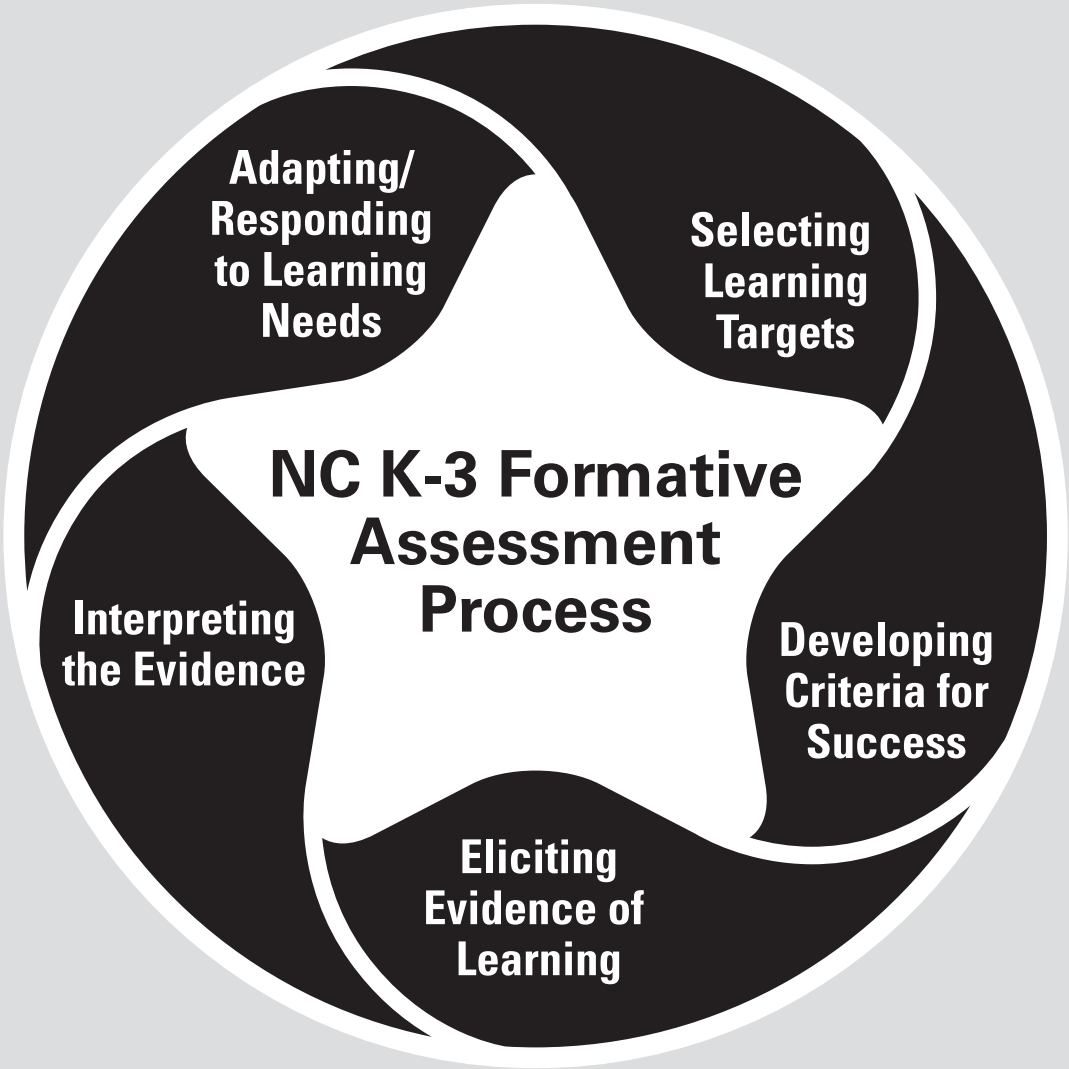
NC Construct Progressions and Situations

OFFICE OF EARLY LEARNING



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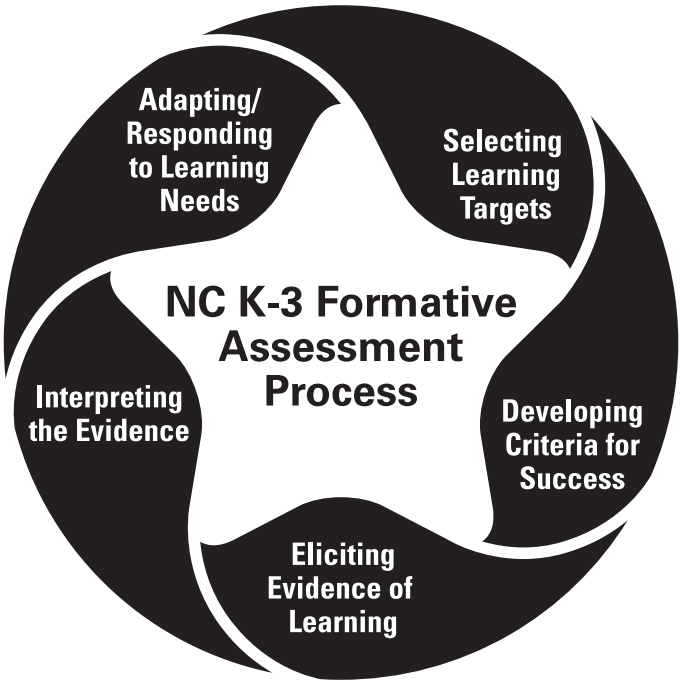


INTRODUCTION

This second edition of *NC Construct Progressions and Situations* is the result of the work of numerous teachers and experts in North Carolina over an eighteen-month period. This is a homegrown teaching support, and we expect that the instrument will be perfected through an iterative improvement process that relies on feedback from North Carolina's teachers. This is not the final word on the essentials of early learning but a living document to help teachers identify where students are with respect to their learning and development.

By its nature and development, this process provides teachers with information to include and respond to individual student's specific strengths as well as her/his specific areas for growth. The NC K-3 Formative Assessment Process (FAP) is a part of daily instruction, rather than a formal one-on-one testing situation. Gathering information about student learning in a formative manner is a natural, ongoing process that is applicable to all students. The K-3 Formative Assessment Process stakeholders worked diligently to design an assessment process that is applicable to as many students as possible. The NC K-3 Formative Assessment Process was developed by utilizing the Universal Design for Learning (UDL). As such, the NC FAP is accessible for all students and is developed in a manner that affords all students an opportunity to maximize his/her learning potential. This is a measurement of growth and provides information to guide instruction, even for our most significantly involved students and students who are English language learners.

In this guide you will find the first iteration of construct progressions and situations from all five of the developmental domains. The construct progressions are pathways of learning that can provide clarity for teachers about how a particular concept develops and how to identify learning targets for students. The progressions are accompanied by classroom situations that assist teachers in identifying a student's development within the context of instruction, and to support efforts to adapt and respond to learners' needs.

Inherent to the effective implementation of the NC K-3 Formative Assessment Process is the recognition and adaptation of classroom environments so as to foster the growth and development of all students. Classroom environments must be conducive to learning as well as to the developmental needs of K-3 students. Effective teachers work to learn as much as possible about their students. Knowing what skills students have already learned, what their likes/dislikes are, and/or if they learn more effectively in large groups, small groups, or in one-on-one settings are but a few important considerations as we move toward our ultimate goal of helping students learn to the maximum of their abilities. This knowledge helps teachers plan lessons to be sure; however, and more importantly, this information helps teachers meet the unique needs of all students in their classrooms, increasing the likelihood that all students will benefit from the instruction provided. Teachers are now equipped with information that allows them to focus on more specific learning targets in a way that encourages all students to explore, initiate learning according to their skills and interests, and collaborate effectively with their peers. Utilizing the NC Formative Assessment Process provides teachers with the information to be successful in these endeavors.

We trust this tool inspires and motivates great teaching. As always, we welcome your thoughts, comments, and classroom tales of the support in action.

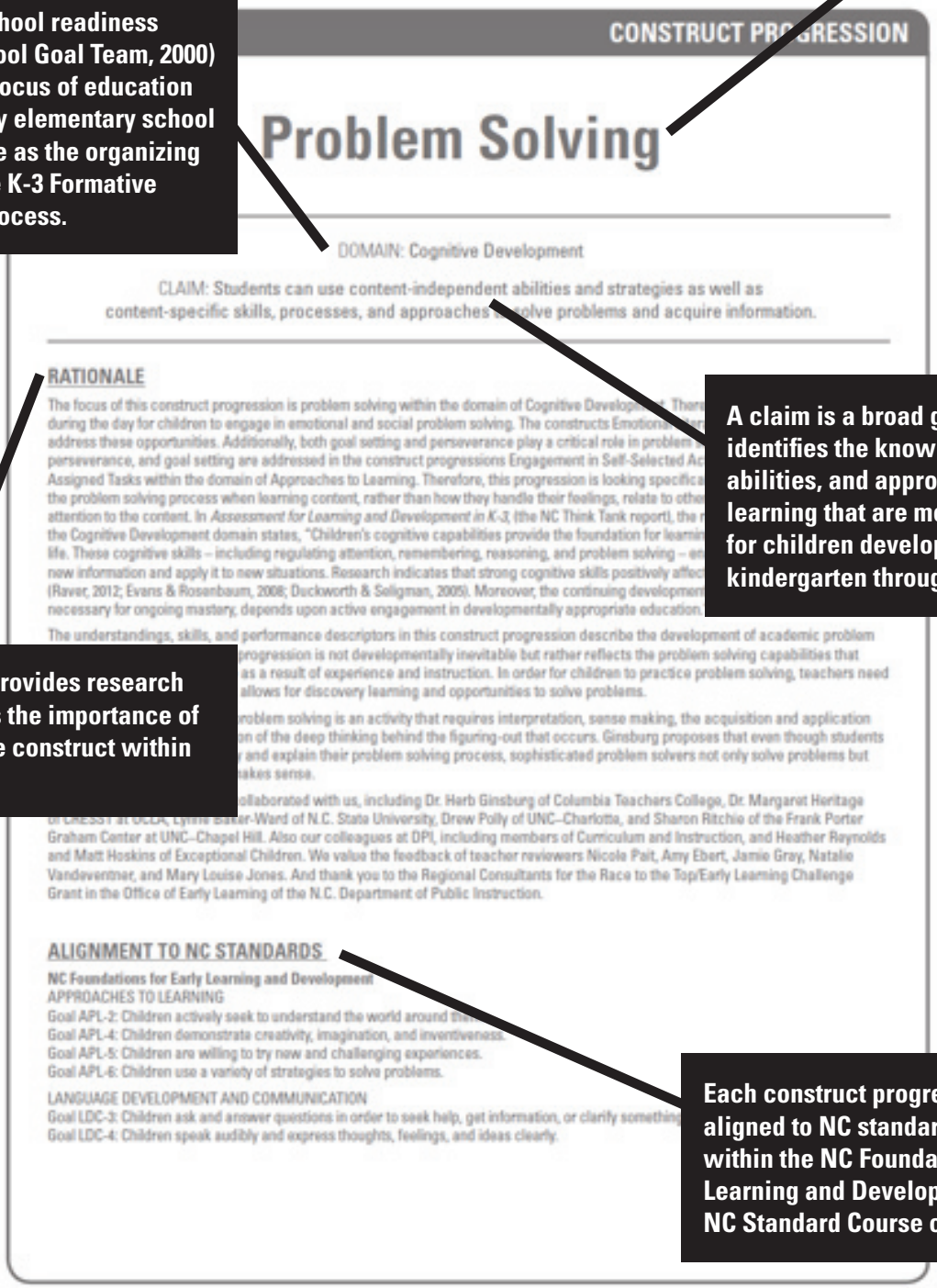
"The contents of this guide were developed under a grant from the Department of Education. However, these contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the federal government"

ARCHITECTURE

Within each of the 5 Domains of Learning and Development, the NC K-3 Assessment Think Tank developed claims- broad goals that identify the knowledge, abilities, and approaches toward learning that are most essential for children to develop during kindergarten through third grade. These claims were used to identify specific constructs for which the assessment would focus.

The five interrelated domains of learning and development included in North Carolina's definition of school readiness (Ready for School Goal Team, 2000) constitute the focus of education during the early elementary school years and serve as the organizing structure of the K-3 Formative Assessment Process.

A construct refers to what the assessment has been designed to measure within a specified claim.



CONSTRUCT PROGRESSION

Problem Solving

DOMAIN: Cognitive Development

CLAIM: Students can use content-independent abilities and strategies as well as content-specific skills, processes, and approaches to solve problems and acquire information.

RATIONALE

The focus of this construct progression is problem solving within the domain of Cognitive Development. There during the day for children to engage in emotional and social problem solving. The constructs Emotional address these opportunities. Additionally, both goal setting and perseverance play a critical role in problem perseverance, and goal setting are addressed in the construct progressions Engagement in Self-Selected Ac Assigned Tasks within the domain of Approaches to Learning. Therefore, this progression is looking specifica the problem solving process when learning content, rather than how they handle their feelings, relate to othe attention to the content. In *Assessment for Learning and Development in K-3*, (the NC Think Tank report), the r the Cognitive Development domain states, "Children's cognitive capabilities provide the foundation for learni life. These cognitive skills – including regulating attention, remembering, reasoning, and problem solving – en new information and apply it to new situations. Research indicates that strong cognitive skills positively affec (Raver, 2012; Evans & Rosenbaum, 2008; Duckworth & Seligman, 2005). Moreover, the continuing developmen necessary for ongoing mastery, depends upon active engagement in developmentally appropriate education.

The understandings, skills, and performance descriptors in this construct progression describe the development of academic problem progression is not developmentally inevitable but rather reflects the problem solving capabilities that as a result of experience and instruction. In order for children to practice problem solving, teachers need allows for discovery learning and opportunities to solve problems.

roblem solving is an activity that requires interpretation, sense making, the acquisition and application on of the deep thinking behind the figuring-out that occurs. Ginsburg proposes that even though students and explain their problem solving process, sophisticated problem solvers not only solve problems but akes sense.

ollaborated with us, including Dr. Herb Ginsburg of Columbia Teachers College, Dr. Margaret Heritage of CRESST at UCLA, Lynne Baker-Ward of N.C. State University, Drew Polly of UNC–Charlotte, and Sharon Ritchie of the Frank Porter Graham Center at UNC–Chapel Hill. Also our colleagues at DPI, including members of Curriculum and Instruction, and Heather Reynolds and Matt Hoskins of Exceptional Children. We value the feedback of teacher reviewers Nicole Pait, Amy Ebert, Jamie Gray, Natalie Vandeventner, and Mary Louise Jones. And thank you to the Regional Consultants for the Race to the Top/Early Learning Challenge Grant in the Office of Early Learning of the N.C. Department of Public Instruction.

ALIGNMENT TO NC STANDARDS

NC Foundations for Early Learning and Development

APPROACHES TO LEARNING

Goal APL-2: Children actively seek to understand the world around the

Goal APL-4: Children demonstrate creativity, imagination, and inventiveness.

Goal APL-5: Children are willing to try new and challenging experiences.

Goal APL-6: Children use a variety of strategies to solve problems.

LANGUAGE DEVELOPMENT AND COMMUNICATION

Goal LDC-3: Children ask and answer questions in order to seek help, get information, or clarify something

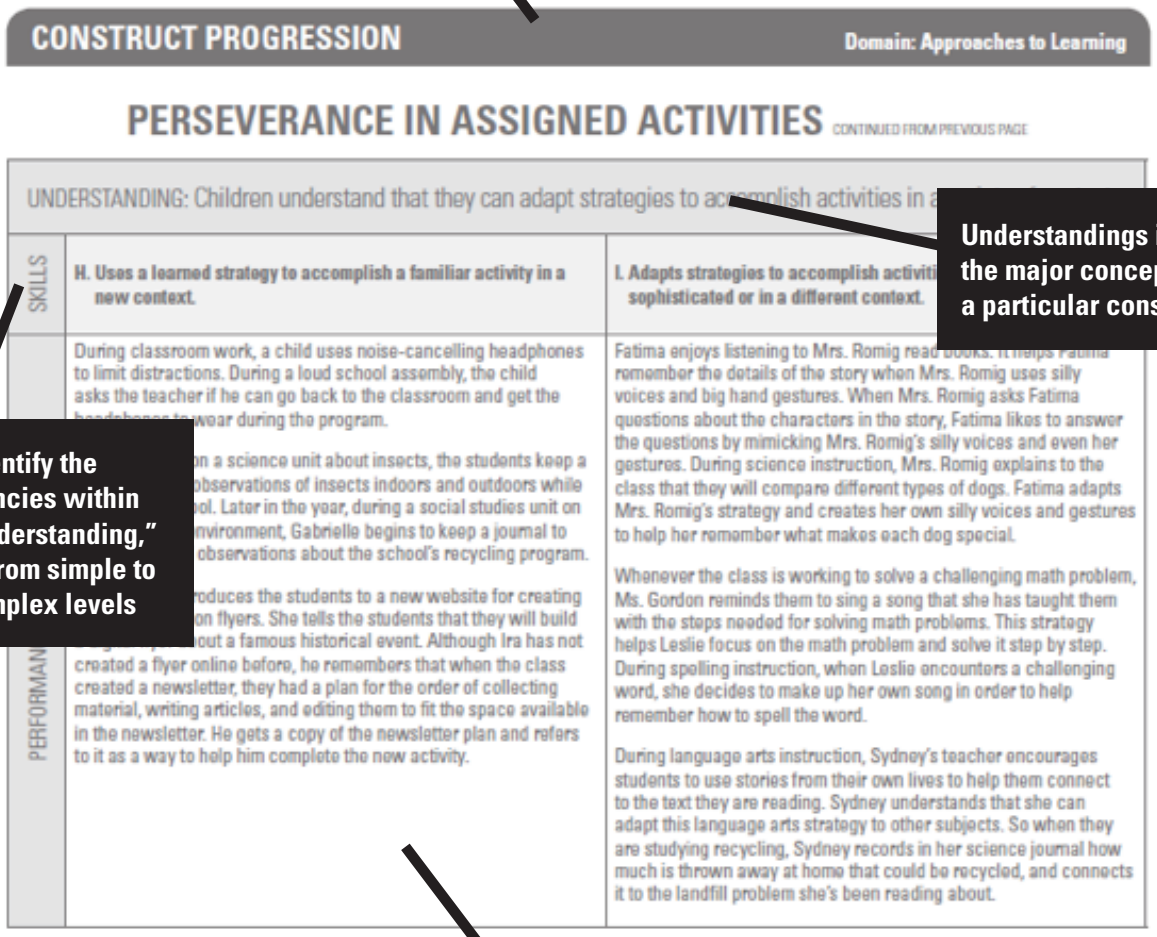
Goal LDC-4: Children speak audibly and express thoughts, feelings, and ideas clearly.

A claim is a broad goal that identifies the knowledge, abilities, and approaches toward learning that are most essential for children develop during kindergarten through third grade.

The rationale provides research that articulates the importance of attending to the construct within the K-3 years.

Each construct progression is aligned to NC standards found within the NC Foundations for Early Learning and Development and the NC Standard Course of Study.

A construct progression is a carefully sequenced set of understandings and skills for a particular concept or subject matter that traces the development of learning over time from a rudimentary form through more sophisticated states. It is comprised of 3 parts: Understandings, Skills, and Performance Descriptors.



CONSTRUCT PROGRESSION — Domain: Approaches to Learning

PERSEVERANCE IN ASSIGNED ACTIVITIES CONTINUED FROM PREVIOUS PAGE

UNDERSTANDING: Children understand that they can adapt strategies to ac[illegible]plish activities in a[illegible]

	SKILLS	H. Uses a learned strategy to accomplish a familiar activity in a new context.	I. Adapts strategies to accomplish activiti[illegible] sophisticated or in a different context.
PERFORMAN[illegible]		During classroom work, a child uses noise-cancelling headphones to limit distractions. During a loud school assembly, the child asks the teacher if he can go back to the classroom and get the headphones to wear during the program. [illegible]n a science unit about insects, the students keep a [illegible]bservations of insects indoors and outdoors while [illegible]ol. Later in the year, during a social studies unit on [illegible]nvironment, Gabrielle begins to keep a journal to [illegible] observations about the school's recycling program. [illegible]roduces the students to a new website for creating [illegible]on flyers. She tells the students that they will build [illegible]out a famous historical event. Although Ira has not created a flyer online before, he remembers that when the class created a newsletter, they had a plan for the order of collecting material, writing articles, and editing them to fit the space available in the newsletter. He gets a copy of the newsletter plan and refers to it as a way to help him complete the new activity.	Fatima enjoys listening to Mrs. Romig read books. It helps Fatima remember the details of the story when Mrs. Romig uses silly voices and big hand gestures. When Mrs. Romig asks Fatima questions about the characters in the story, Fatima likes to answer the questions by mimicking Mrs. Romig's silly voices and even her gestures. During science instruction, Mrs. Romig explains to the class that they will compare different types of dogs. Fatima adapts Mrs. Romig's strategy and creates her own silly voices and gestures to help her remember what makes each dog special. Whenever the class is working to solve a challenging math problem, Ms. Gordon reminds them to sing a song that she has taught them with the steps needed for solving math problems. This strategy helps Leslie focus on the math problem and solve it step by step. During spelling instruction, when Leslie encounters a challenging word, she decides to make up her own song in order to help remember how to spell the word. During language arts instruction, Sydney's teacher encourages students to use stories from their own lives to help them connect to the text they are reading. Sydney understands that she can adapt this language arts strategy to other subjects. So when they are studying recycling, Sydney records in her science journal how much is thrown away at home that could be recycled, and connects it to the landfill problem she's been reading about.

