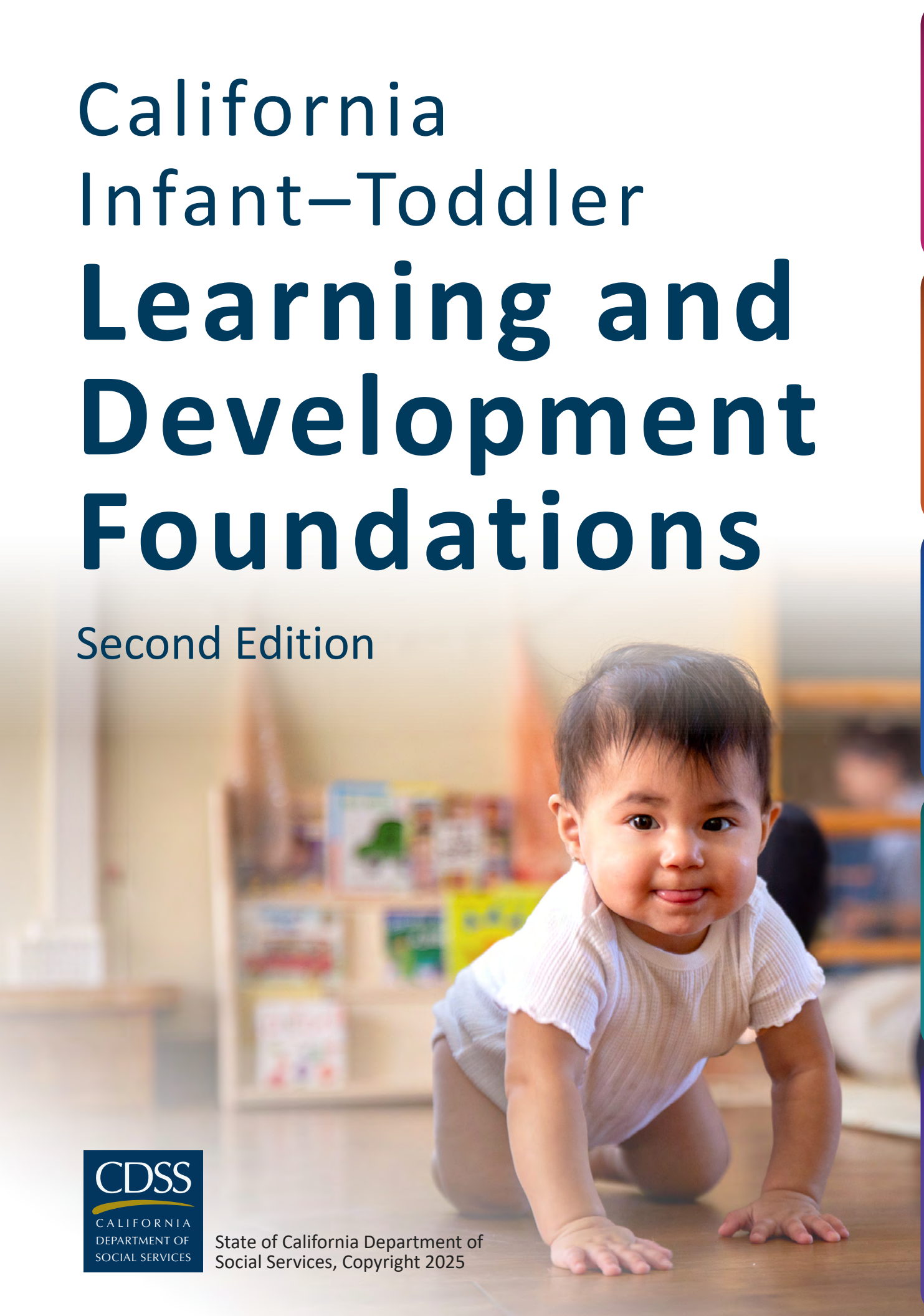
California Infant–Toddler Learning and Development Foundations

Second Edition



CDSS CALIFORNIA DEPARTMENT OF SOCIAL SERVICES

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Publishing Information

California Infant–Toddler Learning and Development Foundations, Second Edition, was developed by WestEd, San Francisco, for the California Department of Social Services. See the Acknowledgments for the names of those who made significant contributions to this document.

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It was published by the California Department of Social Services, 744 P Street, Sacramento CA 95814. It is distributed under the provisions of the Library Distribution Act and Government Code Section 11096.

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A Message From the California Department of Social Services

The California Department of Social Services (CDSS) is pleased to present the second edition of the *California Infant–Toddler Learning and Development Foundations*.

