experience™
EARLY LEARNING

Research Foundation

Contents

Experience Early Learning specializes in the development and publishing of research-based curriculum, books, music and authentic assessment tools for early childhood teachers and parents around the world. Our mission is to inspire children to experience learning through creative expression, play and open-ended discovery. We believe educational materials that invite children to participate with their whole self (mind, body and spirit) support ongoing development and encourage children to become the authors of their own unique learning stories.

Research Foundation

The Experience Early Learning Assessment and Curriculum System is uniquely designed to:

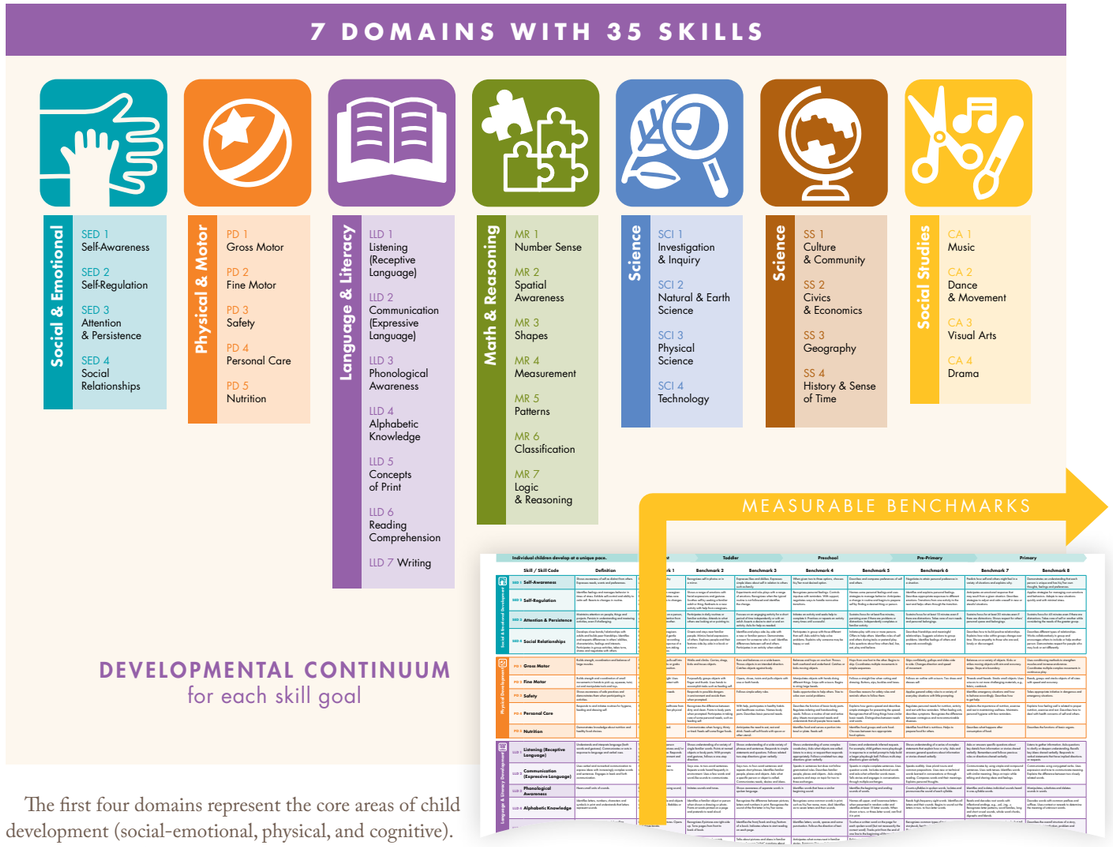
- Serve children birth through kindergarten.
- Feature 33 skills that research correlates with school success.
- Align with state early learning standards.
- Be inclusive of second language and learners with special needs.
- Gather authentic data by observing children in natural play or within a school routine.
- Monitor and chart progress over time.
- Offer educators support on how to use the assessment data to scaffold activities, design environments and nurture relationships.

This Research Foundation outlines the latest research and theories in the field of early childhood education and forms the basis of the skills reinforced throughout all Experience Early Learning curricula. Because development is gradual and reflects cumulative influences over time, each child's learning journey is unique. Educators can use this research foundation to better understand the theory and research behind how and why a child's knowledge develops and what skills, concepts and approaches to learning will support the overall growth and development of the child. Experience Early Learning Curriculum recognizes that a meaningful and full picture of a child is embedded within the interplay between the child's biology, environment and social-cultural context (Blasi, 1996).

This book highlights the skills that research has validated to correlate with success in school and later in life. Skills are presented on a developmental continuum to represent the ongoing process of growth and development. Moreover, it represents the behavioral shifts that occur over time and trigger a reorganization of the child's cognitive, social, emotional and physical processes (Emde, 1989). These skills and developmental benchmarks are embedded within all Experience Early Learning curricula and resources, such as Experience Preschool Curriculum, Experience Toddler and Experience Baby Curriculum.

The skills and learning goals are grouped into eight domains including:

1. Social-Emotional
2. Physical
3. Language and Literacy
4. Mathematics and Reasoning
5. Social Studies
6. Science
7. Creative Development
8. Second Language Learning



The first four domains represent the core areas of child development (social-emotional, physical, and cognitive). Domains 5, 6 and 7 are applied sciences, which focus on content learning that integrates the developmental curiosities and capabilities of the child. The 8th domain is an additional section to outline the learning goals for children who are in the process of acquiring a second language. It helps teachers monitor progress in the child's approach to learning in a new language, as well as receptive and expressive second-language skills.

Within the 7 domains are 35 skills. Each skill defines a learning goal with a series of observable benchmarks that track ongoing development for that given skill from birth through primary levels. Development is a dynamic process. The transition between learning and development occurs within the 'zone of proximal development' (Vygotsky, 1978). This is the distance between the most difficult task a child can perform without help and the most difficult task she can do with support.

Post-Vygotskian researchers developed the idea of 'scaffolding' to represent the support that children receive from their educators and peers in reaching new developmental goals (Wood, Bruner, & Ross, 1976). Benchmarks A – H within the Experience Early Learning Developmental Continuum of Skills offer educators a framework for understanding how to scaffold and set learning goals aligned within the child's zone of proximal development.

The Experience Early Learning Assessment and Curriculum System offers families, educators and states a comprehensive and multidimensional view of a child's learning journey by mapping the child's learning with the Developmental Continuum of Skills and documenting the process with individualized Child Portfolios. The Experience Early Learning Assessment and Curriculum System can be used as one of many tools to inform parents, directors, educators, or states on child progress. It is appropriate to use with Experience Early Learning curricular tools or with any developmentally appropriate curriculum. Our system recognizes the importance of inviting educators and families to collaboratively observe children, set learning goals and communicate in ways that acknowledge child development theory as well as value cultural reciprocity. Cultural reciprocity is based on mutual respect, communication, collaboration and negotiation of culturally based beliefs, values and assumptions (Day & Parlakian, 2003).

The Experience Early Learning Developmental Continuum of Skills is based on bio behavioral shifts and offers measurable benchmarks that can be observed during meaningful experiences within a child's natural play or typical school routine. Therefore, it is inclusive of children who are developmentally accelerated, those with developmental delays or disabilities, and of those who are dual-language learners.

Social & Emotional Development

Social and emotional development refers to a child's ability to identify feelings, self-regulate and build relationships. High-quality relationships correlate to positive outcomes for young children (Shonkoff, 2004).

It is through responsive relationships that a child learns to experience, express, perceive and regulate emotions, develop a sense of self and to learn the skills of building meaningful relationships (National Training Institute for Child Care Health Consultants, UNC, 2010). A child's earliest experiences of warmth and closeness while being held and fed begin this important process of building trust and emotional security. The initial bond of trust with a parent or primary caregiver is what helps a child feel comfortable forming new relationships and secure exploring the world with curiosity.

The development of trust and a secure attachment during infancy has long been identified as a crucial step in healthy cognitive development (Eriks on, 1965; Bowlby, 1969). Brain research verifies that emotional and cognitive development are interrelated. Recent cognitive neuroscience findings suggest that the neural mechanisms underlying emotion regulation may be the same as those underlying cognitive processes (Bell & Wolf, 2004). Therefore young children who have strong social and emotional development are more likely to have good academic performance in future schooling (Cohen, 2005).

Young children build neural connections through a "serve and return" pattern: infants send a message and a parent or caregiver responds with warmth and interest. This pattern helps to construct a strong foundation of neural networks for social/emotional skills and learning during the brain's early developmental stages, making it possible for the child to learn more complex skills later on. Just as a nurturing caregiver increases long-term gain for a child's development, the lack of a responsive caregiver creates increased vulnerability to the opposite, such as toxic stress resulting from trauma or a lack of emotional connection. This research magnifies the importance of high-quality care for young children. High-quality relationships strongly correlate to positive outcomes for young children (Shonkoff, 2004).

The Experience Early Learning Framework includes four social-emotional development (SED) skills.

SED 1 Self-Awareness	Shows awareness of self as distinct from others. Expresses needs, wants and preferences.
SED 2 Self-Regulation	Identifies feelings and manages behavior in times of stress. Exhibits self-control and ability to calm self. Reacts to changes in routine.
SED 3 Attention & Persistence	Maintains attention on people, things and projects. Persists in understanding and mastering activities, even if challenging.
SED 4 Social Relationships	Develops close bonds/relationships with adults and builds peer friendships. Identifies and respects differences in others' abilities, characteristics, feelings and interests. Participates in group activities, takes turns, shares and negotiates with others.

SED 1 Self-Awareness

Experience Early Learning Framework includes 4 Social & Emotional Development skills:

SED 1 Self-Awareness
Understands self as distinct from others and expresses needs, wants and personal preferences.

SED 2 Self-Regulation
Identifies and manages own emotions, behavior and body when faced with a difficult situation or time of stress.

SED 3 Attention & Persistence
Maintains focus toward someone speaking or when persisting on a task.

SED 4 Social Relationships
Builds positive relationships with both adults and peers and cooperates, take turns, reads social cues and problem-solves during challenging social situations.

Self-awareness refers to a child's understanding of who she is, i.e., the qualities that create the unique me. A strong sense of self supports emotional security, which enables a child to fully participate in learning experiences (Espinosa, 2002).

From birth, babies are exposed to information that can teach them about who they are. By touching their faces and bodies, or by grabbing and kicking at people or objects, they begin to explore the influence that they have on their environments. Somewhere between 15 and 24 months, a child develops self-awareness and gains the ability to reflect on themselves from the perspective of someone else.

One way in which this sense of self develops is through social interaction within loving relationships, specifically "respectful, accepting, and concerned treatment" from parents and carers (Coopersmith, 1995). When trusted adults observe a child's preferences and are responsive to what a child communicates, the child learns what makes her unique.

A child demonstrates self-awareness by understanding that he or she is distinct from others and by expressing needs, wants and preferences. Such demonstrations will look different at each phase of the developmental process:

Infants begin to explore self and others by using their senses, for example, by looking in mirrors and touching an adult's face.

Toddlers recognize self in photos or in a mirror and start to express likes and dislikes as well as simple ideas about self in relation to others such as family.

Preschoolers express personal preferences by choosing their favorite when given a selection of two or three options. They also describe and compare preferences of self and others.

Primary schoolers begin to negotiate to attain personal preferences in a situation and predict how they and others might feel in a variety of situations. They understand that each person is unique and has his own thoughts, feelings and preferences.

SED 1 Self-Awareness

INFANT → TODDLER → PRESCHOOL → PRE-PRIMARY → PRIMARY

Benchmark 1	Benchmark 2	Benchmark 3	Benchmark 4	Benchmark 5	Benchmark 6	Benchmark 7	Benchmark 8
Explores self and others by using senses.	Recognizes self in photos or in a mirror.	Expresses likes and dislikes. Expresses simple ideas about self in relation to others such as family.	When given two to three options, chooses his/her most desired option.	Describes and compares preferences of self and others.	Negotiates to attain personal preference in a situation.	Predicts how self and others might feel in a variety of situations and explains why.	Demonstrates an understanding that each person is unique and has his/her own thoughts, feelings and preferences.

SED 2 Self-Regulation

Experience Early Learning Framework includes 4 Social & Emotional Development skills:

SED 1 Self-Awareness
Understands self as distinct from others and expresses needs, wants and personal preferences.

SED 2 Self-Regulation
Identifies and manages own emotions, behavior and body when faced with a difficult situation or time of stress.

SED 3 Attention & Persistence
Maintains focus toward someone speaking or when persisting on a task.

SED 4 Social Relationships
Builds positive relationships with both adults and peers and cooperates, take turns, reads social cues and problem-solves during challenging social situations.

Self-regulation is a child's ability to manage her emotions, behavior and body when faced with a difficult situation, problem or challenge. Self-regulation includes the ability to identify feelings, the ability to calm down after an exciting or upsetting incident and the ability to regulate reactions or emotions like frustration or excitement.

Children develop the foundational skills of self-regulation in the first five years of life (Blair, 2002; Galinsky, 2010). The beginnings of these skills include an infant sucking on his hand when startled or stressed in an effort to self-soothe or a toddler waiting for her turn to be served lunch. Self-regulation requires learning to cope with frustration or discomfort when a need is not met. "Infants are unable to regulate themselves. Despite being born with ther, 2003). Being responsive to a child's communication of distress and meeting their needs in a timely manner is very important in developing early self-regulation (Greenspan, 1999).

Learning to self-regulate is a key milestone in early childhood development. A child who cannot self-regulate may find it difficult to make and maintain friendships and repeated tantrums will strain the parent-child relationship. The inability to self-regulate can snowball into traits such as anger, aggression, withdrawal or anxiety.

In contrast, good self-regulation encourages positive relationships and is a strong indicator of future academic success. Children who can self-regulate maintain better attention and problem-solving capabilities and perform better on tasks that involve long-term goals and delayed gratification (Graziano, Reavis, Keane & Calkins, 2007). Achieving self-regulation will allow children to grow into functional adults who can manage their thoughts, emotions and behaviors.

A child demonstrates self-regulation by identifying feelings, managing behavior in times of stress, exhibiting self-control and calming himself. Self-regulation will look different at each phase of the developmental process:

Infants calm with support from the caregiver when upset and respond when their basic needs are taken care of.

Toddlers show a range of emotions with facial expressions and soothe themselves by seeking a familiar adult or thing. They identify when they have deviated from their typical routine.

Preschoolers recognize personal feelings, control impulses with reminders and–with support–negotiate ways to handle nonroutine transitions. For example, if they anticipate a change in routine, preschoolers will prepare themselves by finding a desired thing or person.

Primary schoolers identify and explain personal feelings and describe the appropriate response to their varying emotions. They will demonstrate an ability to swiftly transition from one activity to the next and help others through the transition. They begin to adapt quickly to new situations with minimal stress and apply strategies to adjust and calm themselves in new or stressful situations.

SED 2 Self-Regulation

INFANT | TODDLER | PRESCHOOL

Benchmark 1	Benchmark 2	Benchmark 3	Benchmark 4
Calms with support from caregiver. Responds as caregiver takes care of his/her needs. Reacts to changes in routine.	Shows a range of emotions with facial expressions and gestures. Soothes self by seeking a familiar adult or thing. Redirects to a new activity with help from caregivers.	Experiments and role-plays with a range of emotions. Recognizes when the typical routine is not followed and identifies the change.	Recognizes personal feelings. Controls impulses with reminders. With support, negotiates ways to handle nonroutine transitions.

PRE-PRIMARY | PRIMARY

Benchmark 5	Benchmark 6	Benchmark 7	Benchmark 8
Names some personal feelings and uses strategies to manage behavior. Anticipates a change in routine and begins to prepare self by finding a desired thing or person.	Identifies and explains personal feelings. Describes appropriate responses to different emotions. Transitions from one activity to the next and helps others through the transition.	Anticipates an emotional response that may result from a given situation. Describes strategies to adjust and calm oneself in new or stressful situations.	Applies strategies for managing own emotions and behaviors. Adapts to new situations quickly and with minimal stress.

SED 3 Attention & Persistence

Experience Early Learning Framework includes 4 Social & Emotional Development skills:

SED 1 Self-Awareness
Understands self as distinct from others and expresses needs, wants and personal preferences.

SED 2 Self-Regulation
Identifies and manages own emotions, behavior and body when faced with a difficult situation or time of stress.

SED 3 Attention & Persistence
Maintains focus toward someone speaking or when persisting on a task.

SED 4 Social Relationships
Builds positive relationships with both adults and peers and cooperates, take turns, reads social cues and problem-solves during challenging social situations.

Attention and persistence are skills that pertain to selecting and maintaining attention towards relevant information, such as listening to the teacher or persisting on a task (Barkley, 1997). Studies have shown that children with the ability to pay attention and persist with a task have a greater chance of future academic success (McClelland, 2012).

Young children develop the capacity to maintain attention towards objects or people for long periods of time through early experiences. As their innate curiosity drives them to focus on sounds and objects and physically explore their environments, children develop skills in persistence and attentiveness.

After twelve months of age, children become increasingly focused on completing and repeating simple tasks (https://illinoisearlylearning.org/ielg/persistence/). For example, they may spend a long period of time putting toys in a bucket, dumping the bucket then filling the bucket again. They also start to become very persistent when trying to accomplish a goal. At this time, children do not have the self-regulatory skills to control their emotions and may act out in frustration when they confront challenges or fail at their goals. As with the development of other social-emotional skills, being responsive to a child in distress and supporting his needs in a timely manner is very important in the development of early skills in attention and persistence (Greenspan, 1999). Caregivers should encourage children to keep trying and help them problem-solve.

Children demonstrate attention and persistence by maintaining attention on people, things and projects and by persisting in understanding and mastering activities. These skills will look different at each phase of the developmental process:

Infants focus for a short period of time on a person, sound or light and begin shifting attention from one person or thing to another.

Toddlers participate in daily routines or familiar activities. They focus on engaging activities for a short period of time and assert a desire to start or end an activity.

Preschoolers initiate an activity and help complete it. They practice or repeat an activity many times until successful and persist with help even if there are problems or distractions.

Primary schoolers sustain focus for longer times even if there are distractions. They work around challenges and solve problems as they work toward their goals. While working on their tasks, they respect others' belongings and space.

SED3 Attention & Persistence

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Focuses for a short time on a person, sound or thing. Shifts attention from one person or thing to another.	Participates in daily routines or familiar activities. Attends to what others are looking at or pointing to.	Focuses on an engaging activity for a short period of time independently or with an adult. Asserts a desire to start or end an activity. Asks for help as needed.	Initiates an activity and seeks help to complete it. Practices or repeats an activity many times until successful.	Sustains focus for at least five minutes, persisting even if there are problems or distractions. Independently completes a familiar activity.	Sustains focus for at least 10 minutes even if there are distractions. Takes care of own needs and personal belongings.	Sustains focus for at least 30 minutes even if there are distractions. Shows respect for others' personal space and belongings.	Sustains focus for 45 minutes even if there are distractions. Takes care of self or another while considering the needs of the greater group.

SED4 Social Relationships

Experience Early Learning Framework includes 4 Social & Emotional Development skills:

SED 1 Self-Awareness
Understands self as distinct from others and expresses needs, wants and personal preferences.

SED 2 Self-Regulation
Identifies and manages own emotions, behavior and body when faced with a difficult situation or time of stress.

SED 3 Attention & Persistence
Maintains focus toward someone speaking or when persisting on a task.

SED 4 Social Relationships
Builds positive relationships with both adults and peers and cooperates, take turns, reads social cues and problem-solves during challenging social situations.

A child's ability to build positive relationships with both adults and peers is important to social- emotional development and success in school (Shonkoff & Phillips, 2000). Children build social competence through observation as well as by comparing their own beliefs with those of others. The ability to interpret and understand others begins at birth and evolves into a complex "theory of mind" (Thompson, Goodvin & Meyer, 2006). Theory of mind is the capacity to create theories about what another person might be thinking and to formulate opinions around what might be true or untrue about what that person may be thinking or trying to communicate. Young children demonstrate social relationship skills by connecting, cooperating, caring and responding to the needs of others.

Social relationship skills have their roots in the development of trust and security in a child's first relationships with their primary caregivers. The ability to recognize, understand and respond to a baby's signals aids in the development of the powerful first relationship and becomes a necessary regulatory support, helping the child calm herself by meeting her needs. Bowlby's work on attachment identifies this first relationship as a fundamental need with the biological basis of supporting both a child's sense of security and a child's survival (Bowlby, 1963; Brazelton, 2006). Warm and nurturing caregiver-child relationships support the foundation of a child's basis of trust and understanding of positive relationships and are highly related to a child's development of social and emotional skills (Webster-Stratton & Reid, 2004; Hart & Risley, 1995).