Understandings identify the major concepts within a particular construct

Skills identify the competencies within each "understanding," ranging from simple to more complex levels

Performance Descriptors paint a picture of what a child may say, do, make or write to demonstrate his/her understanding or skill at each stage of the progression. They help teachers make inferences from evidence gathered to identify where student's learning status is along the progression.

SITUATION: *How Many are Here Today?*

Situations are intentionally planned instructional activities designed to provide teachers guidance on or examples for setting up a learning activity to learn about students through observation and probing.

Situations are organized around the 5 critical components of the formative assessment process

Probes are open-ended questions that invite a student to demonstrate what he or she knows and is able to do, while refraining from instructing or leading the student

Selecting Learning Target(s)	Understanding: Children recognize that counting tells the number of objects*. **A. Says or indicates counting words randomly, with one number for each object, while tapping or pointing to one and only one object to determine the number of objects in a collection.** **B. Says or indicates counting words sequentially, saying one number for each object, while tapping or pointing to one and only one object to attempt to determine the number of objects in a collection without keeping track of objects counted.** **C. Keeps track of objects when counting, not counting them twice or missing any.** **D. States or indicates that the last number counted is the total quantity. (Cardinality)** **E. Stat… the … with…** OR **Stat… that … yield… and … need… reco… the … twic… different answers.**
	* The **amount** and **arrangement** of objects vary according to the student's needs. Therefore, it is possible that a student may demonstrate different skills based on the amounts and/or arrangements used. It is important to record these two factors with the documentation.
General Description	In a small or large group setting, children are invited to count the number of children, boys, girls, and other types of categories (e.g., color of shirt, type of shoes, type of lunch choice). As children count the various groups, the teacher carefully observes and makes notes about the children's counting abilities, paying attention to counting words, the sequence of counting words, one-to-one correspondence, and cardinality.
Eliciting Evidence of Learning	The teacher gathers the children together and asks for a volunteer to count the number of children at school today. After the volunteer counts the children, the teacher then asks for all of the girls to stand up and for a volunteer to count the number of girls at school today. The teacher continues to call on volunteers to count different groups of students, making sure to pick categories that provide different quantities of children to count, including larger and smaller groups. In an effort to find the child's edge of understanding, when the teacher is selecting a student to count a partic… teacher intentionally selects a student who may likely count the number of children in the specified group with… who – based on previous observations – may be able to count larger quantities, the teacher selects those vol… of students, such as the entire class. For children who may find larger … children to count the smaller groups of children, such as the number of children with braids in their hair. Vignette: During Morning Meeting Time, the teacher asks the children, "I wonder how many children are here … Several children say, "We can count!" The teacher agrees and asks for a volunteer to count all of the children… teacher selects Megan. The teacher has observed Megan counting larger quantities of objects at the Math Station and anticipates that this opportunity may challenge her but not frustrate her. Megan begins to count the children, gently touching each child's head. She counts the children with one-to-one correspondence and does not skip any children or count them twice. The teacher asks, "How many children are here today?" Without having to recount the children, Megan responds correctly, "25. Everybody is here!" The teacher probes, "What if Benjamin counted all of the children? Would there still be 25?" Megan pauses, shrugs her shoulders, and says, "I don't know." The teacher invites Benjamin to count all of the children. Benjamin counts them accurately and reports, "Yup. There are 25 children." Megan says, "WOW! We got the same." The teacher probes, "You seem surprised. Tell me what you're thinking." Megan replies, "I thought they would be different." The teacher notes that Megan was surprised that recounting the same group ended up with the same number. Suggested Probes: • "How many (name of object) did you count?" • "If (name of child) counted them again, how many would (s/he) have?" • "Tell me what you're thinking." Probes to Avoid: • "If you counted them again, you would have the same amount; right?" • "That's right. It will be the same because we didn't add any or take any away, did we?"
…on the Evidence	**Observation:** As Megan counted the children in the class, she counted each child, using the correct counting sequence and one-to-one correspondence without losing track of the children she counted. Megan also accurately stated "25," identifying the total amount. When probed about re-counting the same children, Megan stated, "I thought they would be different." • Construct Progression Best Fit: **D. States or indicates that the last number counted is the total quantity. (Cardinality)**
…ding …ning …ds	Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to … same learning target if the student hasn't met it. If the student has met the learning …ing target for teaching and learning.

Engagement in Self-Selected Activities

DOMAIN: Approaches to Learning

CLAIM: Students can maintain focus and persevere to accomplish collaborative tasks whether those tasks are chosen by them, or assigned to them.

RATIONALE

"Attention-related skills such as task persistence and self-regulation are expected to increase the time during which children are engaged and participating in academic endeavors. Research has shown that signs of attention and impulsivity can be detected as early as age 2.5 but continue to develop until reaching relative stability between ages 6 and 8 (Olson, Sameroff, Kerr, Lopez, & Wellman, 2005; Posner & Rothbart, 2000). Studies linking attention with later achievement are less common, but consistent evidence suggests that the ability to control and sustain attention as well as participate in classroom activities predicts achievement test scores and grades during preschool and the early elementary grades (Alexander, Entwisle, & Dauber, 1993; Raver, Smith-Donald, Hayes, & Jones, 2005). These attention skills, which are conceptually distinct from other types of interpersonal behaviors, are associated with later academic achievement, independent of initial cognitive ability (McClelland, Morrison, & Holmes, 2000; Yen, Konold, & McDermott, 2004) and of prior reading ability and current vocabulary (Howse, Lange, Farran, & Boyles, 2003). Examining attention separately from externalizing problems has clarified the role of each in achievement, suggesting that attention is more predictive of later achievement than more general problem behaviors (Barriga et al., 2002; Hinshaw, 1992; Konold & Pianta, 2005; Ladd, Birch, & Buhs, 1999; Normandeau & Guay, 1998; Trzesniewski, Moffitt, Caspi, Taylor, & Maughan, 2006; Duncan et. al, 2007, p. 1430). As mentioned in *Engaging and Re-Engaging Students in Learning at School* (2008), "Fredricks, Blumenfeld, and Paris (2004) conclude: Engagement is associated with positive academic outcomes, including achievement and persistence in school; and it is higher in classrooms with supportive teachers and peers, challenging and authentic tasks, opportunities for choice, and sufficient structure" (pg. 3).

Children learn in different ways. Therefore, when only one teaching method is used, and children do not have a choice about that method, many children may not achieve the learning objective. In order to ensure that all children learn a particular skill, a variety of approaches must be provided. When teachers provide purposefully planned and relevant opportunities from which students can choose, they are increasing possibilities for students to develop autonomy, self-reliance, and self-esteem as well as increasing the students' ability to solve problems, think divergently, accept responsibility for their actions, and learn persistence and task completion (Grossman, 2007).

ALIGNMENT TO NC STANDARDS

NC Foundations for Early Learning and Development
Goal AP-7 Children demonstrate initiative.
Goal AP-8 Children maintain attentiveness and focus.

NC Standard Course of Study (Common Core State Standards & Essential Standards)
As Local Education Agencies embrace the NCSCOS, they will work to empower educators to use a variety of instructional approaches that address the diverse needs of their students. These efforts will be made to improve the academic performance of all students. The NCSCOS does not define these varied instructional practices. Nor does it define how students should approach the learning of these standards. However, the introductory sections of the NCSCOS documents encourage best practices and provide explanations of effective learning cultures. These descriptors bring clarity to possible ways to provide opportunities for students to exhibit these approaches to learning behaviors.

The instructional support components of the NCSCOS documents complement the standards and provide guidance to educators as they develop a desirable pedagogy that allows students to learn by taking risks and overcoming challenges to acquire new knowledge. For example, the preamble to the NC Essential Standards for K-2 Social Studies states that there are two primary purposes of social studies. "The first is to develop young people who are knowledgeable, critical, and capable of making informed decisions about the world and their place in it. The second purpose is to prepare young people to participate actively and responsibly in a culturally diverse, democratic, and increasingly interdependent world." Therefore, you will find reference to skills such as independence, setting goals and demonstrating initiative within the introductory & supplemental materials of the NC Standard Course of Study documents, including the Common Core State Standards.

ENGAGEMENT IN SELF-SELECTED ACTIVITIES

UNDERSTANDING	Children understand that daily classroom routines provide opportunities for them to make choices of interest.	Children understand that making choices allows them to pursue their interests.
SKILLS	**A. Wanders, examining many options for self-selected activities in the classroom environment, but does not settle with one particular choice.**	**B. Begins to make purposeful choices for self-selected activities that are highly engaging and begins to sustain engagement in a chosen activity.**
PERFORMANCE DESCRIPTORS	Felipe is in the block corner observing other children using file cards and markers to make road signs. He notices activity in the dramatic play center and moves to that area of the classroom. Felipe briefly interacts with the cash register and grocery props, but he decides to leave and go to the Art Center. In the Media Center, Abigail is given an opportunity to choose a book to be checked out. She walks from shelf to shelf and mimics the actions of peers by pulling the books off the shelves. Before Abigail takes an interest in any book, she notices other peers in a different location of the media center. Abigail drops a book on a table to migrate to that other area in the media center. Abigail repeats the action of pulling books from shelves, without selecting any particular book.	Aiden chooses to enter the Dramatic Play Center and stays there to explore the materials. He begins to remove items from the stove, the cupboard, etc., and piles them in the middle of the dramatic play table. Aiden explores the items, but he does not appear to be trying to accomplish a specific task. Diego chooses the Math Center and stays there to explore different materials. He selects the counting bears, pours them onto the table and arranges them in various ways.

ENGAGEMENT IN SELF-SELECTED ACTIVITIES

Children understand that they can make a plan and accomplish a task of interest to them, even when there are other things going on around them.	Children understand that when they are working toward completion of a plan, there may be distractions and interruptions, but that their task will be there when they get back.	UNDERSTANDING
C. Sustains engagement in a self-selected activity, ignoring task-irrelevant information and low-level distractions from peers or other classroom activities.	**D. Sustains engagement in self-selected activities, while increasingly resisting distractions. Resumes or re-engages in activities following interruptions.**	SKILLS
Angel begins to build in the block corner. She removes a collection of blocks from the storage shelf and piles them near the foundation of her building. Angel proceeds to build a tall building until all of the chosen blocks are used, ignoring the various distractions of other children also building nearby. Brandon goes to the Art Center and chooses a large popsicle stick out of the bin. He doesn't stay to work in the Art Center but quickly takes the popsicle stick to the puppet corner and uses the popsicle stick as a puppet while performing a puppet show.	Diamond goes to the Bookmaking Center and selects various materials including paper, a stapler, and markers to make a book. Liam comes over to show Diamond his Lego® structure. After stopping to admire the Lego® structure, Diamond returns to making her book. But before the book is completed, the entire class is asked to stop what they are doing to go to lunch. After lunch, the teacher allows children to return to what they were doing, and Diamond returns to the Bookmaking Center and continues to work until her book is completed. Luis goes to the painting easel, produces a painting, and leaves it to dry. Later during a free choice time, Luis returns to the art center, takes the dried painting, and uses pieces from the collage box to further develop the design by gluing pieces onto the painting.	PERFORMANCE DESCRIPTORS

RESOURCES USED

Alexander, K. L., Entwisle, D. R., & Dauber, S. L. (1993). First-grade classroom behavior: Its short and long-term consequences for school performance. *Child Development, 64*, 801-814.

Barriga, A. Q., Doran J. W., Newell, S. Morrison, E. M., Barbenti, V., & Robins, B. D. (2002). Relationships between problem behaviors and academic achievement in adolescents: The unique role of attention problems. *Journal of Emotional and Behavior Disorders, 10*(4), 233-240.

Center for Mental Health in Schools. (2008). *Engaging and re-engaging students in learning at school*. Los Angeles, CA: Author.

Duncan, G. J., Dowsett, C. J., Classens, A., Magnuson, K., Huston, A. C., Klebanov, P., Pagani, L.,… Japel,C. (2007). School readiness and later achievement. *Developmental Psychology, 43*, 1428-1446.

Galinsky, E. (2010). *Mind in the making*. New York, NY: HarperCollins.

Grossman, S. (2007). Offering Children Choices: Encouraging Autonomy and Learning While Minimizing Conflicts, *Early Childhood News*. Retrieved 2/18/2015: *http://www.earlychildhoodnews.com/earlychildhood/article_view.aspx?ArticleID=607*.

Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: causal relationships and underlying mechanisms. *Psychological Bulletin, 111*(1), 127-155.

Howse, R. B., Lange, G., Farran, D. C., & Boyles, C. D. (2003). Motivation and self-regulation as predictors of achievement in economically disadvantaged young children. *The Journal of Experimental Education, 71*, 151-174.

Hyson, M. (2008). *Enthusiastic and engaged learners*. New York, NY: Teachers College Press.

K-3 North Carolina Think Tank. (2013). *Assessment for learning and development in K – 3: A report by the K-3 North Carolina think tank.* Raleigh, NC: Author.

Konold, T. R., & Pianta, R. C. (2005). Empirically-derived, person-oriented patterns of school readiness in typically-developing children: Description and prediction to first-grade achievement. *Applied Developmental Science, 9*, 174-187.

Ladd, G. W., Birch, S. H., & Buhs, E. S. (1999). Children's social and scholastic lives in kindergarten: Related spheres of influence? *Child Development, 70*(6), 1373-1400.

McClelland, M. M, Morrison, F. J., & Holmes, D. L. (2000). Children at risk for early academic problems: the role of learning-related social skills. *Early Childhood Research Quarterly, 15*(3), 307-329.

Normandeau, S., & Guay, F. (1998). Preschool behavior and first-grade school achievement: The mediational role of cognitive self-control. *Journal of Educational Psychology, 90*, 111-121.

North Carolina Department of Public Instruction, Office of Early Learning. (2013). [Attention and focus gap analysis]. Unpublished document.

North Carolina Department of Public Instruction. (2013). Quick Reference Guides http://www.ncpublicschools.org/curriculum/links/reference-guides/

North Carolina Foundations Task Force. (2013). *North Carolina foundations for early learning and development*. Raleigh, NC: Author

Olson, S. L., Sameroff, A. J., Kerr, D. C., Lopez, N. L., & Wellman, H. M. (2005). Developmental foundations of externalizing problems in young children: the role of effortful control. *Development and Psychopathology, 17*(1), 25-45.

Posner, M. I., & Rothbart, M. K. (2000). Developing mechanisms of self-regulation. *Development and Psychopathology, 12*, 427-441.

Raver, C.C., Smith-Donald, R., Hayes, T., Jones, S.M. (2005, April). *Self-regulation across differing risk and sociocultural contexts: Preliminary findings from the Chicago School Readiness Project.* Paper presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.

Trzesniewski, K. H., Moffitt, T. E., Caspi, A., Taylor, A., & Maughan, B. (2006). Revisiting the association between reading achievement and antisocial behavior: New evidence of an environmental explanation from a twin study. *Child Development, 77*, 72-88.

Yen, C., Konold, T. R., McDermott, P. A. (2004). Does learning behavior augment cognitive ability as an indicator of academic achievement? *Journal of School Psychology, 42*, 157-169.

SITUATION: *Engaging in Purposeful Choices*

Selecting Learning Target(s)	Understanding: Children understand that daily classroom routines provide opportunities for them to make choices of interest.	Understanding: Children understand that making choices allows them to pursue their interests.	Understanding: Children understand that they can make a plan and accomplish a task of interest to them, even when there are other things going on around them.	Understanding: Children understand that when they are working toward completion of a plan, there may be distractions and interruptions, but that their task will be there when they get back.
	A. Wanders, examining many options for self-selected activities in the classroom environment, but does not settle with one particular choice.	**B. Begins to make purposeful choices for self-selected activities that are highly engaging, and begins to sustain engagement in a chosen activity.**	**C. Sustains engagement in a self-selected activity, ignoring task-irrelevant information and low-level distractions from peers or other classroom activities.**	**D. Sustains engagement in self-selected activities, while increasingly resisting distractions. Resumes or re-engages in activities following interruptions.**
Identifying Opportunities for Eliciting Evidence of Learning	Children demonstrate their ability to make purposeful choices when provided with opportunities to self-select tasks throughout the day. Observing children as they make choices in these situations can provide evidence of their engagement and focus. Throughout the day children may be observed: • Choosing a standards-based, cross-curricular learning center or station based on interest • Selecting and using materials • Selecting a seat at lunch or during group time • Deciding to work independently, with a group or with a partner • Participating in an activity on the playground			
Eliciting Evidence of Learning	Based on their interest, children choose from open-ended and meaningful standards-based learning centers/stations. Sufficient time is provided for children to explore the various learning areas, freely choose areas in which to work, and become invested in the activities, allowing for personal, authentic inquiry and ownership. These standards-based learning centers or stations could include: blocks, creative arts, drama, math, puzzles and games, reading, science, and writing. Each learning area offers intentionally selected materials that are easily available for children, such as: art supplies (e.g., variety of paper, drawing and collage materials, paint, play dough), various levels and types of books, building materials and accessories, manipulatives (e.g., counters, shapes, letters), writing supplies (e.g., assortment of paper, pencils, markers), and creative and dramatic play items or unit-themed items (e.g., menus, telephones, cash registers, keyboards). Each inviting learning area is appropriate for young learners and offers carefully selected materials that build on student strengths and interests. As children explore various learning area options, the teacher moves among the children observing their ability to choose and sustain a choice. It will take several observations for the teacher to have enough evidence to feel confident about a pattern of behavior for the child.			
Eliciting Evidence of Learning: Suggested Probes	A. After several days of the teacher modeling the routine of selecting a learning station, a child continues to walk around the room from place to place not making a decision to remain. T: I see you are walking around the room, have you selected a learning station? T: I see you have not selected a place to work, do you need help?			
	B. After several days of providing a time during the day for children to choose a learning area and work, a child is observed multiple times quickly making a decision but engages in each decision made on a minimal basis. T: With so many learning station choices, why did you choose this work area? T: I noticed you quickly selected this learning station, can you tell me why? T: What do or did you like about this learning area? T: What made you leave? T: I see that you chose X choice. Tell me what you are thinking of working on there.			

<table>
<tr><td rowspan="2">Eliciting Evidence of Learning: Suggested Probes</td><td>C. After the teacher helps children know the routine of returning to a learning area after an activity and making a choice to work on something of interest until others are finished, a child is observed doing so during a variety of transitions.

After lunch, a child moves quickly to a learning station where he/she was previously engaged and continues to work where he/she left off.

After completing an assigned task, a child knows to get a familiar book and reread until the others at the table have completed the task.

T: Please take your reading materials back to your desk and return to your morning activity center. After circle time, a child knows to return to his learning space and continue with a morning activity of choice until the next transition occurs. After an interruption such as a fire drill, lunch, or recess, ask the students to return to their learning station work area.

T: Now that we have returned to the classroom, please go to your selected learning station and complete your work.</td></tr>
<tr><td>D. No probe is needed if the child returns to the previous task after an interruption. The teacher's comment to the child who returns to the previous task could serve as a probe to another child who overhears it.

T: Wesley, thanks for going right back to the writing center! I know you were working on your Thank You letter before the fire drill. Show me what you have left to do.</td></tr>
<tr><td>Eliciting Evidence of Learning: Probes to Avoid</td><td>• "Maybe you need to stay here and finish your painting, since many artists fill their whole canvas. Possibly add some more colors."
• "I think you should go to the writing center today."
• "Stay here and finish this puzzle."
• "Please go back to the block center and finish building the block tower with Jeremy."</td></tr>
<tr><td>Interpreting the Evidence</td><td>Observation: During center time the teacher observes a child wandering about the room looking at several things, but not selecting a center or becoming engaged. The teacher invites the child to the block center and attempts to engage her by asking her questions like, "What do you like to build?" and "How can you use the blocks to make it?" The child engages in building and becomes focused on creating a house. She sustains her attention to the task briefly, but gets distracted by other children who are next to the block center in the dramatic play area. She gets up and goes to them instead of continuing to build. The teacher attempts to re-engage the child in the block center, but the child remains with the other students a few moments, and then moves on again.

• Identify Learning Status on Construct Progression: A. Wanders, examining many options for self-selected activities in the classroom environment, but does not settle with one particular choice.

Observation: The teacher observes a child scanning the learning center choices in the classroom. The child keeps walking around the room, but after a probe from the teacher the child chooses to play in the block center. He begins to build a structure, but leaves the center after a few minutes when he notices another center across the room. The child engages in the new center for several minutes as well, but is distracted by interruptions.

• Identify Learning Status on Construct Progression: B. Begins to make purposeful choices for self-selected activities that are highly engaging, and begins to sustain engagement in a chosen activity.

Observation: The teacher observes a child choose the block center. The child removes a collection of blocks from the shelf and piles them near the foundation. The child proceeds to build until all the chosen blocks are used and ignores the possible distractions of other children also building nearby.

• Identify Learning Status on Construct Progression: C. Sustains engagement in a self-selected activity, ignoring task-irrelevant information and low-level distractions from peers or other classroom activities.</td></tr>
<tr><td>Adapting/ Responding to Learning Needs</td><td>Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.</td></tr>
</table>

Object Counting

DOMAIN: Cognitive Development

CLAIM: Students can use content-independent abilities and strategies as well as content-specific skills, processes, and approaches to solve problems and acquire information.