The earliest years of life are critically important to children's lifelong well-being and success. Young children develop in the context of responsive interactions with their families and trusted caregivers. A majority of California's infants and toddlers are cared for by infant–toddler care educators in family child care homes; in child care programs; or by relatives, friends, or neighbors. The *California Infant–Toddler Learning and Development Foundations* represents part of the comprehensive effort by the CDSS to strengthen young children's learning and development through high-quality early learning and care.

This second edition emphasizes how each child develops at their own pace and within their own unique set of circumstances in the context of their family and community. To provide individualized, relationship-based care to infants and toddlers, care educators partner with families in authentic and meaningful ways.

The *California Infant–Toddler Learning and Development Foundations* describe the learning and development of infants and toddlers during the birth to 3 age period in five domains that contribute to their overall school readiness: Social and Emotional Development, Approaches to Learning, Language Development, Cognitive Development, and Perceptual and Motor Development. Approaches to Learning is a new domain and is based on recent research highlighting the importance of capacities that support learning in any domain, including curiosity and initiative, collaborative effort, and executive functions. Still, especially in these earliest years of life, learning and development for young children are an integrated experience.

Overall, it is our hope that this edition will offer guideposts to care educators and families as they support infants' and toddlers' learning and development. The support they provide will set our youngest learners on the path to lifelong well-being and success.

Lupe Jaime-Mileham

Lupe Jaime-Mileham, Ed.D.
Deputy Director
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Acknowledgments

The development of the *California Infant–Toddler Learning and Development Foundations* (ITLDF) involved many people. The following groups contributed: (a) project leaders, (b) lead writers, (c) subject matter experts, (d) the team from the California Department of Social Services (CDSS), (e) early childhood interested parties and constituencies, (f) educator focus groups, and (g) WestEd project and quality assurance staff.

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The Child Care and Development Division and the Community Care Licensing Division.

Special Thanks

Early Childhood Interested Constituencies

Many statewide organizations provided perspectives in focus groups that informed the development of the *California ITLDF*:

California Association for the Education of Young Children
California Autism Professional Training and Information Network
California Child Care Coordinators Association
California Child Care Resource and Referral Network
California Commission on Teacher Credentialing
California Community Colleges Chancellor's Office
California Department of Developmental Services
California Division for Early Childhood, Council for Exceptional Children
California Early Childhood Mentor Program
California Early Education Training and Technical Assistance
California Head Start State Collaboration Office
California Preschool Instructional Network
California State University Chancellor's Office
California State University Early Childhood Special Education Credentialing
Child Care Resource Center
Children's Council of San Francisco
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Learning Policy Institute
Parent Voices California
PEACH (Partnerships for Education, Articulation, and Coordination Through Higher Education)
Program for Infant Toddler Care
Sacramento Black Child Development
Supporting Inclusive Early Learning
Tribal Child Care Association of California
UCLA Infant Development Program
ZERO TO THREE

Educator Focus Groups

Special thanks is also extended to the 91 early educators and practitioners who provided invaluable feedback that informed the development of the *California ITLDF*.

Infant and Toddler Photographs

Thank you to the families and the following infant and toddler programs who allowed us to take the photographs used in this publication:

Alameda Family Services-Angela Aguilar Child Care Center
Anna Bing Arnold Children's Center
Best Beginnings Family Home Day Care
Cuesta College Children's Center
Educare California Silicon Valley
Family F.O.C.U.S. Infant/Toddler Center
Fremont Unified School District, Parent Involvement Project
Katina Young, The Little's Daycare
Luv Muffins Preschool & Childcare
ME Playschool
Melo y Reyes Family Child Care
Michy's Reggio Family Childcare
Natural Foundations Preschool
North Bay Children's Center
Ready Play & Learn Child Care
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Introduction to the Infant–Toddler Learning and Development Foundations

The California Infant–Toddler Learning and Development Foundations (ITLDF) represent part of the comprehensive effort by the California Department of Social Services (CDSS) to strengthen young children's learning and development through high-quality early care and education. The foundations describe the development of **infants and toddlers** during the birth to 3 age period. To make optimal developmental progress, young children need responsive, emotionally secure relationships with both family members and **infant–toddler care educators** (care educators). These relationships can facilitate young children's attainment of the knowledge and skills specified in the foundations. Infants and toddlers thrive in emotionally and physically safe **environments** that promote active, playful exploration and experimentation.

