children were unable to complete their tasks and the time was not used efficiently.

Reflection

Many really positive things were happening in all three of these classrooms. Most

importantly, it was evident that the children felt loved by their teachers and safe in the classroom

environment. The classroom schedules fostered independence. There was opportunity for

children to interact with teachers in small groups. The walls were print rich.

With that said, I question how much the children were actually learning. Almost all of the

group meetings and activities offered little to no opportunity for creative or critical thinking. It

was focused on, completing the worksheet, playing the game as directed, or finishing the puzzle.

What struck me the most about all three of these classrooms was the lack of opportunities

for language development. There was a prescribed response for almost every interaction. The

language was not complex. There was a lack of genuine conversation between the students and

both their peers and the teachers. This was very concerning.

The following section will look at research on why language opportunities are lacking in

Prekindergarten and Kindergarten and the effects on children living in poverty. The research will

also look at more developmentally appropriate classrooms and what that means for language

learning and school success.

Rationale

There is a trend in education, especially in charter schools, of holding Kindergarten students to expectations that have been traditionally deemed appropriate for first or second grade under the belief that this will close the achievement gap. This trend emerged in the late 1990s, when research came out that showed that "children's abilities at the beginning of kindergarten were powerful predictors of later success" (Tough, 2009). The research said that if you "exposed struggling children to certain intensive reading and math interventions in prekindergarten and kindergarten, when their minds were still pliable, you could significantly reduce or even eliminate the achievement gap"(Tough, 2009). On top of this, some states were predicting the number of prison cells they would need by looking at the number of children who failed the third grade reading tests because the failure to learn to read was so connected with incarceration (Miller & Almon, 2009, p. 49).

Many scholars, administrators, and policy makers took this new information and determined that in order for these "struggling children" to succeed, no time could be "wasted" with play (Tough, 2009). As a result, many Kindergarten classrooms have been restructured, with enormous focus on reading, writing, and mathematics, and constant testing for assessment. The focus is so intense, that many teachers have cut out other subjects, or done away with naptime and outdoor play, to maximize time for reading and math, the only subjects that "matter." (Kozol, 2006). Also, the style of teaching has changed to predominately teacher-directed and product-oriented to meet the demands. Worksheets are now commonplace in early childhood classrooms. What is even more disturbing is that the pressures this environment creates are tricking down to the PreKindergarten level in an effort to get PreKindergarten children "ready for Kindergarten."

There are many problems associated with this "academic kindergarten," including the lack of consideration for the developmental level of Kindergarten students, the out of school factors that impact the children that are targeted for these programs, and many studies that show a negative impact of this kind of teaching. One of the major problems, however, is that it completely ignores the positive impact that language-rich opportunities, like open-ended materials and play, can have on both the student's development and academic success.

Most of the "struggling children" who are targeted in these "academic kindergartens" live in poverty. When thinking about children living in poverty, there are many factors that act as obstacles to school success. Focusing on language learning in particular, low socioeconomic status is related to having fewer resources and parents with less education and less time for interaction, which limits opportunities for word learning (Jalongo & Sobolak, 2010). Data shows that by age three, children living on welfare utilize less than half the number of vocabulary words than wealthy children (Berliner, 2009, p. 28). Furthermore, the research reviewed by Jalongo and Sobolak (2010), shows "children raised in poverty tend to score, on average, one standard deviation below the mean on measures of vocabulary, metalinguistic skills, narrative skills, and sentence complexity in comparison to peers from higher socioeconomic households." (Jalongo & Sobolak, 2010, p. 425).

While it must be acknowledged that the government, both federal and local, has put New Orleans public schools, and even more so charter schools, under immense pressure to raise test scores and has recently passed legislation to bring this down to the preschool level, putting PreKindergarteners and Kindergarteners, especially those living in poverty, on a "fast track" for learning will only provide misleading, short-term results. Many schools are placing a double burden on young children through raising stress levels by ignoring their "zone of proximal

development," and then depriving the children of their chief means of dealing with that stress by eliminating open-ended materials, physical and creative play from the daily schedule. (Miller & Almon, 2009, p. 48).

Looking at the developmental needs, compiled with the needs of children living in poverty, there is much research that contradicts the "academic kindergarten" theories. In terms of the actual impact on student learning, and in particular language learning, there is much research that supports the negative impact of these programs. According to the book, <u>The Best Schools</u> (Armstrong, 2006),"Research suggests that children who have had this type of early intervention tend to perform better in the early grades where rote skills are most helpful, but by the later grades, when cognitive demands of literacy really kick in, they have washed out their gains" (pp. 76-77). The Institute of Education Sciences evaluation of the Reading First program, a government funded program that is heavy on phonics, found that the program did not have "statistically significant impacts on student reading comprehension test scores in grades 1-3. It also found that the program actually "reduces 2nd grade students' engagement in reading and writing" (Miller & Almon, 2009, p. 20). Also, according to the Alliance for Childhood's report, *Crisis in Kindergarten* (2009), "There is no evidence that a heavy emphasis on teacher-led instruction and scripted curricula yields long-term benefits for children. In particular, low-income children, the students this "academic kindergarten" specifically targets, are not showing significant long-term gains" (Miller & Almon, p. 16).

Looking at language development, these programs completely do away with expanding vocabulary by learning it in context. Much research has been done that shows there is "little chance of closing the gaps between students who have adequate and limited vocabulary

knowledge until there is success in developing and implementing a research-based vocabulary development program" (Jalongo & Sobolak, 2010, pp. 423-424).

Acquiring language and supporting children with language acquisition is a very complex task because "each specific aspect of language develops differently, because many genetic and environmental influences have an impact, and no two children have the same influences." (Berger, 2008, p. 243). Thus, schools are responsible for offering children multiple and varied experiences with language so that these gaps in achievement can be closed. School success is strongly connected to early exposure to "consistent, extensive, and rich verbal interactions" (Berliner, 2009, p. 28).

Children, who engage in developmentally appropriate kindergarten programs, have been shown to be much more balanced. This is especially true in programs that utilize materials and structure that promote language development. These children "have better social skills, more empathy, and show more self- control" (Miller & Almon, 2009, p. 7). A relationship between vocabulary knowledge and reading comprehension has also been acknowledged by researchers (Jalongo & Sobolak, 2010).

For the charter schools, which predominate the school system in New Orleans, and predominately, serve children with low socioeconomic status, there is only a certain amount of time to raise the academic scores of students before they lose their charter. There is also now a lot of tension surrounding the integration of the common core standards into curriculum. Curriculum that is offered is inconsistent and doesn't show how to integrate standards into everyday practices. Thus, these more developmentally appropriate methods are being passed over and many schools are utilizing this "academic kindergarten" approach.

There is much that needs to be done to address this issue, but in the forefront is teacher education on what materials promote language and how they should be incorporated into the classroom. "Given the current research on differences in the vocabulary levels of students from varying socioeconomic levels and the critical role that vocabulary knowledge plays in reading comprehension, it is essential that early childhood educators make a concerted effort to build young children's storehouse of words" (Jalongo & Sobolak, 2010, p. 426).

It is imperative that teachers be trained how to accomplish this in their classrooms, while at the same time addressing the common core and state standards. The following section will give teachers an overview of how language develops in early childhood, information that is key to building a language rich classroom.

Language Development in Early Childhood

"No other time in the entire life span is as sensitive to language learning especially mastering pronunciation." (Berger, 2008, p. 245).

For anyone who has taught or observed children in PreKindergarten or Kindergarten, it becomes immediately clear that children in this age range love to talk. They love to play with words, exaggerate, and tell long stories (Wood, 2007, p. 58). And, there is no shortage of conversation partners. If it is possible, they will talk to other children, adults, and it is common to see them talk to themselves in what is often referred to as "private speech." What is even more special about this age is that they are not self-conscious about what they say, so impediments like mispronunciation, misuse and stuttering generally do not get in their way of trying out new language (Berger, 2008)

According to Berger (2008), "Early childhood is a sensitive period for language learning – for rapidly and easily mastering vocabulary, grammar, and pronunciation." (p. 240). From the time children are age two until about age six, the typically developing child may acquire as many as 10,000 words (Berger, 2008). The following sections will look at the types of language children are acquiring, vocabulary, grammar, and the external factors that influence language development

Types of Language

There are two main types of language that children are working to acquire; receptive language and expressive language. Acquiring receptive language requires the child to interpret words that are read or heard. Expressive language is the act of producing language through speech or writing. According to Jalongo and Sobolak (2010), "The language development of young children is unique in that it is estimated that their receptive vocabulary often is four times greater than their expressive vocabulary" (p. 422).

There are two ways children use their expressive language. The first is through public speech, language that is directed at others. It is used in social interactions and can be formal or informal (Bodrova & Leong, 2007). Private speech, or "speech that is audible but not intended for others," is the second way children use expressive language (Bodrova & Leong, 2007, p.66). Theorists have different ideas about private speech as people grow older, but the common thought is that private speech is part of children process for achieving both self-regulation and the step before mental thinking.

Vocabulary

During this time period, vocabulary builds quickly and most children are capable of learning far more language than they do (Berger, 2008). With that said, the amount and complexity of vocabulary acquired in this age range varies, depending on different internal and external factors, like certain disabilities or socioeconomic status. These will be discussed later in the section.

According to Berger (2008), "At this age, children have moved beyond naming things and are adding new "verbs, adjectives, adverbs, and conjunctions as well as many more nouns mastered during early childhood." (p. 240). One of the ways children learn new words is a method called "fast mapping." Berger (2008) describes fast mapping as, "the speedy and sometimes imprecise way in which children learn new words by mentally charting them into categories according to their meaning" (p. 240). As a child's vocabulary grows, so does their ability to fast map. Children will also use "logical extension," the process of learning a new word and then using it to describe different objects within the same category (Berger, 2008, p. 241).

Although children are like sponges at this age and are not hindered by self-consciousness, developmentally there are still many types of words that are hard for them to process. These

words include, comparison words because they depend so highly on context and expressing relationship between space and time. (Berger, 2008, p. 242). Also, words that are not easily understood through pictures or demonstrations can be hard for children to grasp.

Grammar

Children "soak up" all aspects of language. So, similar to vocabulary, the acquisition of grammar rules is influenced by the child's experiences with language. It is interesting because children often learn grammar more effectively through listening and internalizing and then using, rather than learning the official rules of grammar. According to Berger (2008), "Young children learn grammar so well that they tend to apply rules when they should not, a tendency called overregularization" (p. 243). Thus children's grammar may start out correct and it is common at this age that they go through a phase when they regress.

External Influences on Language Development

Although there are typical milestones or developments seen in children in different age groups, the actual language that is acquired is largely dependent on external influences. The cultural practices and structure of their family life and their experiences play the most defining role in what language children develop before they are school age. Because "language is a distillation of the categories, concepts, and modes of thinking in a culture," this home or family language may differ greatly from the language expected for school (Bodrova & Leong, 2007, p. 66).

Conclusion

Thus, at this age, when many children are starting school, it is important for schools to create environments that support this sensitive time for language learning. Children should have many opportunities to grow their receptive language, through being talked to by their teachers and their peers, and their expressive language, through doing the talking themselves. This is

especially true for children who are exposed to external factors that could influence the amount

of language, and more specifically school language, that they have. The next section will discuss

how teachers can create language rich classrooms for their students.

Creating a Language Rich Classroom Through Materials

For children in this age group, the process of learning is more important than the product. This trend for more academic PreKindergarten and Kindergarten classrooms focuses too much attention on worksheets, test taking, and learning to read as early as possible (Bodrova & Leong, 2007, p. 57). Work time centered on worksheets does not give children ownership over the learning process and the number of questions answered "correctly" or the project finished "perfectly" determines satisfaction. In this instance, children are not working for understanding; they are working for recognition from their teacher. And, what is even more disturbing is that there is little to no quality language development taking place. Given the sensitive nature of language acquisition during this age, it is crucial that teachers create language rich classroom environments.