RATIONALE

Children need to develop foundational concepts, such as knowledge of numbers, in order to build future math and reading skills. The ability to understand number names, the counting sequence, and that counting tells the number of objects, are essential understandings needed in the early developmental years. Understanding counting is more than being able to count to 100. Counting is a complex concept. Children move through progressive mathematical stages in order to understand that quantities remain the same when they are rearranged; they learn to be consistent and accurate and to see relationships between numbers. Research shows that general math achievement measured around kindergarten entry has been found to be highly predictive of subsequent mathematics achievement, measured around third grade (Duncan et al., 2007; Claessens, Duncan, & Engel, 2009; Claessens & Engel, 2013). Key advocacy groups, such as the National Association for the Education of Young Children (NAEYC) and the National Council of Teachers of Mathematics (NCTM), have issued position statements on the importance of early mathematics, arguing that mathematics education for 3- to 6-year olds is essential to promoting future mathematics achievement (NAEYC & NCTM, 2002). Children's ability in mathematics has also been found to affect reading ability. "Most surprising is that it also predicts later reading achievement even better than early reading skills. In fact, research shows that doing more mathematics increases oral language abilities, even when measured during the following school year. These include vocabulary, inference, independence, and grammatical complexity" (Clements & Sarama, 2013).

ALIGNMENT TO NC STANDARDS

NC Foundations for Early Learning and Development

CD-10 Children show understanding of numbers and quantities during play and other activities.

NC Standard Course of Study (Common Core State Standards & Essential Standards)

K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality.

K.CC.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.

OBJECT COUNTING

UNDERSTANDING: Recognizes that counting tells the number of objects*.				
SKILLS	**A. Says or indicates counting words out of sequence while pointing to objects.**	**B. Says or indicates counting words in the correct sequence without keeping track of objects counted (counts with one-to-one correspondence and one-to-one tagging).**	**C. Says or indicates counting words in the correct sequence while keeping track of objects counted (counts with one-to-one correspondence and one-to-one tagging).**	**D. States or indicates that the last number counted is the total quantity. (Cardinality)**
PERFORMANCE DESCRIPTORS	Liam is counting his five crayons before he begins his art project. He touches two crayons as he says the counting words out loud, "one, three, six". During snack time, the teacher notices that Zahir has lined up four crackers. The teacher asks Zahir, "How many crackers do you have?" Zahir moves the first cracker over and says "one." He moves the second cracker over and says, "two." He then moves the third AND fourth crackers over and says, "five."	There are seven chrysalises hanging from branches placed in the butterfly pavilion. Isabella is looking at the butterfly pavilion and the teacher asks, "How many chrysalises are in the branches?" As Isabella points to some chrysalises, she says, "One, two, three, four." The teacher asks, "Did you count all of the chrysalises?" Isabella says, "Yes." Davis has 10 animal crackers on a napkin. He touches each animal cracker while saying the counting words in the correct sequence. Davis counts three of the crackers a second time, finishing his counting with, "11, 12, 13."	Mr. Martinez says, "Olivia, please count the number of beanbags for your team." Olivia moves one beanbag at a time and says, "One, two, three, four, five, six, seven, eight," without counting any of them twice or missing any. In the hall outside the cafeteria, Ms. Bandini pointed out the new poster showing six fruits. MacKensie said, "Wow, one, two, three, four, five, six! I love fruit!" NOTE: The child could visually track the objects without pointing. If the child correctly counts all of the objects presented, his/her ability to keep track may be inferred.	Mr. Martinez says, "Olivia, please count the number of beanbags for your team." Olivia counts the beanbags saying, "One, two, three, four, five, six, seven, eight" without counting any individual beanbag twice or missing any. Mr. Martinez then asks Olivia, "How many beanbags do you have for your team?" Olivia says, "Eight," without having to recount the beanbags.

* The **amount** and **arrangement** of objects vary according to the student's needs. Therefore, it is possible that a student may demonstrate different skills based on the amounts and/or arrangements used. It is important to record these two factors with the documentation. (i.e. Carlos can count ten objects and keep track of them without missing any or counting any twice (one-to-one correspondence), he has a current learning status of skill "C" up to ten. When Carlos is working with a set of five objects, he can state that the last number counted is the total quantity, he can state that he has the same total quantity when asked, if none have been removed or added and he can even indicate that he still has five after the objects have been rearranged. Carlos has a current learning status of skill "F" for a quantity of five objects at the same time as he has a current learning status of "C" for a quantity of ten.)

OBJECT COUNTING

UNDERSTANDING: Recognizes that counting tells the number of objects*.				
E. States or indicates that the same total quantity of previously counted objects does not change unless objects are added or removed.	**F. States or indicates that the same total quantity of previously counted objects does not change when the objects are rearranged (conservation).**	**G. Continues the counting sequence automatically when ONE object is added to the set.**	**H. Continues the counting sequence automatically when MORE THAN ONE object is added to the set.**	SKILLS
At the Art Center, Patrick gets and counts seven markers. Mrs. Sims asks Patrick, "How many markers did you count?" Patrick says "Seven. See. One, two, three, four, five, six, seven, eight." because he counts one of the markers twice. "That's not right! I should have seven!" Patrick recounts, "One, two, three, four, five, six, seven. That's right, seven."	During snack time, Chandler counts out some animal crackers and places them on his plate. Miguel asks, "How many crackers are on your plate?" Chandler answers, "Eight." Chandler then accidentally turns over his plate and the animal crackers are arranged differently on the table. Miguel says, "That looks like a lot more crackers! How many do you have now?" Chandler says, "I still have eight." Ben and Davion are playing a card game. Ben ask Davion, "How many cards do you have?" Davion responds by counting, "One, two, three, four, five, six. I have six cards." Davion drops the six cards. When Ben asks, "How many cards do you have now?" Davion replies, "I still have six cards."	Brittany and Mario have jobs as cashiers in their class market. Brittany accurately counts the pennies in the cash register and tells Mario, "We have 12 pennies." Mario sees an extra penny on the floor, picks it up, hands it to Brittany, who says, says, "Now we have 13 pennies!" The teacher holds up the Compliment Jar filled with cubes, one cube for every compliment the class receives. She reminds the class, "Yesterday we counted eight cubes in the jar". She asks Chloe, "If I get one more cube for the compliment we just received and put that cube in the jar, how many cubes will there be?" Chloe pretends that her hand is the Compliment Jar and mimics putting another cube in, saying, "Eiiiggghhhttt and now nine."	Sarah and Zola are playing a Partner Plus Counting Game. Sarah rolls a six with her die; counts out six counting bears; and places them on the game board. Sarah states, "We have six bears." Zola rolls a four; picks up four counting bears; and adds them to the game board and says, "Now there are ten bears." ** Zola might roll a four and say, "Seven, eight, nine, ten," as she places each bear on the game board. "Now we have ten bears!"*	PERFORMANCE DESCRIPTORS

* The **amount** and **arrangement** of objects vary according to the student's needs. Therefore, it is possible that a student may demonstrate different skills based on the amounts and/or arrangements used. It is important to record these two factors with the documentation. (i.e. Carlos can count ten objects and keep track of them without missing any or counting any twice (one-to-one correspondence), he has a current learning status of skill "C" up to ten. When Carlos is working with a set of five objects, he can state that the last number counted is the total quantity, he can state that he has the same total quantity when asked, if none have been removed or added and he can even indicate that he still has five after the objects have been rearranged. Carlos has a current learning status of skill "F" for a quantity of five objects at the same time as he has a current learning status of "C" for a quantity of ten.)

RESOURCES USED

Claessens, A., Duncan G., & Engel, M. (2009). Kindergarten skills and fifth-grade achievement: Evidence from the ECLS-K. *Economics of Education Review, 28*, 415-427.

Claessens, A., & Engel, M. (2013). How important is where you start? Early mathematics knowledge and later school success. *Teachers College Record, 115*, 1-29.

Clements, D. & Sarama, J. (2009). *Learning and teaching early math: The learning trajectories approach*. New York, NY: Routledge.

Clements, D., & Sarama, J. (2013). *Math in the Early Years: The Progress of Education Reform*. Retrieved from http://www.ecs.org/clearinghouse/01/09/46/10946.pdf

Confrey, J., Nguyen, K.H., Lee, K., Panorkou, N., Corley, A.K., & Maloney, A P. (2012). *Turn-on common core math: Learning trajectories for the common core state standards for mathematics*. Retrieved from http:www.turnonccmath.net

Copley, J., Jones, C., & Dighe, J. (2010). *The creative curriculum for preschool* (5th ed.). Bethesda, MD: Teaching Strategies, Inc.

Daro, P., Mosher, F.A., & Corcoran, T. (2011). *Learning trajectories in mathematics*. Retrieved from http://www.cpre.org/ccii/images/stories/ccii_pdfs/learning%20trajectories%20in%20math_ccii%20report.pdf

De Smedt, B., Verschaffel, L., Ansari,. D., Grabner, R., Schneider, M., & Hannula, M. (2010). Cognitive neuroscience meets mathematics education. *Educational Research Review, 5*(1), 97-105.

Duncan, G.J., Dowsett, C.J., Claessens, A., Magnuson, K., Huston, A.C., Klebanov, P., & Japel, C. (2007). School readiness and later achievement. *Developmental Psychology, 43*(6), 1428–1446.

Edens, K.M., & Potter, E.F. (2012). An exploratory look at relationships among math skills, motivational factors and activity choice. *Early Childhood Education Journal, 41*, 235-243. doi:10.1007/s10643-012-0540-y

Fuson, Karen C. & Grouws, Douglas A. (Eds.), (1992). *Handbook of research on mathematics teaching and learning: A project of the National Council of Teachers of Mathematics*. New York, NY: Macmillan Publishing Co, Inc.

Fosnot, C.T. (2007). *Investigating number sense, addition, and subtraction*. Portsmouth, NH: Heinemann.

Gelman, R., & Gallistel, C. (1986). *Child's understanding of number*. Boston, MA: Harvard College.

Joyner, J., & Muri, M. (2011). *INFORMative assessment: Formative assessment to improve math achievement.* CA: Scholastic, Inc.

K-3 North Carolina Think Tank. (2013). *Assessment for learning and development in K-3: A report by the K-3 North Carolina think tank.* Raleigh, NC: Author.

Maclellan, E. (2012). Number sense: The underpinning understanding for early quantitative literacy. *Numeracy, 5*(2). doi: http://dx.doi.org/10.5038/1936-4660.5.2.3

Myoungwhon, J., Hartman, P., Smith, T., & Wallace, S. (2013). The effectiveness of teaching number relationships in preschool. *International Journal of Instruction, 6*(1), 165-178.

National Association for the Education of Young Children and National Council of Teachers of Mathematics. (2002). *Early childhood mathematics: Promoting good beginnings* (Position Statement). Retrieved from http://www.naeyc.org/files/naeyc/file/positions/psmath.pdf

National Research Council. (2009). *Mathematics learning in early childhood: Paths toward excellence and equity*. Washington, DC: National Academies Press.

North Carolina Department of Public Instruction. (2013). Unpacking Guides http://www.ncpublicschools.org/acre/standards/common-core-tools/#unmath

North Carolina Department of Public Instruction. (2013). Quick Reference Guides http://www.ncpublicschools.org/curriculum/links/reference-guides/

North Carolina Foundations Task Force. (2013). *North Carolina foundations for early learning and development*. Raleigh, NC: Author.

Olive, J., & Caglayan, G. (2008). Learners' difficulties with quantitative units in algebraic word problems and the teacher's interpretation of those difficulties. *International Journal of Science and Mathematics Education, 6*(2), 269-292.

Richardson, K. (2012). *How children learn number concept*. Rowley, MA: Didax, Inc.

Sarama, J., & Clements, D. (2009). Teaching math in the primary grades: The learning trajectories approach. *Young children, 64*(2), 63-65.

State of New South Wales Department of Education and Communities. (2013). *The numeracy continuum*. Retrieved from http://www.numeracycontinuum.com/aspects-of-the-continuum/aspect1/8-aspect-1/27-backward-number-word-sequences

Thomas, G., Tagg, A., & Ward, J. (2003). *Exploring issues in mathematics education: An evaluation of the early numeracy project 2002*. Wellington, New Zealand: Ministry of Education.

Van De Rijt, B., Godfrey, R., Van Luit, J. E., Ghesquiere, P., Torbeyns, J., Hasemann, K., & Tzquriadou, M. (2003). The development of early numeracy in Europe. *Journal of Early Childhood Research, 1*(2), 155-180. doi:10.1177/1476718X030012002

Willey, R., Holliday, A., & Martland, J. (2003). Achieving new heights in Cumbria: Raising standards in early numeracy through mathematics recovery. *Educational and Child Psychology, 24*(2), 108-118.

Wright, R., Ellemor-Collins, D., & Tabor, P. (2012). *Developing number knowledge: Assessment, teaching & intervention with 7-11-year-olds.* Thousand Oaks, CA: SAGE Publications, Ltd.

Wright, R., Staner, G., Stafford, A., & Martland, J. (2006). *Teaching number in the classroom with 4-8-year-olds.* Thousand Oaks, CA: SAGE Publications, Ltd.

SITUATION: *Counting Throughout the Day*

<table>
<tr><td rowspan="3">Selecting Learning Target(s)</td><td colspan="6">Understanding: Recognizes that counting tells the number of objects*.</td></tr>
<tr><td>A. Says or indicates counting words out of sequence while pointing to objects.</td><td>B. Says or indicates counting words in the correct sequence without keeping track of objects counted (counts with one-to-one correspondence and one-to-one tagging).</td><td>C. Says or indicates counting words in the correct sequence while keeping track of objects counted (counts with one-to-one correspondence and one-to-one tagging).</td><td>D. States or indicates that the last number counted is the total quantity. (Cardinality)</td><td>E. States or indicates that the same total quantity of previously counted objects does not change unless objects are added or removed.</td><td>F. States or indicates that the same total quantity of previously counted objects does not change when the objects are rearranged (conservation).</td></tr>
<tr><td colspan="6">* The amount and arrangement of objects vary according to the student's needs. Therefore, it is possible that a student may demonstrate different skills based on the amounts and/or arrangements used. It is important to record these two factors with the documentation. (i.e. Carlos can count ten objects and keep track of them without missing any or counting any twice (one-to-one correspondence), he has a current learning status of skill "C" up to ten. When Carlos is working with a set of five objects, he can state that the last number counted is the total quantity, he can state that he has the same total quantity when asked, if none have been removed or added and he can even indicate that he still has five after the objects have been rearranged. Carlos has a current learning status of skill "F" for a quantity of five objects at the same time as he has a current learning status of "C" for a quantity of ten.)</td></tr>
<tr><td>Identifying Opportunities for Eliciting Evidence of Learning</td><td colspan="6">When given the opportunity to interact with a variety of objects throughout the day, children often count. For instance, children may count to see how many classmates are present, how many letters are in a name, how many children lined up, how many names are next to a menu choice for lunch, how many crackers for snack, how many pips are on a die, or how many objects are in a container. This counting sometimes requires action on the teacher's part to intentionally initiate a counting experience (e.g., "I wonder how many letters are in your name?"). As children count to determine "how many," the teacher uses probes in an effort to learn about the students' understanding of counting.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="6">As children explore various math manipulatives, the teacher moves among the children, observing them working with the objects. The teacher pays particular attention to children who are counting the objects or invites children to count various objects (e.g., "How many blue ones do you have?"), and poses various questions and makes comments about the collections the children are counting (e.g., "How many buttons do you have?" or "If we moved your cubes around, I wonder how many you would have?").

<u>Suggested Probes</u>:
• "Count out loud for me so I can hear your thinking."
• "This time, point as you count."
• "How many (name of object) do you have?"
• "If you counted them again, how many would you have?"
• "Are you sure?"

<u>Probes to Avoid</u>:
• "When you count, be very careful not to miss any."
• "Line them up like this to count." Or "When you count, move them one by one so you don't count something twice."
• Stating, "You have four, right?" after a child counts a set of four, "one…two… three… four."
• "You counted eleven cubes. So, if I counted them again, it would still be eleven. Right?"</td></tr>
<tr><td>Interpreting the Evidence</td><td colspan="6">Observation: Jonah accurately counts several collections of six objects or fewer while counting in the correct sequence, keeping track of the objects, and knowing that the last number stated represents the quantity counted. When there are seven or more, he loses track each time, counting objects multiple times.

• <u>Identify Learning Status on Construct Progression</u>: D. States or indicates that the last number counted is the total quantity. (Cardinality) NOTE: Teacher should make a note to indicate things such as, "Child consistently counted 6 or fewer objects."

Observation: The teacher uses a verbal probe with Samira, asking, "Do you think there would still be eleven objects if I counted them?" Without hesitation, Samira responds, "Yes! Because that's how many there are."

• <u>Identify Learning Status on Construct Progression</u>: E. States or indicates the same total quantity of previously counted objects does not change unless objects are added or removed.</td></tr>
<tr><td>Adapting/ Responding to Learning Needs</td><td colspan="6">Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.</td></tr>
</table>

SITUATION: *How Many are Here Today?*

<table>
<tr><td rowspan="3">Selecting Learning Target(s)</td><td colspan="5">Understanding: Recognizes that counting tells the number of objects*.</td></tr>
<tr><td>A. Says or indicates counting words out of sequence while pointing to objects.</td><td>B. Says or indicates counting words in the correct sequence without keeping track of objects counted (counts with one-to-one correspondence and one-to-one tagging).</td><td>C. Says or indicates counting words in the correct sequence while keeping track of objects counted (counts with one-to-one correspondence and one-to-one tagging).</td><td>D. States or indicates that the last number counted is the total quantity. (Cardinality)</td><td>E. States or indicates that the same total quantity of previously counted objects does not change unless objects are added or removed.</td></tr>
<tr><td colspan="5">* The amount and arrangement of objects vary according to the student's needs. Therefore, it is possible that a student may demonstrate different skills based on the amounts and/or arrangements used. It is important to record these two factors with the documentation. (i.e. Carlos can count ten objects and keep track of them without missing any or counting any twice (one-to-one correspondence), he has a current learning status of skill "C" up to ten. When Carlos is working with a set of five objects, he can state that the last number counted is the total quantity, he can state that he has the same total quantity when asked, if none have been removed or added and he can even indicate that he still has five after the objects have been rearranged. Carlos has a current learning status of skill "F" for a quantity of five objects at the same time as he has a current learning status of "C" for a quantity of ten.)</td></tr>
<tr><td>General Description</td><td colspan="5">In a small or large group setting, children are invited to count the number of children, boys, girls, and other types of categories (e.g., color of shirt, type of shoes, type of lunch choice). As children count the various groups, the teacher carefully observes and makes notes about the children's counting abilities, paying attention to counting words, the sequence of counting words, one-to-one correspondence, and cardinality.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="5">The teacher gathers the children together and asks for a volunteer to count the number of children at school today. After the volunteer counts the children, the teacher then asks for all of the girls to stand up and for a volunteer to count the number of girls at school today. The teacher continues to call on volunteers to count different groups of students, making sure to pick categories that provide different quantities of children to count, including larger and smaller groups.

In an effort to find the child's edge of understanding, when the teacher is selecting a volunteer to count a particular group of children, the teacher intentionally selects a student who may likely count the number of children in the specified group without frustration. Thus, for children who – based on previous observations – may be able to count larger quantities, the teacher selects those volunteers to count larger groups of students, such as the entire class. For children who may find larger groups of students too frustrating to count, the teacher selects those children to count the smaller groups of children, such as the number of children with braids in their hair.

<u>Vignette:</u> During Morning Meeting Time, the teacher asks the children, "I wonder how many children are here today. How can we find out?" Several children say, "We can count!" The teacher agrees and asks for a volunteer to count all of the children. As hands are raised, the teacher selects Megan. The teacher has observed Megan counting larger quantities of objects at the Math Station and anticipates that this opportunity may challenge her but not frustrate her. Megan begins to count the children, gently touching each child's head. She counts the children with one-to-one correspondence and does not skip any children or count them twice. The teacher asks, "How many children are here today?" Without having to recount the children, Megan responds correctly, "25. Everybody is here!" The teacher probes, "What if Benjamin counted all of the children? Would there still be 25?" Megan pauses, shrugs her shoulders, and says, "I don't know." The teacher invites Benjamin to count all of the children. Benjamin counts them accurately and reports, "Yup. There are 25 children." Megan says, "WOW! We got the same." The teacher probes, "You seem surprised. Tell me what you're thinking." Megan replies, "I thought they would be different." The teacher notes that Megan was surprised that recounting the same group ended up with the same number.

<u>Suggested Probes:</u>
• "How many (name of object) did you count?"
• "If (name of child) counted them again, how many would (s/he) have?"
• "Tell me what you're thinking."

<u>Probes to Avoid:</u>
• "If you counted them again, you would have the same amount; right?"
• "That's right. It will be the same because we didn't add any or take any away, did we?"</td></tr>
<tr><td>Interpreting the Evidence</td><td colspan="5">Observation: As Megan counted the children in the class, she counted each child, using the correct counting sequence and one-to-one correspondence without losing track of the children she counted. Megan also accurately stated "25," identifying the total amount. When probed about re-counting the same children, Megan stated, "I thought they would be different."