As children develop, they actively seek opportunities to share experiences with peers and others. Through shared interactions, they begin to emotionally connect with their peers and build relationships. Children who attain positive relationships with both peers and teachers are more likely to do well in school (Shonkoff & Phillips, 2000).

Children learn to cooperate by interacting and working with others in a variety of contexts. Cooperation skills help children get along with others, take turns, read social cues and problem-solve challenging social situations.

Children care for and respond to others by showing interest, empathy and consideration for others' thoughts, feelings and needs. Research indicates that children who respond empathetically to the emotional needs of others are more likely to succeed in the challenging peer arena within schools (Denham, 1998).

Children demonstrate social relationship skills by connecting, cooperating, caring and responding to the needs of others. These skills will look different at each phase of the developmental process:

Infants connect and respond to caregivers through eye contact and gentle touch.

Toddlers greet and stay near familiar people and mimic the actions and facial expressions of others. Toddlers begin to play side-by-side with a new or familiar person and demonstrate concern for someone who is sad or upset.

Preschoolers participate in group play and offer to help others through a challenging activity or social situation.

Primary schoolers describe friendships and other meaningful relationships. They identify the qualities of positive relationships and ways to build them. They describe different types of relationships such as those with family, friends and teachers.

SED4 Social Relationships

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Responds to primary caregivers through eye contact and gentle touch. Adjusts behavior according to emotional or facial response of a familiar person. Enjoys turn-taking games such as peekaboo.	Greets and stays near familiar people. Mimics facial expressions of others. Explores people and their features side-by-side in a book or a mirror.	Identifies and plays side-by-side with a new or familiar person. Demonstrates concern for someone who is sad. Identifies differences between self and others. Participates in an activity when asked.	Participates in group with those different than self. Asks adult to help solve problems. Explains why someone may be happy or sad.	Initiates play with one or more persons. Offers to help others. Identifies roles of self and others during tasks or pretend play. sks questions about how others feel, live, eat, play and believe.	Describes friendships and meaningful relationships. Suggests solutions to group problems. Identifies feelings of others and responds accordingly.	Describes how to build positive relationships. Explains how roles within groups change over time. Shows empathy to those who are sad, lonely or discouraged.	Describes different types of relationships. Works collaboratively in group and encourages others to include or help another person. Demonstrates respect for people who may look or act differently.

Physical & Motor Development

Physical development refers to a child's gross and fine motor skills. Children require adequate nutrition, fitness and personal care to support healthy growth and motor development.

From birth, children are naturally motivated to move and be mobile. Just as movement and exercise are important contributors to the physical and mental health of adults, movement and exercise are extremely important for the motor development of infants and children. In infancy, kicking and playing with feet, rolling over to get a toy and using strength to sit independently all build strong muscles to support later walking, running and upper body strength. Frequent opportunities for movement can also help to strengthen a child's immune system, improve sleep, and help to ease stress and frustration (Jensen, 1998).

From birth to 18 months, growth occurs at a phenomenal rate. The development generally follows a predictable pattern, though each child has an individual timeline for when skills are achieved. This directional pattern, outlined by Bayley, is described below.

- Large muscles develop before small muscles. These large muscles are in the body's core, legs and arms. Children learn how to perform gross motor skills (crawling) before fine motor skills (drawing).
- The center of the body develops before the outer regions. Muscles located at the core of the body become stronger and develop sooner than those in the feet and hands.
- Development progresses from the top down, from the head to the toes.

Early movement experiences are critical to general optimal functioning of the brain (Gabbard & Rodrigues, 2007). Neuroscience research demonstrates that to achieve mature optimal functioning of the brain, movement and sensory experiences during the early developing years is necessary (Greenough & Black, 1992; Shatz, 1992). More specifically, the first 24 months of life have been found to have the greatest impact on the foundation for posture and coordination, with influence on a child's future ability to learn more complex motor skills. Just as in all areas of early childhood development, physical development is encouraged through play (NAEYC DAP Guidelines).

The Experience Early Learning Framework includes five physical development (PD) skills.

PD 1 Gross Motor	Builds strength, coordination and balance of large muscles.
PD 2 Fine Motor	Builds strength and coordination of small movements in hands to pick up, squeeze, twist, cut and manipulate tools and toys.
PD 3 Safety	Shows awareness of safe practices and demonstrates them when participating in activities.
PD 4 Personal Care	Responds to and initiates routines for hygiene, feeding and dressing self.
PD 5 Nutrition	Demonstrates knowledge about nutrition and healthy food choices.

PD 1 Gross Motor

Experience Early Learning Framework includes 5 Physical Development skills:

PD 1 Gross Motor
Builds strength, coordination and balance of large muscles.

PD 2 Fine Motor
Builds strength and coordination of small movements in hands, toes, eyes, wrists and ankles

PD 3 Safety
Identifies, avoids and responds to dangerous situations and seeks help when needed.

PD 4 Personal Care
Implements routines for hygiene, feeding and dressing.

PD 5 Nutrition
Demonstrates knowledge about nutrition and healthy food choices.

Gross motor function is a child's ability to manipulate and control large movements, especially trunk, arm and leg movements. It includes traveling movements (such as crawling and walking) and sweeping movements used to act on objects in the environment. The development of gross motor skills is paramount to a child's physical abilities, as well as linked to social, emotional and executive function development (Bobbio, Gabbard & Cacola, 2009; Stork & Sanders, 2008).
When evaluating gross motor skills, the factors to observe include strength, balance, large movement coordination, muscle tone, movement quality and range of movement.

Children build strength and balance as they gain mobility and explore their surrounding environments. An infant will first sit up then pull herself to a standing position. As strength and balance increases, children will balance on objects, hop and skip. Physical strength enables children to move and act freely and confidently. Therefore there is a connection between gross motor development and growth in social-emotional and cognitive areas of development (Puckett, Black & Mariority, 2007).

Inter-limb coordination is linked to the development of many daily life skills, complex movement behaviors and academic performance (Bobbio, Gabbard & Cacola, 2009). The spatial reasoning, patterns and sequencing skills required for throwing a ball or other movement-based activities, build skills in math and logic. Furthermore, as their gross motor skills develop, children learn that the way we choose to coordinate our movements communicates emotions, ideas and nonverbal messages (Stork & Sanders, 2008).
Progress in gross motor skills allows children to follow through on actions to test problem-solving ideas and initiate interaction with other children. Children use motor skills to avoid obstacles, as they learn to crawl and walk safely in an environment in unison with skills in attention, vision and depth perception.

Though children naturally seek movement, it is important to provide constant gross motor opportunities as some children need more enticements for movement than others. Cross-curricular movement-based experiences invite children to build strength, balance and help them learn to coordinate large movements while simultaneously increasing confidence in social play, communication and reasoning skills (Sawyer, 2001). When movement and a cognitive opportunity are paired, it is a powerful combination to organize the brain for later more complex learning (Jensen, 1998).

Children demonstrate gross motor skills as they build strength, balance to roll, crawl or walk and coordinate large movements to reach, catch and throw. Evidence of such skills will look different at each phase of the developmental process:

Infants develop gross motor skills as they kick or grab from a seated or lying position and pull themselves into a standing position.

Toddlers explore walking and climbing. They build motor development by carrying, dragging, kicking or tossing objects in an intended direction.

Preschoolers begin to balance and hop on one foot and throw objects using both overhand and underhand techniques. They will be able to coordinate multiple movements in a simple sequence.

Primary schoolers start to leap and balance on a variety of objects. With practice, they begin to kick or strike moving objects with aim and accuracy. They strengthen muscles and increase endurance and coordinate multiple complex movements in continuous play.

PD 1 Gross Motor

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Sits independently and pulls self into a standing position. Kicks or grabs from a seated or lying position.	Walks and climbs. Carries, drags, kicks and tosses objects.	Runs and balances on a wide beam. Throws objects in an intended direction. Catches objects against body.	Balances and hops on one foot. Throws both overhand and underhand. Catches or kicks moving objects.	Hops from one foot to the other. Begins to skip. Coordinates multiple movements in simple sequences.	Skips confidently, gallops and slides side to side. Changes direction and speed of movement.	Balances on a variety of objects. Kicks or strikes moving objects with aim and accuracy. Leaps. Stops at a boundary.	Uses conditioning methods to strengthen muscles and increase endurance. Coordinates multiple complex movements in continuous play.

PD 2 Fine Motor

Experience Early Learning Framework includes 5 Physical Development skills:

PD 1 Gross Motor
Builds strength, coordination and balance of large muscles.

PD 2 Fine Motor
Builds strength and coordination of small movements in hands, toes, eyes, wrists and ankles

PD 3 Safety
Identifies, avoids and responds to dangerous situations and seeks help when needed.

PD 4 Personal Care
Implements routines for hygiene, feeding and dressing.

PD 5 Nutrition
Demonstrates knowledge about nutrition and healthy food choices.

Fine motor manipulation is the ability to control small movements and manipulate tools and toys such as drawing and writing tools. Fine motor skills require control over smaller muscles in the fingers, toes, eyes, wrists and ankles. These skills are used in actions such as drawing, writing, grasping objects, waving and turning book pages. They are also linked to early reading and literacy achievement (Reno, 1995).

Children control small movements as they use their arms and hands to manipulate small objects. As children increase their ability to control their fingers, wrists and toes, they are able to act on objects and move in their environment with greater accuracy and precision. These fine motor skills, especially eye-hand coordination, are essential for school readiness (Brack, 2004). Visual and touch skills are integral to the development of fine motor skills. Children must see and feel what is in their hands to be able to interact with it and manipulate it. The connection of vision and touch is important not only for fine motor skills but it also helps children to be able to form a picture in their mind of vocabulary words.

Children coordinate small movements to control drawing and writing tools. This fine motor control is required for children to draw pictures, symbols, letters and eventually words and sentences. Every day routines such as dressing, feeding, using scissors, coloring, squeezing playdough and playing in a sand box all support the development of small muscle coordination.

Children demonstrate skills in fine motor manipulation as they build strength and coordination of small movements in hands to pick up, squeeze, twist, cut and manipulate tools and toys. Such demonstrations look different at each phase of the developmental process:

Infants reach for objects and use arms or legs to make contact with an object.

Toddlers purposefully grasp objects with finger and thumb and use hands to accomplish simple tasks such as feeding themselves. They open, close, twist and pull objects with one or both hands.

Preschoolers manipulate objects with their hands, snip with scissors and begin to string large beads. They begin to button, zip, buckle and lace.

Primary schoolers thread small beads, stack small objects and use scissors to cut more challenging materials such as fabric and cardstock. They grasp and stack objects of all sizes with speed and accuracy.

PD 2 Fine Motor

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Reaches for objects in sight. Uses arms or legs to make contact with an object.	Purposefully grasps objects with finger and thumb. Uses hands to accomplish tasks such as feeding self.	Opens, closes, twists and pulls objects with one or both hands.	Manipulates objects with hands doing different things. Snips with scissors. Begins to string large beads.

PRE-PRIMARY	PRIMARY		
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Follows a straight line when cutting and drawing. Buttons, zips, buckles and laces.	Follows an outline with scissors. Ties shoes and dresses self.	Threads small beads. Stacks small objects. Uses scissors to cut more challenging materials, e.g., fabric, cardstock.	Beads, grasps and stacks objects of all sizes with speed and accuracy.

PD 3 Safety

Experience Early Learning Framework includes 5 Physical Development skills:

PD 1 Gross Motor
Builds strength, coordination and balance of large muscles.

PD 2 Fine Motor
Builds strength and coordination of small movements in hands, toes, eyes, wrists and ankles

PD 3 Safety
Identifies, avoids and responds to dangerous situations and seeks help when needed.

PD 4 Personal Care
Implements routines for hygiene, feeding and dressing.

PD 5 Nutrition
Demonstrates knowledge about nutrition and healthy food choices.

Children require a safe environment to grow and develop. Infants and toddlers learn through the exploration of their environments but are vulnerable to harm due to the combination of their curiosity and enthusiasm, limited self-control and lack of cognitive understanding of potential dangers. Therefore assuring the basic need of physical safety in a childcare environment is essential.

Safety issues are ever-present and ever-changing based upon the developmental skill level of a child. With each new stage of growth, there are new determinants of what defines a safe environment. Once a child rolls, there is potential of knocking items down on top of himself. When a child is able to pull up to stand, there is access to items on tabletops and when a child can crawl or walk, there is access to stairs. The mouthing of objects to explore creates the need for vigilance about small items and choking potential, as well as increased concern about germ transmission.

Infants and toddlers "learn by exploring, experimenting, testing the limits of their environment, and experiencing the consequences of their behavior" (Greenman et al., 2008). This is how young children begin to understand how the world works and what their limits are. As children are busy learning, they must rely on adults to keep them safe. Repeated instances of feeling watched and attended to help children to feel safe and secure. Developing their own sense of safety involves having this trust and emotional security that adults are watching and intervening when something or someone is unsafe. Infants and toddlers develop safe practice skills by looking to adults for direction (and developing more refined ways of asking for help when it is needed) to safely meet a personal need. Preschool and older children develop safe practice skills as they learn, apply and actively adhere to safety rules put in place by caretakers or childcare professionals.

Children demonstrate safe practices as they identify, avoid and respond to dangerous situations. It includes the ability to seek help when needed and respond appropriately in emergency situations. The early years are shown to be important for establishing safe practices and coping skills throughout life (Burger, 2010). Children evidence safety skills as they show awareness of and demonstrate safe practices when participating in various activities. Such demonstrations will look different at each phase of the developmental process:

Infants demonstrate early safe practice skills when they express distress when needs are not met.

Toddlers respond to possible dangers in their environments, follow simple safety rules and actively avoid dangers when prompted.

Preschoolers describe reasons for safety rules and remind others to follow them. They identify dangers and how they could be hurt.

Primary schoolers identify emergency situations and successfully describe how to get help and behave during the emergency. They take appropriate initiative in dangerous and emergency situations.

PD 3 Safety

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Shows awareness of safe practices and demonstrates them when participating in activities.	Expresses distress when needs are not met.	Responds to possible dangers in environment and avoids them when prompted.	Follows simple safety rules.	Describes reasons for safety rules and reminds others to follow them.	Applies general safety rules to a variety of everyday situations with little prompting.	Identifies emergency situations and how to behave accordingly. Describes how to get help.	Takes appropriate initiative in dangerous and emergency situations.

PD 4 Personal Care

Experience Early Learning Framework includes 5 Physical Development skills:

PD 1 Gross Motor
Builds strength, coordination and balance of large muscles.

PD 2 Fine Motor
Builds strength and coordination of small movements in hands, toes, eyes, wrists and ankles

PD 3 Safety
Identifies, avoids and responds to dangerous situations and seeks help when needed.

PD 4 Personal Care
Implements routines for hygiene, feeding and dressing.

PD 5 Nutrition
Demonstrates knowledge about nutrition and healthy food choices.

Personal care is a child's ability to respond and initiate routines for hygiene, feeding and dressing herself. Personal care routines are critical to protect the health and safety of young children (Burger, 2010).

As children develop, they explore their bodies, wonder about gender and gain self-care strategies, such as toileting, teeth-brushing and maintaining physical health through diet and exercise. In early childhood, development is supported by proper hygiene, including washing hands, toileting and learning basic measures to prevent the spread of germs.

Children demonstrate personal care skills by attending to physical needs such as hygiene, feeding and dressing. Such demonstrations will look different at each phase of the developmental process:

Infants receive appropriate healthcare from caregivers and respond when physical needs are not met.

Toddlers recognize the difference between dirty and clean, point to body parts when prompted and participate in taking care of some personal needs, such as feeding themselves.

Preschoolers wash hands, use the toilet and brush their teeth. They describe the function of basic body parts, follow a routine of rest and active play, and meet most personal needs independently. They will start to explain how germs spread and offer simple strategies for preventing the spread.

Primary schoolers explain the importance of nutrition, exercise and rest in maintaining wellness. With a few reminders, they demonstrate an ability to maintain personal hygiene independently. They describe how to deal with health concerns of themselves and others.

PD 4 Personal Care

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Receives appropriate healthcare from caregivers. Responds when physical needs are not met.	Recognizes the difference between dirty and clean. Points to body parts when prompted. Participates in taking care of some personal needs, such as feeding self.	With help, participates in healthy habits and healthcare routines. Names body parts. Describes basic personal needs.	Describes the function of basic body parts. Regulates toileting and handwashing needs. Follows a routine of rest and active play. Meets most personal needs and understands that all people have needs.	Explains how germs spread and describes simple strategies for preventing the spread. Recognizes that all living things have similar basic needs. Distinguishes between needs and wants.	Regulates personal needs for nutrition, activity and rest with few reminders. When feeling sick, describes symptoms. Recognizes the difference between contagious and noncommunicable diseases.	Explains the importance of nutrition, exercise and rest in maintaining wellness. Maintains personal hygiene with few reminders.	Explains how feeling well is related to proper nutrition, exercise and rest. Describes how to deal with health concerns of self and others.

PD 5 Nutrition

Experience Early Learning Framework includes 5 Physical Development skills:

PD 1 Gross Motor
Builds strength, coordination and balance of large muscles.

PD 2 Fine Motor
Builds strength and coordination of small movements in hands, toes, eyes, wrists and ankles

PD 3 Safety
Identifies, avoids and responds to dangerous situations and seeks help when needed.

PD 4 Personal Care
Implements routines for hygiene, feeding and dressing.

PD 5 Nutrition
Demonstrates knowledge about nutrition and healthy food choices.

Children require good nutrition to meet their growth and development needs. If children do not consume adequate amounts of macronutrients (e.g., fat, carbohydrates, proteins) and micronutrients (e.g., iron, zinc, vitamin A), they may have delayed mental and motor development that could translate into long-term adverse effects beyond childhood. Proper nutrition is fundamental to brain development and function (Schiller, 1999) and is strongly correlated with later educational achievement (Behrman, 1996).

Nutrient-dense foods such as fresh fruits and vegetables provide children with many essential micronutrients needed for optimal growth and health. Children have small stomachs and get full quickly. They require child-sized servings for meals and regular snack times. In addition to nutrition knowledge, meal and snack times teach children sharing and socializing skills as well as knowledge of local traditions and customs (Health & Human Services, 2016).

Children demonstrate nutrition knowledge by communicating their nutrition needs and making healthy food choices. This will look different at each phase of the developmental process:

Infants demonstrate early nutrition knowledge by crying when hungry or tired.

Toddlers communicate when hungry, thirsty or tired and feed themselves finger foods. They anticipate the need to eat, rest and drink. They will feed themselves soft foods with a spoon or other utensil.

Preschoolers begin to serve self and feed themselves. They identify food groups, differentiate between healthy and unhealthy foods and choose between two appropriate food options when hungry.

Primary schoolers describe the digestion process and what happens after we eat food. They begin to describe the function of basic organs.

PD 5 Nutrition

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Cries when hungry or tired.	Communicates when hungry, thirsty or tired. Feeds self some finger foods.	Anticipates the need to eat, rest and drink. Feeds self soft foods with spoon or other utensil.	Identifies food and serves a portion into bowl or plate. Feeds self.

	PRE-PRIMARY	PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Identifies food groups and sorts food. Chooses between two appropriate food options.	Identifies food that is nutritious. Helps to prepare food for others.	Describes what happens after consumption of food.	Describes the functions of basic organs.

Language & Literacy Development

Language and literacy skills refer to a child's ability to communicate and connect with others through listening, speaking, reading and writing. The impact of language and literacy skills upon a child is significant and multi-layered. A young child's comprehension and communication skills are directly related to later achievements in reading, writing and spelling (Goodson & Layzer, 2009). Language skills are some of the best predictors of academic success (Snowling, Hulme, Bailey, Strothard & Lindsay, 2011).

Language development is a process that begins even before a child is born and proceeds with rapid growth in the first few years of life. Neuroscience research has revealed that the first two years are a critical period for the development of language skills (Shonkoff et al., 2008). Higher levels of language stimulation during the first years of life equate to better language skills in the long-term. This creates a tremendous opportunity for early impact on a child's foundational skills in language.