Before choosing which materials to use, it is important to note that there are many different functions of language and to recognize how opportunities can be structured to address all of these functions. Peregoy & Boyle (2005), created a table that combined Halliday's (as cited in Peregoy & Boyle, 2005) functional categories for oral language with corresponding examples in the classroom (p.124). *See Table 1.*

Keeping these different functions of language in mind, it is important to offer a balanced approach to language acquisition. There are many ways to incorporate language-learning opportunities into a PreKindergarten or Kindergarten classroom. Children need several repetitions in different contexts in order to gradually build their vocabulary. Read alouds with opportunities for discussion, singing, group meetings, field trips, and snack all offer this experience. Although these routines should be included into every school day, given my observations there is a great need for ways to incorporate rich language learning opportunities

Table 1 Peregoy and Boyle's Language Functions and Analogous Experiences

Functions	Classroom Experiences
Instrumental = I want; language as a means of getting things, of satisfying needs	Child clarifying instructions from morning routines; asking for supplies in play store or kitchen; asking for book in class library
Regulatory = Do as I say; controlling the behavior, feelings, or attitudes of others	Developing pantomimes and role-playing routines with partners or in groups; determining steps for completing projects
Interactional = Me and you; social interaction; getting along with others	Working in cooperative and collaborative groups on projects, art activities, and play
Personal = Here I come; pride and awareness of self, expressions of individuality	Sharing and telling about oneself; dictating language experience stories to others; sharing personal experiences
Heuristic = Tell me why; seeking and testing knowledge	Asking the teachers and students how something works; explaining the ideas in a story or retelling a story
Imaginative = Let's pretend; making up stories and poems; creating new worlds	Using wordless books to create new stories; using pictures to create stories; using creative dramatics to act out original ideas
Informative = I've got something to tell you; communicating information, description, ideas	Sharing ideas about what should be studied in a project or them cycle; explaining what happened during a school event or describing a favorite television show.
Divertive = Enjoy this; jokes, puns, riddles, language play	Telling riddles and jokes during special time devoted to this purpose.

during children's "work time," times when teachers aren't leading the full group. Through my experiences in the classroom, I have found that the best way to do this is through specific, open-ended materials.

Open-ended materials offer an incredible opportunity for language development because they allow children to bring their own experiences into the work. Child-initiated conversational topics make for more meaningful and cognitively challenging interactions, rather than focusing only on instructional topics (Jalongo & Sobolak, 2010, pp. 426-427). According to Jalongo and Sobolak (2010), "Several studies have shown that when students are active participants in vocabulary instruction, more vocabulary words are learned" (p. 424). These materials naturally

differentiate, so are also accessible to every child, no matter where they are in their development. Finally, they open up space for play, a critical aspect of the childhood classroom that not only promotes language development, but also physical, social-emotional and cognitive development.

When thinking about how to set-up these materials in your classroom, a lot of thought should be put into space, structure, and amount of open-ended materials and any associated materials to maximize language opportunities. Having enough time to use and explore is also key for children to have language rich opportunities with materials. Jalongo and Sobolak (2010) found that "Current research in neuroscience shows that it is not just repetition, but the process of retrieving word meaning repeatedly that strengthens the neural pathways between form and meaning" (p. 424). Because many of these materials address multiple learning strands and standards, they can be made available everyday and even multiple times a day.

Teacher's Role

Equally as important as determining which materials to offer is the role of the teacher once these materials are in place. Teacher's need to set aside times during the day when they can float around the classroom to observe and interact with children. Jalongo and Sobolak (2010) determined that "The amount of talk between children and adults predicts oral language development (pp. 426-427). Thus, times that these materials are made available should be structured so that there are opportunities for individual conversations between the children and the teacher.

There are four main roles the teacher should take on during these times. First, the teacher should engage in conversations with individual children by asking open-ended questions that open up a shared dialogue. Second, in order to support children in their language interactions with peers, teachers are responsible for modeling how to interact with peers. Throughout these

times of one-on-one conversation and supporting interactions with peers, teachers are responsible

for modeling the use of new language. Finally, teachers should constantly be listening to

children's thoughts and ideas and helping them to fill in where language is missing.

The next two sections will focus on blocks and painting, as I believe these materials not

only offer incredible opportunities for language development, but also a comprehensive

experience for the whole learning and developing child. I will look at how these materials relate

to language development and offer opportunities for language to function in multiple ways, how

they can be set-up and used in the classroom to promote language and the teacher's role. I will

also show how these materials meet all of the learning strands and many of the common core and

state standards.

I. Blocks

Blocks offer multiple and varied opportunities for language development. The first section will look at the connection between block work and language development. A guide on how and when blocks should be used in the classroom to promote language and the role of the teacher will follow. Finally, considering all of the other benefits of blocks and the pressure on teachers to address the common core and state standards, there is a section on how block work both addresses and offers opportunities to integrate each learning strand and address standards.

Blocks and Language

Blocks offer multiple and varied opportunities for language development. Language opportunities happen between the child and teacher, among the children as they work side-by-side or together, and through private speech. The materials, building process, and associated dramatic and symbolic play offer new and exciting vocabulary and the chance to practice using it, in context, repeatedly. Part of this new vocabulary is a shared block language in reference to the names of blocks. Depending on the group of students and the goals of the teacher, this language can already be established when the children enter the classroom or the children can be engaged in this process. If the children are going to name the blocks, it is important to let them work with the blocks for a week or so, getting to know the physical properties of the blocks and then start the naming process. As children listen to each other and the teacher talk about the block building process, they are able to take in grammar structures and then try them out on their own.

Most of the language functions determined by Halliday (as cited in Peregoy & Boyle, 2005) are used throughout the block work experience. Instrumental language is used when children need a particular block or accessory for their building. For example, a child might ask a

teacher, "I need a book about boats to help me build my cruise ship," or "I need long blocks (quadruple unit blocks) to build my road." Regulatory language is a natural part of work with a partner, especially at the first stages of partner work, which generally emerge in Prekindergarten and Kindergarten. Regulatory language is needed when working with another child or children on a building project. For example, a child might say to his or her partner, "We need to start by building a fence for our house."

Block building is a very social experience, even when a child is building alone. Because of the nature of classroom environments there is limited space and blocks available that children must share and thus interactional language is critical to making this process go smoothly (Wellhousen & Kieff, 2001). When determining where to start a building, a child might say to another, "Do you need more space for your building or is it okay for me to build here?" Block building is a very personal experience, whether it is the experience of building or a representation of something from another life experience, children have the opportunity, and from what I have observed, love to use personal language to tell others. A child might build a house and then describe it in the following way, "Here is my house. This is where I sleep. I sleep with my brother and sister. See them in the bed with me?"

When a child is in the process of or has reached a new stage in block building (these will be explained in the *Teacher's Role* section), the language can often be heuristic. After making a discovery about how to build ramps, a child might say, "The round block (large cylinder) rolls down because this part of the building is higher than this part." This would be a key place for a teacher to model the use of the word "ramp" for the child.

For young children, the block building process is inextricably linked to both dramatic and symbolic play. Children use imaginative language to replay events that have happened, retell

familiar stories or make up original stories. A building with brown cubes on the inside and blue cubes on the outside might be described as "a fortress that protects the monkeys (brown cubes) from the zombies (blue cubes)." Finally, the language of block work is largely informative because children love to talk about their buildings and describe the process. After building the Crescent City Connection, a child might say, "I added pieces of paper that are colored yellow to the bridge because the Crescent City Connection lights up at night."

Although all of these language opportunities are possible within block work, much needs to be done to make it happen. The way the block area is set-up, the structure for how and when the blocks are used and the teacher's input are all critical for promoting language development.

How and when blocks should be used to promote language

When setting up your block area, it is important to think how the set-up can promote language experiences for your children. The space should be large enough so that at least six students can comfortably build alone or together. This allows for individual, partner or small group work, which offers varied experiences for language. It is important to give children a defined area for building. This is an important part of the social experience of block building, creating the stage for practice with interactional language. With that said, depending on your students and the flexibility of the furniture in your classroom, there can be days when the block area is extended and children can build outside of the defined area.

It is also important to think about where the block area will be in your classroom. The location and space allotted depends on the role blocks take in the classroom. If blocks are one of many separate experiences, the block area should be against a wall and enclosed by short shelves (these can hold the blocks or other materials). This is important so that both teachers and other children can observe what is being built. Children observing and learning from each other is an

extremely powerful experience and can promote interactional language opportunities. If blocks are the focus of your curriculum, the blocks should be in a large, central area, so that children can easily access these materials.

The surface should also be considered. While it may be tempting to put the block area on a rug to muffle the sound of blocks falling, rugs can make it hard to balance blocks. It is best to have the block area on a flat, hard and smooth surface, so that children experience the true nature of blocks.

The amount of blocks in your classroom depends first on the number of students in the class and how many will be allowed to build at a time, and second, your budget. Ideally, you want about 450 blocks for every six students. Unit blocks are best because of the mathematical language and opportunities inherent in the way the blocks are made. Also, they are made from solid hardwood, so they are durable and can last for decades. It is important to have a mix of different kinds of blocks, as these will not only add vocabulary to the everyday conversations, but will also allow for more varied building themes and thus more varied conversations about the buildings.

| *Quadruple Unit Block* | *Double Unit Block* | *Unit Block* | *Pillar* |

| *Half Unit Block* | *Ramp* | *Elliptical Curve* | *Large Cylinder* |

It is also important to consider accessories for children to use on their block buildings. Some examples include, colored cubes, cloths, cups and plates, basic wooden people and animals and books. Colored cubes are aesthetically pleasing to children and can be used in multiple ways to enhance the block building process. They can be the lights in a house, the food in a restaurant, or a monster attacking a fortress. Patterned cloths, of varying sizes can also add dimension to block building and play. They can be used as a blanket in a crib or a bed or a bandage in a doctor's office. If you don't have a dramatic play center, cups and plates are an important addition to the block area. Cooking and restaurant play is a very common topic with this age group. Basic wooden silhouettes of people and familiar animals are important, because they help children make the leap to symbolic play and move away from working within their structure and begin using the structure as the center of the play. Finally, books are an essential part of a block area. Both fiction and non-fiction books should be available to serve a both inspiration and resources for research about an idea. Below are examples of accessories and how they are used in block work:

Cloths & weaving   *Colored cubes*   *Plates & cups*   *Wooden people & animals*

In order to be truly effective for the promotion of language development in the Prekindergarten and Kindergarten classroom, blocks should be offered daily. It is also crucial to give children enough time to both build and play or discuss their work. Although language does occur during the building process, it is when the building is done and the children get to play in or with their buildings that rich and varied language use occurs. Although the materials will stay mostly the same, the structure of block work in Prekindergarten and Kindergarten is different

PreKindergarten

For a Prekindergarten classroom, the block work should reflect children's personal experiences and interests. With that said, it is okay to inspire children through familiar pictures on the wall or provide them with new experiences through field trips. These trips can be as simple as a walk around the school, to a playground, or around the neighborhood. Below are two examples of PreKindergarten builds inspired by in-school trips:

INSPIRED

A trip to the 2nd grade's model of the Brooklyn Bridge

The PreKindergarten to build their own version complete with barges going under the bridge

Other simple trip ideas include a visit to the library or the cafeteria. For PreKindergarten, the block buildings should be picked-up at the end of each work period. This routine offers space for either new ideas to emerge or old ideas to be repeated and extended daily.

Young children are natural observers. Even if a child isn't working in the block area, they can be intrigued by what another peer is building and enter into a conversation about both the building process and what it is. It is important to foster curiosity and language opportunities by designating times, like group meetings, for children to talk about their block work and for other children to ask questions and make comments.

The pick-up process is an integral part of the learning process. In the block area, pick-up should be thought of as just another part of block building from the time the material is introduced. Considering the physical development of most children at this age, children should pick-up no more than two or three blocks at a time. Before the blocks are picked-up, children should stack blocks according to shape by twos or threes. Once the blocks are stacked, the children can pick-up the blocks. If it works with the clean up in the rest of the room, teachers can make a game out of pick-up. Challenging children to guess which blocks to pick-up through clues that involve rhyme or mathematical thinking is always a favorite. For instance, a teacher could say, "We are going to start by picking up the longest/shortest block." This offers a chance for children to hear new vocabulary, and requires them to work on their receptive language, internalizing and thinking about directions before acting.