• <u>Identify Learning Status on Construct Progression</u>: D. States or indicates that the last number counted is the total quantity. (Cardinality)</td></tr>
<tr><td>Adapting/ Responding to Learning Needs</td><td colspan="5">Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.</td></tr>
</table>

SITUATION: *Grab a Handful*

<table>
<tr><td rowspan="3">Selecting Learning Target(s)</td><td colspan="5">Understanding: Recognizes that counting tells the number of objects*.</td></tr>
<tr><td>A. Says or indicates counting words out of sequence while pointing to objects.</td><td>B. Says or indicates counting words in the correct sequence without keeping track of objects counted (counts with one-to-one correspondence and one-to-one tagging).</td><td>C. Says or indicates counting words in the correct sequence while keeping track of objects counted (counts with one-to-one correspondence and one-to-one tagging).</td><td>D. States or indicates that the last number counted is the total quantity. (Cardinality)</td><td>E. States or indicates that the same total quantity of previously counted objects does not change unless objects are added or removed.</td></tr>
<tr><td colspan="5">* The amount and arrangement of objects vary according to the student's needs. Therefore, it is possible that a student may demonstrate different skills based on the amounts and/or arrangements used. It is important to record these two factors with the documentation. (i.e. Carlos can count ten objects and keep track of them without missing any or counting any twice (one-to-one correspondence), he has a current learning status of skill "C" up to ten. When Carlos is working with a set of five objects, he can state that the last number counted is the total quantity, he can state that he has the same total quantity when asked, if none have been removed or added and he can even indicate that he still has five after the objects have been rearranged. Carlos has a current learning status of skill "F" for a quantity of five objects at the same time as he has a current learning status of "C" for a quantity of ten.)</td></tr>
<tr><td>Preparation</td><td colspan="5">• Counting book (e.g., Count! by Denise Fleming; Feast for 10 by Cathryn Fallwell; Let's Count by Tana Hoban)
• Collections of various-sized counting objects (e.g., cotton balls, cubes, jacks) in tubs or paper bags</td></tr>
<tr><td>General Description</td><td colspan="5">After reading a counting book and counting collections of objects in the book together, children are asked to grab a handful of counting objects out of one of the containers, count to determine how many they have in their hand, and say out loud the number of objects counted. Students repeat this task several times, using a variety of materials. This occurs in a whole group, small group, or a center or station.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="5">The teacher reads aloud a counting book, inviting the children to point and count together different groups of objects in the book. Then, the teacher introduces various collections of objects for the students to count. The students are asked to use one hand to reach into the container, grab a handful of objects, count the number of objects grabbed, and say out loud the number of objects counted.

The teacher observes the students counting the different objects, and increases or decreases the difficulty by asking students to count specific collections. Thus, a child who is unable to count a large quantity of smaller-sized objects accurately is asked to count the collections of larger-sized objects, therefore decreasing the quantity of objects likely to fit in a handful. If a child accurately counts a few objects, then the teacher asks the child to count the collections of smaller-sized objects, thus increasing the quantity likely to be grabbed in a handful. The teacher also uses probes or asks open-ended questions in an attempt to uncover what the children know and are able to do.

<u>Vignette:</u> During Math Stations, Jonah and Samira are counting objects. Jonah reaches in and grabs a handful of cubes. He counts them, touching each one as he says the numbers in the correct sequence, "One, two, three, four, five, six, seven, eight, nine, ten, eleven"; however, he counts several cubes twice. He then turns to Samira and says, "Eleven! I grabbed eleven."

As the teacher observes, she notices that Jonah does not consistently keep track of objects when the collection has eight or more. She asks Jonah to count objects from the two containers that contain larger objects. As the teacher observes, she notices that Jonah is able to accurately count collections of six or fewer objects while counting in the correct sequence, keeping track of the objects, and knowing that the last number stated represents the quantity counted.

She also notices that Samira quickly and accurately counts collections of ten or more objects. As Samira counts a collection of objects and reports, "Eleven," the teacher probes. "Samira, I heard you say that you counted eleven objects. What would happen if you counted them again? How many would you have?" Samira responds without hesitation, "Eleven." The teacher probes further, "Are you sure?" Samira turns and counts the objects quickly and accurately. "Eleven. See. I knew there would be eleven." The teacher probes, "How did you know that there would be eleven?" Samira responds, "Because that's how many there are."

<u>Suggested Probes:</u>
• "How many (name of object) do you have?"
• "If you counted them again, how many would you have?"
• "Are you sure?"
• "How do you know?"

<u>Probes to Avoid:</u>
• "If you counted them again, you would have the same amount; right?"
• "That's right. It will be the same because we didn't add any or take any away, did we?"</td></tr>
</table>

Interpreting the Evidence	**Observation:** After the teacher changed the type of objects Jonah counted, Jonah accurately counted collections of six or fewer objects while counting in the correct sequence, keeping track of the objects, and knowing that the last number stated represented the quantity counted. • Identify Learning Status on Construct Progression: **D. States or indicates that the last number counted is the total quantity.** (The teacher made a note that Jonah was consistently successful with collections of six or fewer objects.) **Observation:** Samira consistently counted collections of ten or more objects. When probed further, Samira indicated without hesitation that the quantity of a particular collection of 11 objects she has counted will remain 11, even if recounted. • Identify Learning Status on Construct Progression: **E. States or indicates the same total quantity of previously counted objects does not change unless objects are added or removed.** (The teacher made a note that Samira was consistently successful with collections of eleven or fewer objects.) NOTE: Since the observation ended at this point in time, the teacher makes a note to probe further next time to determine what Samira would think if the objects counted were rearranged and then recounted.
Adapting/ Responding to Learning Needs	Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.

SITUATION: *Just One More*

<table>
<tr><td rowspan="3">Selecting Learning Target(s)</td><td colspan="2">Understanding: Recognizes that counting tells the number of objects*.</td></tr>
<tr><td>G. Continues the counting sequence automatically when ONE object is added to the set.</td><td>H. Continues the counting sequence automatically when MORE THAN ONE object is added to the set.</td></tr>
<tr><td colspan="2">* The amount and arrangement of objects vary according to the student's needs. Therefore, it is possible that a student may demonstrate different skills based on the amounts and/or arrangements used. It is important to record these two factors with the documentation. (i.e. Carlos can count ten objects and keep track of them without missing any or counting any twice (one-to-one correspondence), he has a current learning status of skill "C" up to ten. When Carlos is working with a set of five objects, he can state that the last number counted is the total quantity, he can state that he has the same total quantity when asked, if none have been removed or added and he can even indicate that he still has five after the objects have been rearranged. Carlos has a current learning status of skill "F" for a quantity of five objects at the same time as he has a current learning status of "C" for a quantity of ten.)</td></tr>
<tr><td>Prepar-ation</td><td colspan="2">• 15 connecting cubes of the same color per student
• The quantity of cubes can be adjusted as needed.</td></tr>
<tr><td>General Description</td><td colspan="2">The teacher introduces the game "Just One More" to the students, walking through the steps of the game while modeling with connecting cubes. Students are then provided a bag of connecting cubes to play the game alongside the teacher as the teacher walks through the steps with the children as they play. Last, the children play the game independently. As the children play the game, the teacher carefully observes the strategies used by the children to determine the quantity in each tower created. Based on these observations, the teacher adjusts the game for some children by changing the number of cubes in the tower or asking children to play "Just Two More."</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="2">The teacher introduces the game "Just One More" to the students, modeling each step in front of the children:
1. Snap 10 connecting cubes of the same color together to make a tower.
2. Place the tower behind your back, and snap the tower into two parts.
3. Choose one of the two snapped-off parts to count.
4. Count the number of cubes in the selected part, and say out loud how many cubes are in the part you chose.
5. Then say, "Just One More" and snap on one more cube to the tower.
6. Last, say out loud how many cubes are in the new tower.

The teacher then gives each student a bag with 15 connecting cubes and asks the children to play the game along with the teacher as the teacher repeats the directions, modeling the action, while watching the children throughout the steps. Once the children have had an opportunity to play the game with the teacher, the children then play the game independently. As the children play the game both with and without the teacher, the teacher carefully watches to see how the children determine the new quantity after the 'one more' cube is added. The teacher makes note if a child counts all of the cubes again each time the game is played, if the child quickly states the quantity without counting all of the cubes, or if the child sometimes recounts all of the cubes (perhaps when the beginning quantity is larger), while other times states the quantity quickly without counting (perhaps when the beginning quantity is smaller).

While observing the children, the teacher may differentiate the game by asking children to make a tower using more than 10 cubes (perhaps 15 or 20) or fewer than 10 cubes (perhaps 6 or 8), providing additional cubes as needed. The teacher may also decide to adjust the difficulty of the game by introducing the version "Just Two More," asking the student to snap on 2 more cubes to the selected part of the tower.

<u>Vignette:</u> As the children play the game, the teacher watches Anthony place his tower of 10 blue cubes behind his back and snap them into two pieces. He chooses the piece in his right hand, places the other piece on the floor, and begins counting the selected piece. The teacher listens carefully as he counts, noting that he counted the cubes accurately as he says out loud, "Six!" He then reaches down to pick up one cube, and dramatically says, "Just one more!" as he snaps one cube to the tower of 6. Without recounting the cubes, he quickly says "Seven!" and shows them to another student near him. Anthony then makes a new tower of 10 cubes and plays the game again. The teacher watches him for several moments, noticing that each time he adds one more cube, he instantly knows one more than the previous count. The teacher then probes, "Anthony, this time play 'Just Two More,' and see what you find out." Anthony selects the part of the snapped tower that has 6 cubes. He then adds 2 more cubes to his tower. He pauses, looks at the teacher, and then counts each cube: "1, 2, 3, 4, 5, 6, 7, 8. Eight! I have eight cubes now." As Anthony continues to play "Just Two More," the teacher notes that he counts all of the cubes each time to determine the new quantity.

<u>Possible Probes:</u>
• "What would happen if you snapped on 2 more?"
• "Do you know how many you have without counting?"
• "This time, make a tower of [15; more than 10; etc.] and play 'Just One More.' "

<u>Probes to Avoid:</u>
• "You're right. It is seven because seven comes after six."
• "It's just the next number, isn't it?"</td></tr>
<tr><td>Interpreting the Evidence</td><td colspan="2">Observation: As Anthony played "Just One More" with a tower of 10 cubes, he accurately stated the correct quantity without recounting. When Anthony played "Just Two More" with a tower of 10 cubes, he recounted each time to determine the new amount.
• <u>Identify Learning Status on Construct Progression:</u> G. Continues the counting sequence automatically when ONE object is added to the set, without counting all of them again.</td></tr>
<tr><td>Adapting/ Responding to Learning Needs</td><td colspan="2">Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.</td></tr>
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Emotional Literacy

DOMAIN: Emotional and Social Development

CLAIM: Students communicate about and use strategies to regulate responses to their own emotions.

RATIONALE

Emotions serve a very important function in development. They help motivate us to take action, avoid danger, and establish and sustain social relationships (Landy, 2002). There are three aspects of emotion: the subjective experience, the physiological (sweaty palms, racing heart) and the expressive (how we behave or what we say).

Learning to regulate one's emotions involves learning a complex set of skills over time that are essential for doing well in school and relationships. Children first learn to recognize emotion, in their own feelings, thoughts and body experiences, and from the face and body signals of others. Then they learn to pay attention to and respond to emotions. Over time, they come to understand more about how emotions work, and finally, they learn to regulate their emotions – to use them to meet their needs and build relationships with other people (Mayer, Salovey & Caruso, 2000). This is sometimes referred to as *emotional intelligence* (Goleman, 1995).

Language and communication play a very important part of the development of emotion regulation (Raver, Garner, & Smith-Donald, 2007). Children who recognize and communicate about their own emotions more easily manage their own emotions. Learning two languages is not necessarily a disadvantage for learning to regulate behavior and emotions (Luchtel, Hughes, Luze, Richardson Bruna & Peterson, 2010); however it may pose challenges for communicating about them. Children who show delays with language development may have difficulty meeting their needs and connecting with peers, and may express their frustration in challenging behavior.

Children who are able to identify and express their emotions are better able to manage strong emotions, and therefore often have better relationships with children in their classroom and have better social skills with peers, both of which are important competencies for success in school. Children who have difficulty managing frustration or maintaining a positive attitude may also have difficulty with tasks that are important for academic learning, such as focusing attention, planning and finishing tasks, and regulating other behaviors that are important for academic learning (Blair, 2002; Raver, et al., 2007). Identifying and managing one's emotions is essential to personal well-being and happiness and helps children get along better with other people (K-3 North Carolina Think Tank, 2013).

When evaluating a child's emotion regulation, it is important to keep in mind that individual differences among children and cultural expectations may explain variations in children's behavior:

1) Children have biologically-based temperamental predispositions that account for how they respond to new things and react to difficult or negative situations.
2) Children who have delays in language development may struggle to identify and describe emotional experiences, and often develop emotion knowledge and regulation skills more slowly than their peers.
3) Family context may also account for individual differences in children's development. For example, children whose family culture has different expectations for regulating emotions may struggle or be confused while learning two sets of rules.
4) Children whose families are experiencing stress may develop emotion regulation more slowly, or show regression of emotion regulation skills in some circumstances.

In these and other circumstances, children often require extra support from teachers to practice and learn about emotion and emotion regulation.

In order for children to learn to identify emotions, a child may need to identify postures and bodily features in others and images (e.g., picture books, illustrations). Label, describe, and describe context and causes of emotion.

ALIGNMENT TO NC STANDARDS

NC Foundations for Early Learning and Development

ESD-1 Children demonstrate a positive sense of self-identity and self-awareness.
ESD-6 Children identify, manage, and express their feelings.
ESD-7 Children recognize and respond to the needs and feelings of others.
HPD-6 Children develop awareness of their needs and the ability to communicate their needs.
LDC-4 Children speak audibly and express thoughts, feelings, and ideas clearly.

NC Standard Course of Study (Common Core State Standards & Essential Standards)

K.MEH.1 Remember the association of healthy expression of emotions, mental health, and healthy behavior
1.MEH.1 Understand the relationships among healthy expression of emotions, mental health, and healthy behavior.

EMOTIONAL LITERACY

UNDERSTANDING	Children understand that emotions may be experienced in their bodies and expressed in their behaviors.			Children understand that emotions may be recognized in themselves and others.
SKILLS	**A. In response to an experience, expresses a range of emotions. This may manifest as an outburst, change in activity level or facial expressions.**	**B. Exaggerates expression of emotions to get needs and desires met and/or to get help from an adult or peer.**	**C. Expresses emotions through language, posture, or gestures suitable to the context.**	**D. With support from an adult, labels emotions in self and others.**
PERFORMANCE DESCRIPTORS	While the class is researching reptiles on the computer, Holly sees a picture of a snake, runs to the back of the room and hides under the teacher's desk. The teacher announces that it's time to go outside. In her excitement, Kelly knocks over her pencil box and screams, "Woohoo!"	While in the block center, Marshall builds a giant tower. When it falls over, he stomps his feet and yells across the room to his teacher, "My tower fell over!"	Lucas is painting at the easel and is praised by the teacher. His face shows pride. On the playground, Karen's friend is stung by a bee. Karen shows concern by placing her arm around her friend. When the teacher sees William take something that does not belong to him, the teacher says, "Jovan is missing his show-and-tell item." William expresses shame by looking away.	Jody is sitting by herself on the playground. Her teacher sits beside her and asks Jody how she is feeling. At first, Jody is not sure how to express how she feels, so the teacher reminds Jody of a book they read about a bear that was far from home. Jody says, "I'm lonely today like the bear." When Erika entered the classroom she puts her nametag on the "How am I feeling today?" chart under the picture of "Sad." Later in the morning Mrs. Rice sees Erika laughing with her friends. Mrs. Rice says to Erika, "You were sad this morning when you came in. How are you feeling now?" Erika says, "I'm happy now."

EMOTIONAL LITERACY

Children understand that emotions may be recognized in themselves and others.		Children understand that emotions have causes and effects and that people may feel and respond differently in similar situations.			UNDERSTANDING
E. Independently labels emotions in self and others.	**F. Labels higher-order emotions (confused, worried, surprised) in self and others.**	**G. Explains that an event can cause certain emotions.**	**H. Explains that an event can cause more than one emotion.**	**I. Explains that the same event can cause different people to experience different emotions.**	SKILLS
Javier is reading a book to a friend. He says, "Look at how excited the turtle is." Without prompting, Asa tells his teacher, "I am so happy today!"	Langley, the line leader, starts walking the class toward the music room. The teacher reminds Langley that today is PE day. Langley says, "Oh, I was confused." Samantha arrives late to school and says to her teacher, "My dad is worried that he is going to be late for work."	Mrs. Green greets Seth at the door. He says, "When my Mom drops me off at school, I miss her and I feel sad." At the art center, Katie says, "I am so upset. Someone colored all over my project."	After reading the book *Peter's Chair*, Sawyer explains that Peter is both happy and worried about having a baby sister because babies are fun to play with, but they also take all of Momma's time.	Sam says to his teacher, "Michael is happy because he is the line leader, but that makes me mad."	PERFORMANCE DESCRIPTORS

RESOURCES USED

Blair, C. (2002). School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychology, 57*(2), 111-127.

Bowman, B., & Moore, E. (Eds.). (2006). *School readiness and social-emotional development: Perspectives on cultural diversity.* Washington, DC: National Black Child Development Institute, Inc.

Epstein, A. S. (2009). *Me, you, us: Social-emotional learning in preschool.* Ypsilanti, MI: HighScope Press.

Evans, G. W., & Kim, P. (2012). Childhood poverty, chronic stress, self-regulation and coping. *Child Development Perspectives, 7*(1), 43-48.

Falk, B. (Ed.). (2012). *Defending childhood: Keeping the promise of early education.* New York, NY: Teachers College Press.

Galinsky, E. (2010). *Mind in the making.* New York, NY: HarperCollins, Publishers.

Goleman, D. (1995). *Emotional intelligence*. New York: NY: Bantam Books.

Graziano, P. A., Calkins, S. D., & Keane, S. P. (2011). Sustained attention development during the toddlerhood to preschool period: Associations with toddlers' emotion regulation strategies and maternal behavior. *Infant and Child Development, 20*, 389-408.

K-3 North Carolina Think Tank. (2013). *Assessment for learning and development in K-3: A report by the K-3 North Carolina think tank.* Raleigh, NC: Author.

Landy, S. (2002). *Pathways to competence: Encouraging healthy social and emotional development in young children.* Baltimore, MD: Brookes.

Li-Grining, C. P. (2012). The role of cultural factors in the development of Latino preschoolers' self-regulation. *Child Development Perspectives, 6* (3), 210-217.

Luchtel, M., Hughes, K., Luze, G., Richardson Bruna, K., & Peterson, C. (2010). A comparison of teacher-rated classroom conduct, social skills, and teacher–child relationship quality between preschool English learners and preschool English speakers. *NHSA Dialog: A Research-to-Practice Journal for the Early Childhood Field*, *13*(2), 92-111. doi: 10.1080/15240751003737877

Mayer, J. D., Salovey, P., & Caruso, D. (2000). Models of emotional intelligence. In R. Sternberg, *Handbook of intelligence* (pp. 396-420). Cambridge, UK: Cambridge University Press.

McClelland, M. M., & Cameron, C. E. (2011). Self-regulation in early childhood: Improving conceptual clarity and developing ecologically valid measures. *Child Development Perspectives, 6*(2), 136-142.

Raver, C. C., Garner, P. W., & Smith-Donald, R. (2007). The roles of emotion regulation and emotion knowledge for children's academic readiness: Are the links causal? In R. Pianta, M.J. Cox and K.L. Snow (Eds.), *School readiness and the transition to kindergarten in the era of accountability* (pp. 121-148). Baltimore, MD: Brookes.

Riley, D., San Juan, R. R., Klinkner, J., & Ramminger, A. (2008). *Social and emotional development: Connecting science and practice in early childhood settings.* St. Paul, MN: Redleaf Press.

Ursache, A., Blair, C., & Raver, C. C. (2011). The promotion of self-regulation as a means of enhancing school readiness and early achievement in children at risk for school failure. *Child Development Perspectives, 6*(2), 122-128.

Valiente, C., Swanson, J., & Eisenberg, N. (2011). Linking students' emotions and academic achievement: When and why emotions matter. *Child Development Perspectives, 6*(2), 129-135.

Zhou, Q., Chen, S. H., & Main, A. (2011). Commonalities and differences in the research on children's effortful control and executive function: A call for an integrated model of self-regulation. *Child Development Perspectives, 6*(2), 112-121.

SITUATION: *Using Literature to Label Feelings*

<table>
<tr><td>Selecting Learning Target(s)</td><td colspan="3">Understanding: Children understand that emotions may be recognized in themselves and others.</td></tr>
<tr><td></td><td>D. With support from an adult, labels emotions in self and others.</td><td>E. Independently labels emotions in self and others.</td><td>F. Labels higher-order emotions (confused, worried, surprised) in self and others.</td></tr>
<tr><td>Identifying Opportunities for Eliciting Evidence of Learning</td><td colspan="3">Children show emotions and feelings of varying sophistication throughout the day in different situations. When children enter the classroom in the morning they may say, “Hello!” in an excited tone or “I’m happy today.” When listening to a story, a child may say, “The boy is sad because the dog is lost.” When talking about the day’s schedule, a child says, “Yay! We have Art today!” When opening a milk carton, a child says, “I’m so frustrated! Can you open this for me?” The teacher listens to and observes children’s language to learn about how a child may label different emotions.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="3">While reading aloud a book (e.g., Caps for Sale), the teacher pauses at the beginning of the book to ask the children, “Show me how you think the man feels when he finds that his caps are gone.” The children show different expressions or gestures, such as angry, surprised, confused, and sad faces or stomping on the floor in an angry manner. The teacher then gives different children an opportunity to verbalize how they think the man felt. The teacher listens to the different types of expressions shared, noting basic and higher-order emotions, such as “He’s mad.” or “Look at his face. He is frustrated.” or “He must be scared!” Because some children may not have the precise vocabulary to articulate the feeling, teachers listen for approximations or gestures that convey the same meaning.

<u>Suggested Probes:</u>
• “How do you think the man feels?”
• “How else might the character feel?”
• “How would you feel if this happened to you?”
• “How do you show it when you feel ___?”
Students may respond with words, or by using pictures, signs or gestures.

<u>Probes to Avoid:</u>
• “Was the character angry? Mad? Sad?”
• “You look sad today. Are you sad?”</td></tr>
<tr><td>Interpreting the Evidence</td><td colspan="3">Observation: While reading the book, the teacher probes, “How do you think the man feels?” Akash says, “He is sad” and makes a sad face. Then the teacher probes, “How else might the man feel?” Akash answers, “He is mad” and wrinkles her brow to look mad.

• <u>Identify Learning Status on Construct Progression:</u> D. With support from an adult, labels emotions in self and others.