Language and communication skills are developed as a child listens and interacts with family members and caregivers during care routines and everyday experiences. Babies are born interested and motivated to listen to the sounds and voices around them. Researchers have studied the intentional gestures and nonverbal vocalizations displayed by infants and have concluded that these represent a will to communicate and are the precursor to language (Stern, 2000). Young children demonstrate two types of early language skills: (1) receptive language skills, which include listening and understanding and (2) expressive language skills, which include expressing thoughts and feelings. The transition from infanthood to toddlerhood is evidenced by the development of language skills and the new potential within the verbal self. The relationship between thought and word "is not a thing, but a process, a continual movement back and forth from thought to word and from word to thought" (Vygotsky, 1962, p. 125). With language, the toddler has a new toolbox for sharing experiences, thoughts, ideas and feelings with others.

The Experience Early Learning framework includes seven language and literacy development (LLD) skills.

LLD 1 Listening	Understands and interprets language (both words and gestures). Acts in response to language and verbal cues.
LLD 2 Communication	Uses verbal and nonverbal communication to express ideas with increasingly complex vocabulary and sentences.
LLD 3 Phonological Awareness	Hears small units of sounds at the beginning, middle and end of words.
LLD 4 Alphabetic Knowledge	Identifies letters and symbols in print and understands that letters represent sounds.
LLD 5 Concepts of Print	Demonstrates print- and book handling knowledge.
LLD 6 Reading Comprehension	Understands concepts of text. Recalls and extends details.
LLD 7 Writing	Uses scribbles, drawings, letters, characters or words to represent meaning.

LLD 1 Listening

Experience Early Learning Framework includes 7 Language & Literacy Development skills:

LLD 1 Listening
Understands and interprets language (both words and gestures). Acts in response to language and verbal cues.

LLD 2 Communication
Uses verbal and nonverbal communication to express ideas with increasingly complex vocabulary and sentences.

LLD 3 Phonological Awareness
Hears small units of sounds at the beginning, middle and end of words.

LLD 4 Alphabetic Knowledge
Identifies letters and symbols in print and understands that letters represent sounds.

LLD 5 Concepts of Print
Demonstrates print- and book handling knowledge.

LLD 6 Reading Comprehension
Understands concepts of text. Recalls and extends details.

LLD 7 Writing
Uses scribbles, drawings, letters, characters or words to represent meaning.

Listening comprehension is a child's ability to hear, understand and act on verbal language. Achieving the listening skill is very important to language development and is strongly correlated with reading comprehension (Florit, Roch & Levorato, 2011). It is different from hearing in that listening involves a child's ability to attend to and process what she hears (Lanza & Flahive, 2008). Listening is the first language mode that children acquire and serves as a foundation for all aspects of language and cognitive development (Hyslop & Tone, 1988).

Children learn to communicate by imitating the sounds they hear in their environment. Because of this, it is crucial that caretakers first confirm their child is able to hear. If a child has a hearing loss that is undetected and untreated, he or she will miss exposure to language sounds and develop delayed communication skills.

Listening comprehension includes children's receptive language skills, which can be described as their ability to listen and understand spoken language. Receptive language skills include such things as understanding the names of common objects, knowing the names of family members and the ability to follow a direction such as "come here" or "give the toy to Mommy." By understanding verbal directions, children can respond to, recall and follow instructions given verbally. Teachers continuously give directions in classrooms (Goodson & Layzer, 2009) and kindergarten teachers often report the greatest difficulty in transitioning into kindergarten is with following directions (Curby, Grimm & Pianta, 2010).

A child demonstrates receptive language skills by comprehending spoken language and following verbal directions. Such demonstrations will look different at each phase of the developmental process:

Infants turn their heads toward the person speaking and making gestures or vocalizations in response to others talking.

Toddlers respond to familiar people who are singing or talking. With prompts or gestures, they follow a one-step or related two-step direction.

Preschoolers listen to stories or information and respond appropriately. They follow unrelated two-step or multi-step directions.

Primary schoolers evidence comprehension by asking or answering specific questions about key details from information or stories shared orally. They listen to directions and follow previously described rules or respond to implied requests.

LLD 1 Listening

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Turns head toward the person speaking and makes gestures and/or vocalizations in response. Responds to conversation in environment and imitates actions.	Shows understanding of a variety of single familiar words. Points at named objects or body parts. With prompts and gestures, follows a one-step direction.	Shows understanding of a wide variety of phrases and sentences. Responds to simple statements and questions. Follows related two-step directions given verbally.	Shows understanding of some complex vocabulary. Asks what objects are called. Listens to a story or request then responds appropriately. Follows unrelated two-step directions given verbally.	Listens and understands inferred requests. For example, child gathers more playdough in response to a verbal prompt to help build a larger playdough ball. Follows multi-step directions given verbally.	Shows understanding of a series of complex statements that explain how or why. Asks and answers general questions about information or stories shared verbally.	Asks or answers specific questions about key details from information or stories shared verbally. Remembers and follows previous rules or directions shared verbally.	Listens to gather information. Asks questions to clarify or deepen understanding. Recalls key ideas shared verbally. Responds to verbal statements that have implied directions or requests.

LLD 2 Communication

Experience Early Learning Framework includes 7 Language & Literacy Development skills:

LLD 1 Listening
Understands and interprets language (both words and gestures). Acts in response to language and verbal cues.

LLD 2 Communication
Uses verbal and nonverbal communication to express ideas with increasingly complex vocabulary and sentences.

LLD 3 Phonological Awareness
Hears small units of sounds at the beginning, middle and end of words.

LLD 4 Alphabetic Knowledge
Identifies letters and symbols in print and understands that letters represent sounds.

LLD 5 Concepts of Print
Demonstrates print- and book handling knowledge.

LLD 6 Reading Comprehension
Understands concepts of text. Recalls and extends details.

LLD 7 Writing
Uses scribbles, drawings, letters, characters or words to represent meaning.

Communication is a child's ability to use language (especially oral or sign language) to convey ideas, thoughts and feelings to others. Communication improves a child's ability to self-regulate and builds a sense of self and self-confidence by giving rise to greater independence in being able to get one's needs met (Greenspan, 1998). Communication skills are highly important to later school success and are an integral component of school readiness skills. Communication skills include the ability to produce sounds that make up a language, contextual and grammatical understanding of that language and vocabulary.

A child's vocabulary is the number of words a child knows (receptive vocabulary) and can use effectively (expressive vocabulary). Vocabulary also encompasses a child's ability to learn and incorporate new words into their working vocabulary. Children build vocabulary as they hear and use new words (Schickedanz, 1999). Early vocabulary development is an important predictor of success in reading (Neuman & Dickinson, 2001). Greater vocabulary knowledge in early childhood is correlated with better reading comprehension in later school years (Yesil-Dagli, 2011).

Communication can be described as expressive language or a child's ability to express his or her thoughts and feelings. Expressive language includes expressive vocabulary as well as many skills that precede the use of words, such as crying a certain way to express hunger, spontaneously waving good-bye when leaving or vocalizing while pointing to make a choice.

Children exhibit expressive language skills by effectively communicating their thoughts, feelings and ideas and by growing their receptive and expressive vocabulary. Such exhibitions will look different at each phase of the developmental process:

Infants begin to make sounds and gestures to express thoughts, feelings and needs. They coo and smile in response to words or facial expressions.

Toddlers begin to use a few words or word-like sounds to communicate in one to two-word sentences. They build vocabulary by repeating words heard frequently in their environment.

Preschoolers ask simple questions and speak in complete sentences, though not always following grammatical rules. They engage in conversations with multiple exchanges and use question words in speech.

Primary schoolers discuss and share their ideas and feelings about a wide range of topics and stay on topic throughout the duration of a conversation. They begin to identify words whose meanings are similar and determine the meaning of unknown words through context or from the root word.

LLD 2 Communication

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Mimics single sounds. Uses vocalizations and gestures to communicate.	Says one- to two-word sentences. Repeats words heard frequently in environment. Uses a few words and word-like sounds to communicate.	Says two- to four-word sentences and repeats short phrases. Identifies familiar people, places and objects. Asks what a specific person or object is called. Communicates needs, desires and ideas.	Speaks in sentences but does not follow grammatical rules. Describes familiar people, places and objects. Asks simple questions and stays on topic for two to three exchanges.

PRE-PRIMARY		PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Speaks in simple complete sentences. Uses question words. Includes technical words and asks what unfamiliar words mean. Tells stories and engages in conversations through multiple exchanges.	Speaks audibly. Uses plural nouns and common prepositions. Uses new or technical words learned in conversations or through reading. Compares words and their meanings. Explains personal thoughts.	Communicates by using simple and compound sentences. Uses verb tenses. Identifies words with similar meaning. Stays on topic while talking and sharing ideas and feelings.	Communicates using conjugated verbs. Uses expression and tone to communicate meaning. Explains the difference between two closely related words.

LLD 3 Phonological Awareness

Experience Early Learning Framework includes 7 Language & Literacy Development skills:

LLD 1 Listening
Understands and interprets language (both words and gestures). Acts in response to language and verbal cues.

LLD 2 Communication
Uses verbal and nonverbal communication to express ideas with increasingly complex vocabulary and sentences.

LLD 3 Phonological Awareness
Hears small units of sounds at the beginning, middle and end of words.

LLD 4 Alphabetic Knowledge
Identifies letters and symbols in print and understands that letters represent sounds.

LLD 5 Concepts of Print
Demonstrates print- and book handling knowledge.

LLD 6 Reading Comprehension
Understands concepts of text. Recalls and extends details.

LLD 7 Writing
Uses scribbles, drawings, letters, characters or words to represent meaning.

Phonological awareness is a child's understanding of the sound structures of speech and the ability to manipulate those structures. It is not concerned with the meaning of words but rather the individual sounds in spoken language. Phonological awareness is closely related to reading skills, especially the acquisition of alphabetic skills, and is a strong predictor of later word identification (Bianco et al., 2010). Children who demonstrate strong phonological awareness have an easier time learning to read (Crim et al., 2008). Skills in phonological awareness include the ability to hear small units of sound and the ability to identify rhyme and alliteration.

The smallest sound in a language is called a phoneme. Phonemes distinguish one word from the next and they are combined to form the basis of a language. Books, songs and rhymes that draw attention to these individual sounds or phonemes help to build phonological awareness in young children (Yopp & Yopp, 2009). Activities that support phonological awareness, such as classic nursery rhymes, songs and fingerplays, help children to acquire a sense of the architecture and building blocks of a language (Adams et al., 1998).

As children learn to distinguish each phoneme in their spoken language(s), they develop auditory discrimination and acquire the ability to hear small units of sound. This ability enables children to identify and manipulate language sounds and eventually connect these sounds to letters. Children identify rhyme and alliteration by recognizing and manipulating the beginning (alliteration) and ending (rhyme) sounds in words and phrases. This skill helps children to find patterns in language and eventually they translate these patterns into reading and writing strategies. Sensitivity to the individual sounds of language helps children become aware of the unit of sound represented by alphabet letters (Schickedanz, 1999). The ability to segment phonemes and identify rhyme and alliteration is a strong indicator of later success in reading and spelling (Crim et al., 2008; Albert Shanker Institute, 2009).

The skill of phonological awareness is demonstrated in a child's ability to hear small units of sound and identify rhyme and alliteration. Such demonstrations will look different at each phase of the developmental process:

Infants begin to babble and play with sounds of all kinds, including speech sounds and lip-smacking. When listening to music or nursery rhymes, they will bounce or clap along with the rhythm.

Toddlers imitate sounds and tones. When prompted, toddlers will repeat the last word in familiar rhymes and even begin to suggest a missing rhyming word within a poem or song.

Preschoolers identify words with a similar beginning sound and indicate when two words rhyme or do not rhyme. Advanced preschoolers may also be able to identify words with a similar ending sound or suggest a series of rhyming words when given a base word.

Primary schoolers count syllables in spoken words and isolate and pronounce the sound of each syllable. They recognize blends, digraphs, letter patterns and simple word families.

LLD 3 Phonological Awareness

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Babbles and vocalizes using sound, volume and inflection.	Imitates sounds and tones.	Shows awareness of separate words in spoken language.	Identifies words that have a similar beginning sound.

PRE-PRIMARY		PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Identifies the beginning and ending sounds of words.	Counts syllables in spoken words. Isolates and pronounces the sound of each syllable.	Identifies and isolates individual sounds heard in one-syllable words.	Manipulates, substitutes and deletes sounds in words.

LLD 4 Alphabetic Knowledge

Experience Early Learning Framework includes 7 Language & Literacy Development skills:

LLD 1 Listening
Understands and interprets language (both words and gestures). Acts in response to language and verbal cues.

LLD 2 Communication
Uses verbal and nonverbal communication to express ideas with increasingly complex vocabulary and sentences.

LLD 3 Phonological Awareness
Hears small units of sounds at the beginning, middle and end of words.

LLD 4 Alphabetic Knowledge
Identifies letters and symbols in print and understands that letters represent sounds.

LLD 5 Concepts of Print
Demonstrates print- and book handling knowledge.

LLD 6 Reading Comprehension
Understands concepts of text. Recalls and extends details.

LLD 7 Writing
Uses scribbles, drawings, letters, characters or words to represent meaning.

Alphabetic knowledge refers to knowledge of the names and sounds made by letters of the alphabet. It is one of the strongest longitudinal predictors of future literacy achievement and reading success in children (Adams, 1990; Ball & Blachman, 1991; Bradley & Bryant, 1983; Byrne & Fielding-Barnsley, 1989; Stuart & Coltheart, 1988). Alphabetic knowledge includes letter-name recognition and letter-sound recognition or phonics.

Researchers have found that letter-name and letter-sound knowledge require two different but related skills. Toddler and preschool-aged children show relatively low congruence between the letters for which they can provide sounds and those they can name (Worden & Boettcher, 1990). Therefore children must develop both related skills, letter-name recognition and letter-sound recognition, in order to achieve alphabetic knowledge.

Letter-name recognition and symbolic thinking is necessary for reading, writing, mathematical thinking and problem-solving (Younger & Johnson, 2004). Identifying written symbols, such as letters, enables children to recognize writing as a representation of spoken language and is a fundamental skill of reading and writing. Being able to fluently read words by sight is valuable because it allows readers to focus their attention on constructing the meaning of the text while their eyes recognize individual words automatically (Snowling & Hulme, 2005).

In phonetic language, children make letter-sound connections as they match sounds with the letters and letter combinations that represent them. When children understand that symbols represent other things, they can begin to understand that letters represent sounds and sounds combine to represent words (DeLoache, 1991). Identifying letter-sound connections helps children develop phonics and reading skills. Letter and letter-sound knowledge are two of the strongest predictors of later reading proficiency (Skibbe, McDonald-Connor, Morrison & Jewkes, 2011).

Children demonstrate alphabetic knowledge through their ability to recognize letters and words and make letter-sound connections. Evidence of alphabetic knowledge will look different at each phase of the developmental process:

Infants begin to look for familiar people or objects when given their names and by babbling or repeating sounds.

Toddlers start to identify the difference between a picture, letter and number and may start to point at words on a page and pretend to read. Eventually, toddlers will recognize the sound of the first letter in their names.

Preschoolers begin to recognize some familiar words in print such as their name, mom, dad or stop. They will also identify five to seven letters and their associated sounds until eventually they will name all upper- and lowercase letters when presented in random order.

Primary schoolers start to read high-frequency sight words and identify all letters and their sounds. They will sound out words and use techniques to decode unfamiliar words such as text context, letter patterns or reread to determine the meaning of unfamiliar words.

LLD 4 Alphabetic Knowledge

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Looks for familiar people and objects when given their names. Babbles or repeats sounds.	Identifies a familiar object or person when shown a drawing or photo. Points at words printed on a page and pretends to read aloud.	Recognizes the difference between pictures, letters and numbers in print. Recognizes the sound of the first letter in his/her name.	Recognizes some common words in print; such as his/her name, mom, dad. Identifies six to seven letters and their sounds.	Names all upper- and lowercase letters when presented in random order and identifies at least 15 letter sounds. When shown a two- or three-letter word, can find it in print.	Reads high-frequency sight words. Identifies all letters and their sounds. Begins to sound out the letters in two- to four-letter words.	Reads and decodes root words with inflectional endings, e.g., -ed, -ing, -s. Recognizes letter patterns, word families, long and short vowel sounds, whole word chunks, digraphs and blends.	Decodes words with common prefixes and suffixes. Uses context or rereads to determine the meaning of unknown words.

LLD 5 Concepts of Print

Experience Early Learning Framework includes 7 Language & Literacy Development skills:

LLD 1 Listening
Understands and interprets language (both words and gestures). Acts in response to language and verbal cues.

LLD 2 Communication
Uses verbal and nonverbal communication to express ideas with increasingly complex vocabulary and sentences.

LLD 3 Phonological Awareness
Hears small units of sounds at the beginning, middle and end of words.

LLD 4 Alphabetic Knowledge
Identifies letters and symbols in print and understands that letters represent sounds.

LLD 5 Concepts of Print
Demonstrates print- and book handling knowledge.

LLD 6 Reading Comprehension
Understands concepts of text. Recalls and extends details.

LLD 7 Writing
Uses scribbles, drawings, letters, characters or words to represent meaning.

Concepts of print is a child's understanding of the elements and rules of written language. It includes the understanding of books, letters, words, directionality of text, punctuation and the understanding that print has meaning. Concepts of print represent early literacy skills and is a strong predictor of later success in reading (Snowling & Hulme, 2005).

Children develop print knowledge as they participate in reading and literacy activities and learn basic book handling skills and print concepts (Sonnenschein & Munsterman, 2002). Anytime that a parent/caregiver and child participate in shared reading, she is learning concepts of print skills. Book handling (pointing out parts of a book, such as cover, spine and pages), print awareness (pointing to words as they are read or modeling where to start reading) and discussion of story elements (discussion of characters and plot, for example) are simple ways to incorporate concepts of print into children's daily reading.

Print knowledge enables children to interpret information found in books and media. Children with print awareness can begin to understand that written language is related to verbal language and, like spoken language, carries a meaning (Snowling & Hulme, 2005).

Children exhibit skills in concepts of print as they demonstrate print knowledge. Such demonstrations will look different at each phase of the developmental process:

Infants open/close books and look for or point at printed pictures on the page.

Toddlers turn book pages and recognize if a printed picture is upside-down. They identify the front/back and top/bottom of a book and know where to begin reading on each page.

Preschoolers begin to identify letters, words, spaces and some punctuation. When handling or examining print, they will follow the direction of the text.

Primary schoolers with developed concepts of print skills will be able to explain the difference between books that tell stories (fiction) and those that give information (nonfiction). They recognize common types of text, e.g., poem, storybook, fact book. They can name the author and illustrator and identify punctuation. An advanced primary schooler will also be able to describe the overall structure of a story, including the introduction, the central dramatic problem and the conclusion.

LLD 5 Concepts of Print

INFANT → TODDLER → PRESCHOOL → PRE-PRIMARY → PRIMARY

Benchmark 1	Benchmark 2	Benchmark 3	Benchmark 4	Benchmark 5	Benchmark 6	Benchmark 7	Benchmark 8
Looks at or points to pictures. Opens and closes books.	Recognizes if pictures are right-side up. Turns pages from front to back of book.	Identifies the front/back and top/bottom of a book. Indicates where to start reading on each page.	Identifies letters, words, spaces and some punctuation. Follows the direction of text.	Touches a written word on the page for each spoken word (but not necessarily the correct word). Tracks print from the end of one line to the beginning of the next line.	Recognizes common types of text, e.g., poem, storybook, fact book. Names author and illustrator. Identifies punctuation.	Explains the difference between books that tell stories and those that give information.	Describes the overall structure of a story, including the introduction, problem and conclusion.

LLD 6 Reading Comprehension

Experience Early Learning Framework includes 7 Language & Literacy Development skills:

LLD 1 Listening
Understands and interprets language (both words and gestures). Acts in response to language and verbal cues.

LLD 2 Communication
Uses verbal and nonverbal communication to express ideas with increasingly complex vocabulary and sentences.

LLD 3 Phonological Awareness
Hears small units of sounds at the beginning, middle and end of words.

LLD 4 Alphabetic Knowledge
Identifies letters and symbols in print and understands that letters represent sounds.

LLD 5 Concepts of Print
Demonstrates print- and book handling knowledge.

LLD 6 Reading Comprehension
Understands concepts of text. Recalls and extends details.

LLD 7 Writing
Uses scribbles, drawings, letters, characters or words to represent meaning.