Kindergarten

If children have not participated in a PreKindergarten with block building, the Kindergarten block curriculum should be very similar to the PreKindergarten block curriculum. If children have had experience with blocks that allowed them to explore blocks based on their own interests and experiences, the curriculum can change to more topic-centered, offering different language experiences. Teachers can integrate "studies" into the block work. For example, the class might study the school, the neighborhood, or commonly known local sites

(i.e. the superdome, the zoo, and the fairgrounds). This creates the opportunity for children to add to their existing vocabulary associated with each study. Partner or group work can also become central to the building process. As partner or group work is built into the block-building curriculum, planning conversations are required for beginning the building process. When children decide to work as partners or in a group, constant language is vital to success as ideas, expressed through imaginative language, and processes, expressed through functional language, are constantly being shared, merged and changed. When children do work together, the play associated with building offers a change for rich, imaginative language to be explored.

One way to carry this out in your classroom described by Scott Larson (1997), is to begin Monday with a block-planning meeting. Larson (1997) created a chart with two columns, "building ideas and builders" (p. 32). Key to this meeting was that the children's suggestions are real and local so that they can be visited if necessary. The children then are either assigned a building or choose which building they are interested in creating. This is up to the discretion of the teacher and can provide opportunities for teachers to see how different students work together. The first day of the build is focused on the actual blocks. Each day moving forward allows an opportunity to add accessories and work within the building. The buildings generally will stay up for the entire week, a shift from PreKindergarten, and maybe even longer depending on the nature of the build.

Example of a group build in a Kindergarten classroom

Although pick-up may occur at a much later date, it is still important to have a structured pick-up routine. As with PreKindergarten, it is still important for Kindergarten students to work on their receptive language and the process of internalizing the words and then acting on them promotes greater understanding.

Teacher's Role in Promoting Language through Block Building

Setting-up the block area and determining the structure of block work time is just creating the foundation for language development. Teachers are responsible for asking open-ended questions to open up a shared dialogue about either the building process or the structure and associated play scenario. Teachers are responsible for modeling how to interact with peers in the block area and while building with others (*regulatory/interactional/informative*). Teachers are responsible for modeling the use of new language, either during these times of one-on-one conversation or interactions with peers. Finally, teachers should constantly be observing children build and interact with others, listening to their thoughts and ideas, in order to help them fill in where language is missing.

In order to effectively support children with their language development, it is important for teachers to understand how block building develops. It has been determined that there are specific stages that children move through with block building. There are seven stages of block building *See Table 2*. It is important to note that the stages of block building do not directly correspond with the age of the child, but with the child's experience with blocks. For example, a five-year-old who has never used blocks before will need to spend some time exploring the physical properties before moving on to creating figurative representations. On the flip side, because of the open-ended nature, a four-year-old who is ready to start creating figurative representations has the opportunity to move forward.

Table 2   The Seven Stages of Block Building

Stage	Identifying actions or behaviors
1. Carrying	During this stage blocks are carried around, not used for construction. *This stage applies to the very young child, and may be skipped by children who are introduced to blocks at an older age*
2. Building Begins	During this stage blocks are mostly made into rows, either horizontal (on the floor) or vertical (stacked). There is much repetition in this early building stage.
3. Bridging	During this stage two blocks are placed with a space between them and connected by a third block on top
4. Enclosures	During this stage, blocks are placed in such a way that they enclose a space
5. Patterns and Balance	During this stage, more blocks are used to create more elaborate designs, using pattern and balance. Towers start to emerge in this stage.
6. Early Representational	During this stage, block structures are named for dramatic play *Naming may have begun earlier, but in this stage the names are related to the function of the building*
7. Later Representational	During this stage, block buildings often reproduce or symbolize actual structures the children know

(Apelman, 1996/Wellhousen & Kieff, 2001)

A teacher should observe before offering support and think about what language functions are needed and be thoughtful about the words they will use. Children in PreKindergarten will most likely need more support than those in Kindergarten, unless those children did not attend prekindergarten or attended a PreKindergarten that didn't offer block play.

A child may need a teacher's support or have a question during the building process, a teacher may check-in with a child to share what they are building. One very important thing to

note when interacting with a child is to avoid guessing what they made, i.e. "That is a very nice house" because it may in fact be something very different. Also try to avoid questions that can have one word answers, like, "What kind of building is this?" Examples of questions that engage children in further conversation are, "What is your plan?," especially when children are just starting the building process or "Tell me about your building." It is also very important to note that children may just be building for the sake of building and may not have a plan.

A teacher engaging with children in the block area should also be modeling and supporting children to engage in conversations with each other. For example, a teacher might notice that a child wants another child to do something specific with a block, but doesn't have the words. The teacher could say, "Martin, I notice you want Carey to move this unit block. Where do you want him to move the block?" After the child either says or points to the location, the teacher can model, "Ok, Martin. You can say to Carey, 'Carey, can you move the unit block next to the pillar?" If two children are building together, they may need support with hearing each other's ideas. The teacher could say, "Chanel, you and Keith have decided to work together. You have shared your ideas and now it is time to listen to Keith's ideas. Keith, you can say to Chanel, 'It is now time to listen to my idea.'" Or, if two children are having trouble listening to or compromising their ideas, a teacher might say, "It sounds like it has been hard for you to work on the same building together today. If you still want to work together, maybe you can make your own buildings and then connect them."

The teacher should make comments about the building, modeling language for the child, however, these should be more descriptive. Below is an example of a child's block work and ways to comment to model language use:

A building common during Stage 3	A building common during Stage 5
I notice you have used double unit blocks in your building. You made two lines of double unit blocks standing up (or vertically) and then connected them by laying more double unit blocks flat on top.	*I notice you have used rectangular blocks to make a curved building. You have created a pattern with your blocks that have helped them stay balanced as your building has gotten taller.*

Finally, it is the teacher's role to help children fill in words that are missing. In order to do this effectively, teachers must observe children to figure out the language they already know. For example, as a teacher you might notice that a child is trying to describe to another child how to build a tower and the other child looks confused. The child might be saying, "I want lots of blocks that go up high." As the teacher, you could say, "It sounds like you want to build a tower."

Additional Benefits of Block Building: Addressing Learning Strands and Common Core and State Standards

Both the building and play components of block work have the possibility of integrating all learning strands and thus addressing multiple common core and state standards. In this section I will look at how block work offers opportunities for children to build English Language Arts, Math, Science and Social Studies skills.

English Language Arts

Although it may not seem apparent, using blocks in the early childhood classroom can help build a strong foundation for language and literacy. The symbolic nature of blocks, "helps to prepare children to understand abstract symbols used in reading and writing" (Wellhousen &

Kieff, 2001, p. 92). For example, a child being able to decide that a ramp shaped block will be a boat and then using it as such throughout a play scenario, will help a child with the process of accepting that "A" is a letter and that it can also look like "a" and that it makes the /a/ and /A/ sounds. Block building can also be a motivation for children to begin the writing and reading process, especially when entering the 6th and 7th stages when representational buildings become the main focus. Children become interested in reading informational texts to find out information to help them build their intended structure or create signs to help others recognize the building. As was mentioned before, working with blocks allows for multiple and varied language opportunities on a daily basis. In particular, when thinking about skills needed for reading and writing, these opportunities all promote storytelling, a foundational skill for learning to read and write (Wellhousen & Kieff, 2001)

Looking at the Common Core State Standards for PreKindergarten, the use of block building and play in the classroom can address all of the speaking and listening and language standards on a daily basis. Block building and the associated play also addresses some of the foundational reading skills and writing standards. For Kindergarten, again the standards for speaking and listening are largely addressed and opportunities for addressing the foundational reading skills and writing standards are extended. Refer to Appendices 1 and 2 for a more in depth look at exactly which standards are addressed and how.

Math

In addition to helping children develop logical thought process, block play provides multiple opportunities for children to explore blocks and other materials and to construct both physical knowledge and logicomathematical knowledge. This knowledge is the basis for mastering skills like, "counting, sorting, classifying, identifying shapes and understanding equivalencies and part-to-whole relationships" (Wellhousen & Kieff, 2001, p. 90).

Block builders also explore the geometric and numeric relationships among blocks. An important aspect of unit blocks is that each is related to the others in a regular mathematical fashion. For example, a unit block is double a pillar or a ramp and half of a double unit block. Block pick-up involves classifying and sorting blocks into categories in order to return them to the shelves (Larson, 1997, p. 36). Children also explore the mathematical concepts of distance and length. This is especially apparent during the third stage when children are thinking about how far part their base must be in order to successfully build a bridge (Wellhousen & Kieff, 2001).

Looking at the Common Core Standards, both for PreKindergarten and Kindergarten, almost all of the standards are addressed through block building and the associated play. Counting and Cardinality are addressed through the building process, thinking about how many blocks are used and in what order were they used to create the building. Operations and algebraic thinking are explored through the building process. For example, when thinking about making a space bigger or smaller, children must think about how many blocks need to be added or taken away to get the size that they want. This thought process is also related to the concepts of Measurement and Data. Children compare the size of different blocks when thinking about the size and space available in their building. Finally, because of the physical properties of blocks, children are constantly identifying and describing shapes, which are foundational geometric ideas. Refer to Appendices 3 and 4 for a more in depth look at exactly which standards are addressed and how.

Science

Through block building, children get practical experiences with concepts in physics such as the size, shape, and weight of blocks, and the effects of gravity and balance. Children explore the idea of balance through stacking blocks on top of each other. And discover the law of

gravity, when buildings or blocks fall down. Children are also experimenting with balancing weight equally, discovering that the criss-cross pattern of blocks will create a steady building with height. They also have an opportunity to experience the properties of wood. By manipulating the blocks children learn that wood does not bend and that they can't change it's shape with their hands.

Looking at the Louisiana State Standards, both for PreKindergarten and Kindergarten, many of the Science as Inquiry and Physical Science standards are addressed through block building and the associated play. In Kindergarten, as children are progressing in their block building and topic-specific group builds begin, more of the Life Science standards are also addressed. Refer to Appendices 5 and 6 for a more in depth look at exactly which standards are addressed and how.

Social Studies

Block building and the associated play, especially for young children, are centered on creating the world (building) around you and figuring out how to live in it (play). Whether you are utilizing an emergent curriculum based on the interests of the children or thematic units, block building can address many of the social studies standards set by the state of Louisiana, both for PreKindergarten and Kindergarten. Block work builds chronological and historical thinking skills as children think about past experiences that they want to recreate or move into the process of planning and reflecting during longer term builds. Block work builds an awareness of maps, globes and the environment as children begin to recreate the their immediate environment and then extend outward from home to school to neighborhood to city. Children develop skills on what it means to be a productive citizen through both the way they work with each other in the block area and the roles they take on in their dramatic and symbolic play. Finally, block work and play helps build basic economic concepts because of the material and

space to use it is limited and through dramatic and symbolic play. Refer to Appendices 7 and 8

for a more in depth look at exactly which standards are addressed and how.

II. Painting

        Like blocks, painting offers multiple and varied opportunities for language development. The first section will look at the connection between painting and language development. A guide on how and when painting should be used in the classroom to promote language and the role of the teacher is next. Finally, like with blocks, there is a section on how painting offers opportunities to integrate each learning strand and which standards it meets.

Painting and Language

        Painting is a means for expressing internal thoughts, ideas, and feelings (Larson, 1997). Talking about children's work offers a plethora of rich language experiences. Painting can include language both during the painting process and when the child feel like the painting is completed. Children talk with each other, with the teacher or to themselves while painting. The materials, tools and actions associated with painting offer the opportunity to engage with interesting vocabulary and experiment with grammar structures. Church (2005) and Schirrmacher (1986) offer a comprehensive list including, color (names of shades, light and dark), shape or form (circle, square, triangle, flat, fat, big, little), pattern, texture (bumpy, fuzzy, lumpy, soft, smooth, hard), line (long, short, straight, curvy, thick, thin, spiral, slanted), mass or volume, and space (front, back, high, low, near, far)."