Observation: Later in the day, after hearing the story Caps for Sale, Maggie comes to the teacher and says, “I don’t like those monkeys. They made the man mad.”

• <u>Identify Learning Status on Construct Progression:</u> E. Independently labels emotions in self and others.

Observation: While reading the book, the teacher probes, “How does the man feel in the book?” Nate responds, “I think he was surprised.”

• <u>Identify Learning Status on Construct Progression:</u> F. Labels higher-order emotions (confused, worried, and surprised) in self and others.</td></tr>
<tr><td>Adapting/ Responding to Learning Needs</td><td colspan="3">Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn’t met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.</td></tr>
</table>

SITUATION: *On Monday When It Rained*

<table>
<tr><td>Selecting Learning Target(s)</td><td colspan="3">Understanding: Children understand that emotions have causes and effects and that people may feel and respond differently in similar situations.</td></tr>
<tr><td></td><td>G. Explains that an event can cause certain emotions.</td><td>H. Explains that an event can cause more than one emotion.</td><td>I. Explains that the same event can cause people to experience different emotions from one another.</td></tr>
<tr><td>Preparation</td><td colspan="3">*On Monday When It Rained*, by Cherryl Kachenmeister
The teacher may utilize any age-appropriate book that provides opportunities to discuss a wide range of emotions, specifically about how a character feels.</td></tr>
<tr><td>General Description</td><td colspan="3">The teacher reads *On Monday When It Rained* during a small group activity and discusses the boy's experiences as the story progresses. The teacher asks probing questions about the boy's experiences and the experiences of children in the group. Some children may not have the precise vocabulary to articulate the feelings, so the teacher intentionally listens for approximations and looks for gestures that convey the same meaning.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="3">The teacher tells the children that she is going to read a story about a small boy and what happens to him every day for a week. She explains that each day, based on what happens, the boy talks about how these events make him feel. While reading the story, the teacher pauses after reading the day's events (before turning the page to reveal the boy's expression), and asks the children, "How do you think the boy will feel?" Tommy shares with the group, "Mad!" Susie responds, "Unhappy." Johnny says, "I don't know." The teacher then says to the children, "Use your face to show me how you think the boy will feel." The teacher looks out to the group of children and sees Susie making an unhappy face. The teacher then shows the picture of the boy's expression, and asks the children, "How do you think you would feel if the same thing happened to you?" Several children respond, including Yolanda who says, "I would be mad if I couldn't ride my bike." The teacher then says to the children, "Use your face to show me how you think you would feel." Susie and Yolanda are making sad faces. The teacher continues by asking a question about feeling different from someone else in the same situation. "Is there some other way you would feel if the same thing happened to you?" Elisa quietly shares with the group, "I think I would cry if that happened to me," to which Ezekiel responds, "I like when it rains; then I don't have to walk to school."

The teacher later relates the book to current experiences, saying to the children, "I remember when it rained last week, how did you feel?" Regan immediately replies, "I remember that we had to miss recess and I was sad." In an attempt to learn about how children would respond to a question that expresses more than one emotion for the same experience, the teacher asks, "Can you think of a time when you were happy and sad at the same time?" Zack tells the group, "I was excited about the pool party for my birthday, but when it rained, I got upset because we couldn't go to the pool."

<u>Suggested Probes:</u>
• "Share a time when you did something that embarrassed you."
• "What kinds of things are scary to you?"
• "Tell me about a time when someone wouldn't share with you."

<u>Probes to Avoid:</u>
• "Would you feel embarrassed like the boy in the story?"
• "Do you feel disappointed when it rains, and you can't do your favorite things outside?"
• "Do you get mad when a friend won't share with you?"</td></tr>
<tr><td>Interpreting the Evidence</td><td colspan="3">Observation: The teacher asks, "How do you think you would feel if the same thing happened to you?" Johnny shrugs his shoulders and says, "I think I would be mad if I couldn't ride my new bike because it was raining."

• <u>Identify Learning Status on Construct Progression:</u> G. Explains that an event can cause certain emotions.

Observation: The teacher asks, "Can you think of a time when you were both happy and sad?" Zack tells the group, "I was excited about the pool party for my birthday, but when it rained, I got upset because we couldn't go to the pool."

• <u>Identify Learning Status on Construct Progression:</u> H. Explains that an event can cause more than one emotion.

Observation: When the teacher asks, "Is there a different way you would feel if the same thing happened to you?" Ezekiel responds, "I like when it rains, then I don't have to walk to school."

• <u>Identify Learning Status on Construct Progression:</u> I. Explains that the same event can cause people to experience different emotions from one another.</td></tr>
<tr><td>Adapting/ Responding to Learning Needs</td><td colspan="3">Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.</td></tr>
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Crossing Midline

DOMAIN: Health and Physical Development

CLAIM: Students can demonstrate competencies in motor skills and movement patterns.

RATIONALE

Piaget (1954) was one of many developmental psychologists who linked motor skill development with improvements in perceptual and cognitive development. Motor and cognitive functions tend to follow a similar timeline with intensified development between the ages of five and ten (Gabbard, 2008). Grissmer et al. (2010) emphasize the importance of motor skill development in children. Their data analyses suggest that fine motor skills are a strong predictor of achievement. When analyzed collectively, "attention, fine motor skills, and general knowledge are much stronger overall predictors of later math, reading, and science scores than early math and reading scores alone" (Grissmer et al., 2010, P. 1008). Recent research stresses the importance of facilitating both motor and academic development as the two continue to be linked in neuroscience research. When comparing gross motor skills of age-matched children with and without learning disabilities, researchers found a specific relationship between reading and locomotor skills and mathematics and object control skills - the greater the learning delay, the poorer the motor skills (Westendorp, Hartman, Houwen, Smith, & Visscher, 2011). Sibley and Etnier (2003) conducted a meta-analysis showing a positive correlation between physical activity and seven categories of cognitive performance (perceptual skills, intelligence quotient, achievement, verbal tests, mathematics tests, developmental level/academic readiness, and other) among school-aged children. Crossing the midline is an important milestone of development, reflecting integration of the bodily midline, which allows for bilateral coordination (Stilwell, 1987). Difficulty crossing the midline has been linked to a cluster of sensory, perceptual and motor difficulties exhibited by some children with learning exceptionalities (Ayres, 1972; Michell & Wood, 1999; Stilwell, 1987; Murata & Tan, 2009). Previous research suggests that failure of children between the ages of three and four to cross the midline could predict later potential problems in development (Michell & Wood, 1999).

ALIGNMENT TO NC STANDARDS

NC Foundations for Early Learning and Development

HPD-4 Children develop the large muscle control and abilities to move through and explore their environment.
HPD-5 Children develop small muscle control and eye-hand coordination to manipulate objects and work tools.

NC Standard Course of Study (Common Core State Standards & Essential Standards)

PE.MS.1 Apply competent motor skills and movement patterns needed to perform a variety of physical activities.
K.CP.2 Understand how to use performance values (kinesthetic awareness, concentration, focus, and etiquette) to enhance dance performance.
K.DM.1 Understand how to use movement skills in dance.
1.CP.2 Understand how to use performance values (kinesthetic awareness, concentration, focus, and etiquette) to enhance dance performance.
2.CP.2 Understand how to use performance values (kinesthetic awareness, concentration, focus, and etiquette) to enhance dance performance.

CROSSING MIDLINE

UNDERSTANDING	Children are learning that crossing the midline with fine and gross motor activities enables them to perform tasks more efficiently.		
SKILLS	**A. Isolates movement to one side of the midline (the invisible line running from our head to our toes, dividing the body into left and right halves).**	**B. Begins to cross the midline in some situations.**	**C. Consistently crosses midline.**
PERFORMANCE DESCRIPTORS	Olivia uses her left hand to manipulate and pick up things located to the left of her and uses her right hand for things located on her right side. Sometimes she picks up an object on her left side with her left hand and switches it to her right hand in front of her body in order to place the object on her right side (thus, avoiding crossing her midline). Painting the capital letter 'A,' Noah makes a right slanted line with his right hand. He then switches the paintbrush to his left hand and paints the left slanted line. Alyssa picks up chips while counting each one. She picks up the chips on her right side with her right hand. She picks up the chips on her left side with her left hand. While playing a board game, Huan notices the playing piece(s) located to his left. He turns his body so that he picks up the playing pieces with his right hand without crossing his arm across his torso. Jack places his writing materials at the table. He turns his body so that the paper is located on his right side and begins to write on the paper without extending his arm across his body.	At the beginning of the "Macarena Months" song and movement activity, Ethan crosses his right arm to touch his left shoulder and uses his left arm to his right knee. Towards the end of the song, Ethan no longer crosses the midline and uses his left arm to touch the left side of his body and his right arm to touch the right side of his body. During Writer's Workshop, Martina writes in her journal. She places the paper in front of her and moves her arm across her body to write. Later, when Martina was writing a sign for her structure, she moved the paper to one side of her body and wrote her sign without moving her arm across the center of her body. During yoga Christian swung his arms across his body to make the monkey pose. Later, when they did that pose again, he kept his arms to one side without crossing his body.	Gabriel consistently crosses the midline during a variety of activities and tasks, using his dominant hand (right) for movement and manipulation around his body, not just on the right hand side. He does not manipulate his body, paper or objects in order to avoid crossing the midline. Imani picks up all of her game pieces located in various spaces on the board with her dominant hand. Brandon paints on all areas of a large piece paper with his dominant hand. Brianna brings the racket across her body to hit the ball (instead of switching the racket to her other hand).

RESOURCES USED

Ayers, A. (1972). Types of sensory integrative dysfunction among disabled learners. *American Journal of Occupational Therapy, 26*(1). 13-18.

Ayers, A. (1972). Improving academic scores through sensory integration. *Journal of Learning Disabilities, 2*(3), 44-52.

Bornstein, M. (Ed.). (in press). *Handbook of cross cultural developmental science*: Vol.1. *Moving between cultures: Cross cultural research on motor development* (1-23). New York: Psychology Press.

Case-Smith, J., & Pehoski, C. (1992). *Development of hand skills in the child*. Rockville, MD: American Occupational Therapy Association.

Cermak, S. A., Quintero, E. J., & Cohen, P. M. (1980). Developmental age trends in crossing the body midline in normal children. *The American Journal of Occupational Therapy*, *34*, 313–319.

Diamond, A. (2000). Close integration of motor development and cognitive development and of the cerebellum and prefrontal cortex. *Child Development, 71*, 44-56.

Gabbard, C.P. (2008). *Lifelong motor development* (5th ed.). San Francisco: Pearson/Benjamin Cummings.

Gallahue, D., & Ozmun, J. (2005). *Understanding motor development: Infants, children, adolescents, adults* (6th ed.). New York, NY: McGraw Hill.

Graham, G., Holt-Hale, S., & Parker, M. (2010). Skill themes, movement concepts, and the national standards. In G. Graham, S. Holt-Hale, & M. Parker *Children moving: A reflective approach to teaching physical education* (pp. 27-39). McGraw-Hill Higher Education. Retrieved from www.mhhe.com/graham8e

Grissmer, D., Grimm, K., Aiyer S., Murrah, W., & Steele, J. (2010). Fine motor skills and early comprehension of the world: Two new school readiness indicators. *Developmental Psychology*, *46*(5), 1008-1017.

Haywood, K. (2009). *Life span motor development* (5th ed.). Champaign, IL: Human Kinetics.

Horvat, M. (2011). Teaching motor, sport, and play skills, Chapter 22. In M. Horvat, L.H. Kalakian, R. Croce, & V. Dahlstrom, *Developmental/ adapted physical education making ability count* (5th ed.). San Francisco, CA: Pearson/Benjamin Cummings.

Hynes-Dusel, J. (2002). Motor development in elementary children. *Strategies: A Journal for Physical and Sport Education, 15*(3), 30-34.

Malina, R.M. (2004). Motor development during infancy and early childhood: Overview and suggested directions for research. *International Journal of Sport and Health Science, 2*, 50-66.

McAfee, O., & Leong, D.J. (2010). *Large Muscle Development*. Retrieved from http://www.education.com/reference/article/large-muscle-development-assessment

Michell, D., & Wood, N. (1999). An investigation of midline crossing in three-year old children. *Physiotherapy, 85*(11), 607-615.

Motor development. (2005). In Cambridge Encyclopedia of Child Development. Retrieved from http://www.credoreference.com/entry/cupchilddev/motor_development

Murata, N.M., & Tan, C.A. (2009). Collaborative teaching of motor skills for preschools with developmental delays. *Early Childhood Education, 36*. 483-489.

Piaget, J. (1954*). The construction of reality in the child*. New York: Basic Books.

Piek, J.P., Dawson, L., Smith, L.M., & Gasson, N. (2008). The role of early fine and gross motor development on later motor and cognitive ability. *Human Movement Science*, *27*, 668-681.

Sattelmair, J., & Ratey, J. (2009). Physically active play and cognition an academic matter. *American Journal of Play, (winter),* 366-374.

Sibley, B.A., & Etnier, J.L. (2003). The relationship between physical activity and cognition in children: A meta-analysis. *Pediatric Exercise Science, 15,* 243-256.

Stilwell, J.M. (1987). The development of manual midline crossing in 2- to 6-year-old children. *The American Journal of Occupational Therapy, 41*(12), 783-789.

Tan, N.M., Tan, C.A. (2009). Collaborative teaching of motor skills for preschools with developmental delays. *Early Childhood Education, 36*, 483-489.

Viholainen, H., Ahonen, T., Lyytinen, P., Cantell, M., LicSSc, A.T. and Lyytinen, H. (2006). Early motor development and later language and reading skills in children at risk of familial dyslexia. *Developmental Medicine & Child Neurology, 48,* 367–373. doi: 10.1017/S001216220600079X

Westendorp, M., Hartman, E., Houwen, S., Smith, J., & Visscher, C. (2011). The relationship between gross motor skills and academic achievement in children with learning disabilities. *Research in Developmental Disabilities*, *32*, 2773-2779.

Williams, H., & Monsma, E. (2004). Assessment of gross motor development in preschool children. In B. Bracken (Ed.), The psychoeducational assessment of preschool children (3rd ed.) (pp.397-431). Mahwah, NJ: Lawrence Erlbaum.

SITUATION: *Throughout the Day*

<table>
<tr><td>Selecting Learning Target(s)</td><td colspan="3">Understanding: Children are learning that crossing the midline with fine and gross motor activities enables them to perform tasks more efficiently.</td></tr>
<tr><td></td><td>A. Isolates movement to one side of the midline (the invisible line running from our head to our toes, dividing the body into left and right halves).</td><td>B. Begins to cross the midline in some situations.</td><td>C. Consistently crosses midline.</td></tr>
<tr><td>Identifying Opportunities for Eliciting Evidence of Learning</td><td colspan="3">The teacher observes children as they participate in activities throughout the day and pays particular attention to their ability to cross the midline. There are many opportunities to observe midline throughout the day. Teachers may observe how children paint on a large piece of paper using one hand to make a stroke from one side to the other and/or paint on both sides. While using writing or drawing materials, the teacher may notice if a child uses one hand to make all strokes of a letter or writes, draws, and colors across the paper. When playing games, the teacher may see if a child stretches from left to right and/or from right to left to pick up a card during a matching game. As a child turns the pages in a Big Book, the teacher may observe whether the child uses his right hand to turn the pages, crossing over the midline, rather than switching hands to complete the page turn. When working with manipulatives (e.g., blocks, coins, chips, counting bears, cubes), the teacher may notice if the child picks up or places manipulatives across the body from left to right and/or from right to left. As children sing songs and play games with body movements that include activities such as “touch left hand to right knee” or “right hand to left shoulder,” the teacher may observe how children make such movements.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="3">During learning stations/centers, the teacher moves around to various stations and observes children using materials. At the math center, the teacher looks for children crossing the midline when picking up and placing objects, such as counting bears, into three buckets placed in front of them for a sorting activity.
<u>Suggested Probes:</u>
• “Try using one hand.”
• “Can you keep your body facing forward?”
<u>Probes to avoid:</u>
• “Use only one hand.”
• “Do not turn your body.”
• “Move your arm across your body like this.”</td></tr>
<tr><td>Interpreting the Evidence</td><td colspan="3">Observation: Mia picks up objects with her right hand to place them in the basket on the right. She picks up objects with her left hand to place them in the basket on the left. Occasionally she picks up objects with her right hand to place them in the basket on the left.
• <u>Identify Learning Status on Construct Progression:</u> B. Begins to cross the midline in some situations.</td></tr>
<tr><td>Adapting/ Responding to Learning Needs</td><td colspan="3">Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn’t met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.</td></tr>
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Fine Motor

DOMAIN: Health and Physical Development

CLAIM: Students can demonstrate competencies in motor skills and movement patterns.

RATIONALE

Piaget (1954) was one of many developmental psychologists who linked motor skill development with improvements in perceptual and cognitive development. Motor and cognitive functions tend to follow a similar timeline with intensified development between the ages of five and ten (Gabbard, 2008). Grissmer et al. (2010) emphasize the importance of motor skill development in children. Their data analyses suggest that fine motor skills are a strong predictor of achievement. When analyzed collectively, "attention, fine motor skills, and general knowledge are much stronger overall predictors of later math, reading, and science scores than early math and reading scores alone" (Grissmer et al., 2010, p. 1008). Recent research stresses the importance of facilitating both motor and academic development as the two continue to be linked in neuroscience research. When comparing gross motor skills of age-matched children with and without learning disabilities, researchers found a specific relationship between reading and locomotor skills and mathematics and object control skills - the greater the learning delay, the poorer the motor skills (Westendorp, Hartman, Houwen, Smith, & Visscher, 2011). Sibley and Etnier (2003) conducted a meta-analysis showing a positive correlation between physical activity and seven categories of cognitive performance (perceptual skills, intelligence quotient, achievement, verbal tests, mathematics tests, developmental level/academic readiness, and other) among school-aged children. Crossing the midline is an important milestone of development, reflecting integration of the bodily midline, which allows for bilateral coordination (Stilwell, 1987). Difficulty crossing the midline has been linked to a cluster of sensory, perceptual and motor difficulties exhibited by some children with learning exceptionalities (Ayres, 1972; Michell & Wood, 1999; Stilwell, 1987; Murata & Tan, 2009). Previous research suggests that failure of children between the ages of three and four to cross the midline could predict later potential problems in development (Michell & Wood, 1999).

ALIGNMENT TO NC STANDARDS

NC Foundations for Early Learning and Development
HPD-4 Children develop the large muscle control and abilities to move through and explore their environment.
HPD-5 Children develop small muscle control and eye-hand coordination to manipulate objects and work tools.

NC Standard Course of Study (Common Core State Standards & Essential Standards)
Fine motor skills enable the use of the small muscles of the hand to work together to perform precise and refined movements. Educators and researchers recognize the importance that these fine motor skills have on a child's success within multiple aspects of learning and development. For example, when a child writes, fine motor skills allow the child to focus on the content of what's being written rather than the mechanics of pencil grasp, letter formation, spacing, and sizing. Research also recognizes the connection between less developed fine motor skills and emotional and social development, including anxiety and depression (Grissmer et al., 2010; Woodward & Swinth, 2002; Skinner & Piek, 2001). In addition, when analyzed collectively, "attention, fine motor skills, and general knowledge are much stronger overall predictors of later math, reading, and science scores than early math and reading scores alone" (Grissmer et al., 2010, p. 1008).

Although the NC SCOS does not directly address fine motor skills, the importance of fine motor skill development influences numerous factors of learning and development, such as:

- (PE) Apply competent motor skills and movement patterns
- (ELA) Write arguments, informative/explanatory texts, narratives, and research projects
- (Arts) Create original art
- (TECH) Use technology tools

FINE MOTOR – GRIP AND MANIPULATION

UNDERSTANDING	Children are learning to coordinate muscle groups to perform fine manipulation of objects and skilled use of tools, while moving towards fine motor skills performed automatically with a focus on content & outcome.				
SKILLS	**A. Uses a fisted grip or palmar grasp to reach, manipulate or hold items (palmar grasp), with whole arm movement.***	**B. Uses thumb and fingers to manipulate objects (pincer grip), with whole arm movement and increased stability from the shoulder. ***	**C. Uses refined wrist and finger movement, beginning to transfer control of movement from the shoulder to the elbow.***	**D. Uses hands with minimal elbow movement and primary control from wrist and fingers.***	**E. Hand movements are primarily controlled by actions from the wrist and fingers.**
PERFORMANCE DESCRIPTORS	When observed in a variety of settings, Logan grasps objects (e.g., fork, spoon, paintbrush, marker, crayon, pencil, counters) with her entire hand, fingers pointing down or five-finger grip (palmar grasp), using a whole arm movement (shoulder and elbow), resulting in less precise hand control. When trying to open and close the scissors, Jackson uses both hands, with one hand gripping the top loop and the other hand gripping the bottom loop. While cutting with scissors, Emily inserts her index finger in one loop of the scissors and her middle finger in the other loop.	In a variety of settings, Mateo uses his thumb and fingers (pincer grip) to manipulate or move objects (e.g., fork, spoon, scissors, adaptive scissors, crayon, primary pencils, short pencils, dice, grape, cracker, writing utensil with a tripod grip), with increased stability in shoulder movement resulting in improved finger precision and control. Tripod grip: When buttoning, zipping, and snapping her winter jacket, Francesca uses her thumb and fingers with increased stability in shoulder movement, resulting in improved finger precision and control.	Santiago uses precise finger movement (isolated control of each finger) in a variety of settings, such as when using writing and drawing utensils, building with Lego® toys, tearing paper, picking up chips or coins, opening a bottle or picking up laces of a shoe. Manipulation is controlled and stabilized from the wrist through fingers, allowing for greater accuracy. When helping his classmate button, zip, and snap his bookbag, Anthony uses precise finger movement (isolated control of each finger). Manipulation is controlled and stabilized from the wrist through fingers, allowing for greater accuracy. As Joshua uses scissors, his thumb is in the top loop, and his index finger (or multiple fingers) are in the bottom loop. His elbow is away from his body and elevated, using his whole arm to cut.	Gabrielle uses her thumb and fingers to manipulate or move objects (e.g., writing and drawing utensils, building materials, tearing paper, picking up chips or coins, opening a bottle, picking up a shoelace) in a variety of settings (e.g., writing, drawing, coloring, buttoning, zipping, snapping). Her wrist and fingers move together as a unit with less movement from the shoulder. When writing or drawing, her fingers appear still and close together, resulting in improved efficiency (thus, investing minimal time and effort). When using scissors, Caleb places his thumb in the top loop and his middle finger (or ring finger, depending on size of loop) in the bottom loop. He uses his index finger along the bottom of the blade for stabilization. Sometimes his elbow is close to his body, and his shoulder becomes more stable.	Alejandro uses different tools (including scissors) to complete increasingly complex fine motor tasks (such as buttoning, zipping, snapping, cutting, drawing) with precision and efficiency (investing minimal time and effort) in a variety of settings. Brandon exhibits control when following intricate cutting patterns and cutting different types of materials (card stock, yarn, textiles). Sofia controls the computer mouse or track pad efficiently and with little effort. Juliana manipulates the small electronic motor control box on the arm of her wheelchair when maneuvering through different pathways in the classroom and within the school building.