Reading comprehension is a child's ability to understand and interpret written language. Comprehension is at the heart of reading since the purpose of all reading is to acquire information and meaning from the printed page. Some communication skills, such as receptive vocabulary, are a prerequisite to reading comprehension. It is difficult for children to derive larger meaning from printed text if they do not understand the meaning of individual words. Young children demonstrate their reading comprehension by responding to text, retelling, asking questions and answering them.

When children respond to stories and texts, it increases their understanding of what they have heard or read and supports reading comprehension skills (Teale & Yokota, 2000). Active dialogue with children during shared reading is correlated with gains in language comprehension skills, which support later reading comprehension (Gest, Freeman, Domitrovich & Welsh, 2004).

Children demonstrate their comprehension of the shared material by retelling, asking and answering questions. Children build comprehension skills when they connect the text to their personal experiences or understanding (Pentimonti, 2012). Reading interactions that engage children in story recall and response strongly correlate to children's early literacy-related skills (Sonnenschein & Munsterman, 2002).

Children evidence reading comprehension skills by responding to text, retelling stories and asking or answering questions. Skills in reading comprehension will look different at each phase of the developmental process:

Infants begin to reach for or pat a book when it is read or by holding a book and looking intently at each page.

Toddlers repeat words from familiar stories and answer "where" and "what" questions by pointing. They start to recall the name of the main character and talk about pictures and ideas in familiar stories.

Preschoolers begin to anticipate what comes next in familiar stories, express likes and dislikes within the story, and participate in the retelling of a story by pointing at pictures or role-playing with props. They may demonstrate an ability to personally relate to characters or events within the story and answer simple questions about character, setting and plot events.

Primary schoolers begin to recognize similarities between two separate texts and retell major events of a story in sequence. They will exhibit the ability to make many personal and world connections. They summarize texts and their messages, describe the point of view of various characters and how they each respond to challenges or events in the story.

LLD 6 Reading Comprehension

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Interacts by reaching for or patting when a book is read. Holds book and looks intently at each page.	Points to pictures and repeats words from familiar stories. Answers "where" questions by pointing.	Talks about pictures and ideas in familiar stories. Answers "what" questions about stories and books. Recalls the name of the main character.	Anticipates what comes next in familiar stories. Expresses likes or dislikes within the story. Participates with others in the retelling of a story by pointing at pictures or role-playing with props.

PRE-PRIMARY		PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Relates to the characters or events of the story and shares a similar experience or object from own life. Retells portions of a story. Asks and answers simple questions about characters, setting and events.	With support, compares similarities between two texts. With prompting, answers questions about characters and setting. Retells major events of a story in sequence.	Makes many text-to-text, self, and real-world connections. Compares similarities and differences between texts. Retells stories with key details. Discusses setting, characters and events.	Evaluates texts based on content, personal experiences and knowledge of the world. Compares the main points of two texts. Summarizes texts and their messages. Describes the points of view of various characters.

LLD 7 Writing

Experience Early Learning Framework includes 7 Language & Literacy Development skills:

LLD 1 Listening
Understands and interprets language (both words and gestures). Acts in response to language and verbal cues.

LLD 2 Communication
Uses verbal and nonverbal communication to express ideas with increasingly complex vocabulary and sentences.

LLD 3 Phonological Awareness
Hears small units of sounds at the beginning, middle and end of words.

LLD 4 Alphabetic Knowledge
Identifies letters and symbols in print and understands that letters represent sounds.

LLD 5 Concepts of Print
Demonstrates print- and book handling knowledge.

LLD 6 Reading Comprehension
Understands concepts of text. Recalls and extends details.

LLD 7 Writing
Uses scribbles, drawings, letters, characters or words to represent meaning.

Emergent writing is a child's ability to convey ideas, thoughts and feelings by using symbols, especially through drawing and writing. It includes the ability to reproduce and independently construct letters, names and sentences.

Writing symbols such as letters, names or simple words is a predictor of later literacy (Diamond et al., 2008). Early writing emerges when children realize that their ideas can be written down through scribbles, drawings or inventive spelling (Strickland & Morrow, 2000). Name writing is a foundation for literacy development (Puranik, Lonigan & Kim, 2011).

A scribble or drawing that conveys personal thoughts and feelings is expressive writing and foundational to a child's ability to communicate thought (International Reading Association & National Council of Teachers of English, 1996). As young children have opportunities to write or to have their thoughts written for them, they develop concepts about the meanings of letters, words and sentences (McGee & Richgels, 2003).

LLD 7 Writing

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Explores writing materials.	Makes random marks with writing tools. Make handprints or fingerprints.	Holds drawing/writing tools with whole hand and may use whole arm to make intentional marks. Scribbles or draws marks as a representation of an object or person.	Uses fingers to grasp and manipulate drawing/writing tools with increasing control. Draws lines, circles or shapes and explains who or what they represent.

Early writing supports alphabetic knowledge, phonological awareness and print concepts (Diamond, Gerde & Powell, 2008). Children demonstrate emergent writing skills by writing names, words and sentences or by expressing thoughts, feelings and ideas through writing or drawing. These skills will look different at each phase of the developmental process:

Infants explore grasping and releasing small objects, such as toy links or dry cereal, to build the hand-eye coordination and motor strength required to eventually hold a writing utensil.

Toddlers scribble and make continuous marks with writing tools or handprints on paper. They begin to experiment with drawing letter-like forms and doodling representations of an object or person.

Preschoolers begin to print or copy familiar symbols and letters, especially those found in their own names. They draw lines, shapes or pictures and explain who or what they represent.

Primary schoolers print their first and last names with proper capitalization. They write simple sentences to tell a story or share information and begin to follow traditional spelling rules.

PRE-PRIMARY		PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Uses a mature tripod grip with drawing/writing tools. Uses a combination of drawing, dictating and writing to express and record an event or idea.	Consistently uses mature tripod grip with drawing/writing tools. Uses inventive spelling to write words that are connected to a given topic or opinion. Draws pictures to support writing.	Legibly prints letters, numbers and symbols. Writes a string of simple sentences to tell a story or share information. Provides a concluding statement.	Uses appropriate spacing between letters and words. Controls the size and placement of letters, numbers or details in drawings. Writes ideas or groups information in logical order. Uses descriptive words in writing.

Math & Reasoning Development

Math and reasoning skills include a child's ability to count, understand number sense, manipulate objects in space, create patterns, sort, compare and measure.

Children begin to explore math skills from a young age by interacting with their environments. Through play, young children begin to notice differences in the quantity, shape and size of objects (Gopnik, Sobel, Schulz & Glymour, 2001). They will ask themselves questions that encourage critical thinking, problem-solving and draw attention to math and reasoning skills. Play with blocks, for example, encourages children to notice spatial awareness and develop reasoning skills. They will explore combining shapes to construct familiar objects, which shapes can be placed on top of each other and which ones will topple the tower they have built. Importantly while math concepts can be independently explored from a young age, children must interact with parents or educators in order to learn the vocabulary which represents the basic math concepts they experience. Research on children's learning in the first six years of life validates the importance of early experiences in mathematics for lasting positive outcomes (Bowman, Donovan & Burns, 2001).

Researchers have located strong interconnectivity between the development of early math and early literacy skills, meaning that efforts to support both can take place simultaneously (Institute of Medicine (IOM) & National Research Council, 2015). In fact, studies show that when math is taught in conjunction with other subjects such as reading, children learn more math than if they had studied math alone (National Research Council, 2009).
When children develop their ability to reason mathematically, they become increasingly sophisticated in their ability to recognize and analyze the mathematics inherent in the world around them (Baroody, Bajwa & Eiland, 2009). Children's early mathematical experiences play a significant role in the development of their understanding of mathematics and serve as a foundation for their cognitive development (Tudge & Doucet, 2004).

The Experience Early Learning Framework includes seven math and reasoning (MR) skills:

MR 1 Number Sense	Understands concepts of number and quantity.
MR 2 Spatial Awareness	Understands how objects move in space and describes their location, e.g., on, under, next to.
MR 3 Shapes	Identifies shapes and their characteristics.
MR 4 Measurement	Estimates, measures and compares size, weight, length or volume.
MR 5 Patterns	Identifies, reproduces and creates patterns
MR 6 Classification	Matches and sorts.
MR 7 Logic & Reasoning	Uses logic to solve problems.

MR 1 Number Sense

Experience Early Learning Framework includes 7 Math & Reasoning Development skills:

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Writing symbols such as letters, names or simple words is a predictor of later literacy (Diamond et al., 2008). Early writing emerges when children realize that their ideas can be written down through scribbles, drawings or inventive spelling (Strickland & Morrow, 2000). Name writing is a foundation for literacy development (Puranik, Lonigan & Kim, 2011).

A scribble or drawing that conveys personal thoughts and feelings is expressive writing and foundational to a child's ability to communicate thought (International Reading Association & National Council of Teachers of English, 1996). As young children have opportunities to write or to have their thoughts written for them, they develop concepts about the meanings of letters, words and sentences (McGee & Richgels, 2003).

Early writing supports alphabetic knowledge, phonological awareness and print concepts (Diamond, Gerde & Powell, 2008). Children demonstrate emergent writing skills by writing names, words and sentences or by expressing thoughts, feelings and ideas through writing or drawing. These skills will look different at each phase of the developmental process:

Infants explore grasping and releasing small objects, such as toy links or dry cereal, to build the hand-eye coordination and motor strength required to eventually hold a writing utensil.

Toddlers scribble and make continuous marks with writing tools or handprints on paper. They begin to experiment with drawing letter-like forms and doodling representations of an object or person.

Preschoolers begin to print or copy familiar symbols and letters, especially those found in their own names. They draw lines, shapes or pictures and explain who or what they represent.

Primary schoolers print their first and last names with proper capitalization. They write simple sentences to tell a story or share information and begin to follow traditional spelling rules.

MR 1 Number Sense

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Explores writing materials.	Makes random marks with writing tools. Make handprints or fingerprints.	Holds drawing/writing tools with whole hand and may use whole arm to make intentional marks. Scribbles or draws marks as a representation of an object or person.	Uses fingers to grasp and manipulate drawing/writing tools with increasing control. Draws lines, circles or shapes and explains who or what they represent.	Uses a mature tripod grip with drawing/writing tools. Uses a combination of drawing, dictating and writing to express and record an event or idea.	Consistently uses mature tripod grip with drawing/writing tools. Uses inventive spelling to write words that are connected to a given topic or opinion. Draws pictures to support writing.	Legibly prints letters, numbers and symbols. Writes a string of simple sentences to tell a story or share information. Provides a concluding statement.	Uses appropriate spacing between letters and words. Controls the size and placement of letters, numbers or details in drawings. Writes ideas or groups information in logical order. Uses descriptive words in writing.

MR 2 Spatial Awareness

Experience Early Learning Framework includes 7 Math & Reasoning Development skills:

MR 1 Number Sense
Understands concepts of number and quantity.

MR 2 Spatial Awareness
Understands how objects move in space and describes their location, e.g., on, under, next to.

MR 3 Shapes
Identifies shapes and their characteristics.

MR 4 Measurement
Estimates, measures and compares size, weight, length or volume.

MR 5 Patterns
Identifies, reproduces and creates patterns.

MR 6 Classification
Matches and sorts.

MR 7 Logic & Reasoning
Uses logic to solve problems.

Spatial awareness is a child's understanding of space, dimension and how objects are positioned in relation to himself and others. Spatial awareness is foundational in a child's concept of how objects fit in space and relate to other objects (Seefeldt & Galper, 2008). It allows children to locate objects and successfully navigate their environments. Spatial awareness includes the ability to flip and rotate objects as well as the ability to determine the location of an object.

Children are born spatially aware. Immediately after birth, infants demonstrate an ability to track their parent's movement through space and show a preference for human-like faces to blank head outlines, suggesting they can distinguish between the two (Platas, 2017).

Children develop spatial awareness from concrete kinesthetic and spatial feedback they receive from flipping and rotating objects. Activities such as puzzles, block play and guessing games support spatial awareness. The manipulation of small objects helps children develop fine motor skills, perception skills and spatial awareness required for mental manipulation of objects and abstract problem-solving (Schindler, 2002).

Object location is a spatial concept that is determined by the relationship of one object to another. As language develops, a child can more precisely communicate an object's location with words such as in front of, behind, top, bottom, over, under and between. Using spatial language allows children to clearly express their thoughts, needs and concerns ("Oh, no! Ball under bed") and discuss or describe the world around them (Platas, 2017). An awareness of object location predicts later success in math and verbal skills connected with following directions (Murata & Tan, 2009).

Children evidence skills in spatial awareness through their ability to locate objects in space and flip or rotate objects. These skills will look different at each phase of the developmental process:

Infants begin by playing with objects and toys in a variety of shapes. They may try to put one object inside another or participate with a caregiver by raising their arms and legs or saying "up" and "down."

Toddlers deliberately turn or spin objects to fit them in containers or puzzles and follow simple, positional directions such as on/off, over/under, and up/down. They recognize familiar objects that are upside-down and turn them rightside up.

Preschoolers match two similar objects that are turned or positioned in different ways. They assemble 8-20 piece puzzles by turning pieces until they fit together. When prompted, they place objects next to, between, in front of or behind objects not related to themselves.

Primary schoolers identify two- and three-dimensional shapes and symbols regardless of orientation. They make simple maps or models to represent the location of objects. They problem-solve putting together both 2D and 3D puzzles or models.

MR 2 Spatial Awareness

INFANT → TODDLER → PRESCHOOL → PRE-PRIMARY → PRIMARY

Benchmark 1	Benchmark 2	Benchmark 3	Benchmark 4	Benchmark 5	Benchmark 6	Benchmark 7	Benchmark 8
Plays with objects and toys that are a variety of shapes. Participates as caregiver raises arms or legs and says up/down. Tries to put one object inside another.	Purposely turns or spins objects. Follows simple positional directions such as on/off, over/under and up/down. Fills container then dumps out the contents.	Recognizes objects that are upside down and turns them right-side up. Finds or places objects next to, between, in front of or behind self. Puts together three pieces to create a whole object.	Matches two objects even if turned different ways. When prompted, places objects next to, between, in front of or behind objects not related to self. Uses a guide to assemble 12 puzzle pieces.	Identifies and corrects the orientation of familiar objects and symbols. Explains the location of an object in relation to another object. Assembles a puzzle without using a guide.	Identifies 2D and 3D shapes regardless of orientation. Makes simple maps or models to represent the location of objects. Creates complex shapes by putting together or taking apart other shapes.	Matches 2D to 3D shapes. Recognizes symmetry. Gives and follows positional instructions to find objects. Builds complex shapes from simpler shapes. Splits shapes into four equal parts.	Determines when shapes have been rotated or flipped. Uses representations, coordinate systems and maps. Separates a shape into halves, thirds and fourths.

MR 3 Shapes

Experience Early Learning Framework includes 7 Math & Reasoning Development skills:

MR 1 Number Sense
Understands concepts of number and quantity.

MR 2 Spatial Awareness
Understands how objects move in space and describes their location, e.g., on, under, next to.

MR 3 Shapes
Identifies shapes and their characteristics.

MR 4 Measurement
Estimates, measures and compares size, weight, length or volume.

MR 5 Patterns
Identifies, reproduces and creates patterns.

MR 6 Classification
Matches and sorts.

MR 7 Logic & Reasoning
Uses logic to solve problems.

A child's understanding of shapes is the ability to identify, name, recreate, and compare common two- and three dimensional shapes. It includes the ability to recognize, describe and manipulate the characteristics of shapes and forms. A strong understanding of shapes helps children develop spatial awareness and is strongly correlated to later geometric knowledge (Hindman, Skibbe, Miller & Zimmerman, 2010).

The ability to identify, name, recreate and compare common two- and three- dimensional shapes, such as circles, squares, triangles, cubes and cylinders, supports a child's ability to describe and view shapes in their environment (Charlesworth, 2005). Learning math vocabulary to describe the environment supports geometric reasoning (Ginsburg, 1989).

An understanding of parts and wholes allows children to decompose and combine shapes to create other shapes. This ability to manipulate and rearrange parts is transferred to a child's understanding of how to partition number wholes and parts to strengthen overall number sense (Bobis, 2008).

Children demonstrate shape knowledge by identifying shapes and manipulating parts and wholes. Such demonstrations will look different at each phase of the developmental process:

Infants investigate shapes by holding and exploring objects then begin to try to put one object inside another.

Toddlers identify by name a few basic shapes, begin to match two identical shapes and explore filling a container then dumping out the contents.

Preschoolers identify four to six basic shapes and begin exploring 2D and 3D shapes. With a guide, preschoolers put together six to twelve pieces to make a whole object.

Primary schoolers identify objects as two- or three- dimensional shapes, create complex shapes by putting together simple shapes and break down complex shapes into simple shape pieces. They begin to separate a shape into halves, thirds and fourths.

MR 3 Shapes

INFANT → TODDLER → PRESCHOOL → PRE-PRIMARY → PRIMARY

Benchmark 1	Benchmark 2	Benchmark 3	Benchmark 4	Benchmark 5	Benchmark 6	Benchmark 7	Benchmark 8
Manipulates objects that are a variety of shapes.	Matches two identical shapes.	Identifies a few basic shapes.	Identifies four to six basic geometric shapes.	Describes basic and complex two- and three-dimensional shapes using own words.	Describes objects in the environment as two- and three-dimensional shapes.	Describes and draws defining features of shapes.	Identifies and draws complex shapes.

MR 4 Measurement

Experience Early Learning Framework includes 7 Math & Reasoning Development skills:

MR 1 Number Sense
Understands concepts of number and quantity.

MR 2 Spatial Awareness
Understands how objects move in space and describes their location, e.g., on, under, next to.

MR 3 Shapes
Identifies shapes and their characteristics.

MR 4 Measurement
Estimates, measures and compares size, weight, length or volume.

MR 5 Patterns
Identifies, reproduces and creates patterns.

MR 6 Classification
Matches and sorts.

MR 7 Logic & Reasoning
Uses logic to solve problems.

Measurement encompasses concepts of estimation, seriation and measuring through the use of standard and nonstandard tools. Measurement is a core concept of mathematics and a child's ability to estimate, measure, compare and seriate concrete objects is an indicator for future mathematical abstract reasoning and understanding (VanDerHeyden et al., 2011).

An understanding of measurement begins at infancy and develops throughout early childhood. Young children begin to learn measurement skills in many of their everyday activities through the use of nonstandard measurement tools, such as hands, blocks, water or string. They compare portions of food, the length of toy trains, the weight of two pumpkins or the capacity of different-sized cups. Eventually children will develop a vocabulary of measurement and comparison, using words such as longer, shorter, bigger and smaller. In play, measurement becomes especially meaningful as an indicator of fairness. Assertions such as, "She had it for longer!" or "I want the bigger cookie!" indicate a strong awareness of measurement.

Estimating and measuring help children learn to mentally approximate and concretely quantify characteristics so that these characteristics can be compared mathematically. First-hand experiences in measurement, including those using non-standard tools, build informal measurement skills needed for more complex measurement concepts (Seefeldt & Galper, 2008).

Seriating is putting things in order by a defined characteristic or set of characteristics (size, darkness of color). The ability to seriate is a predictor of understanding arithmetic concepts (Ginsburg, 1987). Comparing and seriating objects help children understand sequencing, which supports fundamental mathematics, comprehension and problem-solving skills (Carpenter, Fennema, Franke, Levi & Empson, 1999).

Children exhibit measurement skills in their ability to estimate, measure, compare and seriate. Such exhibitions will look different at each phase of the developmental process:

Infants explore measurement by picking up and putting down objects. Depending on an object's size, they begin to use their whole hand or just two fingers to pick up and put down the object. They demonstrate an understanding of more.

Toddlers explore the size and weight of objects in relation to self. They put objects in a line and demonstrate an understanding of more, none and one. They begin to determine which object is bigger (heavier, longer) when given 2 objects.

Preschoolers use non-standard measurement tools to estimate approximate size or volume. They order multiple objects by one feature using the process of elimination and describe the order using first, then and last.

Primary schoolers make logical estimations and use standard measurement tools to check their estimations. They will correctly order multiple objects by two or more features and order events in time. They also compare and explain how much longer one object is than another by using standard units of measurement.

MR 4 Measurement

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Recognizes when to use whole hand or just two fingers to pick up an object.	Explores size and weight of objects in relation to self.	Determines which object is bigger (heavier, longer) when given two objects.	Uses nonstandard measurement tools to estimate approximate size or volume. Verifies estimation with help.