        Like with block work, most of the functions of language are used throughout the painting experience. Instrumental language often occurs with painting, especially at the beginning of the year when children are learning about the routines, expectations and tools associated with painting. For example, "I want to make small dots, can I have a smaller brush," or "I want more paint." Both regulatory and interactional language are used when children decide to paint together. Partner painting provides a situation when children have to work in a very small space

with a very limited amount of materials and within those limited resources share and combine ideas. There is a lot of give and take between regulatory and interactional language to make these experiences productive. A child might say to another child, "I don't want you to paint on my side. This is my side and this is your side." Painting is an extremely personal experience. Whether it is the experience of using color and movement to express feelings or emotions, or depicting a specific experience, most children love using personal language to tell about their paintings. They often paint themselves or their family, even before they reach the figurative art stage. A child might describe a painting as "This is me and my mommy. We are at the grocery story. I love buying cookies."

As children move through the stages of painting (addressed later in the Teacher's Role section), language will often be heuristic. It might be inquiring about how to make a certain color or how to make a specific kind of mark with the brush. For instance, a child might say, "How do you make light green. I mixed blue and yellow. Now what?" Conversely, the language surrounding painting can also take on an imaginative function. For example, a blue blob in the center of the painting with side-to-side, yellow strokes may be described as "a monster attacking a super hero." Finally, the language associated with painting will also take on an informative function. When children are asked about their paintings, they might share, "I covered the whole page with pink paint that I mixed on the tray and then added dots with a small brush."

As with blocks, there is much that needs to be done to build the foundation for making these rich language opportunities a reality. Again, the set-up, structure for when and how painting is used and the teacher's input all play a crucial role in setting up these language experiences.

How and when painting should be used to promote language

When setting up your painting area, it is important to think how the set-up can promote language experiences for your children. A set-up for at least two children and no more than four children is recommended, otherwise the area will need to be too large. The children should be able to see each other's paintings and paints as both the painting process and mixing of colors can promote an interesting conversation. If you are able to put easels in your room, the set-up below is space efficient:

Two easels are mounted to the wall, side-by-side and there is a
standing easel with space for two child to paint back-to-back.

With this set-up, children have the opportunity of easily looking at one to two other paintings. As long as there are other paintings clearly in their eyesight, the mystery involved with back-to-back easels can also initiate language opportunities. Another option is tray painting on tables. Like with easel painting, children should be able to see other paintings during their process. A long table that allows children to paint side-by-side is suggested.

Other important considerations include an area that is close to the sink, to aid in the clean-up process, space for additional materials, like extra paints, smocks, paper, and how the tray and the easel should be set-up. Not only does painting involve opportunities for spoken

language development, but the set-up can also start conditioning behaviors and actions for

reading and writing development. Below are ways to set-up either the easel or tray so eye and

hand movement is constantly happening from left-to-right:

Tray set-up

Easel set-up

The tray is set up with the brush furthest to the left, the first material children use.

Children then wet or clean the brush in water, dry it with the sponge, pick or mix their color on

the tray and then begin to paint on the paper, which is farthest to the right. With the easel, the

paper is above, so the movement goes from the brushes all the way to the left and children move

along to their mixing jar which is all the way to the right.

Once the location and set-up of your painting center is determined, it is important to think

about when and for how long painting will be offered. Painting should be offered during a "work

time" or, considering the multiple connections with reading and writing, during a literacy block.

Since painting offers experiences that are both familiar and new, it should be offered everyday.

Children may not choose to go to the painting center everyday, but it should be offered. There

should be plenty of time for painting as well because for young children it is more about the

process than the product and more often than not, children love to talk about the process or tell a

story while painting.

As you can see from this picture, two children were painting next to each other. As the child was painting, she was telling a story of ducks "waddling over a banana on their way to the pond." The yellow dots are their footprints.

The painting curriculum should look similar in PreKindergarten and Kindergarten. What will change is the language used during and about paintings as children move through the developmental stages of painting and their vocabulary grows. Children in PreKindergarten and Kindergarten love mixing colors. In order to encourage language use and extension, these colors can be saved for later use and named. Children may use imaginative language, like "Golden fire" or "Spy," or informative language like "Raspberry" or "Light Purple." Below is an example of what this could look like in your classroom:

The chart on the wall serves as a reference guide for other children to mix their colors. If a child has a question about making a color on the chart, he or she can ask the child who made the color how they did it. A small shelf should be made available so that children can save their colors for later use if they choose. Finally, an example of a way to label the jars.

There should be ample opportunities for children to both observe each other's paintings and to share about their own paintings with the group. An interesting language opportunity is to choose a painting to share at your group meeting. First it is important to ask the child whose

painting it is and if they agree, they should keep it a secret until the teacher signals it is time to tell the class. The teacher then opens the floor to students' comments about the painting, asking what they notice. The amount of guidance by the teacher depends on the age and the group (i.e. in PreKindergarten the teacher may have to support more than in Kindergarten). After children have shared comments, the teacher asks the artists to share a few things about his or her painting (depending on the student, two to three is usually a good amount). After the artist shares, the floor is then opened up again to the other children to ask questions.

The clean-up process allows children to think about and act on language they have received. For example, children may be introduced to the vocabulary of "fresh" and "mixed." "Fresh" paints are paints that can be used again by other children, whereas "mixed" paints should be cleaned, unless the child wants to keep it for later use.

Teacher's Role in promoting language through Painting

Setting up the paint area and determining the structure of painting is just creating the foundation for language development. Teachers are responsible for asking open-ended questions to open up a dialogue about either the painting process or what the child has created on the paper. Teachers are responsible for modeling how to interact with peers in the painting area and while painting with others. Teachers are responsible for modeling new language. Finally, teachers should constantly be observing children paint and interact with others, listening to their thoughts and ideas, in order to help them fill in where language is missing.

In order to effectively support children with their language development, it is important for teachers to know how painting develops. There are six stages of painting. *See Table 3.* Similar to block building, it is important to note that the stages do not directly correspond with the age of the child, but with the child's experience with painting.

Table 3 The Six Stages of Painting

Stage	Identifying Actions or Behaviors
1) Motions and the Marks They Make *(Ages 1 ½, 2, 3)*	During this stage, the sensory aspects of painting are more important than what is produced. Children enjoy the feeling of moving a brush around and the discovery of what is produced by that movement
2) Finding Out About Lines, Shapes, and Colors *(Ages 3,4,5)*	During this stage, may deliberately try to keep colors separate in order to experiment with lines and colors. Conversely, this stage also involves the beginning of mixing colors either directly on the page or in a jar
3) Designing *(Ages 4,5,6)*	During this phase, a shape or a mark can serve as the theme for the whole picture, often covering most of the paper. When the whole page is not covered, it seems that children intentionally place shapes so that the unpainted portions of the picture contribute to the whole design
4) Simple Images *(Ages 5,6,7)*	During this phase, paintings begin with the most basic symbols to represent objects. Later in the stage, more attributes are added to these symbols. These symbols are combined into scenes. * * Paintings during this time are characterized by their personal quality*
5) Richer Symbols *(Ages 7,8,9)*	During this phase, symbols are no longer constructed on the fewest possible attributes needed to define the subject. In these pictures, people have waists and joints that bend. - Two dimensional - Depth is included
6) Metaphors and Styles *(Ages 9, 10, 11)*	During this phase, visual images are used as symbols or metaphors for emotions or concepts. - Growth in understanding of conventions of perspective as seen through varied viewpoints

(Smith, Fucigna, Kennedy, and Lord, 1993)

For example, a five-year-old who is not experienced with painting will need to spend some time exploring the way a brush can move on the page. making marks. And just like blocks, because of the open-ended nature, a four-year-old who is ready to start creating simple images has the opportunity to move forward. It is also important to recognize that children may regress in certain areas when trying out new concepts. So, if a child is working on design, he or she might discontinue color mixing for a while and focus on primary colors.

When a child approaches you about his or her work, it is highly recommended to pause before responding (Church, 2005; Schirrmacher, 1986). The pause is beneficial in two ways. First, it allows the child a chance to speak before you respond. It also allows the teacher a moment to formulate a thoughtful response. When you are ready to respond, it is important for teachers to ask open-ended questions when interacting with children about their paintings. "When we tell children what we see in their painting and what we like about it, we are often imposing our own personal sense of style on something that may be very different from what they imagine (Church, 2005). A statement as simple as, "Tell me about your painting," can be very effective for opening up dialogue with a child. Looking at the painting below, from the second stage, here are some examples of questions and comments that would be appropriate:

I notice you used different colors to make the same circular shape with your brush. What did you do with your brush to make those marks? You also have a big shape in the middle of your paper. You used lots of colors to make this shape. Can you remember which colors you used? What kind of lines did you make inside it? What did you use to make those lines? How did you move your arm?

As was mentioned before, children express themselves through their artistic movements. As a teacher, you can help them translate those emotions and feelings into words. Discussions

about paintings are an ideal time to help the child attach feelings or emotions to their work. If a child seems proud, you might say, "You worked very hard on this painting and have shared a lot about it. You seem very proud of your work." If the child decided to tell you a description or story about the painting, you can ask if the child would like you to write down their words and you can do this on the back corner of the painting, so that you don't interfere with the aesthetic intentions of the child.

A teacher engaging with children in the paint area should also be modeling and supporting children to engage in conversations with each other. For example if one child is trying to mix a light green and you notice another child has just mixed and used one on their painting, you can say, "Clarice, why don't you check in with Zion. I noticed that he just mixed a light green. You can say, 'Zion, I am interested in mixing a light green. How did you make your green?'" Depending on the child, this may be enough for them to approach the other child independently or they may need further support with actually asking the other child for help.

Modeling new language is the third way teachers can support children's language development through painting. Teachers can use their understanding of the stages of painting to select the art-centered vocabulary they want to use when talking with a child about their painting. For example, looking at the picture below a teacher might say:

*You decided to cover the whole page with your design. You used the colors from the easel and mixed your own colors. The center of your painting is a dark purple. On each side, you have the same pattern of vertical lines, lines that go up and down. Your painting is symmetrical. If we drew a line down the middle, it looks the same on either side (*model for the student).

Finally, it is the teacher's role to help children fill in words that are missing. As with blocks and any other material provided, teachers must spend time observing children to do this effectively. For instance, a child who is spending a lot of time talking about the movements he or she makes to create certain lines would be ready for more technical positional words. A teacher could say, "You created a vertical line when you moved your arm up and down." Another example would be after observing that a child is spending a lot of time painting different elements of the environment (trees, clouds, blades of grass, hills, etc.), offering he or she the word "landscape"

An important part of this observation and support, is being aware of how your children use the painting center. Children use painting centers in different ways. For some children, painting can serve as a transition from one activity to another and they spend only a few minutes. It is important to identify these children and make sure you find opportunities to have conversations with them before they move on.

Additional Benefits of Block Building: Addressing Learning Strands and Common Core and State Standards

A painting area in your classroom offers the possibility of integrating all learning strands and addressing many common core and state standards. Below is a look at how painting offers experiences for children to build English Language Arts, Math, Science and Social Studies skills.

English Language Arts

Besides the language component that has been addressed in the sections above, painting plays a large role in building the foundation for reading and writing. The act of painting a scene and then telling an associated story builds an awareness of the connection between illustrations and words read, important for the beginning reader.

With regard to writing, children usually paint before they write. Painting is a way for children to put their thoughts and ideas in visual form. An important part of learning to write is having things to write about. Also, gripping a brush and controlling it to make the marks you want develops the fine motor skills that are needed for writing.

Painting and the associated talk allow children to explore the concepts of character, setting and major events. As children progress through the stages of painting, they begin to add more description/detail, which helps the viewer understand what his happening. This mirrors the progression of writing and more complex reading.

Looking at the Common Core Standards, painting begins to address reading standards for literature in PreKindergarten, but it is really extended in Kindergarten when children generally understand the components of books and begin to paint more representational figures. Painting offers many opportunities to address writing standards through using pictures and oral language to share their story. We also see children experimenting with letterform and writing their first words, generally their name. Like blocks, painting covers most of the speaking and listening standards through the act of talking about the painting process and product. Refer to Appendices 9 and 10 for a more in depth look at exactly which standards are addressed and how.

Math

Many mathematical concepts are explored through painting. In the beginning stages of painting children explore lines, shape, patterns and space. The process of color mixing requires problem solving skills, like red + yellow = orange. And thinking about quantities for getting different shades of a color, more red than yellow makes a darker shade of orange.