Infants' and toddlers' first experience in caring relationships is with their families or a trusted **caregiver**. In providing relationship-based care for infants and toddlers in centers and home-based care, care educators develop authentic partnerships with children's families. These partnerships facilitate connecting children's experiences with their families to their experiences in the infant–toddler care setting and form the cornerstone of culturally responsive care. Experiences that connect with children's **culture** and language are essential for their social and emotional well-being and the development of their self-awareness and social awareness, communication, and learning. To provide **responsive interactions** for each child and appropriate, individual support for each child's healthy progress along the developmental pathways described by the ITLDF, infant–toddler **early learning and care settings** must work together with the children's families.

Who are caregivers and infant–toddler care educators?

The term *caregiver* refers to the person responsible for the care, well-being, safety, and education of a child. A *caregiver* might be a relative, such as an immediate or extended family member, who takes care of the child in the **child's home** or the caregiver's home. A caregiver might also be an *infant–toddler care educator*, a person who provides early learning experiences to support young children's learning and development in a home-based, center-based, or community-based care environment. The terms *caregiver, infant–toddler care educator*, and **care educator** are used in this document.

The ITLDF are designed to align with the California Preschool/Transitional Kindergarten Learning Foundations (PTKLF) in five major domains:

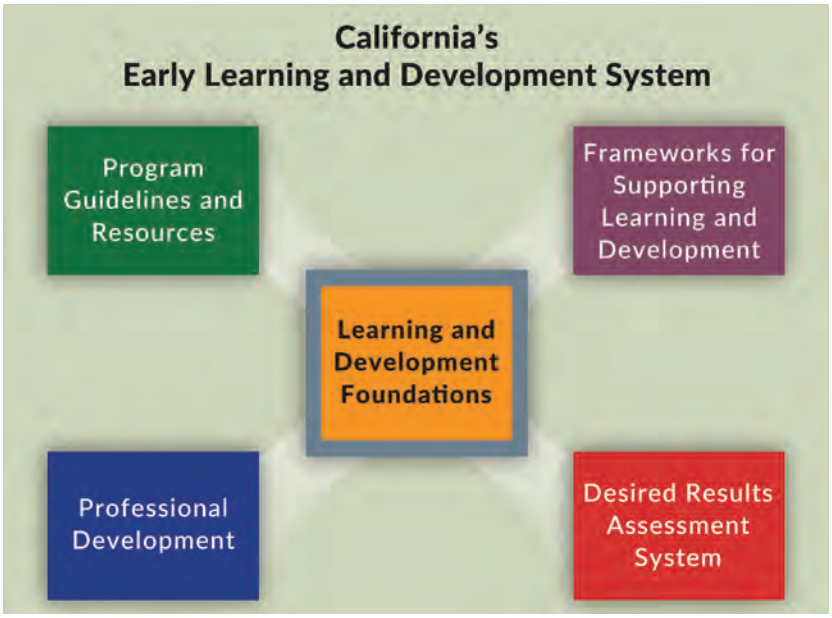
- Social and Emotional Development
- Approaches to Learning
- Language Development
- Cognitive Development
- Perceptual and Motor Development

When taking an in-depth look at each domain, one needs to keep in mind that learning for young children is an integrated experience. Within this understanding, each domain represents an important area of early learning and development that contributes to young children's readiness for school (Darling-Hammond et al., 2020; Osher et al., 2020; Science of Learning & Development [SoLD] Alliance, 2020). The foundations present key concepts and skills in each domain. Taken together, they provide an overview of development. Infants and toddlers can be considered from the perspective of one domain, such as social and emotional development or language development, while other perspectives also apply at the same time. For example, an infant may make a cognitive discovery about **cause and effect** while making the connection that a cry leads to a comforting response from a caregiver. This discovery also strengthens the infant's sense of security and contributes to a strong child–caregiver relationship, which is at the heart of the child's social and emotional development.

Recent research by Bosseler et al. (2024) deepens the field's understanding of the interrelated connections between the different domains early in life. Their study of the effect of social interactions on infants' future language growth

indicated that face-to-face verbal interactions at 5 months activate both attention and sensorimotor brain areas. Bosseler et al. hypothesize that caregivers' animated faces, use of **child-directed speech**, and contingent responses (responses that connect with the child's communication) contribute to language development. They conclude that social interactions may contribute to key areas of development, including children's later language and social, emotional, and cognitive development.

While learning is integrated, the ITLDF identify key developments in each of the five domains based on research and best practice. Examples that illustrate the foundations come directly from infant and toddler care practice. The purpose of the foundations and examples is to promote understanding of early learning and development. The foundations also provide general guidance for supporting the development and well-being of infants and toddlers. That support will vary as development unfolds in unique ways for each individual child.