	PRE-PRIMARY	PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Estimates (not always logically) size and volume. Measures and describes findings.	Makes logical estimates and uses measurement tools to check estimation.	Explains which measurement tool makes the best sense for the object being measured. Tells time in hours and half-hours.	Tells time. Estimates length in inches, feet, centimeters or meters. Measures an object using a variety of measurement standards.

MR 5 Patterns

Experience Early Learning Framework includes 7 Math & Reasoning Development skills:

MR 1 Number Sense
Understands concepts of number and quantity.

MR 2 Spatial Awareness
Understands how objects move in space and describes their location, e.g., on, under, next to.

MR 3 Shapes
Identifies shapes and their characteristics.

MR 4 Measurement
Estimates, measures and compares size, weight, length or volume.

MR 5 Patterns
Identifies, reproduces and creates patterns.

MR 6 Classification
Matches and sorts.

MR 7 Logic & Reasoning
Uses logic to solve problems.

Patterns are things that repeat in a logical way. Patterns can be found everywhere in children's daily lives. They can be a sequence of shapes or letters such as AB, ABC, AABB, a routine physical action such as brushing their teeth every night before bed or an environmental normality like the sun's pattern of rising in the morning and setting in the evening. Identifying and creating patterns enables children to recognize and quantify repetition in their environments.

To identify and create patterns involves memory skills and an ability to demonstrate that one can remember familiar people, words, symbols and rules of social and environmental interactions. The value of memory is that it makes the world predictable; it allows for storage of information so that memories can be built upon each other and become more complex. We tend to think of memory as a verbal task. However young children's behavior reveals their abilities to remember long before they can use language to describe their experiences. Research shows that infants as young as three months can perform actions they observed two weeks earlier, if they have enough opportunity to practice it (Rovee-Collier, 1999).

Patterns help children make predictions as they begin to understand and anticipate what comes next. Patterning is a foundational math skill upon which many mathematical skills and concepts are based. Studies show that early understandings of patterns correspond with later algebraic understanding (Hindman et al., 2010). For example, the ability to identify and create patterns is an important building block in the development of a child's logic and reasoning skills.

Children demonstrate patterning skills in their ability to identify and create patterns. Such demonstrations will look different at each phase of the developmental process:

Infants play predictable activities with caregivers such as pat-a-cake and peekaboo.

Toddlers attempt to mimic vocal and physical patterns by clapping or playing follow the leader games. They begin to copy simple two-step patterns, such as red-blue, red-blue.

Preschoolers create and extend two-step patterns and play memory games. With help, they begin to copy and extend three- or four-step patterns.

Primary schoolers determine the missing piece of a pattern within a sequence and recognize simple patterns in their environments. They begin to develop and explain their own formulas for creating a variety of patterns.

MR 5 Patterns

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Plays predictable activities with caregivers such as pat-a-cake and peekaboo.	Attempts to mimic vocal and physical patterns.	Copies patterns with two steps, such as red-blue, red-blue.	Creates and extends two-step patterns.	Creates and extends three- and four-step patterns and plays complex memory games.	Determines the missing piece of a pattern within a set sequence. Recognizes simple patterns in the environment.	Creates or extends increasing or decreasing patterns.	Develops and explains his/her own formula for creating a variety of patterns.

MR 6 Classification

Experience Early Learning Framework includes 7 Math & Reasoning Development skills:

MR 1 Number Sense
Understands concepts of number and quantity.

MR 2 Spatial Awareness
Understands how objects move in space and describes their location, e.g., on, under, next to.

MR 3 Shapes
Identifies shapes and their characteristics.

MR 4 Measurement
Estimates, measures and compares size, weight, length or volume.

MR 5 Patterns
Identifies, reproduces and creates patterns.

MR 6 Classification
Matches and sorts.

MR 7 Logic & Reasoning
Uses logic to solve problems.

Classification involves skills of matching and sorting. It is the ability to identify the same or similar objects based on their common properties. As children match and sort objects, they learn that some objects are alike and some are different. This process of looking at an item, evaluating its unique characteristics and organizing it with like items is the first step in applying logical thinking to objects in one's environment.

Matching and sorting concepts become increasingly complex as children move from matching objects by one characteristic to then sorting by two or more characteristics. Sorting, grouping and charting information is predictive of abstract analysis and reasoning skills needed to understand the surrounding world (Sousa, 2008).

Classification skills are demonstrated in a child's ability to match, sort and chart objects. Such demonstrations will look different at each phase of the developmental process:

Infants demonstrate early classification skills by recognizing familiar people and objects.

Toddlers will begin to match a picture or object when shown the same picture or object. Some toddlers will also begin to sort objects by a single feature, such as shape or color.

Preschoolers sort objects by one feature then sort the same objects again by a different feature.

Primary schoolers start to identify, sort and classify objects by at least two features. They will use graphs or charts to represent data sorted in up to four categories.

MR 6 Classification

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Recognizes familiar people and objects. Recognizes self as being separate from others.	When shown one object, finds the match. Identifies and names familiar people, characters and animals.	Sort objects by one feature, such as size or color. Groups objects by common characteristics.	After sorting objects by one feature, sorts again by a different feature.

PRE-PRIMARY		PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Sorts objects by more than one feature and explains why.	Identifies, sorts and classifies objects by at least two features.	Answers questions about data or objects sorted in up to three categories.	Uses graphs and charts to represent data sorted in up to four categories.

MR 7 Logic & Reasoning

Experience Early Learning Framework includes 7 Math & Reasoning Development skills:

MR 1 Number Sense
Understands concepts of number and quantity.

MR 2 Spatial Awareness
Understands how objects move in space and describes their location, e.g., on, under, next to.

MR 3 Shapes
Identifies shapes and their characteristics.

MR 4 Measurement
Estimates, measures and compares size, weight, length or volume.

MR 5 Patterns
Identifies, reproduces and creates patterns.

MR 6 Classification
Matches and sorts.

MR 7 Logic & Reasoning
Uses logic to solve problems.

Logic is a child's ability to use reasoning and problem-solving skills to draw conclusions and find answers to questions. One of the foremost goals of education is the development of a child's cognitive structure (Ausubel, 1965). According to Swiss psychologist Jean Piaget, the height of a child's cognitive structure is hypothetical-deductive thought whereby the child is able to think scientifically through predictions or hypotheses about the world to answer questions (O'Brien & Shapiro, 1968). More simply, the height of a child's cognitive structure is logic and reasoning.

Logic and reasoning are central to math skills and develop through a process of assimilation and accommodation (Piaget, 1964). Assimilation is when children process new information or events and connect it within their existing mental schema. Accommodation is when a child has to reorganize or create a completely new schema to deal with a new object or event because it does not fit consistently with his existing schemas. The result of accommodation is equilibrium. When the brain experiences equilibrium, higher-level cognition results (Ginsburg & Opper, 1987).

Logic and reasoning skills are evidenced in children through their ability to problem-solve. Problems force children to rethink patterns and mental processes which creates new conditions for learning (Schiller, 1999). Problem-solving skills enable children to connect mathematical principles to everyday occurrences. Logic, reasoning and problem-solving skills will look different in children across different developmental stages:

Infants react to a problem and use their body or voice to seek a desired solution.

Toddlers experiment with cause and effect. They begin to recognize a problem and ask for help.

Preschoolers try out many possible solutions to a problem. They begin to use previous knowledge to determine which solution to try first when solving a problem.

Primary schoolers mentally eliminate possible solutions to a problem by thinking through their potential results. They explain their problem-solving strategies and begin to solve hypothetical problems by connecting personal experiences to possible solutions.

MR 7 Logic & Reasoning

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Reacts to a problem and seeks a desired outcome.	Experiments with cause and effect.	Recognizes a problem and asks for help.	Tries out many possible solutions to a problem.

	PRE-PRIMARY	PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Uses previous knowledge to determine which solution to try first when solving a problem.	Mentally eliminates possible solutions to a problem by thinking through their potential results.	Explains the sequence of his or her problem-solving strategy.	Solves hypothetical problems by connecting personal experiences to possible solutions.

Science

Science skills include a child's ability to inquire, predict and evaluate observations. They support a child's ability to explore everyday life, physical properties and to make sense of concepts such as weather, natural habitats and technology.
Research indicates that young children have the capacity for conceptual learning and the ability to engage in scientific practices by using reasoning and inquiry to understand the world around them (National Research Council, 2007, 2012).
A child's everyday environment is rich with potential science exploration both indoors and outdoors. STEM stands for Science, Technology, Engineering and Math. By beginning STEM during the early years, children are more likely to maintain interests in the sciences throughout later elementary years. Moreover, spending time in nature and exploring natural and earth science is essential for cognitive development. As children play in nature, it stimulates creativity and problem-solving skills. Research has also validated that children who play and spend time in nature have increased concentration and cognitive skills, including reduced ADHD/ADD symptoms (Chawla, L, 2015).

Similar to learning to count or read, learning how to do science is a lifelong process. Metacognitive skills develop as a result of the scientific process children engage in when describing what they see, asking questions about it, repeating the experience and thinking about how it connects to what they already know about their surrounding environment (Ashbrook, 2003). Because science discovery is highly engaging for children and their innate curiosity, it serves as an ideal conduit for supporting children's learning across different domains (French, 2004).

The Experience Early Learning Framework includes four science (SCI) skills.

SCI 1 Investigation & Inquiry	Observes, inquires and investigates objects and events to gain understanding.
SCI 2 Natural & Earth Science	Understands living and nonliving things, their characteristics and how they change.
SCI 3 Physical Science	Explores forces, motion and materials and how they change.
SCI 4 Technology	Explores technology and how things work.

SCI 1 Investigation & Inquiry

Experience Early Learning Framework includes 4 Science skills:

SCI 1 Investigation & Inquiry
Observes, inquires and investigates objects and events to gain understanding.

SCI 2 Natural & Earth Science
Understands living and nonliving things, their characteristics and how they change.

SCI 3 Physical Science
Explores forces, motion and materials and how they change.

SCI 4 Technology
Explores technology and how things work.

Investigation and inquiry, otherwise known as scientific reasoning, is a child's ability to use the scientific process to inquire, hypothesize, observe, experiment, record, evaluate and infer. It includes planning and carrying out scientific experiments and investigations. By using an inquiry-based approach to learning, children look at and evaluate the world critically and scientifically.

Children learn scientific reasoning as they inquire, act and construct new theories about the world around them (Smyth, 2007). Knowledge of science and the ability to generate a hypothesis or formulate an inquiry about a surrounding phenomenon is linked to children's success in society (Saracho & Spodek, 2008).

Young children are naturally curious and first explore their environments through their senses (Tephly, 1986). They look for bright colors and patterns, taste new foods and touch various textures. As children develop scientific skills, they learn to investigate using multiple strategies. They observe their environments, ask questions and seek answers through experimentation. The ability to observe and experiment is a critical building block in future cognitive development (Beatty, 2005).

As children use data collected through observation and experimentation to test predictions and make new connections, they demonstrate an ability to evaluate and infer. Children with good scientific reasoning skills are better at inferring if their understanding may require more information or if it is reasonable and fits within existing schemas (Fraser-Abder, 2011).

Children demonstrate skills in investigation and inquiry as they observe, inquire and investigate objects to gain understanding. Evidence of this process will look different at each phase of the developmental process:

Infants look for a person or toy that has moved out of sight, indicating that they are aware of changes in their immediate surroundings.

Toddlers ask one- to two-word questions to gain understanding and use their senses to explore their environments. They investigate an object or group of objects in multiple different ways.

Preschoolers wonder, predict outcomes, record observations through drawings and describe and compare their observations. They use past knowledge to explain observed changes and try out many possible solutions to a given problem. They will identify personal interests, seek more information and express a willingness to share discoveries with others.

Primary schoolers inquire about a scientific phenomenon and explain which prediction seems most probable. They use prior knowledge and gathered information to make simple inferences, experiment to gather information, record findings in tables, charts and diagrams then explain the sequence of their problem-solving strategy. They begin to solve both real and hypothetical problems by connecting personal experiences to possible solutions.

SCI 1 Investigation & Inquiry

INFANT		TODDLER	PRESCHOOL
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Looks for a person or toy that has moved out of sight. Reacts to changes.	Asks one- to two-word questions. Uses senses to explore environment.	Identifies personal interests and seeks more information. Investigates an object or group of objects in multiple ways. Shares discoveries with others.	Observes and describes changes that occur to familiar objects and people. When given a question, guesses a possible answer or outcome. Uses past knowledge to explain observed changes.

	PRE-PRIMARY	PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Asks questions or shows curiosity about scientific phenomenon. Predicts a few outcomes. Explores and records observations by drawing. Describes and compares observations.	Predicts multiple outcomes to a question or situation and explains personal reasoning. Gathers information or experiments to prove/disprove a hypothesis.	Inquires about a phenomenon, makes a prediction based on prior knowledge and gathered information. Records findings in charts or diagrams. Explains his/her problem-solving strategy.	Asks questions and makes hypotheses about scientific phenomena or hypothetical problems. Conducts an experiment multiple times, records observations and evaluates information to explain a phenomenon.

SCI 2 Natural & Earth Science

Experience Early Learning Framework includes 4 Science skills:

SCI 1 Investigation & Inquiry
Observes, inquires and investigates objects and events to gain understanding.

SCI 2 Natural & Earth Science
Understands living and nonliving things, their characteristics and how they change.

SCI 3 Physical Science
Explores forces, motion and materials and how they change.

SCI 4 Technology
Explores technology and how things work.

Natural and earth science is the understanding of living and nonliving things, their characteristics and how they change. Knowledge of natural and earth science allows children to understand the needs and characteristics of ecosystems, climates and living organisms.

An understanding of natural science helps children learn how all living creatures are interrelated and dependent on each other. Moreover, it supports a child's ability to care for self as well as protect and provide for the needs of others (Holt, 1993).

Knowledge of natural science includes the ability to identify basic needs and classify organisms. Through activities such as gardening and animal care, children observe similarities and differences between their own needs and those of other life forms (Holt, 1993). Children take better care of personal needs when they understand the life requirements of a variety of types of animals and plants (Schwartz & Copeland, 2010). Classifying organisms helps children develop abstract reasoning and helps children organize a growing mental schema from interacting with the surrounding world (Piaget, 1926).

Children learn about ecosystems as they use senses to explore their immediate environments. Ecosystems can be both small and large, from a single tree to a whole forest and can be found everywhere, from the garden in a child's backyard to the river near her home. Exploring ecosystems helps children begin to understand how they fit within their surrounding environments and how all organisms work together to support life (Holt, 1993). Identifying weather and climates allows children to understand how weather patterns and climates affect ecosystems and everyday life on Earth. During early childhood, the observation of weather and seasonal changes helps children link how changes in the environment influence human, animal and plant behaviors (Schwartz & Copeland, 2010).

Children exhibit knowledge of natural and earth science through demonstrated understanding of living and nonliving things, their characteristics and how they change. Such demonstrations will look different at each phase of the developmental process:

Infants begin to learn of their immediate environments through sensory exploration.

Toddlers start to understand the difference between different animals and insects in their immediate environment. They explore concepts of hot and cold, point at clouds and explore the feeling of weather patterns, including rain and wind.

Preschoolers start to describe the weather and climate. They recognize if an object can grow, eat or move. They begin to understand the concept of basic needs for living things to survive and sort organisms as living or nonliving.They explain how changes in weather and climate may affect a living thing and their own daily life.

Primary schoolers describe features of living things and group them by similar features. They make connections between climate and which type of living things can or cannot survive in those ecosystems.

SCI 2 Natural & Earth Science

INFANT	TODDLER	PRESCHOOL	PRE-PRIMARY	PRIMARY
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**	**Benchmark 5**	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Explores immediate environment using senses. Reacts to weather changes in immediate environment.	Plays with rocks, sand, dirt or water. Reacts to animals or insects in immediate environment. Understands hot and cold. Points at clouds and explores the feel of rain and wind.	Identifies familiar animals, plants or rocks in immediate environment. Groups living things by common characteristics. Notices changes in temperature or weather.	Demonstrates an understanding that all people have needs. Identifies if an object can grow, eat or move. Identifies the climate and weather in the immediate environment.	Recognizes that all living things have similar basic needs. Sorts organisms as living or nonliving and explains why. Identifies current season and explains how weather affects personal life.	Describes how living things obtain what they need to survive. Groups living things by similar features. Explains that different places have disparate kinds of weather and climates.	Describes how an organism's features and surroundings help it survive. Explains weather patterns and the basic properties and role of the sun, moon and earth.	Describes threats that living things must overcome to survive. Explains the relationships between a variety of species. Describes how the sun and movements of the earth affect climate.

SCI 3 Physical Science

Experience Early Learning Framework includes 4 Science skills:

SCI 1 Investigation & Inquiry
Observes, inquires and investigates objects and events to gain understanding.

SCI 2 Natural & Earth Science
Understands living and nonliving things, their characteristics and how they change.

SCI 3 Physical Science
Explores forces, motion and materials and how they change.

SCI 4 Technology
Explores technology and how things work.

Physical science includes the exploration of forces, motion, and how things work. Physical science is a child's ability to identify, describe and explore physical properties and phenomena. It includes observing and recording physical characteristics such as color and state of matter, magnetic forces, motion and concepts like gravity. Physical science nurtures a child's natural curiosity of finding out how things work and why things change (Segal, Bardige, Woika & Leinfelder, 2006). Knowledge in physical science is the basis for later physics and chemistry sciences (Segal et al., 2006).

Physical science includes the ability to identify properties of matter and explore forces and motion. The properties of matter include such characteristics as color, taste, shape, volume and state (solid, liquid, gas, plasma). Being able to identify and describe properties of matter increases a child's language and reasoning skills. From hand to mouth, from viewing to sniffing, young children use all available senses to explore and explain the world (Tephly, 1986). Children explore forces and motions as they act on and interact with objects in their environments, e.g., exerting effort to move an object or dropping an object to explore gravity. Exploring forces and motions enables children to build intrinsic understanding of the basic observable laws of physics (Fraser-Abder, 2011).

Children demonstrate skills in physical science as they identify properties of matter and explore forces of motion. Skills in physical science will look different at each phase of the developmental process:

Infants begin to learn skills in physical science by exploring the impact and influence of themselves on their environments kicking their feet or shaking their arms to make other objects move.

Toddlers react to changes in texture, smell, sound or sight. They will begin to explore motion by moving, rolling, blowing on or dropping a toy.

Preschoolers demonstrate an ability to explain how common vehicles, animals and people move. They sort objects by type of movement and describe the basic physical properties of objects and materials. They begin to experiment with and explain invisible forces, such as gravity and magnets. They will manipulate matter and observe any physical changes that may occur as a result of their manipulation.

Primary schoolers experiment and compare the movement of various objects on a variety of surfaces and by classifying and sorting materials by physical properties. They begin to recognize that materials move differently on different surfaces and explore how force is used to change the direction of moving objects. They will explore forces, motion, technology and how things work.

SCI 3 Physical Science

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Uses senses to explore objects in immediate environment. Kicks feet or shakes arms to make other objects move.	Reacts to changes in texture, smell, sound or sight. Uses body to push or pull toys.	Explores motion by moving, rolling, blowing on or dropping a toy.	Explains how common vehicles, animals and people move. Sorts objects by type of movement. Describes basic physical properties of objects and materials in immediate environment.

PRE-PRIMARY		PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Experiments with and explains invisible forces, e.g., ramps, magnets. Manipulates matter and observes any physical changes that may occur.	Experiments and compares the movements of various objects on a variety of surfaces. Classifies and sorts materials by a variety of physical properties.	Recognizes that gravity makes unsupported objects fall. Identifies objects that are attracted to magnets. Identifies materials that are solid, liquid and gas.	Recognizes that materials move differently on different surfaces. Explains how force is used to change the direction of moving objects.

SCI 4 Technology

Experience Early Learning Framework includes 4 Science skills:

SCI 1 Investigation & Inquiry
Observes, inquires and investigates objects and events to gain understanding.

SCI 2 Natural & Earth Science
Understands living and nonliving things, their characteristics and how they change.

SCI 3 Physical Science
Explores forces, motion and materials and how they change.

SCI 4 Technology
Explores technology and how things work.

Technology is the use of tools to solve problems. It includes the ability to use specific technological apparatuses as well as the ability to experiment and create new uses of common tools. Knowledge and education in technology supports reasoning and problem-solving skills and leads young children to success in society (Saracho & Spodek, 2008).

Early learners can use technology to explore new worlds, express themselves through make-believe and solve problems. Technology offers children the tools and information they need to explore math and science connections in the real world from a more global perspective (Ronis, 2008). Children gain technology skills as they experiment with tools (e.g., eating utensils, on/off switches, simple screen toys) to solve problems. Technology skills support problem-solving by enabling children to identify, analyze and address problems quicker and easier.