These concepts and processes are directly linked to many of the Common Core Standards. The most obvious link is building geometric ideas, especially in the beginning stages. Children think about how they need to move their brush to create different shapes and using lines

to create patterns. Painting also supports building counting and cardinality skills as children begin to analyze their paintings. Refer to Appendices 11 and 12 for a more in depth look at exactly which standards are addressed and how.

Science

Painting is a very scientific experience. Color mixing introduces children to the concept of change. When you combine different things, they can change form. Also thinking about how the paint changes from when it is in the jar to when it dries on the paper. Children often explore concepts associated with weather, landscape, changes in the day, and natural phenomena. An ocean scene may begin with fish shapes and as children learn more about ocean life the background may become all blue and the fish shapes are layered on top.

Looking at the Louisiana State Standards, both for PreKindergarten and Kindergarten, many of the science concepts are addressed through painting. Children participate in scientific inquiry though the actual painting process, wondering about the materials and when asking questions about the environment around them. Physical science standards, especially properties of objects and materials are addressed through the process of painting. Children also engage with life science and earth and space science through painting. As their paintings become more representational and detailed, teachers can see how children have integrated new knowledge into prior conceptions. Refer to Appendices 13 and 14 for a more in depth look at exactly which standards are addressed and how.

Social Studies

Painting offers an inside look into how children perceive their world. Paintings change as children's knowledge base expands and their painting skills enhance. Painting offers a wonderful guide for teachers on how to structure a social studies curriculum because it shows exactly what is important to the child.

Painting offers children opportunities for practicing social studies skills required by the Louisiana State Standards. Children use chronological and historical thinking skills when painting about things that have happened in the past or that they hope to do in the future. Paintings also reflect the culture that the children experience. Painting offers a foundation for thinking about maps, globes and the environment as children start to not only paint themselves and how they relate spatially to the world around them. Students start thinking about the concept of citizenship and economics through the actual sharing of materials and space and through thinking about the roles people take on in their community. Refer to Appendices 15 and 16 for a more in depth look at exactly which standards are addressed and how.

III. Additional Materials that Promote Language Learning

While this study focuses on blocks and paint, there are many more materials that teachers can integrate into a work time that promote rich language learning opportunities. These included, but are not limited to, dramatic play, felt boards, drawing, and clay or playdough.

Dramatic Play

While dramatic play is happening in the block area, it is still important to offer an area solely devoted to dramatic play. A dramatic play center offers more concrete materials, which can be changed or added to depending on the interests of the children or the topics of focus in the curriculum. Children take on roles and act them out experimenting and using associated language. For instance, children running a coffee shop think and talk about what they are going to wear, what they are going to sell, how much they are going to sell it for and then how to treat customers.

Felt boards

Like Dramatic Play, felt boards offer a more concrete experience for language learning. Given that the shapes are already determined, children are able to either use these shapes as they were intended or come up with original and innovative uses. Using shapes to represent different things, language is required between work partners to determine a shared language about the

shapes they are using. Children can use the shapes to retell familiar stories, create their own version of a familiar story or make up an original story.

Drawing

Like painting, drawing another means for children express what is going on internally. Once the drawing is out of the child's mind and on to paper, it offers the opportunity to talk about the work and add and practice vocabulary associated with the child's thoughts, idea and feelings. Through drawing, children are telling a story, which they can orally communicate with teachers and peers.

Clay/Playdough

Clay and playdough offer a sensory experience that promotes language associated with touch, smell and sight. Children and teachers can talk about how they are manipulating the

materials, like rolling, patting or pinching, while doing it. Clay and playdough also offer

opportunities for dramatic play as children often turn the material into some sort of food or

vehicle.

These materials like blocks and painting, require a set-up that promotes interaction, time,

and the teacher's support to promote language. A closer look at these materials would also reveal

that like blocks and painting they integrate major the learning strands and address many of the

common core and state standards.

Reflection

When I decided to become a teacher, it was always my intention to teach in New Orleans. However, it was important to me to get the best education available, so that I could then offer the best education to my students and that meant coming to Bank Street. When it came time to write my Integrative Master's Project, I knew that I wanted to take what I had learned at Bank Street and create a tool to share this knowledge with teachers in New Orleans. However, two years away from New Orleans and its fast changing school system, made finding a focus for this independent study a difficult task.

Over the past year, my focus changed considerably as I became reconnected with the schools in New Orleans and reflected on what information was the priority and how to share it. After finishing the curriculum class last summer, I was sure that developing a yearlong curriculum that promoted experiential learning and addressed the Common Core and State Standards was the way to go. I began to create a "school study," an integrated curriculum centered on trips, interviews, and centers-based learning time. During the winter, I went down to New Orleans and visited a kindergarten classroom at a community charter school. I also spoke with educators from other schools. Through these observations and discussions, I learned that many of these schools are tied to scripted curriculum and that the teachers are not educated or supported enough to implement a full on centers-based curriculum. In fact, many of the teachers felt that centers were a waste of learning time.

This experience showed me that "school study," was an idea to keep for the future, but that administrators or teachers would not currently accept it. So, I went back to the drawing board and restructured my project. I thought that in order for these educators to be able to be excited about and willing to try a centers-based curriculum, they should know the centers and

materials that provide the base for such a curriculum are not only developmentally appropriate, but also address the standards. I set out to create a tool that would argue for the benefits of this kind of classroom structure by offering evidence of how each material and corresponding center helps the child develop and exactly which standards they would address.

A second visit to New Orleans, to the same community charter school, but different classroom and two other schools, showed me once again that my focus was too broad and not what these educators were ready to take on. In particular, an observation and subsequent conversation with two experienced educators who held progressive beliefs, but were tied to an academic achievement focused school, helped me refocus once again. These teachers had at one point used and believed in the centers-based approach, but demands for high scores and an unconventional classroom set-up, led them back to an approach that focused mostly on teacher-directed learning times and individual work.

I came away from this second visit with two important thoughts. The first, was that there was a severe lack of language at all of the schools I visited. The only time children spoke was to answer a teacher's question with a prescripted response or play out the rules of a game. The second thought, was what these teachers needed was information on how to incorporate one or two materials that are developmentally appropriate and promote much needed language development, into their current structure. This would feel less overwhelming and something that the teachers would actually get on board with.

Once I finally determined my focus, language in the classroom, I realized that this topic is not only relevant and important for the educators in New Orleans, it is also deeply connected to what I have valued most about my own learning experience at Bank Street. Having the opportunity to constantly question, discuss and reflect has given me the opportunity to, for the first time in my

life, love learning and to feel confident about sharing my thoughts and ideas. In the school where I currently teach PreKindergarten, we encourage this kind of learning and it creates what we like to call, "a tornado of awesomeness." Our students are engaged, thoughtful and excited to share what they have "discovered" with others and they have the ability to make comments or questions what others have shared with them.

I look forward to bringing what I have learned and created through this study back to New Orleans. I believe that I can use the research done in this study to justify to administrators why they should let me implement these materials and strategies in my own classroom and share them with others. I feel proud of the work I have done and through this process, I realized that I have internalized these teaching methods into my own practice.

References

Alliance for Childhood. (2009). *Crisis in the kindergarten: why children need play in school.* College Park, MD: Edward Miller and Joan Almon.

Apelman, M. (1996). Stages of block building. In E. Hirsch (Ed.), *The block book* (3rd ed., pp. 142-148). Washington, D.C.: National Association for the Education of Young Children.

Armstrong, T. (2006). *The best schools: How human development research should inform educational practice.* Alexandria, VA: Association for Supervision and Curriculum Development.

Berliner, D.C. (2009). *Poverty and potential: Out-of-school factors and school success.* Boulder and Tempe: Education and the Public Interest Center & Education Policy Research Unit. Retrieved from http://epicpolicy.org/publication/poverty-and-potential

Berger, K. S. (2008). *The developing person: Through the life span.* (7th ed.). New York, NY: Worth Publishers.

Bodrova, E., & Leong, D. J. (2007). *Tools of the mind: The vygotskian approach to early childhood education.* (2nd ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Church, E. B. (2005). Learning from children's art and writing [Electronic version]. *Early Childhood Today*, *19*(5), 34-42. Retrieved from http://web.ebscohost.com

Jalongo, M. R., & Sobolak, M. J. (2011). Supporting young children. *Early Childhood Education Journal*, 38, 421-429. doi: 10.1007/s10643-010-0433-x

Kozol, J. (2006, March/April). Standardized testing: the do-or-die agenda. *Principal*, 18-22.

Larson, S. (1997). *Learning with basic materials: A curriculum for v's at city and country school.* (Master's thesis, Bank Street College of Education).

Peregoy, S. F., & Boyle, O. F. (2005). *Reading, writing, and learning in esl: A resource book for k-12 teachers.* (4th ed.). Boston, MA: Pearson Education, Inc.

Schirrmacher, R. (1986). Talking with young children about their art. *Young Children*, 3-7.

Smith, N. R., Fucigna, C., Kennedy, M., & Lord, L. (1993). *Experience & art: Teaching children to paint.* (2nd ed.). New York, NY: Teachers College Press.

Tough, P. (2009, September 25). Can the right kinds of play teach self-control? The New York Times Magazine. Retrieved on June 27, 2011 from http://www.nytimes.com.

Wellhousen, K., & Kieff, J. (2001). *A constructivist approach to block play in early childhood.* Albany, NY: Delmar.

Wood, C. (2007). *Yardsticks: Children in the classroom ages 4-13* (3rd ed.). Turner Falls, MA: Northeast Foundation for Children, Inc.

Appendices

Appendix 1: Blocks and the Common Core Standards for PreKindergarten ELA

Standard	Examples in the Classroom
RLI.PK.2 - Retell part of a favorite story in sequence (first, next, and last)	- Building the story setting out of blocks and retelling either from memory or with the book
RF.PK.11 - Recognize that print is read left to right and top to bottom	- Reading signs associated with the block area i.e. rules and expectations, signs created by self or peers and put on buildings
RF.PK.20 - Demonstrate appropriate reading behaviors when handling and looking at books with predictable, repetitive text, and simple illustrations	- Using books to research for building ideas - Children demonstrate reading behaviors such as front to back, turning pages, holding the book right-side-up, point to words and pictures
W.PK.22 - Use a variety of writing tools in an appropriate manner showing increasing muscular control	- Creating signs for buildings using paper and pencil, crayon, or markers - Drawing/writing plans before building
SL.PK.24 - Listen and orally respond to questions about text, read aloud or information presented orally or through other media, including music and video	- Listening to peers describe buildings and asking questions or making comments about work during work time and/or group meetings
SL.PK.25 – Carry on a conversation about a topic, thought, or idea from the classroom, home, or community	- Speaking with a peer, group, or teacher about the building process
SL.PK.26 – Actively participate in role-playing, creative dramatics, finger plays, nursery rhymes and choral speaking	- Working within a building i.e. restaurant, doctor's office, super hero fortress, etc.
SL.PK.27 – Use words, phrases, and/or sentences to express a complete thought	- Speaking with peer, group, or teacher about building process - Dramatic or symbolic play scenarios either within or using the building
L.PK.28 – Demonstrate knowledge of opposites and positional words	- Describing a building to the teacher, peer, or group - Giving a peer directions or receiving directions from a peer about the building
L.PK.29 – Use new vocabulary acquired through conversations, activities, stories, or books	- Through the building process - Through the dramatic or symbolic play within the building

Appendix 2: Blocks and the Common Core Standards for Kindergarten ELA

Standard	Examples in the Classroom
RL.K.2 - With prompting and support, retell familiar stories, including key details	- Building the scene and acting out a favorite story i.e. building the houses and retelling the story of the <u>Three Little Pigs</u>
RL.K.3 - With prompting and support, identify characters, settings and major events in a story	- Building the scene and acting out a favorite story i.e. building the houses and retelling the story of the <u>Three Little Pigs</u>
RI.K.2 - With prompting and support, identify the main topic and retell key details of a text.	- Using an informational text to aid in the building process i.e. Building a spaceship or doctor's office
RI.K.9 - With prompting and support, identify basic similarities in and differences between two texts	- Using multiple informational texts as resources for the same building