** NOTE: Fine motor activities (e.g. zipping, writing, stringing a bead) are observable representations of using the functions of visual-motor integration together. If a child demonstrates this level with the ability to hold and manipulate the object they are using (scissors, pencil, crayon, etc.), but does not follow the line to cut, stay in the lines to color, or copy a letter correctly when writing, it may be due to visual ability rather than fine motor ability. Talk with your school nurse or occupational therapist for additional information.*

FINE MOTOR – HAND DOMINANCE

Children are learning to coordinate muscle groups to perform fine manipulation of objects and skilled use of tools, while moving towards fine motor skills performed automatically with a focus on content & outcome.				UNDERSTANDING
A. Uses no established dominance for lead/ dominant hand (switching still continues).	**B. Uses established dominant hand.**	**C. Performs actions involving mirrored movements with opposing hand.**	**D. Manipulates with dominant hand with assistance from other hand.**	SKILLS
When observed in a variety of settings, Harper is inconsistent with regards to which hand is used (e.g., drawing, writing, cutting, tossing a beanbag, using an eating utensil).	Abigail mostly uses the same hand to complete a variety of activities (e.g., color, paint, write, throw a ball, staple, brush hair/teeth, use adaptive technology, use a mouse, scoop items from a jar).	Rather than relying solely on the dominant hand, Luke uses opposing hands in an attempt to accomplish a task (e.g., tearing paper, catching a ball with two hands, snapping cubes, using a Velcro® fastener, playing a drum with a stick in each hand, separating the seam of a milk carton spout, clapping, tapping two sticks together, rolling a ball with two hands, pulling loops of a shoe string to make a bow).	In a variety of settings, Brianna uses one hand for manipulation and one hand for assistance. In a controlled action, her hands perform independent actions (e.g., zipping, screwing a lid on a jar, turning pages, holding food while cutting it with a knife). Jayla holds a piece of paper still with one hand while writing or drawing with her dominant hand. Ethan holds and turns a piece of construction paper with one hand while cutting with his dominant hand. Joseph holds a string with one hand and uses his dominant hand to place a bead on the string. Emma stabilizes the block tower with one hand while adding a block on top with the other hand.	PERFORMANCE DESCRIPTORS

RESOURCES USED

Ayers, A. (1972). Types of sensory integrative dysfunction among disabled learners. *American Journal of Occupational Therapy, 26*(1), 13-18.

Ayers, A. (1972). Improving academic scores through sensory integration. *Journal of Learning Disabilities, 2*(3), 44-52.

Bornstein, M. (Ed.). (in press). *Handbook of cross cultural developmental science*: Vol.1. *Moving between cultures: Cross cultural research on motor development* (1-23). New York: Psychology Press.

Case-Smith, J., & Pehoski, C. (1992). *Development of hand skills in the child*. Rockville, MD: American Occupational Therapy Association.

Cermak, S. A., Quintero, E. J., & Cohen, P. M. (1980). Developmental age trends in crossing the body midline in normal children. *The American Journal of Occupational Therapy*, *34*, 313–319.

Diamond, A. (2000). Close integration of motor development and cognitive development and of the cerebellum and prefrontal cortex. *Child Development, 71*, 44-56.

Gabbard, C.P. (2008). *Lifelong motor development* (5th ed.). San Francisco: Pearson/Benjamin Cummings.

Gallahue, D., & Ozmun, J. (2005). *Understanding motor development: Infants, children, adolescents, adults* (6th ed.). New York, NY: McGraw Hill.

Graham, G., Holt-Hale, S., & Parker, M. (2010). Skill themes, movement concepts, and the national standards. In G. Graham, S. Holt-Hale, & M. Parker (Eds.),*Children moving: A reflective approach to teaching physical education* (pp. 27-39). McGraw-Hill Higher Education. Retrieved from www.mhhe.com/graham8e

Grissmer, D., Grimm, K., Aiyer S., Murrah, W., & Steele, J. (2010). Fine motor skills and early comprehension of the world: Two new school readiness indicators. *Developmental Psychology*, *46*(5), 1008-1017.

Haywood, K. (2009). *Life span motor development* (5th ed.). Champaign, IL: Human Kinetics.

Horvat, M. (2011). Teaching motor, sport, and play skills. In M. Horvat, L.H. Kalakian, R. Croce, & V. Dahlstrom, *Developmental/adapted physical education making ability count* (5th ed.). San Francisco, CA: Pearson/Benjamin Cummings.

Hynes-Dusel, J. (2002). Motor development in elementary children. *Strategies: A Journal for Physical and Sport Education, 15*(3), 30-34.

Malina, R.M. (2004). Motor development during infancy and early childhood: Overview and suggested directions for research. *International Journal of Sport and Health Science, 2*, 50-66.

McAfee, O., & Leong, D.J. (2010). *Large Muscle Development*. Retrieved from http://www.education.com/reference/article/large-muscle-development-assessment

Michell, D., & Wood, N. (1999). An investigation of midline crossing in three-year old children. *Physiotherapy, 85*(11), 607-615.

Motor development. (2005). In Cambridge Encyclopedia of Child Development. Retrieved from http://www.credoreference.com/entry/cupchilddev/motor_development

Murata, N.M., & Tan, C.A. (2009). Collaborative teaching of motor skills for preschools with developmental delays. *Early Childhood Education, 36*. 483-489.

Piaget, J. (1954*). The construction of reality in the child*. New York: Basic Books.

Piek, J.P., Dawson, L., Smith, L.M., & Gasson, N. (2008). The role of early fine and gross motor development on later motor and cognitive ability. *Human Movement Science*, *27*, 668-681.

Sattelmair, J., & Ratey, J. (2009). Physically active play and cognition an academic matter. *American Journal of Play*, *(winter),* 366-374.

Sibley, B.A., & Etnier, J.L. (2003). The relationship between physical activity and cognition in children: A meta-analysis. *Pediatric Exercise Science, 15,*

Stilwell, J.M. (1987). The development of manual midline crossing in 2- to 6-year-old children. *The American Journal of Occupational Therapy, 41*(12), 783-789.

Tan, N.M., Tan, C.A. (2009). Collaborative teaching of motor skills for preschools with developmental delays. *Early Childhood Education, 36*, 483-489.

Viholainen, H., Ahonen, T., Lyytinen, P., Cantell, M., LicSSc, A.T. and Lyytinen, H. (2006), Early motor development and later language and reading skills in children at risk of familial dyslexia. *Developmental Medicine & Child Neurology, 48,* 367–373. doi: 10.1017/S001216220600079X

Westendorp, M., Hartman, E., Houwen, S., Smith, J., & Visscher, C. (2011). The relationship between gross motor skills and academic achievement in children with learning disabilities. *Research in Developmental Disabilities*, *32*, 2773-2779.

Williams, H., & Monsma, E. (2004). Assessment of gross motor development in preschool children. In B. Bracken (Ed.), *The psychoeducational assessment of preschool children (3rd ed.)* (pp.397-431). Mahwah, NJ: Lawrence Erlbaum.

SITUATION: *Throughout the Day*

Selecting Learning Target(s)

Understanding: Children are learning to coordinate muscle groups to perform fine manipulation of objects and skilled use of tools, while moving towards fine motor skills performed automatically with a focus on content & outcome.

GRIP AND MANIPULATION

A. Uses a fisted grip or palmar grasp to reach, manipulate or hold items (palmar grasp), with whole arm movement.	B. Uses thumb and fingers to manipulate objects (pincer grip) with whole arm movement and increased stability from the shoulder.	C. Uses refined wrist and finger movement, beginning to transfer control of movement from the shoulder to the elbow.	D. Uses hands with minimal elbow movement and primary control from wrist and fingers.	E. Hand movements are primarily controlled by actions from the wrist and fingers.

HAND DOMINANCE

A. Uses no established dominance for lead/dominant hand (switching still continues).	B. Uses established dominant hand.	C. Performs actions involving mirrored movements with opposing hand.	D. Manipulates with dominant hand with assistance from other hand.

Identifying Opportunities for Eliciting Evidence of Learning

Grip and Manipulation and Hand Dominance may be observed in various school activities throughout the day. The teacher may observe Grip and Manipulation and Hand Dominance while the children are:

- holding pencils, crayons and/or markers during writing, drawing, and coloring
- holding paintbrushes during painting
- zipping and/or buttoning while preparing to go outside
- holding scissors while cutting
- holding spoons and/or forks while eating
- manipulating small objects (e.g., blocks, coins, chips, counting bears, counting cubes, etc.)
- manipulating a computer mouse
- rolling dice
- using an electronic device

Eliciting Evidence of Learning

After reading a book aloud and engaging children in a discussion about an idea, theme, or character from the book, the teacher presents the children with a range of materials. The materials include a variety of paper and various types and sizes of scissors, crayons, and pencils. Then, the teacher asks the children to make a collage (or other art project) related to the book (e.g., an idea, theme, or character). While the children work, the teacher prompts them to use the materials and observes their scissors grip and pencil/crayon manipulations. As children reach for and use writing instruments, paper, and scissors, the teacher observes for hand dominance.

GRIP AND MANIPULATION

Suggested Probes:

- "How else could you hold the scissors when you're cutting?"
- "How else could you hold the pencil or crayon when you are drawing or writing?"
- "Look at these other kinds of scissors. Which would you like to try now?"

Probes to Avoid:

- "Put your fingers in the scissors like this."
- "Hold your pencil like I showed you."

HAND DOMINANCE

Suggested Probes:

- "Would you like to try the other hand? Which hand feels more comfortable?"

Probes to Avoid:

- "This hand is probably the best for you to use."
- "Please don't switch back and forth with your hands. Just use this hand."

Interpreting the Evidence

Observation (Grip and Manipulation-Pencil Grip): As Megan writes her name on her collage, she uses a fisted grip on the pencil. The teacher probes, "How else can you hold your pencil?" Megan attempts the pincer grip, but after writing one letter, she returns to the fisted grip with whole arm movement.

- Identify Learning Status on Construct Progression: **A. Uses a fisted grip or palmar grasp to reach, manipulate or hold items (palmar grasp), with whole arm movement.**

Observation (Grip and Manipulation- Scissors Grip): The teacher probes, "How else could you hold the scissors when you're cutting?" Megan transitions to a scissors grip using the thumb and fingers to manipulate the scissors. She continues to use this grip for the entire duration she works on the collage, with greater control and stabilization from the wrist through the fingers.

- Identify Learning Status on Construct Progression: **C. Uses refined wrist and finger movement, beginning to transfer control of movement from the shoulder to the elbow.**

Observation (Hand Dominance): When illustrating a story, Megan uses her right hand to hold her scissors, reach for a crayon, and hold her pencil. Megan uses whole right arm movement when using the scissors. The teacher observes as Megan twists and turns her right arm to position the scissors for cutting rather than using her left hand to move the paper.

- Identify Learning Status on Construct Progression: **B: Uses established dominant hand.**

Adapting/ Responding to Learning Needs

Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.

SITUATION: *Friendship Wreath*

<table>
<tr><td rowspan="4">Selecting Learning Target(s)</td><td colspan="5">Understanding: Children are learning to coordinate muscle groups to perform fine manipulation of objects and skilled use of tools, while moving towards fine motor skills performed automatically with a focus on content & outcome.</td></tr>
<tr><td colspan="5">GRIP AND MANIPULATION</td></tr>
<tr><td>A. Uses a fisted grip or palmar grasp to reach, manipulate or hold items (palmar grasp), with whole arm movement.</td><td>B. Uses thumb and fingers to manipulate objects (pincer grip) with whole arm movement and increased stability from the shoulder.</td><td>C. Uses refined wrist and finger movement, beginning to transfer control of movement from the shoulder to the elbow.</td><td>D. Uses hands with minimal elbow movement and primary control from wrist and fingers.</td><td>E. Hand movements are primarily controlled by actions from the wrist and fingers.</td></tr>
<tr><td colspan="5">HAND DOMINANCE</td></tr>
<tr><td></td><td colspan="2">A. Uses no established dominance for lead/ dominant hand (switching still continues).</td><td>B. Uses established dominant hand.</td><td>C. Performs actions involving mirrored movements with opposing hand.</td><td>D. Manipulates with dominant hand with assistance from other hand.</td></tr>
<tr><td>Preparation</td><td colspan="5">• A book about friendship* (e.g., Friends by Helme Heine, Just My Friend & Me by Mercer Mayer, My New Friend Is So Fun by Mo Willems, Franklin's New Friend by Paulette Bourgeois & Brenda Clark, The Rainbow Fish by Marcus Pfister)
• Construction paper (red, pink, white, purple, etc.) folded with a cutting line in the shape of half of a heart (or pattern for children to trace)
• Pencils and markers (of various diameters)
• Blunt-tipped left- and right-handed children's scissors
*adapt with age appropriate book, topic and fine motor activity.</td></tr>
<tr><td>General Description</td><td colspan="5">After the teacher reads a book aloud to the children about friendship, the children complete a cutting activity in small groups or individually. The teacher observes as children demonstrate Grip and Manipulation of small objects and Hand Dominance.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="5">The teacher reads a book aloud about friends and engages children in a discussion about why the characters were friends, how they became friends, and how they settled arguments. The teacher listens to children's ideas about what they think makes a good friend. After the conversation, the teacher explains that they will work together to create a friendship wreath and states the purpose of the activity (e.g., "You have a classroom of new friends"; "Friends lend a helping hand"; "Our hearts feel happy when we have friends"). The teacher shows the materials available to use and demonstrates the steps of the activity: 1. Choose your paper. 2. Cut on the line. 3. Write your name on the heart.

The teacher observes children in small groups and/or individually as they make hearts for the friendship wreath. As the children cut out their heart and write their name on it, the teacher observes for Grip and Manipulation and Hand Dominance while children use the pencils and scissors. The hearts are joined together to create a large friendship wreath and displayed.

<u>Vignette:</u> The teacher observes Michael holding scissors in his right hand, with the thumb in the top loop and the middle and ring fingers in the bottom loop, with index and pinky fingers sticking out away from the scissors. Michael is unable to open the blades wide, and cutting is ragged. The teacher says, "How else could you hold the scissors when you are cutting?" Michael attempts a new hold and is still unable to open the blades wide, and cutting is ragged. The teacher says, "Look at these other kinds of scissors. Which would you like to try?" Michael tries a different pair of scissors and is still unable to open the blades wide, and cutting is ragged. The teacher observes Michael using whole arm movement while turning/manipulating the scissors as he cuts the paper.

The teacher observes Michael writing his name. Michael chooses a fat pencil, and he holds it in the same hand as the one with which he held the scissors. Michael uses a tripod grip with whole arm movement, but the paper slides beneath the pencil as he writes.

<u>Suggested Probes:</u>
• "How else could you hold the scissors when you are cutting?"
• "Look at these other kinds of scissors. Which would you like to try?"

<u>Probes to Avoid:</u>
• "Put your fingers in the scissors like this."
• "Use this hand to write your name."</td></tr>
</table>

Interpreting the Evidence	**Observation (Grip and Manipulation-Pencil Grip):** Michael holds a pencil with a tripod grip and uses whole arm movement. • Identify Learning Status on Construct Progression: **B. Uses thumb and fingers to manipulate objects (pincer grip) whole arm movement with increased stability from the shoulder.** **Observation (Grip and Manipulation-Scissors Grip):** Michael holds the scissors with his thumb in the top loop, with his middle and ring fingers in the bottom loop, turning/manipulating the scissors as he cuts the paper using his whole arm. • Identify Learning Status on Construct Progression: **C. Uses refined wrist and finger movement, beginning to transfer control of movement from the shoulder to the elbow.** **Observation (Hand Dominance):** Michael uses the same hand to hold the scissors and the pencil. He manipulates the scissors as he cuts, while twisting and turning his right arm to position the scissors for cutting, rather than using his left hand to move the paper. • Identify Learning Status on Construct Progression: **B. Uses established dominant hand.**
Adapting/ Responding to Learning Needs	Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.

Book Orientation and Print Awareness

DOMAIN: Language Development and Communication

CLAIM: Students can acquire the foundational skills for reading and integrate these skills for comprehending increasingly complex texts in home, school, and community.

RATIONALE

Depending on home and early school experiences with print (bedtime stories and read-aloud books, big book shared reading, shared writing and their very independent adventures with reading- and writing-like behaviors), children come to kindergarten and first grade with different understandings about the conventions used to communicate meaning in print.

Based on the research of Marie Clay (2000) and others, each child develops his/her level of understanding of book orientation and print awareness. By assessing both the child's understanding and misunderstanding of conventions, teachers can address what still needs to be learned. This knowledge enables teachers to design instruction that meets the needs of individuals regarding how print works. Questions posed to students may include: *Where is the front of the book? Where does the story start? Where do I start reading, and where do I go after that? What is a letter? What is a word?* These important literacy understandings can develop through quality hands-on experiences with books and print.

ALIGNMENT TO NC STANDARDS

NC Foundations for Early Learning and Development
LDC-10 Children develop book knowledge and print awareness.

NC Standard Course of Study (Common Core State Standards & Essential Standards)
CCSS RF.K.1 Demonstrate understanding of the organization and basic features of print.

BOOK ORIENTATION

Children understand that books have pages that may contain pictures and/or words.	Children understand that books contain pages of print that represent language and sometimes there are pictures that help us know what the words describe.			UNDERSTANDING
A. Holds the book in random ways and flips pages, not looking at pages, nor looking at anything specifically.	**B. Turns the book to an upright orientation so pictures and text are right side up.**	**C. Holds the book upright, opens it from the front cover, and turns pages front to back not always one by one.**	**D. Holds the book upright, turns the pages in order, front to back one page at a time.**	SKILLS
When handed an early learning book* with the spine facing toward her, Olivia opens the book from back to front and possibly upside down. She flips the pages randomly, but does not stop long enough to see what is on the pages. When Olivia gets to the last page or set of pages being turned, she closes the book. After selecting a book from one of the classroom book baskets, Santiago examines the book's front and back covers, then opens the book from the back, randomly flips pages, and finally closes the book, and returns it to the basket. Another book is selected and Santiago opens this book from the front and holds it upside down. This is repeated with several books before he moves to another area in the classroom.	When Anthony explores a book he randomly flips pages until the pictures and/or print captures his attention. Then, he turns the book upright to correct the orientation of picture or print and says to the teacher, "Now the house isn't upside down." . When observing Aaliyah sharing a book with a reading buddy, the teacher notices that she flips the pages then changes the position of the book to upright. Aaliyah says to the buddy, "Now the dog is on his feet."	The teacher hands Carl an early learning book* with the spine facing him. The teacher says, "Show me how you would open the book and read it to a friend." Carl holds the book upright, opens the book from the front, and begins turning the pages, but not always one by one. When visiting the school library, the teacher observes Liam "reading" a book, holding the book upright, opening from the front, and turning a few pages at a time.	After the teacher selects an early learning book* (or the book is self-selected by the student), the teacher says to Noah, "Help me read this book." The teacher asks, "Where do I start reading?" Once Noah opens the book upright and opens the book at the front, the teacher asks, "What do we do next to read the book?" He turns the pages one at a time. When provided an opportunity to engage in a classroom library or centers, Sofia selects a book and models reading it to herself and to an audience (e.g., stuffed animals, peers, dolls, or an imaginary audience). She holds the book upright and turns pages from front to back, one page at a time.	PERFORMANCE DESCRIPTORS

* An **early learning book** is characterized as one that contains two to six lines of text, utilizes familiar content that is concrete and easy to understand, contains strong picture support, and uses mostly simple sentences but may periodically include longer sentences that include high frequency words and possibly dialogue. Note: Punctuation increases with the increase in sentence structure and content. Punctuation may include periods, commas, quotation marks, exclamation marks, question marks, and ellipses (Fountas and Pinnell, 1996).