Today children are growing up in a rapidly changing digital age and are surrounded by a variety of technologies in home and at school. Technology skills also include the ability to appropriately use computers, touchscreens and interactive media. Interactive media includes computer software, applications, children's television, e-books and the internet, among others. When used appropriately, technology and interactive media serves as a valuable tool for learning and problem-solving.

Technology and interactive media should not replace creative play, physical activity, real-life exploration, conversation, social interaction or other such activities that are crucial to early childhood development. Rather technology and media should be used to enhance activities, support learning and expand a child's access to new information and perspectives (Guernsey 2010a, 2011b).

The public health community discourages the use of screen technology for children under the age of two (National Association for the Education of Young Children, 2012). Educators should use knowledge of appropriate practices to moderate, carefully select and use technology in a way that serves a child's creativity and relationship-building. As children develop, their relationship with technology should be one of creator instead of consumer whereby they use technology to solve problems and create new innovations and ideas.

Children demonstrate skills in technology when they use or experiment with tools to solve problems. Such demonstrations will look different at each phase of the developmental process:

Infants explore simple tools such as toys and spoons.

Toddlers begin to use simple tools purposefully, such as using a spoon to feed themselves. They begin to understand the use of on/off switches and explore other movable parts on toys.

Preschoolers explore simple machines and interact with simple electronics, apps and screen toys. They experiment with simple technology and various tools to solve problems or accomplish tasks.

Primary schoolers use familiar tools and technology to produce a desired result or to solve a specific problem. They identify which tools can best help save time, solve a problem or increase enjoyment.

SCI 4 Technology

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Explores simple tools such as toys and spoons.	Begins to use simple tools purposefully, such as using a spoon to feed self.	Explores movable parts on toys and tools. Uses on and off switches.	Explores simple machines and interacts with simple electronic and screen toys.

PRE-PRIMARY		PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Experiments with simple technology to solve problems or accomplish tasks.	Uses familiar tools and technology to produce a desired result or solve a specific problem.	Experiments with familiar and unfamiliar tools and technology to achieve a variety of results.	Identifies which tools can best help save time, solve a problem or increase enjoyment.

experience EARLY LEARNING

Social Studies

Social Studies skills refer to children's ability to understand themselves in relation to the surrounding community and world. It includes exploration of roles, responsibilities and cultural traditions. Many educators regard social studies as the central pillar of an integrated curriculum where teachers "are able to tap into children's natural curiosity about the larger world" (D'Addesio, Grob, Furman, Hayes & David, 2005). According to the National Council for the Social Studies (NCSS), the primary goal of social studies education is to "teach children the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world" (2010).

There are two branches of social studies learning in early childhood education: social systems and social concepts (Epstein, 2014). Social systems can be defined as the social norms, roles, values and traditions that shape human relationships and everyday lives. Social concepts include topics introduced in early schooling and taught more thoroughly in later education, e.g., economics, history, ecology and geography.

Children must navigate within many different communities: family, school, religion, city, nation and world. Within each community is a different set of social rules and traditions. A child's understanding of social systems influences a child's lifelong dispositions about people, cultures and how they belong within these systems (National Council for Social Studies, 1988). Learning about diverse communities enables children to recognize commonalities between them and increase respect for differences (Morrison, 2008).

The Experience Early Learning Framework includes four social studies (SS) skills.

SS 1 Culture & Community	Explores communities and families, culture and traditions.
SS 2 Civics & Economics	Follows familiar rules, routines and helps make group decisions. Explores the concept of trade. Identifies ownership of items.
SS 3 Geography	Identifies types of places and interacts with maps.
SS 4 History & Sense of Time	Develops sense of time.

SS 1 Culture & Community

Experience Early Learning Framework includes 4 Social Studies skills:

SS 1 Culture & Community
Explores communities and families, culture and traditions.

SS 2 Civics & Economics
Follows familiar rules, routines and helps make group decisions. Explores the concept of trade. Identifies ownership of items.

SS 3 Geography
Identifies types of places and interacts with maps.

SS 4 History & Sense of Time
Develops sense of time.

Culture and community skills encompass a child's exploration of community, family, culture, tradition and diversity. Children belong to many different communities: family, friends, gender group, classroom, religious affiliation, town, and nation. Social roles include an understanding of expected behaviors within each of these groups as well as an understanding of family member roles and responsibilities, community jobs, gender and racial identity.

Children internalize society's rules and cultural norms pertaining to their various communities. They learn about race and class in the same way that they learn cultural rules about relating to others based on other characteristics (VanAusdale & Feagin, 2001). The way children represent themselves, evaluate themselves and compare themselves to others encompasses their view on how they fit in society. Play offers children a safe place to explore new ideas and diverse community roles (Lieberman, 1995).

By identifying, describing and comparing various roles within their families or communities, children gain awareness of their own roles within a community. When children have opportunities to make meaningful contributions to their communities, it builds self-worth and results in an increase in kindness, sharing and cooperation (Bailey, 2001).

Exploring cultures and traditions gives children the opportunity to learn about the history, practices and beliefs of a variety of cultural groups. Learning about other cultures or group norms concurrently with their own culture enables children to recognize commonalities and appreciate differences without inferring inferiority or superiority of one or the other (Morrison, 2008).

Children learn to respect diversity as they recognize and explore differences and similarities between various people. Respecting diversity helps children appreciate and accept others regardless of their race, religion, color, gender, national origin, disability or age. Children can better assimilate in groups and participate in school settings when they have the ability to accept multiple viewpoints and view others with respect (Rogoff, 2003).

Children exhibit culture and community skills through exploration of family and community roles and through demonstrating respect for culture, tradition and diversity. Evidence of culture and community skills will look different at each phase of the developmental process:

Infants recognize family members and are exposed to family traditions, routines and cultural events.

Toddlers participate in family traditions, holiday routines and customs. They recognize the difference between familiar people versus strangers. They begin to identify body parts and personal features.

Preschoolers begin to describe the routines, familiar stories, traditions, foods and celebrations of their own family and community. They begin to express curiosity and learn about cultures different than their own.

Primary schoolers start to explain the meaning and importance of traditions and customs of cultures different than their own. They learn about and name influential people and events that have impacted familiar cultures and traditions.

SS 1 Culture & Community

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Recognizes family members and is exposed to family traditions or cultural events.	With help, participates in family traditions and customs.	Recognizes familiar symbols or artifacts of family traditions or customs. Identifies differences between self and others.	Describes the routines, familiar stories, traditions, foods and celebrations of own family and community. Describes family and community members, their roles and their relationship to self.

	PRE-PRIMARY	PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Explains the meaning and importance of own traditions and customs. Begins to learn about other cultures. Identifies roles and responsibilities of self and others to contribute to the community.	Explains the meaning and importance of traditions and customs of other people. Explains how individuals, families and cultures differ. Compares roles, rules and responsibilities of different groups.	Compares diverse cultures and traditions. Understands that some people have different needs or beliefs.	Names influential people and events that have impacted familiar cultures and traditions. Demonstrates respect for people who may look or act differently.

SS 2 Civics & Economics

Experience Early Learning Framework includes 4 Social Studies skills:

SS 1 Culture & Community
Explores communities and families, culture and traditions.

SS 2 Civics & Economics
Follows familiar rules, routines and helps make group decisions. Explores the concept of trade. Identifies ownership of items.

SS 3 Geography
Identifies types of places and interacts with maps.

SS 4 History & Sense of Time
Develops sense of time.

Civics and economics skills encompass a child's knowledge of the familiar governing and trading systems of a community. It includes an understanding of how people work with others, make group decisions or set rules to protect each other and to meet basic needs. These skills prepare children to participate in democracy and to live together as good citizens (Maxim, 2010).

Children demonstrate an understanding of citizenship when they participate in social decision-making and maintaining rules. During early childhood, children begin to understand a sense of belonging and personal responsibility which (when combined with an awareness of the greater world) creates a foundation for effective citizenship (Feng, 1994).

Young children develop a basic understanding of trade and economics as they realize what belongs to them and what does not. As they exchange one object for another desired object, they begin to understand the rules of trade. Additionally, when children dramatize job roles and play with pretend money, they develop a basic understanding of how to participate in our global economy (Schwartz & Copeland, 2010).

Children evidence skills in civics and economics as they demonstrate an ability to follow familiar rules, help make group decisions, explore concepts of trade and identify ownership of items. These skills will look different at each phase of the developmental process:

Infants learn civics and economics skills as they observe how others interact within their surroundings.

Toddlers participate in communal activities and express a desire for an object and define ownership with simple vocabulary such as me and mine. They attend to authority figures and begin to follow simple rules and expectations.

Preschoolers follow familiar rules and help make group decisions. They will ask before taking an object that does not belong to them and offer a toy or object to another person. They begin to suggest new rules in a variety of situations.

Primary schoolers identify their individual rights and determine if rules support the common good. They describe ways one might use money, goods or services. They begin to describe different levels of government (local, state, national) and use voting to make democratic decisions with their class. They begin to explain why people work together and how they use trade to get what they need and want.

SS 2 Civics & Economics

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Attends to others in immediate environment. Grasps and releases objects.	Participates in communal activities. Expresses a desire for an object or action. Says me, mine.	Recognizes and attends to authority figures. Recognizes ownership of familiar objects.	Follows familiar rules and helps make group decisions. Asks before taking an object that does not belong to self. Offers a toy or object to another person.

	PRE-PRIMARY	PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Applies familiar rules and suggests new rules in a variety of situations. Explores the use of trade to receive objects or services.	Discusses the purposes of rules, laws and civic leaders. Participates in voting to make decisions. Exchanges money, goods or services for other goods or services.	Identifies individual rights. Determines if rules support the common good. Describes ways one might use money, goods or services.	Describes different levels of government, e.g., local, state, national. Makes democratic decisions. Explains how and why people work together in trade to get what they need and want.

SS 3 Geography

Experience Early Learning Framework includes 4 Social Studies skills:

SS 1 Culture & Community
Explores communities and families, culture and traditions.

SS 2 Civics & Economics
Follows familiar rules, routines and helps make group decisions. Explores the concept of trade. Identifies ownership of items.

SS 3 Geography
Identifies types of places and interacts with maps.

SS 4 History & Sense of Time
Develops sense of time.

Geography skills are a child's ability to identify, describe and navigate places. Young children begin to develop these skills by exploring their immediate environments. With an increase of symbolic thinking, children are able to understand that maps are representations of larger places. Geography skills help them understand the features and characteristics of Earth and how these things influence daily life (Jantz & Seefeldt, 1999).

The ability to identify types of places allows children to understand the connections between geography and everyday life. Children can make better decisions about how to interact with their environment when they have a strong sense of geography and the cultural expectations (Rogoff, 2003) or environmental needs of a given type of place (Maxim, 2010).

Young children build early map skills when they find their way around a home or school then by following paths. By drawing pictures of their homes, schools and learning their addresses, they demonstrate basic mapping skills. Maps play an important role in the application of symbolic thinking and tangibly modeling distances and directions for children (William, Rockwell & Sherwood, 1987).

Children demonstrate geography skills when they identify types of places and interact with maps. These skills will look different at each phase of the developmental process:

Infants respond to changes in their immediate environment and navigate within a familiar environment.

Toddlers recognize familiar places and navigate obstacles in a familiar environment. They identify a variety of familiar places such as the store, car, home or Grandma's. They will demonstrate the ability to follow a path.

Preschoolers identify different types of water bodies, streets, buildings and landmarks in their community. They explain the purpose of different types of structures such as bridges and buildings. They ask questions about landmarks and begin to use or draw their own maps.

Primary schoolers identify and describe various types of landforms and natural resources, locate familiar places on maps and use cardinal directions to follow and give directions. They explain how the physical features of an environment affect how people live. They use a variety of maps to gather information about a place or environment.

SS 3 Geography

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Responds to changes in the immediate environment. Navigates within a familiar environment.	Recognizes familiar places. Finds ways to move around obstacles in a familiar environment.	Identifies a variety of familiar places, such as the store, car, home or Grandma's. Follows a path.	Identifies different types of water bodies, streets, buildings and landmarks in own community. Recognizes symbols and landmarks.

	PRE-PRIMARY	PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Explains the purpose for different types of structures, such as bridges and buildings. Asks questions about landmarks. Identifies what is represented on a map. Draws pictures of current location.	Compares the geographic features of own community to another community. Recreates a map of something s/he cannot immediately see.	Identifies and describes various types of landforms and natural resources. Locates familiar places on maps. Uses cardinal directions to follow and give directions.	Explains how the physical features and characteristics of an environment affect how people live. Uses a variety of maps to gather information

SS 4 History & Sense of Time

Experience Early Learning Framework includes 4 Social Studies skills:

SS 1 Culture & Community
Explores communities and families, culture and traditions.

SS 2 Civics & Economics
Follows familiar rules, routines and helps make group decisions. Explores the concept of trade. Identifies ownership of items.

SS 3 Geography
Identifies types of places and interacts with maps.

SS 4 History & Sense of Time
Develops sense of time.

Knowledge of history is a child's understanding of events that have happened in the past. By applying sequencing, measurement and cause-effect skills, a child connects past occurrences to current conditions (Jantz & Seefeldt, 1999). "Without history, a society shares no common memory of where it has been, of its core values, and what past decisions account for present conditions" (Bredekamp & Rosegrant, 1992, p. 116).

Describing past events enables children to connect past events to current experiences and decision-making. Stern (1993) described the child's use of autobiography narratives as a window to see how children interpret past experiences and thereby construct their images of self and the world. During early childhood, past personal experiences, family stories and folktales can all be used to emphasize cultural values that have been passed down through generations and to also establish concepts of continuity (Jantz & Seefeldt, 1999).

Children learn history skills as they develop a sense of time and start to distinguish between past, present and future.

Infants demonstrate a sense of time as they focus on interactions with others for a short period of time.

Toddlers observe events and start to describe events as they happen and use time vocabulary such as first and then.

Preschoolers begin to recall information and events from the past. Preschoolers with advanced time and history knowledge will use language of time such as days of the week and months to describe familiar sequences of events.

Primary schoolers compare and contrast current and historical conditions of familiar environments. They begin to describe the relationship between past events and current conditions and explain why it is important to understand historical events.

SS 3 History & Sense of Time

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Focuses on interactions with others for a short time.	Observes events and begins to participate.	Describes events as they happen. Uses words such as first, then.	Recalls information and events from the past.

	PRE-PRIMARY	PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Uses language of time to describe familiar sequences of events.	Retells historical, fictional or past events or stories.	Compares and contrasts current and historical conditions of familiar environments.	Describes relationships between past events and current conditions. Explains why it is important to understand historical events.

Creative Arts

Creative arts are activities that actively engage children's imagination through music, dance, visual arts, and dramatic play (Mills, 2014). Creative art activities are deliberately open-ended and work to foster creativity, divergent thinking, and imagination. The creative arts engage children across all domains—physical development, social-emotional, language and literacy, mathematics, science and social studies. Activities such as painting and drawing support the growth and maturation of a child's fine and gross motor skills. Dance and music support the development of balance, coordination and fundamental auditory and rhythmic understanding (Schiller, 1999). Other creative arts activities such as dramatic play, puppetry and visual arts enable children to explore and develop a stronger sense of self-regulation and to safely experiment with emotional range and self-control (Koster, 2012). A creative arts education also provides abundant opportunity for teaching and exploring cultural differences through music, art and holiday celebrations (Koster, 2012).

The creative arts invite children to partake in art activities that encourage freedom and experimentation in a no-failure environment. These activities, which foster motivation and imagination, enhance a child's continuing development without frustration, boredom or passive participation. Developmentally appropriate practice (Copple & Bredekamp, 2009) ensures that activities are planned and suggested according to the appropriate development stage of each individual child or group of children.

Children who score higher on tests of imagination and creativity develop stronger problem-solving strategies (Brown, Sutterfy & Thronton, 2008). Creativity allows children to take risks, make connections and explore their curiosity in personally meaningful ways. The creative arts are fundamental for supporting a child's cognitive growth and overall development (Mills, 2014).

The Experience Early Learning framework outlines four creative arts (CA) skills.

CA 1 Music	Expresses through music and develops rhythm and tone.
CA 2 Dance & Movement	Expresses through dance and develops movement techniques.
CA 3 Visual Arts	Expresses through 2D and 3D visual art. Develops artistic techniques.
CA 4 Drama	Participates in dramatic and symbolic play. Uses props to represent other objects or ideas.

CA 1 Music

Experience Early Learning Framework includes 4 Creative Arts skills:

CA 1 Music
Expresses through music and develops rhythm and tone.

CA 2 Dance & Movement
Expresses through dance and develops movement techniques.

CA 3 Visual Arts
Expresses through 2D and 3D visual art. Develops artistic techniques.

CA 4 Drama
Participates in dramatic and symbolic play. Uses props to represent other objects or ideas.

Music development is a child's exploration and understanding of sound, rhythm and tone. It includes listening and responding to music as well as creating original music, rhythms or sounds. Early musical development builds fundamental auditory and rhythmic understanding and increases spatial temporal reasoning (Schiller, 1999).

Children develop rhythm and tone as they follow, move, sing and play along with music. The plasticity of the brain during early childhood is key for forming musical patterns and a wide variety of music should be introduced during this time (Schiller, 1999).

Children express through music when they clap, sing or play instruments to express feelings, thoughts and ideas. Expressing through music encourages communication skills and is essential for tonal, melodic and rhythmic development (Niland, 2009).

Children evidence music skills as they express through music and develop rhythm and tone. Music skills in children will look different at each phase of the developmental process:

Infants demonstrate early music skills as they respond to sounds in their environment and make sounds to communicate their needs and feelings.

Toddlers respond to changes in sound, rhythm, volume or melody, when they attempt to sing and when they repeat words in a familiar song. They begin to clap or shake objects to the beat (though not always consistently), recognize the difference between a singing and speaking voice, and express likes and dislikes of familiar songs.

Preschoolers clap along to simple rhythm patterns, control their voices to mimic the melodic direction of a familiar song and use common objects or instruments to create music. They also use their voices or instruments to express feelings to mimic sound effects.

Primary schoolers maintain a steady beat, recognize strong versus weak beats, begin to read rhythm notation and interpret and compare many types of music. They participate in call-and-response rounds and experiment with or perform self-written music for rhythmic patterns.

CA 1 Music

INFANT	TODDLER		PRESCHOOL
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Responds to sounds. Makes sounds to communicate feelings.	Responds to changes in sound, rhythm, volume or melody. Repeats words in familiar songs and attempts to sing.	Claps to beat (not always consistently). Understands difference of singing and speaking voices. Expresses likes and dislikes of familiar songs. Explores shaking, pounding and tapping various instruments.	Claps along to simple rhythm patterns. Controls voice to mimic the melodic direction. Uses voice, common objects or instruments to create music. Identifies self as a musician.

	PRE-PRIMARY		PRIMARY
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Repeats simple rhythm patterns. Hears the change of musical phrases in a song. Sings along to familiar songs. Uses voice or instruments to express feelings or to mimic sound effects.	Creates simple rhythm patterns. Controls pitch when singing a familiar song. Communicates ideas by creating rhythm and/or melody.	Maintains a steady beat. Recognizes strong/weak beats. Begins to read rhythm notation. Matches vocal pitch in limited range. Interprets and compares many types of music.	Maintains rhythm in various meter groupings. Participates in call-and-response and two-part rounds. Experiments and performs self-written music or rhythmic patterns.

CA 2 Dance & Movement

Experience Early Learning Framework includes 4 Creative Arts skills:

CA 1 Music
Expresses through music and develops rhythm and tone.

CA 2 Dance & Movement
Expresses through dance and develops movement techniques.

CA 3 Visual Arts
Expresses through 2D and 3D visual art. Develops artistic techniques.

CA 4 Drama
Participates in dramatic and symbolic play. Uses props to represent other objects or ideas.

Dance and creative movement are a child's kinesthetic understanding of movement as communication. Dance and movement support the development of balance, coordination and internal rhythm (Schiller, 1999). Creative movement activities help children develop body awareness, spatial orientation, rhythmic skills and strength-building (Mayesky, 2009).

Fundamental dance techniques help children build coordination, balance, sequencing skills and spatial awareness while also increasing motor control (Rupnow, 2000). When children express through dance and movement, they develop strategies for expressing their own thoughts, feelings and ideas. Creative movement, especially in combination with a variety of musical forms, stimulates the left hemisphere of the brain (Schiller, 1999).