RF.K.1 - Demonstrate understanding of the organization and basic features of print
  a. Follow words from left to right, top to bottom, and page by page
  b. Recognize that spoken words are represented in written language by specific sequences of letters
  c. Understand that words are separated by spaces in print
  d. Recognize and name all upper- and lowercase letters of the alphabet
	a. Reading signs in the block area
	   Using books as resources for building
	b. Connecting labeled shelves with correct block

W.K.2- Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic	- Creating signs for buildings using paper and pencil, crayons, or markers - Creating props for block play i.e. Menus for restaurants, books for libraries
W.K.5 - With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed	- Adding more information to make signs or props more clear i.e. at prices or descriptions to menus

W.K.7 - Participate in shared research and writing projects	- Through a class build i.e. Researching and recreating the neighborhood, school

SL.K.1 - Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups
   a. Follow agreed-upon rules for discussions (i.e. listening and taking turns speaking about the topics and texts under discussion
   b. Continue conversation through multiple exchanges
	- Planning with partners for upcoming build
	
	a. Making sure everyone's ideas are heard
	
	b. Check-in at the end of each day to reflect on work and at the beginning of each day to make a plan for work

SL.K.2 - Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood	- Question and answer opportunities when sharing building with group
SL.K.3 - Ask and answer questions in order to seek help, get information, or clarify something that is not understood	- Partner/group check-in at the beginning of each day to make a plan for work and at the end of each day to reflect on work
SL.K.4 - Describe familiar people, places, things and events and, with prompting and support, provide additional detail	- Sharing with group about build i.e. building the school and describing each area - Within play scenarios
SL.K.5 - Add drawings or other visual displays to descriptions as desired to provide additional detail	- Adding signs to buildings
SL.K.6 - Speak audibly and express thoughts, feelings, and ideas clearly	- Speaking to peers, teachers, adults about building process and play
L.K.1 - Demonstrate command of conventions of Standard English grammar and usage when writing and speaking	

a. Print many upper- and lowercase letters b. Use frequently occurring nouns and verbs c. Form regular plural nouns orally by adding /s/ or /es/ d. Understand and use question words (interrogatives) e. Use the most frequently occurring prepositions (to, from, in, out, on, off, for, of, by, with) f. Produce and expand complete sentences in shared language activities	a. Making signs for buildings b. Talking about own building process and/or play c. *Same as b.* d. Asking peers about their building process and/or play e. *See b* f. Sharing with group about build
L.K.2 - Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Capitalize the first word in a sentence and the pronoun I. b. Recognize and name end punctuation c. Write a letter or letters for most consonant and short-vowel sounds (phonemes) d. Spell simple words phonetically, drawing on knowledge of sound-letter relationships.	 a. Creating signs/props for block buildings c. *Same as a.* d. *Same as a*
L.K.6 - Use words and phrases acquired through conversations, reading and being read to, and responding to texts.	- Describing research and actions related to building process and projects

Appendix 3: Blocks and the Common Core Standards for PreKindergarten Math

Standard	Examples in the Classroom
CC.PK.1 - Count by ones to 20	- Counting the number of blocks used in a building - Counting the number of blocks that need to be shelved
CC.PK.2 - Count forward from a given number between 1 and 10, and count backward from 5	- Talking about how many blocks have been used and how many you have total
CC.PK.3 - Understand that the last number named tells the number of objects counted	- Teacher asking, "How many round blocks did you use in your building?" and child counting blocks and giving the answer
CC.PK.6 - Compare sets of objects using same/different and more/less/fewer	- Talking about the different block shapes - Talking about how many of each block you would need to make a certain shape/structure i.e. 2 double unit blocks vs. 4 unit blocks
CC.PK.7 - Identify an object's or person's position as first or last	- Building a road or tower (stages 2&3)
OA.PK.8 - Recognize, copy, and extend patterns	- Stages 1-5 of block building i.e. stacking block on top of another in the same direction, to stacking blocks perpendicularly to creating a fence alternating curved blocks and round blocks
OA.PK.9 - Use concrete objects to demonstrate simple addition and subtraction	- Adding or taking away blocks to complete a structure i.e. When thinking about making an enclosure. Adding two blocks to the four already on the floor makes six blocks
MD.PK.11 - Describe measurable attributes of objects, using comparative words to represent length or weight	- When thinking about what size blocks to use or which blocks to pick-up i.e. Planning to use the longest blocks for a big enclosure or looking for a block that is longer than a unit block
MD.PK.12 - Sort concrete objects by more than one attribute	- Sort blocks by size and shape
G.PK.13 - Identify and name at least the four basic shapes (rectangles, squares, circles, and triangles) using different	- Unit blocks are available in shapes that include all four basic shapes (rectangle = unit block, square = square block, cubes, one side of 1/2 unit

sizes and in different orientations	block, circles = cylinders, ramps = triangles - Beginning of understandings when things are 3-dimensional, they may have more than one shape, i.e. a square block is square on two sides and rectangular one two sides
G.PK.14 - Create or draw shapes using a variety of materials or components	- Making new shapes out of blocks, i.e. lining up unit blocks to create a square - Patterning unit blocks at certain angles to create a circular tower

Appendix 4: Blocks and the Common Core Standards for Kindergarten Math

Standard	Examples in the Classroom
K.CC.A.1 - Count to 100 by ones and by tens.	- Counting and stacking blocks - Counting the number of a certain kind of block on the shelf
K.CC.A.2 - Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	- Counting how many blocks have been used and how many there are total i.e. "I have used 1,2,3,4 cylinders and I have 5,6,7 cylinders to use"

K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality
    a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
    b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
    c. Understand that each successive number name refers to a quantity that is one larger.
	- During the building and pick-up process

K.CC.B.5 - Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects	- Counting the number of a certain kind or total blocks used in a building
K.CC.C.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	- Counting the total number of each block shape used in a building i.e. Counting 6 unit blocks and 8 round blocks and then saying, "My building has more cylinders that unit blocks."
K.OA.A.1 Represent addition and subtraction with objects, fingers, mental images, drawings[1], sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	- Using blocks i.e. I have a pile of ten blocks, take away two blocks and then you have eight blocks
K.OA.A.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g.,	- During the building and pick-up process

by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).	
K.OA.A.4 For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	- During the building and pick-up process

K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	- When thinking about what size blocks to use or which blocks to pick-up
	   i.e. Planning to use the longest blocks for a big enclosure or looking for a block that is longer than a unit block
	   i.e. The "quadruple unit block" is the longest and heaviest block

K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter*	- Comparing heights of blocks i.e. "The quadruple unit block is taller than the unit block"
K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.	- Classify blocks by shapes
K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.	- Building, the associated play and talking about it (especially during a group build) i.e. "The elliptical block goes next to the cylinder and in front of the unit block."
K.G.A.2 Correctly name shapes regardless of their orientations or overall size.	- Unit blocks are available in shapes that include all four basic shapes (rectangle = unit block, square = square block, cubes, one side of 1/2 unit block, circles = cylinders, ramps = triangles)
K.G.A.3 Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	- Blocks are three dimensional
K.G.B.4 Analyze and compare two- and three-dimensional shapes, in different sizes and	- Blocks and pictures

orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).	
K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	- Going on a "block walk" to identify shapes of blocks in the neighborhood and then building what is seen in the block area
K.G.B.6 Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle*?"	- Joining two ramps to make a unit block.

Appendix 5: Blocks and the Louisiana State Standards for PreKindergarten Science

Standard	Examples in the Classroom
PK.CS.I1/SI.E.A1 - Pose questions that can be answered by using students' own observations and scientific knowledge	- Observing what is happening as blocks are being used i.e. "Why does the cylinder roll down the ramp?"
PK.CS.P3/SI.E.A3 - Use the five senses to describe observations	- Through describing blocks i.e. "The block feels smooth"
PK.CS.I4/SI.E.A4 - Select and use developmentally appropriate equipment and tools and units of measurement to observe and collect data	- Using blocks to measure room size i.e. "This room is 20 unit blocks wide and 20 unit blocks long"
PK.CS.I4/SI.E.A7 - Identify and use appropriate safety procedures and equipment when conducting investigations (e.g. gloves, goggles, hair ties)	- Thinking and acting on ways to build safely i.e. When rolling cylinders down a ramp, create a fence or guard so that blocks down run into other children or knock over other buildings.
PK.CS.P2/PS.E.A1 - Sort objects using one characteristic	- Sorting blocks for pick-up by shape, size or weight
PK.CS.P4/PS.E.A2 - Describe properties of materials by using observations made with the aid of equipment such as magnets, magnifying glasses, pan balances, and mirrors	- Investigate blocks using magnets, magnifying glasses, pan balances, and mirrors i.e. "A unit block is heavier than a pillar"
PK.CS.I4/PS.E.A2 - Determine whether one object weighs more or less than another by using a pan balance	- Talking about the relative weights of blocks using a pan balance i.e. unit blocks are heavier than ramps

PK.CS.I2/PS.E.B3 - Explore the motion of objects by using balls, toy cars, or spinning tops	- Building, the associated play and talking about it
	  i.e. Cylinders rolling down ramps
	  i.e. Cubes falling through towers

PK.CS.P3/PS.E.C1 - Identify different sounds as soft or loud	- When a tall building falls i.e. "Blocks make a loud sound when they fall from a way up high"

PK.CS.L1/LS.E.A3 - Identify parts of the body and how they move	- Thinking about how to move your body in the block area without knocking over buildings i.e. Swinging arms can knock over buildings, arms should stay by your side or in front of you
PK.CS.L1/LS.E.A4 - Give examples of different kinds of plants and different kinds of animals	- Building, the associated play, and talking about it i.e. Children building a garden or a farm
PK.CS.L1/LS.E.C1 - Describe plants and animals in the schoolyard or home environments	- Building, the associated play, and talking about it i.e. A group build of the school playground, including the trees and other plants in the yard

Appendix 6: Blocks and the Louisiana State Standards for Kindergarten Science

Standard	Examples in the Classroom
K.SI.E.A1 - Pose questions that can be answered by using students' own observations	- Observing what is happening as blocks are being used i.e. "Why does the cylinder roll down the ramp?"
K.SI.E.A2 - Predict and anticipate possible outcomes	- Building tall towers i.e. "If I stack quadruple unit blocks on top of each other, the building will fall"

K.SI.E.A3 - Use the five senses to describe observations	- Touching, seeing and hearing what happens with blocks as they are used in the block area
	   i.e. "When a tall tower falls, it makes a loud sound"
	   i.e. "When a cube falls it makes a soft sound"
	   i.e. "The block feels smooth"
	   i.e. "I see that this block is chipped because the corner feels rough"

K.SI.E.A4 - Measure and record length and temperature in both metric system and U.S. system units	- Measuring different blocks with a ruler
K.SI.E.A4 - Select and use developmentally appropriate equipment and tools and units of measurement to observe and collect data	- Using blocks to measure room size i.e. "This room is 20 unit blocks wide and 20 unit blocks long"
K.SI.E.A7 -Identify and use appropriate safety procedures and equipment when conducting investigations (e.g. gloves, goggles, hair ties)	- Thinking and acting on ways to build safely i.e. When rolling cylinders down a ramp, create a fence or guard so that blocks down run into other children or knock over other buildings.
K.PS.E.A1 - Identify objects by using the senses	- Using a block "grab bag" i.e. Children must reach into a bag and use their sense of touch to figure out the shape of the block
K.PS.E.A1 - Construct patterns by using color, size, and shape of objects	- Evidenced during stages 4 and 5 of block building i.e. Stacking cubes and alternating between two colors (red, green, red, green)

K.PS.E.A1 - Sort objects based on their properties (i.e. size, weight, texture)	- Sorting blocks by weight
K.PS.E.A1 - Determine whether objects are magnetic or nonmagnetic	- Investigations with blocks and magnets
K.PS.E.B1 - Follow directions using vocabulary such as front/back, above/below, right/left, and next to	- Building, the associated play, and talking about it (especially, group/partner builds) i.e. One child says to another, "put the cubes above the unit blocks."