PRINT AWARENESS

UNDERSTANDING	Children understand that books have pages that may contain pictures and/or words.		
SKILLS	**A. Attends to pictures as the only source of information.**	**B. Indicates that books can have pictures and/or words.**	**C. Attends to words on a page by mimicking directionality.**
PERFORMANCE DESCRIPTORS	While looking at an early learning book,* Isabella attends only to the pictures. For example, during small group instruction or one-on-one, the teacher may say, "I am going to read a story, and I want you to help me." Isabella points to or looks at the pictures and gives information about the book based on what is shown in the illustrations. She makes no attempt to "pretend to read" the print on the pages. When examining a self-selected book, Brandon flips through the pages, looking at and commenting only on the pictures. He identifies objects (or actions) seen in the illustrations. His eyes scan only the pictures. Brandon appears not to notice the text. He is sitting beside the teacher while the teacher reads a book. As the teacher reads, he points to the pictures on each page. When there is a page with only text, he turns pages until finding a picture.	After the teacher selects an early learning book* (or one is self-selected by the student), Emma is prompted to indicate print or pictures on a page. The teacher says, "Show me the pictures … [Emma points] … Now show me the words." Emma points to a picture and points to the print on a page. The teacher is using technology to read an interactive e-book to the class and asks Diego to point to a picture and then to the words. He comes to the white board and points to the picture and words.	The teacher notices Luis interacting with a book by running his finger along the words on the page in a zigzag manner. The teacher asks Luis, "How does using your finger help you read?" He responds by saying, "When my friend did it yesterday, you said it was good, so I am trying it." When listening to the narrator of an interactive e-book, Alyssa follows the print by pointing, beginning at the top and moving to the bottom, and occasionally runs her finger from the left-hand side of the page to the right.

* An **early learning book** is characterized as one that contains two to six lines of text, utilizes familiar content that is concrete and easy to understand, contains strong picture support, and uses mostly simple sentences but may periodically include longer sentences that include high frequency words and possibly dialogue. Note: Punctuation increases with the increase in sentence structure and content. Punctuation may include periods, commas, quotation marks, exclamation marks, question marks, and ellipses (Fountas and Pinnell, 1996).

PRINT AWARENESS

Children understand that books contain pages of print that represent language and that there are sometimes pictures that help us know what the words describe.				UNDERSTANDING
D. Distinguishes between the general area of printed words when prompted to show where we read words.	**E. When prompted, indicates that the first word on the page is where to begin reading.**	**F. Distinguishes between letters and words on a page of text (excluding the words a, A, and I).**	**G. Uses directionality while indicating one word on the page for each word read aloud (concept of word: one-to-one correspondence and voice to print match).**	SKILLS
After the teacher selects an early learning book* (or one is self-selected by the student) the teacher asks Ava, "Show me where we read words on the page." Ava indicates by pointing or using a hand to show the general area of printed words. She can find words in different areas of the page. When reading a book, the teacher comes to a page with text and pictures and asks Gabriel to point to the words. He uses a finger and touches the text – not the pictures – on the page. Mrs. Carter is administering the mCLASS: Reading 3D Print Concepts formative assessment and says to Sean, "I'll read the book. You help me. Show me where to start reading. Where do I begin?" Sean points to a word in the middle of the page.	During center time, the teacher brings Victoria an early learning book* and a stuffed animal (or puppet "friend"). After the teacher introduces Victoria to her "friend," the teacher asks her to show the "friend" where to begin reading the book. Victoria holds the book right side up, opens to the beginning of the book, and points to where the first word is located on the page. While sitting in the reading center, Brianna is "reading" a familiar book to another child. After joining the group, the teacher asks Brianna to point to where to begin reading. Brianna uses a finger and points to the first word on the page. Mr. Summers is administering the mCLASS: Reading 3D Print Concepts formative assessment and says to Jason, "Show me where to start ." Jason shows Mr. Summers where to start reading on the indicated page in the book by pointing to the first word.	During small group time, several children and the teacher are reading a big book. The teacher says, "Show me a letter," and Caleb points to one letter. Next, the teacher says, "Show me a word," and Caleb points to one word. The teacher joins Sebastian who is "reading" a book during center time. She asks Sebastian to point to one letter and then asks him to point to one word. Sebastian does both. Mrs. Montgomery is administering the mCLASS: Reading 3D Print Concepts formative assessment. When prompted, Wrennie slides index cards together to frame one individual letter then two letters side by side. Mrs. Montgomery further prompts, and Wrennie frames one word and then two words side by side.	While reading an early learning book* out loud to Alexandra, the teacher points to the first word on a new page. Before reading, Alexandra is asked by the teacher to "Point to each word as I read this line." Alexandra follows along and matches each word on the page with each word that the teacher reads. Alexandra moves a finger from left to right, one word at a time, as the teacher reads. Chung-Ho interacts with a book. The teacher hears him "reading" the book and walks over to sit with him. The teacher asks Chung-Ho to point to each word as he is "reading ." (The child may "pretend" to read the text with a mismatch between the written and spoken words, but is able to point to one word at a time as the child is "reading" the text on the page.) Note: For every word that is called, there should be a shift in the child's pointing that goes from left to right and from one word to the next . Mrs. Rapato is administering the mCLASS: Reading 3D Print Concepts formative assessment and says to Ralph, "Point to each word while I read." Ralph points to each word while Mrs. Rapato reads.	PERFORMANCE DESCRIPTORS

* An **early learning book** is characterized as one that contains two to six lines of text, utilizes familiar content that is concrete and easy to understand, contains strong picture support, and uses mostly simple sentences but may periodically include longer sentences that include high frequency words and possibly dialogue. Note: Punctuation increases with the increase in sentence structure and content. Punctuation may include periods, commas, quotation marks, exclamation marks, question marks, and ellipses (Fountas and Pinnell, 1996).

RESOURCES USED

Clay, M. M. (2000). *Concepts About Print: What have children learned about printed language?* Portsmouth, NH: Heinemann

Clay, M. M. (2001). *Change over time in children's literacy development.* Portsmouth, NH: Heinemann.

Clay, M. M. (2002). *An observation survey of early literacy achievement.* Auckland, N.Z: Heinemann.

Fountas, I. C., & Pinnell, G. S. (1996). *Guided reading, good first teaching for all children* (1st ed.). Portsmouth, NH: Greenwood Press.

K-3 North Carolina Think Tank. (2013). *Assessment for learning and development in K-3: A report by the K-3 North Carolina think tank.* Raleigh, NC: Author.

North Carolina Foundations Task Force. (2013). *North Carolina foundations for early learning and development.* Raleigh, NC: Author

North Carolina Department of Public Instruction. (2013). *Quick reference guides.* Retrieved from http://www.ncpublicschools.org/curriculum/links/reference-guides/

Following Directions

DOMAIN: Language Development and Communication

CLAIM: Students can use and continue to develop effective listening and communication skills (e.g. verbal and non-verbal) for a range of purposes, audiences, and settings/contexts in increasingly complex ways.

RATIONALE

Children need to be able to listen carefully to a variety of language genres, including extended discourse (multiple sentences within a dialogue and narrative with adults and peers), and then children need to be able to communicate in ways that are understandable to both adults and children. These combined skills are foundational for later learning and literacy at home and at school (Snow, Burns, & Griffin, 1998). As most children enter school, these skills are well established within their home and community and must be adapted for the **context of school**. However, some children come to school with rich language at home and in the community that may not be as aligned with the context of school (Heath, 1983; Vernon-Feagans, 1996).

- For instance, some communities value dynamic, overlapping communication, where multiple speakers speak or jump into the conversation at the same time. Yet, school conventions require children to wait their turn, speak one-at-a-time, and often communicate directly to the teacher or adult. Children who do not have extensive practice with such turn-taking routines will benefit from explicit instruction in listening and communicating in order to learn and understand the **conventions of school** (Vernon-Feagans, 1996).

All children need to listen carefully to the details of instruction in the classroom and increasingly be able to ask and answer questions. In particular, children must be able to recognize when they do not understand and find ways to both verbally and nonverbally gain access to the information they need to learn. School should provide the opportunity for all children to communicate at length and complexly with diverse children and adults in a supportive way that provides scaffolding for both listening and communicating.

ALIGNMENT TO NC STANDARDS

NC Foundations for Early Learning and Development

LDC-1 Children understand communications from others.

NC Standard Course of Study (Common Core State Standards & Essential Standards)

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.

SL.1.2 Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

SL.2.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

SL.3.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood.

SL.1.3 Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

SL.2.3 Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

SL.3.3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

FOLLOWING DIRECTIONS

UNDERSTANDING	Children understand how to respond to directions, requests, and commands in a variety of settings (one-on-one with an adult, one-on-one with a peer, small group setting, large group setting).			
SKILLS	**A. Responds with silence.**	**B. Responds non-verbally to simple requests in a variety of ways (nodding, pointing, gesturing, facial expressions, eye pointing, sign language).**	**C. Indicates when something is not understood by making gestures or asking "what?"**	**D. <u>When given visual cues</u>, accurately follows an oral one-step direction that includes positional words: 1) on, off, in, out, under 2) in front of, behind, on top of, bottom, before, after 3) next to, between, above, below**
PERFORMANCE DESCRIPTORS	When Ava hears a direction, request, or command given by the teacher or peer, she does not respond with a verbal or non-verbal answer. When the teacher or peer repeats the same direction, request, or command to ensure Ava has heard the statement, Ava provides a cue (looking/glancing at the speaker, making eye contact) to indicate that the speaker has been heard, but she still does not respond verbally or non-verbally. Ava does not complete the request.	When singing a song in the classroom that involves requests (e.g., "If You're Happy and You Know It"), Brandon does not sing but completes the request in the song (claps hands, stomps feet, etc.). When the teacher says, "Would you please take this note to the office?" Alexandra nods (gives thumbs up, takes the note and smiles, etc.) to indicate to the teacher an intention to take the note to the office. She then completes the request.	When the teacher or peer asks Sebastian a question ("Do you have your lunchbox?" "Is your best friend Erika?" "Do you like apples?" etc.), he responds by asking, "What?" or making a gesture (shrugs shoulders, raises/creases eyebrows and looks at the speaker, signs "what" using sign language, etc.) to indicate to the speaker that he does not understand what was asked or stated.	**on, off, in, out, under** • The <u>teacher points</u> (as a visual cue) and says, "Put the crayon under the paper." William places the crayon under the paper. • When Luciana enters the classroom, the teacher says, "Good Morning. Remember to put your coat on the hook." The <u>teacher walks over and touches</u> the coat hooks in the classroom while providing the directions. Luciana places her coat on the hook. • As children are writing, the <u>teacher holds up</u> Xavier's journal and points to the journal basket and instructs Xavier to put the journal in the basket. He then takes the journal and places it in the basket. **in front of, behind, on top of, bottom, before, after** • The <u>teacher points</u> (as a visual cue) and says, "Put the crayon in front of the box." Destiny puts the crayon in front of the box. • As children are gathering for group time, the <u>teacher walks over</u> to Mason and says (<u>while pointing to John</u>), "Would you please sit behind John?" Mason sits behind John. **next to, between, above, below** • The <u>teacher points</u> (as a visual cue) and says, "Put the crayon next to the box." Lily puts the crayon next to the box. • After the teacher reads *The Gingerbread Man*, children in a small group are engaged in creating their personal gingerbread man. After finishing with that activity, they bring their gingerbread men to use for a listening activity. The teacher has brought to the lesson some additional small items (hats, shoes, buttons, ties, mittens, etc.). The teacher gives oral directions to the small group of children. <u>While holding the purple</u> hat in one hand and the gingerbread man in the other hand, the teacher says, "Place the purple hat above the gingerbread man." Zoey places the purple hat above the gingerbread man. • Children in a small group are engaged in following the procedure for a science experiment. <u>While holding open the zipper-lock bag containing a paper towel, the teacher points to the paper towel and holds up a seed</u> and says, "Place the seed next to the paper towel." Leonardo places the seed next to the paper towel.

FOLLOWING DIRECTIONS CONTINUED ON NEXT PAGE

Children understand how to respond to directions, requests, and commands in a variety of settings (one-on-one with an adult, one-on-one with a peer, small group setting, large group setting). (continued)				UNDERSTANDING
E. Without visual cues, accurately follows oral one-step directions that include positional words: 1) on, off, in, out, under 2) in front of, behind, on top of, bottom, before, after 3) next to, between, above, below	**F. Asks simple questions to clarify directions, requests, and commands.**	**G. With visual cues (if needed), follows two-step directions.**	**H. Without visual cues, accurately follows two-step directions.**	SKILLS
on, off, in, out, under • The teacher says, "Take the crayon and put it under the paper." Rodrigo puts the crayon under the paper. • When the child enters the classroom, the teacher says, "Good morning. Remember to put your coat on the hook." Cameron places his coat on the hook. • When Kayo is exploring with Unifix® cubes in the math center, the teacher sits down beside her and says, "Can you put the red cube on top of the blue cube?" Kayo places the red cube on top of the blue cube. • When Jada is writing a journal entry at the writing center where the teacher is located, the teacher says, "Great writing! Please put your journal in the basket." Jada then takes her journal and places it in the basket. **in front of, behind, top, bottom, before, after** • As children are gathering for group time, the teacher walks over to Kiara and says, "Would you please sit behind John?" Kiara sits behind John. **next to, between, above, below** • The teacher says, "Take the crayon and put it next to the box." Nathan puts the crayon next to the box. • After the teacher reads *The Gingerbread Man*, children in a small group are engaged in creating their personal gingerbread man. After finishing with that activity, they bring their gingerbread men to use for a listening activity. The teacher has brought to the lesson some additional small items (hats, shoes, buttons, ties, mittens, etc.). The teacher gives oral directions to the small group of children. The teacher says, "Place the purple hat above the gingerbread man." Nevaeh places the purple hat above the gingerbread man. • Prior to writing a "how to" book, children work in pairs to practice giving each other oral directions. The teacher observes Carlos accurately following Alyssa's directions that include the words next to, between, above, and below.	The class is sitting together during group time and, the teacher says, "When you get back to your seat, I want you to pull out your magnetic letters and whiteboard for Word Work." Hannah says, "Can you say that again?" When a teacher is explaining how to complete an activity, Makayla asks questions such as the following: "Why are we doing that?" "What is that for? "What are we doing?" "What do we do after …?" "Can you say that again?"	Teacher gives directions while pointing (as a visual cue), "Take the crayon out of the box and put the crayon under the paper." Madison removes the crayon from the box and puts it under the paper. When Hachiro enters the classroom the teacher says, "Good morning. Remember to put your coat on the hook and put your reading book on your table." (The pictures for the morning routine are posted on a bulletin board. The teacher could point to pictures on the bulletin board if a visual cue appears to be needed.) Hachiro places his coat on the hook and places his reading book on the table. When Isaiah is exploring with Unifix® cubes in the math center, the teacher sits down beside him and says, "I can tell you like exploring with the cubes. It is great how you have connected many colors of Unifix® cubes together to make a tower." Handing Isaiah a red cube and pointing to the blue cube if a visual is needed, the teacher says, "Place the red cube on top of the blue cube, and then put the yellow cube under the blue cube." (The teacher hands Isaiah the yellow cube and points to the bottom of the blue cube – if a visual is needed.)	When Manuel enters the classroom before the tardy bell, the teacher says, "Good morning. Please unpack your book bag and bring your lunch money to me." Manuel unpacks his book bag and takes his lunch money to the teacher. When Trinity is exploring with Unifix® cubes in the math center, the teacher sits down beside her and says, "I can tell you like exploring with the cubes. It is great how you have connected many colors of Unifix® cubes together to make a tower. Place the red cube on top of the blue cube and then put the yellow cube under the blue cube." Trinity places the red cube on top of the blue cube and connects the yellow cube under the blue cube.	PERFORMANCE DESCRIPTORS

FOLLOWING DIRECTIONS CONTINUED FROM PREVIOUS PAGE

UNDERSTANDING	Children understand how to respond to directions, requests, and commands in a variety of settings (one-on-one with an adult, one-on-one with a peer, small group setting, large group setting). (continued)		
SKILLS	**I. With visual cues (if needed), accurately follows three- to four-step directions at one time, and carries out the tasks over time.**	**J. Without visual cues, accurately follows three- to four-step directions at one time and carries out the tasks over time.**	**K. With visual cues (if needed), accurately follows multi-step directions (more than four).**
PERFORMANCE DESCRIPTORS	While posting a picture schedule for later reference, the teacher gives directions orally, saying, "Finish your math stations, wash your hands, and eat your snack." Tomas accurately follows directions. When the children are sitting together at group time, the teacher provides directions to the class about the tasks to be completed over the next hour. The teacher says, "Class, when I excuse you from the group, you will need to finish the math problems on your table, wash your hands, and eat your snack." Elijah finishes the math problems, washes his hands, and then eats his snack. (If needed, the teacher should post picture reminders in a prominent location for children's reference.) When Mia enters the room in the morning, the teacher says, "When you get to your seat, please take out your writing journal, turn to the next clean page, and write something you would like to share. Raise your hand when you are finished." Mia takes out her writing journal, turns to the next clean page, and begins to write an entry. Mia raises a hand when finished. (If needed, the teacher should use prominently displayed visuals by drawing or posting pictures of the writing journal, clean page, a child writing, and a raised hand.)	The teacher gives the class directions orally with NO picture schedule: "Finish your math activity, wash your hands, and eat your snack." Zion accurately follows all three steps. When the children are sitting together at group time, the teacher provides four-step directions to the class about the tasks to be completed over time. The teacher says, "Find your partner, gather your math materials, work together to find as many solutions as you can, and place your completed work in the bucket when you are finished." (No Visuals are given.) Eduardo and his partner accurately follow each step of the directions during the work time.	When the teacher provides directions individually, in a small group setting, or a large group setting, the teacher explains the expectations for what is to be completed. After ensuring the children are paying attention, the teacher gives the directions orally while providing a visual to post for the children to refer to later (visuals can be drawn on the board, printed pictures, etc.). The teacher says, "This activity will be completed with your partner. • Gather a handful of shapes from the bucket. • Lay the shapes in front of your partner. • Find a shape that can be partitioned. • Partition the shapes into equal parts. • Raise your hand when you are finished and I will come to you." Catalina refers to the visual cues during the activity and accurately follows the multi-step directions.

RESOURCES USED

Erickson, K.A., Koppenhaver, D.A., Yoder, D.E., & Nance, J. (1997). Integrated communication and literacy instruction for a child with multiple disabilities. *Focus on Autism and Other Developmental Disabilities, 12*(3), 142-150.

Goldin-Meadow, S., & Sandhofer, C.M. (1999). Gestures convey substantive information about a child's thoughts to ordinary listeners. *Developmental Science, 2* (1), 67-74.

Heath, S.B. (1996, 1983). *Ways with words: Language, life, and work in communities and classrooms.* New York, NY: Cambridge University Press.

Linder, T., Anthony, T.L., Bundy, A.C., Charlifue-Smith, R., Hafer, J.C., Hancock, F., & Rooke, C.C. (2008). *Transdisciplinary play-based system* (TPBA2/TPBI2). Baltimore, MD: Paul H. Brookes Publishing Co., Inc.

Snow, C.E., Burns, M.S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children.* Washington, DC: National Academy Press.

Tharp, R.G., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context.* Cambridge, UK: Cambridge University Press.

Vernon-Feagans, L. (1996). *Children's talk in communities and classrooms.* Cambridge, MA: Blackwell.

SITUATION: *Daily Routines with One-Step Directions*

<table>
<tr><td>Selecting Learning Target(s)</td><td colspan="2">Understanding: Children understand how to respond to directions, requests, and commands in a variety of settings (one-on-one with an adult, one-on-one with a peer, small group setting, large group setting).</td></tr>
<tr><td></td><td>D. When given visual cues, accurately follows an oral one-step direction that includes positional words:
1) on, off, in, out, under
2) in front of, behind, on top of, bottom, before, after
3) next to, between, above, below</td><td>E. Without visual cues, accurately follows oral one-step directions that include positional words:
1) on, off, in, out, under
2) in front of, behind, on top of, bottom, before, after
3) next to, between, above, below</td></tr>
<tr><td>Identifying Opportunities for Eliciting Evidence</td><td colspan="2">Teachers provide directions to children throughout the day. Directions are provided when children are taking care of daily routines like exchanging a book for at-home reading, cleaning up the blocks area, or getting ready to go to lunch or outside. Teachers also provide specific directions for engaging with materials during a planned lesson, such as preparing for a science experiment, using math manipulatives, and getting ready to write a story. During all of these types of daily situations, there are many opportunities to observe children's abilities to follow single- and multi-step directions. In order to gather information for making a learning status for all students, it will be necessary to make several observations of this kind during daily routines.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="2">During part of a daily routine, the teacher asks children to follow a one-step direction in order to prepare for book reading with a partner. The teacher has previously assigned partners and asks children to meet with their partners to begin the book sharing activity. The teachers says, "Please sit next to your book reading partner."

As the children transition to meeting with their partners, the teacher observes the children, watching to see which children remember the direction, which children quickly complete the direction without redirection, and which children need support in completing the direction.

<u>Suggested probes:</u>
• Repeat the direction by saying, "Sit next to your book reading partner."
• Repeat the direction, point to a visual cue (picture), and say, "Sit next to your book reading partner."

<u>Probes to avoid:</u>
• Do you remember what you are supposed to do?
• Have you done what I asked you to do?</td></tr>
<tr><td>Interpreting the Evidence</td><td colspan="2">Observation: While observing, the teacher notices that Mia remains in her location rather than joining her partner. The teacher then points to the visual and provides the one-step direction, "Sit next to your book reading partner." Mia then sits next to her partner.

• <u>Identify Learning Status on Construct Progression:</u> D. When given visual cues, accurately follows an oral one-step direction that includes positional words.

Observation: After providing the direction, the teacher observes both Pablo and Paula (partners) sit next to each other.