Children demonstrate skills in dance and movement as they express through dance and develop movement techniques. Dance skills in children will look different at each phase of the developmental process:

Infants move their bodies to express needs, feelings and begin to respond to musical rhythms by bouncing.

Toddlers begin to move their bodies purposely. They sway or bounce to music and use purposeful gestures or body language to communicate. They begin to follow the movements of others, explore personal space and direction.

Preschoolers begin to move their bodies to the beat and demonstrate varying levels of energy in dance such as gentle movements versus explosive movements. They describe and demonstrate multiple ways to move and create movements based on their own ideas.

Primary schoolers dance a sequence of movement patterns and identify the beginning, middle and end of a dance. They can also create their own simple movement sequences and describe how dance and movement express certain personal ideas or feelings.

CA 2 Dance & Movement

INFANT	TODDLER	PRESCHOOL	
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Moves body in a variety of ways. Uses body language to express feelings.	Moves body purposely. Sways or bounces to music. Uses purposeful gestures and body language to communicate.	Follows the movements of others. Explores personal space and direction. Moves in own way to music and rhythm.	Describes and demonstrates multiple ways to move body parts. Moves to the beat. Demonstrates different levels of energy in dance, e.g., gentle versus explosive or small versus large movements.

PRE-PRIMARY		PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Follows a leader to perform a simple movement pattern. Demonstrates the difference between spontaneous and planned movement. Creates movements based on own ideas.	Recalls a simple movement pattern and performs it individually or in a group. Expresses ideas, feelings and stories through creative movement.	Recalls and dances a sequence of two or three movement patterns. Identifies the beginning, middle and end of a dance.	Creates simple movement sequences. Describes how dances and movements express certain ideas or feelings.

CA 3 Visual Arts

Experience Early Learning Framework includes 4 Creative Arts skills:

CA 1 Music
Expresses through music and develops rhythm and tone.

CA 2 Dance & Movement
Expresses through dance and develops movement techniques.

CA 3 Visual Arts
Expresses through 2D and 3D visual art. Develops artistic techniques.

CA 4 Drama
Participates in dramatic and symbolic play. Uses props to represent other objects or ideas.

Visual arts invite children to use artistic tools, materials and media to create art and communicate ideas. It includes producing and evaluating drawings, paintings, clay sculptures, collages and other representations. Visual arts knowledge and techniques help children understand images and express themselves visually and symbolically. Open-ended art increases a child's problem-solving skills (Douglas, 2001).

Children develop artistic technique as they use a variety of tools and media to intentionally create visual artwork. Creating art enables children to develop fine motor skills, hand-eye coordination (Koster, 2005), visual discrimination (Morrow, 2007) and foundational geometry skills (Roberts & Harpley, 2007).

Children express through visual arts when they create and explain representational art. Children benefit from daily open-ended art experiences where they can use art to symbolically represent their experiences, express feelings, thoughts, ideas and imaginations (Seefeldt & Galper, 2008).

Children demonstrate skills in visual arts by developing artistic techniques and expressing themselves through 2D and 3D visual art. Such demonstrations will look different at each phase of the developmental process:

Infants explore materials using their senses and express their emotions while investigating those materials.

Toddlers scribble, color or paint intentionally on paper and use their hands and feet to explore a variety of media.

Preschoolers use artistic tools and media to create intentional designs or images. They make deliberate decisions throughout the artistic process such as choosing a color or tool for a desired effect.

Primary schoolers create art to express ideas, thoughts and feelings. They use various tools and techniques to achieve a desired artistic result. They compare techniques and creations of many artists and explain why and how they chose creation of their own art.

CA 3 Visual Arts

INFANT	TODDLER		PRESCHOOL
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Explores materials using gross motor movements and senses. Expresses emotions while exploring materials.	Uses hands and feet to explore a variety of media. Scribbles, colors or paints intentionally on paper.	Explores a variety of artistic tools and media. Uses materials to create shapes and symbols.	Chooses an object or art tool to use with a given medium for a desired effect. Makes choices throughout the artistic process.

	PRE-PRIMARY		PRIMARY
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Uses artistic tools and media to create intentional designs or images. Plans, designs and seeks materials to make a creation.	Demonstrates a variety of techniques using a given tool or medium. Creates arts to represent an idea or object. Explains how it was made.	Uses various tools and techniques to achieve desired artistic results. Creates art to express ideas, thoughts and feelings.	Compares artistic techniques and creations of many artists. Creates art and explains why and how s/he chose specific materials and techniques.

CA 4 Drama

Experience Early Learning Framework includes 4 Creative Arts skills:

CA 1 Music
Expresses through music and develops rhythm and tone.

CA 2 Dance & Movement
Expresses through dance and develops movement techniques.

CA 3 Visual Arts
Expresses through 2D and 3D visual art. Develops artistic techniques.

CA 4 Drama
Participates in dramatic and symbolic play. Uses props to represent other objects or ideas.

Dramatic play invites a child to create or reenact stories and social situations in a safe environment (Gaskins & Miller, 2009). Children who spend more time in socio-dramatic play show an enhanced ability to understand the feelings of others and have an increased level of social competence (Berk & Winsler, 2002).

Dramatic play is the reenactment of everyday situations that children observe. Symbolic and socio-dramatic play are strongly influenced by culture (Smith, 2005). Children use pretend play to test new roles and develop social skills (Gaskins & Miller, 2009). Dramatic play supports the development of long-term memory and increases mental capacities for recall (Liebermann, 1995).

Children use props to demonstrate their ability to think symbolically (Gaskins & Miller, 2009) and to support role-playing. In all cultures, children's symbolic play is based on the materials they have available, e.g., toys, cardboard boxes, roots, seeds (Bjorklund, 2011). Because dramatic play with props encompasses both physical manipulation and social interaction, it is necessary for ongoing child development (Bodrova, 2007).

Children demonstrate drama skills by participating in dramatic play and using props to represent other objects or ideas. Such demonstrations will look different at each phase of the developmental process:

Infants imitate simple movements and facial expressions and respond to props or puppets.

Toddlers mimic observed behaviors or words and the use of familiar objects. They will use realistic toys as replacements for real objects and demonstrate an ability to distinguish between real and pretend.

Preschoolers play a role in dramatic play and use a combination of real and imaginary props to act out a story or situation.

Primary schoolers perform (with cues) a simple preplanned drama, complete with setting, characters and events. They begin to rehearse, memorize and perform a short play and may also participate in creating costumes, settings or props to construct a mood or environment.

CA 4 Drama

INFANT	TODDLER		PRESCHOOL
Benchmark 1	**Benchmark 2**	**Benchmark 3**	**Benchmark 4**
Imitates simple movements and facial expressions. Responds to props or puppets.	Mimics observed behaviors and words. Mimics the use of familiar objects.	Uses words, actions and props to pretend. Uses realistic toys as replacements for real objects. Distinguishes between real and pretend.	Plays a role in group dramatic play. Uses an object as a replacement for a realistic prop or real object.

	PRE-PRIMARY	PRIMARY	
Benchmark 5	**Benchmark 6**	**Benchmark 7**	**Benchmark 8**
Assigns roles and plays out unscripted scenes in dramatic play. Uses a combination of real and imaginary props or characters to play out a scene.	With cues, performs a simple preplanned drama. Creates a setting, characters and events to tell a story.	Plans a story and seeks out props to enhance a role or highlight details. Integrates emotion into performance.	Rehearses, memorizes and performs a short play. Plans a story and creates costumes, settings or props to create a mood or environment.

experience EARLY LEARNING

Second Language Acquisition

Learning a second language is a complex social and cognitive process. It includes phases from pre-production to advanced fluency. In early stages, children first observe and respond with gestures only. Over time, the child will progress into speech emergence and then ultimately gain fluency both in second language comprehension and communication. By immersing language-building activities within the natural routines of the day, children from diverse language backgrounds can participate and acquire language through authentic experiences. Engaging the child and encouraging him to express himself in the second language throughout the day builds natural connections between real-life and language concepts (Clark, 2000).

36 A Approach	**36 A.1** Participates using target language. **36 A.2** Demonstrates initiative with target language.
36 B Comprehension	Demonstrates comprehension of target language.
36 C Communication	Uses target language to communicate.

36 A Approach

Approach to second language acquisition is the attitude and flexibility with which a child approaches learning a second language. It includes the child's willingness to participate and the way the child engages with the target language. A positive approach to second language acquisition enables children to acquire the target language more quickly and easily (Halle, Hair, Wandner, McNamara, & Chien, 2012). Wanting to communicate with people who speak that language is crucial if acquisition is to occur (Clark, 2000).

36 A.1 Participates using target language

A child's willingness to use and engage in activities in the target language is foundational to acquiring language proficiency. Tactile, kinestic and visual activities in the target language support language learning and give children opportunities to use the target language in context (Reynolds, 1995).

36 A.2 Demonstrates initiative with target language

A child demonstrates initiative with the target language when he actively seeks to understand interactions in the target language. Taking initiative with the target language gives a child more learning opportunities in the target language and helps him become self-sufficient in learning the language. Krashen and Brown (2005) found that children with high levels of self-confidence and high levels of motivation are more likely to become proficient in a second language.

36 A Approach

GOAL	Pre-production	Early Production	Speech Emergence	Intermediate Fluency	Advanced Fluency
36 A.1 Participates using target language	Observes interactions in target language, but may not participate.	When prompted, uses gestures and words in target language to participate in group interactions.	Uses target language to actively participate, working around any language barriers.	Initiates interactions in target language, displaying adequate conversational proficiency with minimal language barriers.	Uses target language confidently and comfortably to participate. Begins to display written and academic proficiency for developmental level.
36 A.2 Demonstrates initiative with target language	Uses cues and gestures to understand interactions in target language.	Asks for repetition of target language to clarify understanding.	Seeks explanations for unknown words and phrases in target language.	Asks questions in target language to clarify meanings of idioms and complex interactions.	Uses context clues and resources to clarify any misunderstandings.

36 B Comprehension

Comprehension of second language is a child's ability to interpret, understand and respond to the target language. Growing comprehension of the target language enables children to develop receptive proficiency with the target language. Learning to listen and speak a second language contributes to eventual fluency in reading of the second language (Ballantyne, Sanderman, & McLaughlin, 2008).

Children demonstrate comprehension of the target language by responding appropriately and to increasingly complex interactions in the target language (Clark, 2000). Comprehension of the target language enables children to fully participate in activities and learning experiences.

36 B Comprehension

GOAL	Pre-production	Early Production	Speech Emergence	Intermediate Fluency	Advanced Fluency
Demonstrates comprehension of second language	Responds to cues, such as gestures and visualizations.	Responds to simple words and phrases in target language, especially in combination with other cues.	Responds to simple stories and short discussions in target language.	Responds to stories, jokes and lengthy discussions in target language.	Demonstrates near-native comprehension of target language in all contexts.

36 C Communication

Communication in the second language is a child's ability to use the target language to effectively convey ideas, thoughts and feelings. Communicating in the target language effectively enables children to fully participate in interactions in the target language (Clark, 2000).

A child uses the target language to communicate when he uses vocabulary, grammar and syntax of the target language to convey meaning. Using the target language to communicate allows children to communicate, learn, develop relationships and participate in activities with that language (Reynolds, 1995).

36 C Communication

GOAL	Pre-production	Early Production	Speech Emergence	Intermediate Fluency	Advanced Fluency
Uses target language to communicate	Uses cues, gestures and visualizations to communicate.	Uses words and memorized phrases in target language to communicate.	Formulates sentences by combining familiar words and phrases in target language. May make frequent errors.	Uses increasingly complex linguistic structures in target language with minimal grammatical errors.	Uses target language effectively in all contexts.

experience EARLY LEARNING

Developmental Continuum of Skills

Individual children develop at a unique pace. | INFANT | TODDLER | PRESCHOOL | PRE-PRIMARY | PRIMARY

	Skill / Skill Code	Definition	Benchmark 1	Benchmark 2	Benchmark 3	Benchmark 4	Benchmark 5	Benchmark 6	Benchmark 7	Benchmark 8
Social & Emotional Development	SED 1 **Self-Awareness**	Shows awareness of self as distinct from others. Expresses needs, wants and preferences.	Explores self and others by using senses.	Recognizes self in photos or in a mirror.	Expresses likes and dislikes. Expresses simple ideas about self in relation to others such as family.	When given two to three options, chooses his/her most desired option.	Describes and compares preferences of self and others.	Negotiates to attain personal preference in a situation.	Predicts how self and others might feel in a variety of situations and explains why.	Demonstrates an understanding that each person is unique and has his/her own thoughts, feelings and preferences.
	SED 2 **Self-Regulation**	Identifies feelings and manages behavior in times of stress. Exhibits self-control and ability to calm self. Reacts to changes in routine.	Calms with support from caregiver. Responds as caregiver takes care of his/her needs. Reacts to changes in routine.	Shows a range of emotions with facial expressions and gestures. Soothes self by seeking a familiar adult or thing. Redirects to a new activity with help from caregivers.	Experiments and role-plays with a range of emotions. Recognizes when the typical routine is not followed and identifies the change.	Recognizes personal feelings. Controls impulses with reminders. With support, negotiates ways to handle nonroutine transitions.	Names some personal feelings and uses strategies to manage behavior. Anticipates a change in routine and begins to prepare self by finding a desired thing or person.	Identifies and explains personal feelings. Describes appropriate responses to different emotions. Transitions from one activity to the next and helps others through the transition.	Anticipates an emotional response that may result from a given situation. Describes strategies to adjust and calm oneself in new or stressful situations.	Applies strategies for managing own emotions and behaviors. Adapts to new situations quickly and with minimal stress.
	SED 3 **Attention & Persistence**	Maintains attention on people, things and projects. Persists in understanding and mastering activities, even if challenging.	Focuses for a short time on a person, sound or thing. Shifts attention from one person or thing to another.	Participates in daily routines or familiar activities. Attends to what others are looking at or pointing to.	Focuses on an engaging activity for a short period of time independently or with an adult. Asserts a desire to start or end an activity. Asks for help as needed.	Initiates an activity and seeks help to complete it. Practices or repeats an activity many times until successful.	Sustains focus for at least five minutes, persisting even if there are problems or distractions. Independently completes a familiar activity.	Sustains focus for at least 10 minutes even if there are distractions. Takes care of own needs and personal belongings.	Sustains focus for at least 30 minutes even if there are distractions. Shows respect for others' personal space and belongings.	Sustains focus for 45 minutes even if there are distractions. Takes care of self or another while considering the needs of the greater group.
	SED 4 **Social Relationships**	Develops close bonds/relationships with adults and builds peer friendships. Identifies and respects differences in others' abilities, characteristics, feelings and interests. Participates in group activities, takes turns, shares and negotiates with others.	Responds to primary caregivers through eye contact and gentle touch. Explores people and their features side-by-side in a book or a mirror.	Greets and stays near familiar people. Mimics facial expressions of others. Explores people and their features side-by-side in a book or a mirror.	Identifies and plays side-by-side with a new or familiar person. Demonstrates concern for someone who is sad. Identifies differences between self and others. Participates in an activity when asked.	Participates in group with those different than self. Asks adult to help solve problems. Explains why someone may be happy or sad.	Initiates play with one or more persons. Offers to help others. Identifies roles of self and others during tasks or pretend play. Asks questions about how others feel, live, eat, play and believe.	Describes friendships and meaningful relationships. Suggests solutions to group problems. Identifies feelings of others and responds accordingly.	Describes how to build positive relationships. Explains how roles within groups change over time. Shows empathy to those who are sad, lonely or discouraged.	Describes different types of relationships. Works collaboratively in group and encourages others to include or help another person. Demonstrates respect for people who may look or act differently.
Physical Development	PD 1 **Gross Motor**	Builds strength, coordination and balance of large muscles.	Sits independently and pulls self into a standing position. Kicks or grabs from a seated or lying position.	Walks and climbs. Carries, drags, kicks and tosses objects.	Runs and balances on a wide beam. Throws objects in an intended direction. Catches objects against body.	Balances and hops on one foot. Throws both overhand and underhand. Catches or kicks moving objects.	Hops from one foot to the other. Begins to skip. Coordinates multiple movements in simple sequences.	Skips confidently, gallops and slides side to side. Changes direction and speed of movement.	Balances on a variety of objects. Kicks or strikes moving objects with aim and accuracy. Leaps. Stops at a boundary.	Uses conditioning methods to strengthen muscles and increase endurance. Coordinates multiple complex movements in continuous play.
	PD 2 **Fine Motor**	Builds strength and coordination of small movements in hands to pick up, squeeze, twist, cut and manipulate tools and toys.	Reaches for objects in sight. Uses arms or legs to make contact with an object.	Purposefully grasps objects with finger and thumb. Uses hands to accomplish tasks such as feeding self.	Opens, closes, twists and pulls objects with one or both hands.	Manipulates objects with hands doing different things. Snips with scissors. Begins to string large beads.	Follows a straight line when cutting and drawing. Buttons, zips, buckles and laces.	Follows an outline with scissors. Ties shoes and dresses self.	Threads small beads. Stacks small objects. Uses scissors to cut more challenging materials, e.g., fabric, cardstock.	Beads, grasps and stacks objects of all sizes with speed and accuracy.
	PD 3 **Safety**	Shows awareness of safe practices and demonstrates them when participating in activities.	Expresses distress when needs are not met.	Responds to possible dangers in environment and avoids them when prompted.	Follows simple safety rules.	Seeks opportunities to help others. Tries to solve own social problems.	Describes reasons for safety rules and reminds others to follow them.	Applies general safety rules to a variety of everyday situations with little prompting.	Identifies emergency situations and how to behave accordingly. Describes how to get help.	Takes appropriate initiative in dangerous and emergency situations.
	PD 4 **Personal Care**	Responds to and initiates routines for hygiene, feeding and dressing self.	Receives appropriate healthcare from caregivers. Responds when physical needs are not met.	Recognizes the difference between dirty and clean. Points to body parts when prompted. Participates in taking care of some personal needs, such as feeding self.	With help, participates in healthy habits and healthcare routines. Names body parts. Describes basic personal needs.	Describes the function of basic body parts. Regulates toileting and handwashing needs. Follows a routine of rest and active play. Meets most personal needs and understands that all people have needs.	Explains how germs spread and describes simple strategies for preventing the spread. Recognizes that all living things have similar basic needs. Distinguishes between needs and wants.	Regulates personal needs for nutrition, activity and rest with few reminders. When feeling sick, describes symptoms. Recognizes the difference between contagious and noncommunicable diseases.	Explains the importance of nutrition, exercise and rest in maintaining wellness. Maintains personal hygiene with few reminders.	Explains how feeling well is related to proper nutrition, exercise and rest. Describes how to deal with health concerns of self and others.
	PD 5 **Nutrition**	Demonstrates knowledge about nutrition and healthy food choices.	Cries when hungry or tired.	Communicates when hungry, thirsty or tired. Feeds self some finger foods.	Anticipates the need to eat, rest and drink. Feeds self soft foods with spoon or other utensil.	Identifies food and serves a portion into bowl or plate. Feeds self.	Identifies food groups and sorts food. Chooses between two appropriate food options.	Identifies food that is nutritious. Helps to prepare food for others.	Describes what happens after consumption of food.	Describes the functions of basic organs.
Language & Literacy Development	LLD 1 **Listening (Receptive Language)**	Understands and interprets language (both words and gestures). Communicates or acts in response to language and verbal cues.	Turns head toward the person speaking and makes gestures and/or vocalizations in response. Responds to conversation in environment and imitates actions.	Shows understanding of a variety of single familiar words. Points at named objects or body parts. With prompts and gestures, follows a one-step direction.	Shows understanding of a wide variety of phrases and sentences. Responds to simple statements and questions. Follows related two-step directions given verbally.	Shows understanding of some complex vocabulary. Asks what objects are called. Listens to a story or request then responds appropriately. Follows unrelated two-step directions given verbally.	Listens and understands inferred requests. For example, child gathers more playdough in response to a verbal prompt to help build a larger playdough ball. Follows multi-step directions given verbally.	Shows understanding of a series of complex statements that explain how or why. Asks and answers general questions about information or stories shared verbally.	Asks or answers specific questions about key details from information or stories shared verbally. Remembers and follows previous rules or directions shared verbally.	Listens to gather information. Asks questions to clarify or deepen understanding. Recalls key ideas shared verbally. Responds to verbal statements that have implied directions or requests.
	LLD 2 **Communication (Expressive Language)**	Uses verbal and nonverbal communication to express ideas with increasingly complex words and sentences. Engages in back and forth communication.	Mimics single sounds. Uses vocalizations and gestures to communicate.	Says one- to two-word sentences. Repeats words heard frequently in environment. Uses a few words and word-like sounds to communicate.	Says two- to four-word sentences and repeats short phrases. Identifies familiar people, places and objects. Asks what a specific person or object is called. Communicates needs, desires and ideas.	Speaks in sentences but does not follow grammatical rules. Describes familiar people, places and objects.. Asks simple questions and stays on topic for two to three exchanges.	Speaks in simple complete sentences. Uses question words. Includes technical words and asks what unfamiliar words mean. Tells stories and engages in conversations through multiple exchanges.	Speaks audibly. Uses plural nouns and common prepositions. Uses new or technical words learned in conversations or through reading. Compares words and their meanings. Explains personal thoughts.	Communicates by using simple and compound sentences. Uses verb tenses. Identifies words with similar meaning. Stays on topic while talking and sharing ideas and feelings.	Communicates using conjugated verbs. Uses expression and tone to communicate meaning. Explains the difference between two closely related words.
	LLD 3 **Phonological Awareness**	Hears small units of sounds.	Babbles and vocalizes using sound, volume and inflection.	Imitates sounds and tones.	Shows awareness of separate words in spoken language.	Identifies words that have a similar beginning sound.	Identifies the beginning and ending sounds of words.	Counts syllables in spoken words. Isolates and pronounces the sound of each syllable.	Identifies and isolates individual sounds heard in one-syllable words.	Manipulates, substitutes and deletes sounds in words.
	LLD 4 **Alphabetic Knowledge**	Identifies letters, numbers, characters and symbols in print and understands that letters represent sounds.	Looks for familiar people and objects when given their names. Babbles or repeats sounds.	Identifies a familiar object or person when shown a drawing or photo. Points at words printed on a page and pretends to read aloud.	Recognizes the difference between pictures, letters and numbers in print. Recognizes the sound of the first letter in his/her name.	Recognizes some common words in print; such as his/her name, mom, dad. Identifies six to seven letters and their sounds.	Names all upper- and lowercase letters when presented in random order and identifies at least 15 letter sounds. When shown a two- or three-letter word, can find it in print.	Reads high-frequency sight words. Identifies all letters and their sounds. Begins to sound out the letters in two- to four-letter words.	Reads and decodes root words with inflectional endings, e.g., -ed, -ing, -s. Recognizes letter patterns, word families, long and short vowel sounds, whole word chunks, digraphs and blends.	Decodes words with common prefixes and suffixes. Uses context or rereads to determine the meaning of unknown words.
	LLD 5 **Concepts of Print**	Demonstrates print- and book handling knowledge.	Looks at or points to pictures. Opens and closes books.	Recognizes if pictures are right-side up. Turns pages from front to back of book.	Identifies the front/back and top/bottom of a book. Indicates where to start reading on each page.	Identifies letters, words, spaces and some punctuation. Follows the direction of text.	Touches a written word on the page for each spoken word (but not necessarily the correct word). Tracks print from the end of one line to the beginning of the next line.	Recognizes common types of text, e.g., poem, storybook, fact book. Names author and illustrator. Identifies punctuation.	Explains the difference between books that tell stories and those that give information.	Describes the overall structure of a story, including the introduction, problem and conclusion.
	LLD 6 **Reading Comprehension**	Understands concepts of text. Recalls and extends details.	Interacts by reaching for or patting when a book is read. Holds book and looks intently at each page.	Points to pictures and repeats words from familiar stories. Answers "where" questions by pointing.	Talks about pictures and ideas in familiar stories. Answers "what" questions about stories and books. Recalls the name of the main character.	Anticipates what comes next in familiar stories. Expresses likes or dislikes within the story. Participates with others in the retelling of a story by pointing at pictures or role-playing with props.	Relates to the characters or events of the story and shar es a similar experience or object from own life. Retells portions of a story. Asks and answers simple questions about characters, setting and events.	With support, compares similarities between two texts. With prompting, answers questions about characters and setting. Retells major events of a story in sequence.	Makes many text-to-text, self, and real-world connections. Compares similarities and differences between texts. Retells stories with key details. Discusses setting, characters and events.	Evaluates texts based on content, personal experiences and knowledge of the world. Compares the main points of two texts. Summarizes texts and their messages. Describes the points of view of various characters.
	LLD 7 **Writing**	Uses scribbles, drawings, letters, characters or words to represent meaning.	Explores writing materials.	Makes random marks with writing tools. Make handprints or fingerprints.	Holds drawing/writing tools with whole hand and may use whole arm to make intentional marks. Scribbles or draws marks as a representation of an object or person.	Uses fingers to grasp and manipulate drawing/writing tools with increasing control. Draws lines, circles or shapes and explains who or what they represent.	Uses a mature tripod grip with drawing/writing tools. Uses a combination of drawing, dictating and writing to express and record an event or idea.	Consistently uses mature tripod grip with drawing/writing tools. Uses inventive spelling to write words that are connected to a given topic or opinion. Draws pictures to support writing.	Legibly prints letters, numbers and symbols. Writes a string of simple sentences to tell a story or share information. Provides a concluding statement.	Uses appropriate spacing between letters and words. Controls the size and placement of letters, numbers or details in drawings. Writes ideas or groups information in logical order. Uses descriptive words in writing.