K.PS.E. B3 - Trace the motion of an object, such as a ball or toy car, as it rolls	- Building, the associated play and talking about it
	   i.e. Cylinders rolling down ramps and continuing straight across the floor
	   i.e. Cubes falling through towers, landing and bouncing to the side

K.PS.E.C1 - Demonstrate and identify sounds as soft or loud	- When a tall building falls i.e. "Blocks make a loud sound when they fall from a way up high"
K.LS.E.B3 - Match models of baby animals with their parents	- Using the wooden animals
K.ESS.E.A2 - Distinguish between areas of Earth covered by land and water	- Building, the associated play and talking about it i.e. New Orleans is land and built with blocks, and the river and lake are water and painted on the ground

Appendix 7: Blocks and the Louisiana State Standards for PreKindergarten Social Studies

Standard	Examples in the Classroom
Standard 1 - Chronological Thinking Skills	*Students develop an understanding of chronological order during school routines*
PK.1.1 - Demonstrate an awareness of chronological order by using time-related vocabulary (i.e. first, next, last, yesterday, today, tomorrow)	- Talking about a building from another day i.e. "Yesterday we built a house and today we are going to build the grocery store."
Standard 2 - Historical Thinking Skills	*Students participate in discussions about people, events, and symbols of the past and present*
PK.2.2 - Participate in discussion about local, state, and national symbols by using visuals (flags, landmarks)	- Posting pictures of local landmarks on the walls in the block area for inspiration - Talking about local, state, and national symbols and then the children engage in a build
PK.2.3 - Participate in discussions about local, state, and national cultural events, celebrations, and holidays (e.g. Mardi Gras, Thanksgiving, Christmas/Hanukkah, Veteran's Day)	- Building, the associated play and talking about it i.e. Building Mardi Gras floats in the block area and using Mardi Gras beads as accessories
Standard 3 - Maps and Globes, and Environment	*Students develop an awareness of maps, landforms, and weather patterns to recognize the relationship between physical environments, people, places, and cultures*

PK.3.1 - Demonstrate geographic knowledge of the student's community (e.g. bodies of water, farmland, woods/forests, wetlands)	- Building, the associated play, and talking about it
	   i.e. A build that shows a child's neighborhood or the city of New Orleans,
	   i.e. A build of New Orleans that has canals, the river or the lake.

PK.3.3 - Create maps and dictate information to explain map content	- Through block building, children can create three dimensional, tool maps i.e. Build of the school or the neighborhood
PK.3.4. - Use positional words to indicate directions (up, down, left, right)	-Telling the class about block building - Guiding a partner or group during the building process

PK.3.5 - Create representations of landforms, roads, and communities through play activities	- Recreating places in their community with blocks
	  i.e. Building roads for vehicles through horizontal stacking
	  i.e. Creating a "river" or "lake" through enclosures or horizontal stacking

PK.3.7 - Explore music, dance, dress, foods, and traditions of various cultures through play activities	- Building, the associated play, and talking about it
	  i.e. Building and "working" in a restaurant
	  i.e. Building a stage and then performing

PK.3.8 - Describe shelters/homes in various geographic regions (e.g. igloo, apartment, raised housing)	- Building, the associated play, and talking about it i.e. All children building their home and talking about the different types (i.e. apartment, house, shotgun, camel back)
Standard 4 – Citizenship	*Students develop an awareness of the importance of rules and responsibilities within their community and the actions/ behaviors necessary for effective citizenship*
PK.4.1 - Recognize their responsibility as a member of a family and classroom (e.g. helping, sharing, taking turns)	- Foundation comes from picking up the school environment, integrated into daily pick-up - Through sharing the building space and materials
PK.4.2 - Participate in conversations about the importance of rules/consequences	- Working in an area with limited space and resources promotes these conversations daily
PK.4.3 - Identify workers and their roles as citizens within the community	- Through building, the associated play, and taking about it i.e. A chef at a restaurant, a postal worker at a post office, a bus driver in a bus
Standard 5 - Basic Economic Concepts	*Students demonstrate an awareness of basic economic concepts*
PK.5.1 - Demonstrate awareness of the purpose of money through play activities	- Through building, the associated play, and taking about it i.e. Buying food at a restaurant or market
PK.5.2 - Demonstrate the role of buyers and sellers in play activities (e.g. grocery store, flower shop, restaurant)	- Through building, the associated play, and taking about it i.e. Visiting a market, restaurant, nail salon

Appendix 8: Blocks and the Louisiana State Standards for Kindergarten Social Studies

Standards	Examples in Classroom
Standard 1 - Chronological Thinking	*Students apply sense of time in daily routines within their community*
K.1.1 - Order events that take place in a sequence using appropriate vocabulary (e.g. before, during, after/today, yesterday, tomorrow/seasons)	- Daily check-in meetings with groups or partners - Talking about building from another day i.e. "Yesterday we built the foundation. Today we should start with the walls."
Standard 2 - Historical Thinking Skills	*Students distinguish between events, people, and symbols in the past and present*
K.2.2 - Identify symbols of local, state, and national importance using various sources (e.g. flag, various state symbols, government landmarks)	- A build about important places around New Orleans - Brainstorm ideas, introduce through pictures, books and fieldtrips

K.2.3 - Identify local, state, and national celebrations, holidays, and events using various sources	- Building and then talking about it
	   i.e. Building Mardi Gras floats, creating an enclosure
	   i.e. Adding paper fireworks to a bridge build for July 4th

Standard 3 - Maps, Globes, and Environment	*Students demonstrate an understanding of the connections between their physical and cultural environments through the use of globes, maps, and other visual representations*
K.3.1 - Demonstrate an understanding of the relative locations of objects through the use of appropriate vocabulary (e.g. near/far, over/under, left/right, up/down)	- Determining placement of building when doing location specific builds i.e. School, neighborhood
K.3.2 - Identify maps and globes as representations of the earth and recognize the difference between land and water	- Painting in water around areas with water i.e. A build of Bayou St. John or the river front
K.3.3 - Demonstrate geographic knowledge of places within the school and community	- A build of the school or neighborhood
K.3.4 - Illustrate basic landforms (e.g. mountain, ocean)	*See K.3.2*

K.3.5 - Construct maps of familiar locations	- Create three dimensional, tool maps i.e. of school or neighborhood
K.3.7 - Describe how people live differently in other places using various sources	- Building and then talking about it i.e. Houses near canal or lake are higher off the group so they don't flood

K.3.9 - Demonstrate spatial understanding that students are part of (i.e., classroom, school, town/city, and state)	- Building and then talking about it
	   i.e. know where their classroom should go in the school
	   i.e. building the neighborhood around the school

Standard 4 - Government and Citizenship	Students understand how to participate and use effective citizenship skills at home, in school, and in the community
K.4.3 - Discuss roles, rights, and responsibilities of being a good citizen in a family, class, and school (e.g. respect others, cooperate, share)	- Foundation comes from picking up the school environment, integrated into daily pick-up of blocks - Sharing the building space and materials
Standard 5 - Basic Economic Concepts	Students develop an understanding of economic concepts and develop decision-making skills
K.5.3 - Discuss the concept of scarcity within classroom situations (e.g. use of equipment/toys/snack distribution when limited supplies are available)	- Working in an area with limited space and resources promotes these conversations daily
K.5.4 - Explore concepts of goods/services (e.g. food, clothing, garbage collection)	- Through building, the associated play, and talking about it.
K.5.5 - Describe jobs that people do to earn money	- Through building, the associated play, and talking about it.
K.5.6 - Explain how products get from a point of origin to consumers (bread/milk to the table)	- Through building, the associated play, and talking about it.
K.5.7 - Describe a voluntary exchange/trade (trading seats, supplies)	- Sharing materials i.e. A situation when one child has a block another child needs.

Appendix 9: Painting and the Common Core Standards for PreKindergarten ELA

Standards	Examples in the Classroom
RLI.PK.2 - Retell part of a favorite story in sequence (first, next, and last)	- Painting a scene from a story and discussing it
RLI.PK.8 - With prompting and support, describe the relationship between illustrations and the story in which they appear	- Painting a scene from a story and discussing it while referring to the illustration in the painting
W.PK.22 - Use a variety of writing tools in an appropriate manner showing increasing muscular control	- Fine motor skills with the paint brush build muscle control needed for writing
W.PK.23 - Use a combination of writing letters and numbers, dictation, and drawing in response to a text read aloud, or to tell a story about a life experience or event	- Painting a scene from a book or a personal experience
SL.PK.24 - Listen and orally respond to questions about text, read aloud or information presented orally or through other media, including music and video	- Comments about other children's paintings - Answering other children's questions about your painting
SL.PK.25 - Carry on a conversation about a topic, thought, or idea from the classroom, home, or community	- Talking about a painting that reflects an aspect of the classroom, home, or community i.e. A painting of children working in the block area
SL.PK.27 - Use words, phrases, and/or sentences to express a complete thought	- Talking about paintings with teacher or peer
L.PK.28 - Demonstrate knowledge of opposites and positional words	- Talking about where certain components of painting are on the page i.e. "The mountain is in the middle of the page and the ground is on the bottom of the page
L.PK.29 - Use new vocabulary acquired through conversations, activities, stories, or books	- Utilizing painting vocabulary modeled by teacher and peers

Appendix 10: Painting and the Common Core Standards for Kindergarten ELA

Standards	Examples in the Classroom
RL.K.2 - With prompting and support, retell familiar stories, including key details	- Painting a scene or scenes from a story and then discussing it
RL.K.3 - With prompting and support, identify characters, settings and major events in a story	- Painting a scene from a story and then discussing it i.e. "This is when the wolf blew down the straw house and the pig ran to his brother's house."
RL.K.4 - Ask and answer questions about unknown	- When paintings are being shared during group meetings
RL.K.6 - With prompting and support, name the author and illustrator of a story and define the role of each in telling the story.	- The child writing his/her name on the back/front of the painting to signify that he/she made the painting

RF.K.1 - Demonstrate understanding of the organization and basic features of print
  a. Follow words from left to right, top to bottom, and page by page
  b. Recognize that spoken words are represented in written language by specific sequences of letters
  c. Understand that words are separated by spaces in print
  d. Recognize and name all upper- and lowercase letters of the alphabet
	a. This skill is supported through the set-up of the paints at the easel
	b. Teachers can support this by offering to write a child's words on the back of their painting and then reading it with them

W.K.2- Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic	- Painting a picture about a topic i.e. "baking a cake," and on the back either writing their own words or dictating them to a teacher
W.K.3 - Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order they occurred, and provide a reaction to what happened.	- Painting a picture about an event i.e. "my birthday party" and on the back either writing their own words or dictating them to a teacher

SL.K.1 - Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups
    a. Follow agreed-upon rules for discussions
   b. Continue conversation through multiple exchanges
	- Group meetings during which paintings are discussed

SL.K.3 - Ask and answer questions in order to seek help, get information, or clarify something that is not understood.	- Comments or questions about other children's paintings - Answering other children's questions about your painting
SL.K.4 - Describe familiar people, places, things and events and, with prompting and support, provide additional detail.	- Conversations with teachers and/or peers about paintings
SL.K.5 - Add drawings or other visual displays to descriptions as desired to provide additional detail	- Start by telling a story and then painting it
SL.K.6 - Speak audibly and express thoughts, feelings, and ideas clearly	- Discussions surrounding painting with teachers and/or peers

L.K.1 - Demonstrate command of conventions of Standard English grammar and usage when writing and speaking
  a. Print many upper- and lowercase letters
  b. Use frequently occurring nouns and verbs
  c. Form regular plural nouns orally by adding /s/ or /es/
  d. Understand and use question words
  e. Use the most frequently occurring prepositions
  f. Produce and expand complete sentences in shared language activities
	- Discussions about paintings provide opportunities for b-f

L.K.6 - Use words and phrases acquired through conversations, reading and being read to, and responding to texts.	- Utilizing words modeled by teacher in painting discussions i.e. "I moved my arm up and down and side to side to make this shape. It is called a square."