The ITLDF are at the center of California's effort to promote early learning and development. This effort includes professional development, assessment, and resources that define program quality and early educator competencies aligned to the ITLDF. The goal of professional development is to help care educators learn how best to support the learning and development of young children as described in the ITLDF. California's Desired Results Developmental Profile (DRDP) assesses young children's progress in developing and learning foundational knowledge and skills. Three important sets of aligned resources—California's frameworks, guidelines for center- and home-based care, and competencies for care educators—describe how overall quality and competent care and education provide young children with responsive, relationship-based care and learning experiences.

At the heart of well-supported early learning and development are **responsive relationships** with caregivers. The learning and development described in the ITLDF unfolds most effectively when caregivers are responsive to the interests, needs, and lived experiences of infants and toddlers. The ITLDF is the resource in the Early Learning and Development System that mainly focuses on children's learning and development. Based on the understanding that responsive caregivers are fundamentally important, the System's other resources emphasize supporting the development of caregivers, particularly care educators. The ITLDF explore in depth the learning and development caregivers promote through responsive relationships and examine factors that they need to consider in nurturing infants and toddlers.

The first step in creating the ITLDF was to fully consider infants' and toddlers' experiences in relationships. Their relationships are influenced by the contexts in which they develop, which includes their lived experiences, cultures, racial-ethnic backgrounds, languages, individual strengths, temperaments, and diverse needs. In this introduction, the relational context for their development and learning will be examined before presenting principles that guided the creation of the ITLDF. Just as important, though research defines general trajectories for early development, each infant follows a unique path that reflects a combination of their genes, **temperament tendencies**, and lived experiences. The ITLDF identify the learning and development caregivers can intentionally support through understanding each child as an individual who is developing at their own pace and within their own unique set of circumstances.

A Collaborative Development Process

Domain-specific subject matter experts, including those with expertise in equitable approaches to early learning and care along with culturally and linguistically responsive practices, contributed as advisors in the development of the ITLDF. They also reviewed drafts with a focus on representation and inclusion of children who are multilingual, children with disabilities, and children from culturally diverse backgrounds, including Black and African American children and children from Tribes and tribal communities. Key constituencies and practitioners that reflect the diversity of children and families in California participated in focus groups. Early in the process, they provided input on how to revise the first edition of the ITLDF. They also provided feedback on working drafts of this second edition of the ITLDF.

The Context for Early Learning and Development

Social and Environmental Factors

Young children's development is influenced by social and environmental factors, including lived experiences, cultures, racial-ethnic backgrounds, languages, individual strengths, temperaments, and diverse needs. Children's experiences in the world are often shaped by interconnected **social determinants** (for example, economic stability, educational access and quality, health care access and quality, neighborhood and built environment, and social and community context) (World Health Organization, n.d.). Social determinants can create high-quality learning opportunities and experiences or lead to inequitable ones that are underresourced or do not accommodate children's unique strengths and needs. For example, racism leads to some groups having higher status, greater power, more privilege, and more educational opportunities, while others have less power and privilege and fewer opportunities and resources. Another example is disability, which leads to inequities when sensory, physical, cognitive, or social learning differences require additional supports that are not provided. Disability can also lead to negative stereotypes, prejudice, and discrimination that limit access to equitable learning opportunities in inclusive environments.

To provide equitable learning opportunities for all children, early learning and care should actively and intentionally focus on diversity and inclusion and work to rectify inequitable policies, practices, and distribution of resources, such as exclusionary discipline or discontinuity of care (California Department of Education [CDE], 2022; Cosse, et al., 2018). As stated in the National Association for the Education of Young Children (NAEYC) position statement on advancing equity, "All children have the right to equitable learning opportunities that help them achieve their full potential as engaged learners and valued members of society" (NAEYC, 2019, p. 1). Unlike equality, which means everyone is treated the same, equity means everyone receives the support they need to develop well and participate fully with others.

Family and Community History

The experiences of children and their families in early learning and care settings are impacted by the historical treatment of their communities. **Systemic oppression** and experiences of injustice have adversely affected communities, families, and their children for generations and have led to **intergenerational trauma** (Administration for Children & Families, n.d.; CDE, 2022). The intergenerational experience of racism has resulted in an opportunity gap and biased discipline that leads to disproportionate rates of expulsion and suspension of boys of color (CDE, 2022; Meek et al., 2020). Generation after generation, families of color have been vulnerable to the adversity of racism and work to respond with their strength and **resilience**. For many Black and African American families, building on cultural strengths or core **protective factors** is critically important in understanding and supporting children's development and well-being (Lloyd et al., 2022).