Mathematics & Reasoning										
MR 1	**Number Sense**	Understands concepts of number and quantity.	Hears numbers in everyday context. Hears rote counting. Looks for an object that is taken out of sight.	Recognizes the numeral one and sees other numerals around the room. Repeats number words when heard. Demonstrates an understanding of one, two and more.	Recognizes numerals to three. Points to one object at a time while counting (not always in correct order). Creates groups of objects. Adds to and removes from group as prompted.	Identifies numerals to five. Counts up to ten objects. Creates and counts groups of up to five objects. Removes objects from the group as prompted and recounts.	Identifies numerals to 10. Solves addition and subtraction problems within ten. Counts up to 20 objects.	Identifies and writes numerals to 20. Counts to 100 by ones and tens. Counts forward from a given number. Decomposes numbers less than or equal to 10 in more than one way, e.g., $7 = 3 + 4$ just as $7 = 2 + 5$.	Identifies and counts in sequence to 120 from a given number. Uses manipulatives to group and count units. Determines if a given addition or subtraction equation is true or false.	Compares and orders numerals to 1000. Identifies if a number is even or odd. Counts by fives, tens and hundreds to 1000. Adds and subtracts within 20. Solves addition or subtraction word problems.
MR 2	**Spatial Awareness**	Understands how objects move in space and describes their location, e.g., on, under, next to.	Plays with objects and toys that are a variety of shapes. Participates as caregiver raises arms or legs and says up/down. Tries to put one object inside another.	Purposely turns or spins objects. Follows simple positional directions such as on/off, over/under and up/down. Fills container then dumps out the contents.	Recognizes objects that are upside down and turns them right-side up. Finds or places objects next to, between, in front of or behind self. Puts together three pieces to create a whole object.	Matches two objects even if turned different ways. When prompted, places objects next to, between, in front of or behind objects not related to self. Uses a guide to assemble 12 puzzle pieces.	Identifies and corrects the orientation of familiar objects and symbols. Explains the location of an object in relation to another object. Assembles a puzzle without using a guide.	Identifies 2D and 3D shapes regardless of orientation. Makes simple maps or models to represent the location of objects. Creates complex shapes by putting together or taking apart other shapes.	Matches 2D to 3D shapes. Recognizes symmetry. Gives and follows positional instructions to find objects. Builds complex shapes from simpler shapes. Splits shapes into four equal parts.	Determines when shapes have been rotated or flipped. Uses representations, coordinate systems and maps. Separates a shape into halves, thirds and fourths.
MR 3	**Shapes**	Identifies shapes and their characteristics.	Manipulates objects that are a variety of shapes.	Matches two identical shapes.	Identifies a few basic shapes.	Identifies four to six basic geometric shapes.	Describes basic and complex two- and three-dimensional shapes using own words.	Describes objects in the environment as two- and three-dimensional shapes.	Describes and draws defining features of shapes.	Identifies and draws complex shapes.
MR 4	**Measurement**	Estimates, measures and compares size, weight, length or volume.	Recognizes when to use whole hand or just two fingers to pick up an object.	Explores size and weight of objects in relation to self.	Determines which object is bigger (heavier, longer) when given two objects.	Uses nonstandard measurement tools to estimate approximate size or volume. Verifies estimation with help.	Estimates (not always logically) size and volume. Measures and describes findings.	Makes logical estimates and uses measurement tools to check estimation.	Explains which measurement tool makes the best sense for the object being measured. Tells time in hours and half-hours.	Tells time. Estimates length in inches, feet, centimeters or meters. Measures an object using a variety of measurement standards.
MR 5	**Patterns**	Identifies, reproduces and creates patterns.	Plays predictable activities with caregivers such as pat-a-cake and peekaboo.	Attempts to mimic vocal and physical patterns.	Copies patterns with two steps, such as red-blue, red-blue.	Creates and extends two-step patterns.	Creates and extends three- and four-step patterns and plays complex memory games.	Determines the missing piece of a pattern within a set sequence. Recognizes simple patterns in the environment.	Creates or extends increasing or decreasing patterns.	Develops and explains his/her own formula for creating a variety of patterns.
MR 6	**Classification**	Matches and sorts.	Recognizes familiar people and objects. Recognizes self as being separate from others.	When shown one object, finds the match. Identifies and names familiar people, characters and animals.	Sort objects by one feature, such as size or color. Groups objects by common characteristics.	After sorting objects by one feature, sorts again by a different feature.	Sorts objects by more than one feature and explains why.	Identifies, sorts and classifies objects by at least two features.	Answers questions about data or objects sorted in up to three categories.	Uses graphs and charts to represent data sorted in up to four categories.
MR 7	**Logic & Reasoning**	Uses logic to solve problems.	Reacts to a problem and seeks a desired outcome.	Experiments with cause and effect.	Recognizes a problem and asks for help.	Tries out many possible solutions to a problem.	Uses previous knowledge to determine which solution to try first when solving a problem.	Mentally eliminates possible solutions to a problem by thinking through their potential results.	Explains the sequence of his or her problem-solving strategy.	Solves hypothetical problems by connecting personal experiences to possible solutions.
Science										
SCI 1	**Investigation & Inquiry**	Observes, inquires and investigates objects and events to gain understanding.	Looks for a person or toy that has moved out of sight. Reacts to changes.	Asks one- to two-word questions. Uses senses to explore environment.	Identifies personal interests and seeks more information. Investigates an object or group of objects in multiple ways. Shares discoveries with others.	Observes and describes changes that occur to familiar objects and people. When given a question, guesses a possible answer or outcome. Uses past knowledge to explain observed changes.	Asks questions or shows curiosity about scientific phenomenon. Predicts a few outcomes. Explores and records observations by drawing. Describes and compares observations.	Predicts multiple outcomes to a question or situation and explains personal reasoning. Gathers information or experiments to prove/disprove a hypothesis.	Inquires about a phenomenon, makes a prediction based on prior knowledge and gathered information. Records findings in charts or diagrams. Explains his/her problem-solving strategy.	Asks questions and makes hypotheses about scientific phenomena or hypothetical problems. Conducts an experiment multiple times, records observations and evaluates information to explain a phenomenon.
SCI 2	**Natural & Earth Science**	Understands living and nonliving things, their characteristics and how they change.	Explores immediate environment using senses. Reacts to weather changes in immediate environment.	Plays with rocks, sand, dirt or water. Reacts to animals or insects in immediate environment. Understands hot and cold. Points at clouds and explores the feel of rain and wind.	Identifies familiar animals, plants or rocks in immediate environment. Groups living things by common characteristics. Notices changes in temperature or weather.	Demonstrates an understanding that all people have needs. Identifies if an object can grow, eat or move. Identifies the climate and weather in the immediate environment.	Recognizes that all living things have similar basic needs. Sorts organisms as living or nonliving and explains why. Identifies current season and explains how weather affects personal life.	Describes how living things obtain what they need to survive. Groups living things by similar features. Explains that different places have disparate kinds of weather and climates.	Describes how an organism's features and surroundings help it survive. Explains weather patterns and the basic properties and role of the sun, moon and earth.	Describes threats that living things must overcome to survive. Explains the relationships between a variety of species. Describes how the sun and movements of the earth affect climate.
SCI 3	**Physical Science**	Explores forces, motion and materials and how they change.	Uses senses to explore objects in immediate environment. Kicks feet or shakes arms to make other objects move.	Reacts to changes in texture, smell, sound or sight. Uses body to push or pull toys.	Explores motion by moving, rolling, blowing on or dropping a toy.	Explains how common vehicles, animals and people move. Sorts objects by type of movement. Describes basic physical properties of objects and materials in immediate environment.	Experiments with and explains invisible forces, e.g., ramps, magnets. Manipulates matter and observes any physical changes that may occur.	Experiments and compares the movements of various objects on a variety of surfaces. Classifies and sorts materials by a variety of physical properties.	Recognizes that gravity makes unsupported objects fall. Identifies objects that are attracted to magnets. Identifies materials that are solid, liquid and gas.	Recognizes that materials move differently on different surfaces. Explains how force is used to change the direction of moving objects.
SCI 4	**Technology**	Explores technology and how things work.	Explores simple tools such as toys and spoons.	Begins to use simple tools purposefully, such as using a spoon to feed self.	Explores movable parts on toys and tools. Uses on and off switches.	Explores simple machines and interacts with simple electronic and screen toys.	Experiments with simple technology to solve problems or accomplish tasks.	Uses familiar tools and technology to produce a desired result or solve a specific problem.	Experiments with familiar and unfamiliar tools and technology to achieve a variety of results.	Identifies which tools can best help save time, solve a problem or increase enjoyment.
Social Studies										
SS 1	**Culture & Community**	Explores communities and families, culture and traditions.	Recognizes family members and is exposed to family traditions or cultural events.	With help, participates in family traditions and customs.	Recognizes familiar symbols or artifacts of family traditions or customs. Identifies differences between self and others.	Describes the routines, familiar stories, traditions, foods and celebrations of own family and community. Describes family and community members, their roles and their relationship to self.	Explains the meaning and importance of own traditions and customs. Begins to learn about other cultures. Identifies roles and responsibilities of self and others to contribute to the community.	Explains the meaning and importance of traditions and customs of other people. Explains how individuals, families and cultures differ. Compares roles, rules and responsibilities of different groups.	Compares diverse cultures and traditions. Understands that some people have different needs or beliefs.	Names influential people and events that have impacted familiar cultures and traditions. Demonstrates respect for people who may look or act differently.
SS 2	**Civics & Economics**	Follows familiar rules, routines and helps make group decisions. Explores the concept of trade. Identifies ownership of items.	Attends to others in immediate environment. Grasps and releases objects.	Participates in communal activities. Expresses a desire for an object or action. Says me, mine.	Recognizes and attends to authority figures. Recognizes ownership of familiar objects.	Follows familiar rules and helps make group decisions. Asks before taking an object that does not belong to self. Offers a toy or object to another person.	Applies familiar rules and suggests new rules in a variety of situations. Explores the use of trade to receive objects or services.	Discusses the purposes of rules, laws and civic leaders. Participates in voting to make decisions. Exchanges money, goods or services for other goods or services.	Identifies individual rights. Determines if rules support the common good. Describes ways one might use money, goods or services.	Describes different levels of government, e.g., local, state, national. Makes democratic decisions. Explains how and why people work together in trade to get what they need and want.
SS 3	**Geography**	Identifies types of places and interacts with maps.	Responds to changes in the immediate environment. Navigates within a familiar environment.	Recognizes familiar places. Finds ways to move around obstacles in a familiar environment.	Identifies a variety of familiar places, such as the store, car, home or Grandma's. Follows a path.	Identifies different types of water bodies, streets, buildings and landmarks in own community. Recognizes symbols and landmarks.	Explains the purpose for different types of structures, such as bridges and buildings. Asks questions about landmarks. Identifies what is represented on a map. Draws pictures of current location.	Compares the geographic features of own community to another community. Recreates a map of something s/he cannot immediately see.	Identifies and describes various types of landforms and natural resources. Locates familiar places on maps. Uses cardinal directions to follow and give directions.	Explains how the physical features and characteristics of an environment affect how people live. Uses a variety of maps to gather information.
SS 4	**History & Sense of Time**	Develops sense of time.	Focuses on interactions with others for a short time.	Observes events and begins to participate.	Describes events as they happen. Uses words such as first, then.	Recalls information and events from the past.	Uses language of time to describe familiar sequences of events.	Retells historical, fictional or past events or stories.	Compares and contrasts current and historical conditions of familiar environments.	Describes relationships between past events and current conditions. Explains why it is important to understand historical events.
Creative Arts										
CA 1	**Music**	Expresses through music and develops rhythm and tone.	Responds to sounds. Makes sounds to communicate feelings.	Responds to changes in sound, rhythm, volume or melody. Repeats words in familiar songs and attempts to sing.	Claps to beat (not always consistently). Understands difference of singing and speaking voices. Expresses likes and dislikes of familiar songs. Explores shaking, pounding and tapping various instruments.	Claps along to simple rhythm patterns. Controls voice to mimic the melodic direction. Uses voice, common objects or instruments to create music. Identifies self as a musician.	Repeats simple rhythm patterns. Hears the change of musical phrases in a song. Sings along to familiar songs. Uses voice or instruments to express feelings or to mimic sound effects.	Creates simple rhythm patterns. Controls pitch when singing a familiar song. Communicates ideas by creating rhythm and/or melody.	Maintains a steady beat. Recognizes strong/weak beats. Begins to read rhythm notation. Matches vocal pitch in limited range. Interprets and compares many types of music.	Maintains rhythm in various meter groupings. Participates in call-and-response and two-part rounds. Experiments and performs self-written music or rhythmic patterns.
CA 2	**Dance & Movement**	Expresses through dance and develops movement techniques.	Moves body in a variety of ways. Uses body language to express feelings.	Moves body purposely. Sways or bounces to music. Uses purposeful gestures and body language to communicate.	Follows the movements of others. Explores personal space and direction. Moves in own way to music and rhythm.	Describes and demonstrates multiple ways to move body parts. Moves to the beat. Demonstrates different levels of energy in dance, e.g., gentle versus explosive or small versus large movements.	Follows a leader to perform a simple movement pattern. Demonstrates the difference between spontaneous and planned movement. Creates movements based on own ideas.	Recalls a simple movement pattern and performs it individually or in a group. Expresses ideas, feelings and stories through creative movement.	Recalls and dances a sequence of two or three movement patterns. Identifies the beginning, middle and end of a dance.	Creates simple movement sequences. Describes how dances and movements express certain ideas or feelings.
CA 3	**Visual Arts**	Expresses through 2D and 3D visual art. Develops artistic techniques.	Explores materials using gross motor movements and senses. Expresses emotions while exploring materials.	Uses hands and feet to explore a variety of media. Scribbles, colors or paints intentionally on paper.	Explores a variety of artistic tools and media. Uses materials to create shapes and symbols.	Chooses an object or art tool to use with a given medium for a desired effect. Makes choices throughout the artistic process.	Uses artistic tools and media to create intentional designs or images. Plans, designs and seeks materials to make a creation.	Demonstrates a variety of techniques using a given tool or medium. Creates arts to represent an idea or object. Explains how it was made.	Uses various tools and techniques to achieve desired artistic results. Creates art to express ideas, thoughts and feelings.	Compares artistic techniques and creations of many artists. Creates art and explains why and how s/he chose specific materials and techniques.
CA 4	**Drama**	Participates in dramatic and symbolic play. Uses props to represent other objects or ideas.	Imitates simple movements and facial expressions. Responds to props or puppets.	Mimics observed behaviors and words. Mimics the use of familiar objects.	Uses words, actions and props to pretend. Uses realistic toys as replacements for real objects. Distinguishes between real and pretend.	Plays a role in group dramatic play. Uses an object as a replacement for a realistic prop or real object.	Assigns roles and plays out unscripted scenes in dramatic play. Uses a combination of real and imaginary props or characters to play out a scene.	With cues, performs a simple preplanned drama. Creates a setting, characters and events to tell a story.	Plans a story and seeks out props to enhance a role or highlight details. Integrates emotion into performance.	Rehearses, memorizes and performs a short play. Plans a story and creates costumes, settings or props to create a mood or environment.

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