Appendix 11: Painting and the Common Core Standards for PreKindergarten Math

Standards	Examples in the Classroom

CC.PK.3 - Understand that the last number named tells the number of objects counted	- Counting objects at paint center or on actual paintings
	   i.e. Counting the number of brushes at the easel and being able to answer the question, "how many brushes are at the easel?"
	   i.e. Painting three circles and then describing number of circles in the painting

CC.PK.5 - Count a set of objects from 1-10	- Counting objects on painting i.e. Painting ten triangles and then counting them

CC.PK.6 - Compare sets of objects using same/different and more/less/fewer	- Making and describing a painting
	   i.e. "All of the shapes in my painting are green, but they have different sides"
	   i.e. "I have more squares in than triangles in my painting

CC.PK.7 - Identify an object's or person's position as first or last	- Making and describing a painting i.e. "This is the first line that I made on my painting."
OA.PK.8 - Recognize, copy, and extend patterns	- Through the painting process - Painting with a friend can promote this
MD.PK.11 - Describe measurable attributes of objects, using comparative words to represent length or weight	- Making a painting and describing it i.e. "The yellow line is longer than the red line."
G.PK.13 - Identify and name at least the four basic shapes (rectangles, squares, circles, and triangles) using different sizes and in different orientations	- Making a painting and describing it
G.PK.14 - Create or draw shapes using a variety of materials or components	- Using a paintbrush and paints

Appendix 12: Painting and the Common Core Standards for Kindergarten Math

Standards	Examples in the Classroom
K.CC.A.3 - Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects)	- Children will often paint numbers when exploring forms of numbers and what they mean i.e. A horizontal line and then a diagonal line make a "7," and 7 is more than 5

K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality
  a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
  b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
  c. Understand that each successive number name refers to a quantity that is one larger.
	- Recognizing that the number of brushes matches the number of jars
	
	- Making a painting
	  i.e. Painting 12 stars and then painting the number "12."

K.CC.C.6 - Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	- Thinking about composition of painting i.e. There are more triangles than squares
K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.	- Making a painting and describing it i.e. Two sides of the triangle are longer than the third side
K.MD.B.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.[1]	- Making a painting and describing it i.e. How many different shape are in the painting

K.G.A.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.	- Making a painting and describing it i.e. The triangle shape is next to the circle and above the square
K.G.A.2 Correctly name shapes regardless of their orientations or overall size.	- Making a painting and describing it

K.G.A.3 Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	- Comparing shapes on painting to shapes in the surrounding environment
	  i.e. Comparing a square on a painting to a cube in the block area
	  i.e. Thinking about body orientation when painting

K.G.B.5 Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.	- Integrated into the painting process
K.G.B.6 Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*	- Exploring with shapes in painting

Appendix 13: Painting and the Louisiana State Standards for PreKindergarten Science

Standard	Examples in the Classroom
PK.CS.I1/SI.E.A1 - Ask questions about and events in the environment (e.g. plants, rocks, storms)	- Asking questions before making a painting i.e. Deciding to paint a hurricane and asking for information about what it looks like
PK.CS.I1/SI.E.A1 - Pose questions that can be answered by using students' own observations and scientific knowledge	- Asking questions before making a painting i.e. Wanting to paint a cloud, wondering what they look like and then looking outside the window to see

PK.CS.P3/SI.E.A3 - Use the five senses to describe observations	- Using the five senses during the painting process
	  i.e. Seeing how paint moves across the paper
	  i.e. Seeing how the paint changes color slightly when it dries
	  i.e. Touching wet paint and dry paint

PK.CS.I5/SI.E.A6 - Use a variety of appropriate formats to describe procedures and to express ideas about demonstrations or experiments (e.g. drawings, journals, reports, presentations, exhibitions, portfolios)	- Through the painting process
	  i.e. Painting about color mixing, including different shades of a color on one page
	  i.e. Painting about a what will happen when the pretzel dough goes in the oven

PK.CS.P1/PS.E.A5 - Identify components of simple mixtures (e.g. salt/water, rice/beans, iron filings/sand)	- Through mixing colors

PK.CS.P3/PS.E.B3 - Demonstrate motion by using students' own bodies	- Through the painting process
	  i.e. If I move my arm in a circle with the brush, it makes this mark
	  i.e. If I move my arm from side to side it makes this mark

PK.CS.L1/LS.E.A4 - Give examples of different kinds of plants and different kinds of animals	- Making a painting and describing it i.e. "I painted an animal farm. It has cows and sheep and pigs."

PK.CS.L1/LS.E.C1 - Describe plants and animals in the schoolyard or home environments	- Make a painting and describing it i.e. "We have low bushes and tall trees in our schoolyard"
PK.CS.ES2/ESS.E.A4 - Describe the weather and its daily changes	- Making a painting and describing it i.e. "It was cold this morning, but the sun came out and now it is warm"
PK.CS.ES2/ESS.E.A4 - Describe different types of weather students have experienced and give examples of how daily activities and appropriate attire are affected by weather conditions	- Making a painting and describing it i.e. "I painted myself with a coat on because it was cold in the morning, now it is hot."

Appendix 14: Painting and the Louisiana State Standards for Kindergarten Science

Standard	Examples in the Classroom
K.SI.E.A1 - Ask questions about objects and events in the environment	- Asking questions before making a painting i.e. Deciding to paint a volcano and asking for information about what happens when it erupts
K.SI.E.A1 - Pose questions that can be answered by using students' own observations	- Asking questions before making a painting i.e. Wanting to paint a cloud, wondering what they look like and then looking outside the window to see
K.SI.E.A2 - Predict and anticipate possible outcomes	- Through mixing colors i.e. "If I mix in more yellow than blue, I think my green will be lighter"

K.SI.E.A3 - Use the five senses to describe observations	- Using the five senses during the painting process
	  i.e. Seeing how paint moves across the paper
	  i.e. Seeing how the paint changes color slightly when it dries
	  i.e. Touching wet paint and dry paint

K.SI.E.A6 - Use a variety of appropriate formats to describe procedures and to express ideas about demonstrations or experiments (e.g. drawings, journals, reports, presentations, exhibitions, portfolios)	- Through the painting process i.e. Painting about color mixing, including different shades of a color on one page - i.e. Painting about what will happen when the pretzel dough goes in the oven
K.PS.E.A1 - Construct patterns by using color, size, and shape of objects	- Many paintings, especially in the designing stage include patterns using color, size and shape of objects
K.PS.E.A5 - Create and separate mixtures (e.g. oil/water, rice/beans)	- Through mixing colors

K.PS.E.B1 - Follow directions using vocabulary such as front/back, above/below, right/left, and next to	- Many aspects of the set-up/clean-up process
	   i.e. Letting children know that they should write their name on the back of the paper
	   i.e. The brushes go on the left side, the paints go next to the brushes and the mixing jar goes all the way to the right

LS.E.A1 - Record observations on the growth of plant seeds	- In painting form i.e. Planting seeds in the classroom and having the children observe and paint their observations every few days
K.ESS.E.A2 - Distinguish between areas of Earth covered by land and water	- Painting a map i.e. A floor block build of New Orleans and painting the river on one side and the lake on the other side
K.ESS.E.B1 - Discuss and differentiate objects seen in the day and/or night sky (e.g. clouds, Sun, stars, Moon)	- Paintings that reflect different times of the day i.e. A background painted black for a night time scene

Appendix 15: Painting and the Louisiana State Standards for PreKindergarten Social Studies

Standards	Examples in the Classroom
Standard 2 - Historical Thinking Skills	*Students participate in discussions about people, events, and symbols of the past and present*
PK.2.1 - Use various sources to identify similarities/differences between students and their families with those of the past (i.e. clothing, toys, homes)	- Painting opens up the possibility of children expressing what life was like for them and for those in the past i.e. A painting about their parent as a child, talking about what is the same and what is different
PK.2.3 - Participate in discussions about local, state, and national cultural events, celebrations, and holidays (e.g. Mardi Gras, Thanksgiving, Christmas/Hanukkah, Veteran's Day)	- Paintings made around the time of these events can be a catalyst for conversation i.e. Child painting self in front of a Mardi Gras float.
Standard 3 - Maps and Globes, and Environment	*Students develop an awareness of maps, landforms, and weather patterns to recognize the relationship between physical environments, people, places, and cultures*
PK.3.1 - Demonstrate geographic knowledge of the student's community (e.g. bodies of water, farmland, woods/forests, wetlands)	- Paintings that show a child's neighborhood or the city of New Orleans, i.e. that reflect canals, the river or the lake
PK.3.4. - Use positional words to indicate directions (up, down, left, right)	- Making and describing a painting i.e. This is my house, my grandma lives to the left
PK.3.5 - Create representations of landforms, roads, and communities through play activities	- Painting with a friend i.e. Friends painting their neighborhood
PK.3.7 - Explore music, dance, dress, foods, and traditions of various cultures through play	- Painting with a friend offers experiences for children to think about various cultures

activities	
PK.3.8 - Describe shelters/homes in various geographic regions (e.g. igloo, apartment, raised housing)	- Creating a painting that reflects this i.e. A child paints a cabin after reading about fishing camps on the bayou
PK.3.9 - Demonstrate care of the environment (e.g. recycling, picking up litter, water conservation)	- Saving paint for another child to use if the colors aren't mixed
Standard 4 – Citizenship	*Students develop an awareness of the importance of rules and responsibilities within their community and the actions/behaviors necessary for effective citizenship*
PK.4.1 - Recognize their responsibility as a member of a family and classroom (e.g. helping, sharing, taking turns)	- Cleaning up the paint area when finished
PK.4.3 - Identify workers and their roles as citizens within the community	- Through a painting i.e. After a trip to the library, paint a picture and describe

Appendix 16: Painting and the Louisiana State Standards for Kindergarten Social Studies

Standards	Examples in the Classroom
Standard 1 - Chronological Thinking	*Students apply sense of time in daily routines within their community*

K.1.1 - Order events that take place in a sequence using appropriate vocabulary (e.g. before, during, after/today, yesterday, tomorrow/seasons)	- Make a painting and describing it
	   i.e. A painting of a trip to the cafeteria the day before
	   i.e. A picture of buds of leaves on trees, describing signs of spring

Standard 2 - Historical Thinking Skills	*Students distinguish between events, people, and symbols in the past and present*
K.2.3 - Identify local, state, and national celebrations, holidays, and events using various sources	- Make a painting and describing it i.e. A painting of a child watching fireworks on July 4th
Standard 3 - Maps, Globes, and Environment	*Students demonstrate an understanding of the connections between their physical and cultural environments through the use of globes, maps, and other visual representations*
K.3.1 - Demonstrate an understanding of the relative locations of objects through the use of appropriate vocabulary (e.g. near/far, over/under, left/right, up/down)	- Make a painting and describing it i.e. Describing a picture as, "The cabin is near the river and under a big oak tree"
K.3.3 - Demonstrate geographic knowledge of places within the school and community	- A painting of the school i.e. A painting that shows that the playground is in the back of the school and the garden is to the left of the school
K.3.4 - Illustrate basic landforms (e.g. mountain, ocean)	- Through a painting i.e. For New Orleans, landforms like lakes, bayous, rivers

K.3.5 - Construct maps of familiar locations	- Through a painting
	    i.e. A map of the classroom or how the children get from the classroom to the playground
	    i.e. A map of the child's neighborhood

K.3.6 - Describe how weather affects daily choices	- Through a painting i.e. Painting of children playing inside with rain through a window or a person holding an umbrella because it is raining
K.3.7 - Describe how people live differently in other places using various sources	- Through a painting i.e. A child painting a picture of his or her cousin's house, who lives in a rural area
K.3.9 - Demonstrate spatial understanding that students are part of (i.e., classroom, school, town/city, and state)	- Creating a map through painting
Standard 4 - Government and Citizenship	*Students understand how to participate and use effective citizenship skills at home, in school, and in the community*
K.4.3 - Discuss roles, rights, and responsibilities of being a good citizen in a family, class, and school (e.g. respect others, cooperate, share)	- Showing an understanding of why cleaning up the paint area for another child is being a good citizen in the classroom
Standard 5 - Basic Economic Concepts	*Students develop an understanding of economic concepts and develop decision-making skills*
K.5.2 - Explore the concept of saving	- Saving un-mixed or "fresh" paint for the next child to use
K.5.3 - Discuss the concept of scarcity within classroom situations (e.g. use of equipment/toys/snack distribution when limited supplies are available)	- Participating in a discussion of why saving unmixed or "fresh" paint is important - Participating in a discussion about the number of painting stations (easels or trays) and why all children can't paint at the same time (i.e. space constraints, limited supplies)
K.5.7 - Describe a voluntary exchange/trade (trading seats, supplies)	- Discussing and making a trade for a painting material (i.e. a fat brush for a skinny brush)