• <u>Identify Learning Status on Construct Progression:</u> E. Without visual cues, accurately follows an oral one-step direction that includes positional words.</td></tr>
<tr><td>Adapting/ Responding to Learning Needs</td><td colspan="2">Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.</td></tr>
</table>

SITUATION: *Daily Routines with Two-Step Directions*

<table>
<tr><td>Selecting Learning Target(s)</td><td colspan="3">Understanding: Children understand how to respond to directions, requests, and commands in a variety of settings (one-on-one with an adult, one-on-one with a peer, small group setting, large group setting).</td></tr>
<tr><td></td><td>G. <u>With visual cues</u> (if needed), follows two-step directions.</td><td>H. <u>Without visual cues</u>, accurately follows two-step directions.</td><td>I. <u>With visual cues</u> (if needed), accurately follows three- to four-step directions at one time, and carries out the tasks over time.</td></tr>
<tr><td>Identifying Opportunities for Eliciting Evidence of Learning</td><td colspan="3">Teachers provide directions to children throughout the day. Directions are provided when children are taking care of daily routines like exchanging a book for at-home reading, cleaning up the blocks area, or getting ready to go to lunch or outside. Teachers also provide specific directions for engaging with materials during a planned lesson, such as preparing for a science experiment, using math manipulatives, and getting ready to write a story. During all of these types of daily situations, there are many opportunities to observe children's abilities to follow single- and multi-step directions. In order to gather information for making a learning status for all students, it will be necessary to make several observations of this kind during daily routines.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="3">During part of a daily routine, the teacher asks small groups of children to follow directions in order to prepare for lunch. Using prepared visual displays with pictures that depict the step-by-step directions, the teacher points to the display while giving the directions:
1. Place your work materials in the basket.
2. Wash your hands.
3. Line up for lunch.

As the children make the transition to lunch, the teacher observes the children, watching to see which children revisit the visual display to help remember the directions, which children quickly complete the three directions without redirection, and which children complete some or part of the directions but need support in completing the full directions.

<u>Suggested Probes:</u>
• If a child does not complete the directions, repeat the three-step directions using visual cues. Point to each visual and say, "Place your work materials in the basket, wash your hands, and line up for lunch."
• If a child does not complete the directions, create two-step directions and say, "Place your work materials in the basket and wash your hands" or "Wash your hands and line up for lunch."
• If a child still does not complete the directions, point to each visual and separate the directions to create two-step directions and say, "Place your work materials in the basket and wash your hands" or "Wash your hands and line up for lunch."

<u>Probes to avoid:</u>
• Do you remember what you are supposed to do next?
• Have you done what I asked you to do?
• Are you finished?</td></tr>
<tr><td>Interpreting the Evidence</td><td colspan="3">Observation: While observing, the teacher notices that Mia comes over and hands her work to the teacher rather than putting it in the basket. The teacher then points to each visual and provides two-step directions. "Wash your hands and line up for lunch." Mia then washes her hands and lines up for lunch.

• <u>Identify Learning Status on Construct Progression:</u> G. With visual cues (if needed), follows two-step directions.

Observation: After providing three-step directions with visual cues, the teacher observes Pablo putting his materials in the basket, washing his hands, and getting in line for lunch.

• <u>Identify Learning Status on Construct Progression:</u> I. With visual cues (if needed), accurately follows three- to four-step directions at one time, and carries out the tasks over time.</td></tr>
<tr><td>Adapting/ Responding to Learning Needs</td><td colspan="3">Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.</td></tr>
</table>

SITUATION: *The Three Little Pigs*

<table>
<tr><td>Selecting Learning Target(s)</td><td colspan="3">Understanding: Children understand how to respond to directions, requests, and commands in a variety of settings (one-on-one with an adult, one-on-one with a peer, small group setting, large group setting).</td></tr>
<tr><td></td><td>F. Asks simple questions to clarify directions, requests, and commands</td><td>G. <u>With visual cues</u> (if needed), follows two-step directions.</td><td>H. <u>Without visual cues</u>, accurately follows two-step directions.</td></tr>
<tr><td>Preparation</td><td colspan="3">• One or more versions of the story of The Three Little Pigs
• Pieces of heavy (corrugated) cardboard or poster board on which to build the houses
• A variety of materials that represent materials for building the houses in the story of the three little pigs
This might include: straw, Easter basket grass, sticks, and something to represent bricks (such as sugar cubes, Legos®, clay [to make bricks], string, glue, rubber bands, yarn, etc.).</td></tr>
<tr><td>General Description</td><td colspan="3">The teacher uses large group time to introduce the task. Building on previous class experiences with the story, The Three Little Pigs, the teacher provides various building materials for students to create houses. The teacher provides the children with two-step directions to follow in order to complete this activity.</td></tr>
<tr><td>Eliciting Evidence of Learning</td><td colspan="3">The teacher has been reading different versions of The Three Little Pigs and has made them available for children to browse independently. Discussions during repeated readings of the story have included topics such as which house might be the safest and in which house the children would want to live. There may have also been discussion about how a straw or stick house could be built that the wolf couldn't blow down.

During this lesson, the teacher introduces the activity by explaining that they will use different materials to build a house, like the pigs did in the different stories they've been reading. The teacher introduces the building materials, holding up various examples for the children to see. The teacher also shows a large piece of cardboard, which will be used as a base for building each house. Then, the teacher provides specific two-step oral directions for children to follow.
1. Choose your building materials.
2. Build your house on top of the cardboard.

The teacher observes the children as they select materials, giving them ample time for selection. Students are also observed while building their houses. The teacher notes how each child follows the specific two-step directions provided without providing visual cues. For some children who do not follow the two-step directions, the teacher repeats the directions, and then repeats the directions while pointing to the materials and the cardboard, as visual cues, to determine if the child can follow the directions with visual cues.

<u>Example:</u>
The teacher introduces the activity by saying, "We are going to be building houses like the three pigs did in the stories we've been reading. Here are some of the materials that you can use." The teacher holds up some of the choices of materials so that the children can see them. You'll find these materials on each of our tables. She adds, "You can choose other materials from the classroom or outside if you can think of something else that you might want to use." The teacher then explains that they will be building their house on a piece of cardboard and that the cardboard is needed so their houses can be moved carefully. Then, she gives the children two directions:
1. Choose your building materials.
2. Build your house on top of the cardboard.

The teacher observes Danielle choosing a piece of cardboard and then selecting materials to build her house (sugar cubes, blue clay, and yellow yarn). After Danielle puts all of her selected materials in a pile, she uses the materials to build her house on top of the cardboard.

As the children work, the teacher also observes Dan. He walks toward one of the tables and then looks back to the teacher with his eyebrows raised. He points to the building materials and asks, "What is that for?" The teacher then points to the pile of building materials and says, "Choose what you need to build your house." Then, the teacher points to the cardboard piece and says, "Build your house on top of the cardboard." Dan then chooses materials and begins to build his house on the cardboard.

<u>Suggested Probes:</u>
• Repeat the directions.
• Pointing to the cardboard, "Build your house on top of the cardboard."
• Pointing to the materials, "Choose what you need to build your house."

<u>Probes to Avoid:</u>
• "Did you get your materials?"
• "Did you put your house on the cardboard?"</td></tr>
</table>

Interpreting the Evidence	**Observation:** Dan asks for clarification. The teacher provides visual cues along with the directions. After the teacher restates the directions while using visual cues, Dan completes the set of directions. • Identify Learning Status on Construct Progression: **G. With visual cues (if needed), follows two-step directions.** **Observation:** While observing Danielle, the teacher notes that Danielle selects her building materials and builds her house on the cardboard as directed. • Identify Learning Status on Construct Progression: **H. Without visual cues, accurately follows two-step directions.**
Adapting/ Responding to Learning Needs	Once the evidence is interpreted and the learning status is identified on the construct progression, continue to adapt and respond to the learning needs of the student, addressing the same learning target if the student hasn't met it. If the student has met the learning target, work with the student to select a new learning target for teaching and learning.

Letter Naming

DOMAIN: Language Development and Communication

CLAIM: Students can acquire the foundational skills for reading and integrate these skills for comprehending increasingly complex texts in home, school, and community.

RATIONALE

Learning to read is a complex process that requires young children to acquire and continue to develop automaticity with foundational skills, including alphabet knowledge (National Early Literacy Panel, 2009; National Reading Panel, 2000). Alphabet knowledge includes the ability to identify and name letters and hear sounds in words (phonological awareness). These are an integral part of foundational skills and closely correlated to later reading and spelling achievement (Strickland & Shanahan, 2004).

In addition to acquiring alphabet knowledge as a part of foundational skill development, successful readers can integrate the sound, visual, and meaning systems of language to monitor comprehension and repair misunderstandings and apply their understandings to a range of increasingly complex texts in a variety of settings. The National Research Council estimated that if children received exposure and systematic opportunities to develop foundational language, reading, and related skills during early schooling, only about five percent might experience serious reading difficulty later in school (Snow et al., 1998).

ALIGNMENT TO NC STANDARDS

NC Foundations for Early Learning and Development
LDC-12 Children develop knowledge of the alphabet and the alphabetic principle.

NC Standard Course of Study (Common Core State Standards & Essential Standards)
RF.K.1 Demonstrate understanding of the organization and basic features of print.

LETTER NAMING CONTINUED ON NEXT PAGE

Children understand that spoken language can be represented by letters.				UNDERSTANDING
A. Recognizes own name in isolation and in context.	**B. Makes connections to particular letters in the print environment (one's name, family members' names, friends' names).**	**C. Locates, talks about, and/or asks questions about letter(s) in the print environment.**	**D. Discriminates letters from pictures and numbers.**	SKILLS
During a shared reading* of *Who Stole the Cookie from the Cookie Jar*, Ms. Lewis asked Alexis to select her name from the 12 name card choices and place it in the poem on the pocket chart. Alexis selects her name and places it in the empty space on the pocket chart. Bryson enters the classroom and completes the morning attendance activity. He uses the wand of the interactive whiteboard and selects his name from the other classmates' names on the board and drags his name to the picture of the school.	While working in the Read the Room Literacy Center, Paul notices that Pablo's name has some of the same letters as his name and says, "Look Ms. Graham, Pablo has a 'P', 'a', & 'l' in his name like my name!" Chet is standing in the line with the other students who travel home by car and notices that his George Watts Elementary School folder has a letter that he recognizes. Chet says to Ms. Allen, "Look that's like the 'G' in Grandma," as he points to the letter 'G' in George.	When asked, "Use your pointer to find a letter in the classroom," Huan uses the pointing device*** and points to a letter and/or letters in the classroom environment. During school day routines, Mason notices letters by gesturing to them and saying, "I see a letter" and "I know that one!" while pointing to letters in the classroom. Throughout the school environment and in print material,* Isabella asks questions about letter names. • "What is that letter?" (to identify unknown letters) • "Why does that letter look like that?" and "Is that a 'g', too?" (to sort out features of letters, such as different fonts or uppercase/lowercase letters) • When pointing to the letter 'Q,' Isabella asks, "What is that little part on that 'O'?" (to make connections to known letters)	When asked, "Show me some letters (or a letter)" during a shared reading activity, Jacob uses a framing tool and frames letters on the print material.* Chloe has chosen to work at the Interactive Whiteboard Center. The board has visuals of numbers, pictures, and letters. She is prompted by the character on the whiteboard to tap only the letters and drags the letters to Leo, the Letter-Loving Lobster. The character explains that Leo will only grab letters. Chloe selects letters only and drags the letters to Leo.	PERFORMANCE DESCRIPTORS

** Examples of print material could include poems, stories, word wall, informational text, and digital media.*
*** Collections of letters could include magnetic letters, large foam letters, cards or paper with letters written on them, or letters on a digital learning device.*
**** Pointers could include items such as a finger, pointer, framing tool, highlighter tape, or a dot marker.*

LETTER NAMING CONTINUED FROM PREVIOUS PAGE

UNDERSTANDING	Children know features of letters.		
SKILLS	**E. Accurately selects and names *some-to all* of the letters in own name.** *Some-to-all of the letters indicates a range of knowledge. For children with longer names, they may select and name some-to-all of the letters in own name.*	**F. Accurately selects letters when given the letter name.**	**G. Accurately matches *some* uppercase to lowercase letters, matching the same letter uppercase to lowercase form.** *Some indicates the child is able to select and accurately name letters throughout printed materials within the following range (8-13) for uppercase or lowercase letters.*
PERFORMANCE DESCRIPTORS	When given a small group of letters,** including the letters in her name, Destiny sorts through the various letters and selects (picks up or points to) the letters in her name. She then names ***some-to-all*** of the letters selected. As part of the morning routine, Trumaine walks over to the name pocket chart and finds his picture. He takes the envelope from behind his picture that contains an assortment of letter cards. Trumaine then searches through the letters in attempt to spell his name. He selects the letters 'T' 'r' 'm' 'i' and 'e'. Ms. Lipe, the teacher assistant, says, "Trumaine, tell me the letters you placed under your name." Trumaine points to each letter under his picture with his finger while saying the correct name for each letter, "T r m i e".	When provided letters,** either uppercase or lowercase, and asked to pick up the letter 'T,' Diamond accurately selects the letter. *NOTE: The oral prompting would continue until the child accurately selects most of the letters, either uppercase or lowercase.* During free choice literacy centers, Jamal chooses to work on the interactive whiteboard. Jamal picks up the whiteboard wand, taps the board, and begins the flipchart. Jamal hears the name of a letter (e.g. "uppercase D" or "lowercase f"), and a colored space is highlighted on the board. Jamal uses his wand to tap the correct letter from the letter box at the bottom of the board and drags the letter to the space highlighted on the board. When Jamal hears "uppercase W," he selects 'u,' but this time the 'u' bounces back to the letter box. Jamal is able to place most letters in the correct space on the board when prompted; however, when prompted to select "uppercase W," "lowercase f," "uppercase G," and "lowercase q," the letters do not stay in the correct space and bounce back to the letter box. At the end of the flipchart, the letters that bounced back to the letter box are listed on the next page for Jamal to complete additional lessons with these letters. In print material,* Isaiah accurately selects most letters using a pointing device, when orally prompted with letter names.	Jason Thomas has chosen to work in the Letter Detective Center. Ms. Rodgriguez shows Jason Thomas the cube with the uppercase letter 'R' and asks him to find the lowercase 'r.' Jason Thomas looks, using his magnifier*** until he spots the lowercase 'r' and highlights it with the magnifier. Jason Thomas continues his detective work, matching ***some*** lowercase letters to the corresponding uppercase letter when prompted by Ms. Rodriguez. While working in Literacy Work Stations, Hunter places the alphabet placemat printed with uppercase letters in front of him and empties the container of lowercase letter tiles. Hunter chooses the lowercase 'r' letter tile and matches it to the uppercase 'R' printed on the placemat. He continues to accurately match ***some*** lowercase letter tiles to their uppercase form on the placemat. While working with the letter app on the iPad, Li Ming was able to match the lowercase to the uppercase letter on the screen for ***some*** letters. During small group reading, the teacher hands Sara the framing tool, shows her an uppercase letter and asks her to find the same letter in lowercase. Sara accurately frames*** the lowercase letter. When prompted to find additional letters, Sara matches ***some*** uppercase letters to lowercase letters.

** Examples of print material could include poems, stories, word wall, informational text, and digital media.*
*** Collections of letters could include magnetic letters, large foam letters, cards or paper with letters written on them, or letters on a digital learning device.*
**** Pointers could include items such as a finger, pointer, framing tool, highlighter tape, or a dot marker.*

LETTER NAMING CONTINUED FROM PREVIOUS PAGE

Children know features of letters.				UNDERSTANDING
H. Accurately names *some* letters (uppercase *or* lowercase). *Some indicates the child is able to select and accurately name letters throughout printed materials within the following range (8-13) for uppercase or lowercase letters.*	**I. Accurately names *most* letters (uppercase *or* lowercase).** *Most indicates the child is able to select and accurately name letters throughout printed materials within the following range (14-25) for uppercase or lowercase letters.*	**J. Accurately names forms of the same letter for *most* letters (uppercase *and* lowercase).** *Most indicates the child is able to select and accurately name letters throughout printed materials within the following ranges (14-25) for uppercase and (14-25) for lowercase letters.*	**K. Accurately names all letters of the alphabet (uppercase *and* lowercase, including different fonts encountered during reading).**	SKILLS
Lamonte is working in the Word Work Station using cards with classmates' pictures and their names written beside the picture. Each letter of the child's name is written in a box. Below the names are the same number and size boxes, but the boxes are blank. Lamonte chooses the card with Chris' picture and then selects an uppercase 'C' and places it in the blank box under uppercase 'C'. He continues until he has found each letter and placed it in the individual box. Lamonte then takes his finger and points to the uppercase C and says, 'C.' He then places his finger on the lowercase h and says, 'h.' He continues until he has said each letter correctly. He then gets the next picture card of his classmate, Marquis. When Lamonte begins to name the letters he placed on the card, he can only name the letters 'M', 'i' and 's'. He asks another student at the center for help naming the other letters. When using magnetic letters,** Elijah picks up and accurately says the name for ***some*** of the letters, either uppercase or lowercase. Jaylen and Charlene use pointers as they read the poem written on chart paper. As Charlene calls out different letters, Jaylen uses the pointer and correctly selects ***some*** uppercase and lowercase letters as they are called.	When provided a group of 7 lowercase letters,** Jing accurately selects and says the letter name for 6 lowercase letters (a, e, x, m, q, u). After Jing is successful with this small group, Mr. Hughes gives Jing 7 more letters and Jing accurately selects and names 5 of them (r, n, s, y, i). Mr. Hughes keeps giving Jay groups of 7 letters until all letters have been provided for Jing. After seeing all the groups of letters, Jing selected and named 18 letters, which is in the ***most*** range. In print material,* Charlotte accurately selects and says the letter name for ***most*** letters either uppercase ***or*** lowercase, using a pointing device. When looking at a print storybook, Lucas uses a framing tool to frame letters. He accurately names ***most*** framed letters either uppercase or lowercase.	When using magnetic letters, Valentina selects the uppercase and lowercase letters for a small group of letters and says the name for them (A/a, E/e, X/x, M/m, Q/q, U/u, G/g,). After being able to name both the uppercase and lowercase letters for this small group, she continues with another small group of both uppercase ***and*** lowercase letters until she names ***most*** letters. In print material Gabriela accurately selects, using a pointing device,*** and says the letter name for ***most*** letters, both uppercase ***and*** lowercase. When reading the class name graph, Jeremiah uses a framing tool to frame letters while accurately naming ***most*** uppercase ***and*** lowercase letters aloud.	While exploring with letter beads, Mackenzie begins stringing all 26 uppercase letters on one string while saying the letter name that appears on each bead. She then strings all 26 lowercase letter beads on a string while saying the letter name on each lowercase letter bead. Mr. Nicholson asks, "Why do you have different letters on different strings?" Makenzie answers, "These are lowercase letters," and points to the string of lowercase letter beads. She then points to the uppercase string of letter beads and says, "These are uppercase letters." While working at the pocket chart in the literacy center, Justin places all the uppercase and lowercase letter cards in the pocket chart and then points to each letter and says the letter name for ***all*** letters. While reading the room, Xavier challenges himself to find and name every letter of the alphabet (uppercase and lowercase). Xavier uses a pointing device and finds every letter of the alphabet and says the name of every letter (uppercase and lowercase).	PERFORMANCE DESCRIPTORS

** Examples of print material could include poems, stories, word wall, informational text, and digital media.*
*** Collections of letters could include magnetic letters, large foam letters, cards or paper with letters written on them, or letters on a digital learning device.*
**** Pointers could include items such as a finger, pointer, framing tool, highlighter tape, or a dot marker.*

RESOURCES USED

Chall, J.S. (1983). *Stages of reading development.* New York: McGraw-Hill.

Clay, M. (1991). *Becoming literate: The construction of inner control.* Portsmouth, NH: Heinemann.

Cunningham, P.M., & Cunningham, J.W. (2002). What we know about how to teach phonics. In A.E. Farstrup & S.J. Samuels (Eds.), *What research has to say about reading instruction (3rd ed.)* (pp. 87–109). Newark, DE: International Reading Association.

Ehri, L., & Roberts, T. (2007). The roots of learning to write: Acquisition of letters and phonemic awareness. In D. Dickenson & S. Neuman (Eds.), *Handbook of early literacy research (Vol 2)* (p. 113-148). New York: Guilford Press.

Heath, S.B. (1996, 1983). *Ways with words: Language, life, and work in communities and classrooms.* New York, NY: Cambridge University Press.

mCLASS:Reading 3D. (2014). New York: Amplify Education, Inc.

National Early Literacy Panel (2009). *Developing early literacy: Report of the National Early Literacy Panel (A scientific synthesis of early literacy development and implications for intervention).* Jessup, MD: National Institute for Literacy and National Center for Family Literacy. Retrieved from http://lincs.ed.gov/publications/pdf/NELPReport09.pdf

National Reading Panel (US), National Institute of Child Health & Human Development (US). (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups.* Washington, DC: National Institute of Child Health and Human Development, National Institutes of Health.

Neuman, S. B., Copple, C., & Bredekamp, B. (2004). *Learning to read and write: Developmentally appropriate practices for young children: A joint position statement of the International Reading Association (IRA) and the National Association for the Education of Young Children.* Retrieved from http://www-tc.pbs.org/teacherline/courses/rdla155/pdfs/c2s2_5devapprop.pdf

Pinnell, G., & Fountas, I. (2011). *The continuum of literacy learning grade pk-8.* Portsmouth NH: Heinemann

Pinnell, G., & Fountas, I. (2002). *Phonics lessons: Letters, words and how they work grade 1.* Portsmouth NH: Heinemann

Snow, C.E., Burns, M.S., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children.* Washington, DC: National Academy Press.

Strickland, D. S., & Shanahan, T. (2004). Laying the groundwork for literacy. *Educational Leadership*, *61*(6), 74-77.

Torgesen, J.K. (1998). Catch them before they fall. *American Educator, 22*, 32-41. Retrieved from www.ncsip.org/reading_trainers_resources.php