Tribes and tribal communities have experienced injustice over centuries that continues today. Historically, these communities have been impacted by state and federal family separation policies and practices. Children were removed from their homes and tribal communities and not allowed to speak the **traditional languages** of their homes and communities or engage in meaningful cultural practices. These factors and others have resulted in historical and current adverse conditions that have led to intergenerational and historical **trauma** (Administration for Children & Families, n.d.). Throughout this experience, Tribes and tribal communities have depended on rich cultural values and practices to strengthen the development and well-being of children and families (Wesner et al., 2022).

Children whose families have been forced to resettle in the United States as a result of violence and unrest in their home countries and continents, such as immigrants or refugees from the Middle East/North Africa, Eastern Europe, Central America, and Southeast Asia, experience many threats to their well-being, including poverty, discrimination, **malnutrition**, emotional vulnerability, and personal and family mental health conditions (Bouza, et al., 2018; Murray, 2019; Scharf et al., 2021). These disruptive experiences faced by families and communities contribute to trauma. For example, immigration enforcement policies that lead to forced family separations have negatively impacted the health, sense of security, and overall well-being of children from immigrant communities (Finno-Velasquez et al., 2018). Like Black and African American communities and Tribes and tribal communities, immigrant families use cultural strengths to promote the development and well-being of children and families (Brown, 2015).

Care educators must "ensure that all children see themselves and...others within and beyond their community, positively reflected in the design and implementation of pedagogy, curriculum, learning environment, interactions, and **materials**" (NAEYC, 2019, p. 7). Young children need to see their daily experiences and those of others reflected in their early learning and care settings. It is essential that early development is understood within this perspective. When care educators "celebrate diversity by acknowledging similarities and differences and provide perspectives that recognize beauty and value across differences" (NAEYC, 2019, p. 7), all infants and toddlers can thrive. Embracing the strengths of children and families while providing warm, caring, and responsive interactions is essential for the well-being and healthy development of children, especially those who have experienced stress and trauma, including intergenerational trauma. Supportive, loving environments where children feel appreciated for who they are and feel emotionally and physically safe and secure help them cope with stress and build resilience. To provide this kind of nurturance, care educators need to have their well-being supported. As part of this support, time for self-care and the availability of mental health consultation are essential, especially when care educators are caring for children who have experienced trauma (CDE, 2019).

The Essential Role of Family and Culture

Relationships with caregivers are crucially important in infants' and toddlers' development, in both the home and early learning and care settings. The social and environmental contexts where those relationships unfold also have a powerful impact. Cultural values and beliefs inform caregiving practices, which, in turn, influence children's development. For example, research suggests that families' cultural values and home practices can influence the development of their children's approaches to learning skills, including children's **initiative** and how they show curiosity (Bustamante & Hindman, 2020).

The lived experiences of children influence how they engage in social interactions and develop relationships. Families have their own ways of interacting with children and carrying out care **routines**. The lived experience of each family is unique. Because families differ from each other, including how they understand and practice their culture, each family and child who enters early learning and care settings differs from every other child and family. In other words, two children from the same culture will differ from each other. Only through communicating with each child's family can care educators begin to understand and support each child's unique development (Lang et al., 2016).

Practicing ongoing self-reflection creates the opportunity for care educators to uncover preferences, biases, beliefs, and expectations that may shape their own views on caregiving practices. Awareness of their own perspectives helps care educators effectively partner with families to learn how to support children on different developmental paths in a way that is responsive to each child's strengths, interests, and needs. Establishing authentic **family partnerships** based on trust, mutual respect, and back-and-forth communication promotes continuity between the home and the early learning and care setting (Cook et al., 2024). These partnerships create a welcoming **environment** that children can easily connect with, which strengthens their **sense of belonging** and joy of learning.

Creating safe, emotionally secure, and welcoming spaces for children and their families also includes understanding potential sources of stress and trauma that may affect children's development. Sources of stress or trauma may include, but are not limited to, poverty, food and housing insecurity, domestic violence, gender-based violence, neglect, racism, immigration, and forced migration, as well as family separations and death or illness of a parent or family member. Implementing healing practices for children, families, and care educators can act as a buffer against the potential effects of adverse experiences (Bartlett, 2021). Information on these healing practices, which includes mental health consultation and self-care for care educators to help them better support children and families, can be found in *Trauma and Young Children: Teaching Strategies to Support and Empower*, a publication from the National Association for the Education of Young Children (Erdman et al., 2020).

The ITLDF highlight diverse ways in which infants and toddlers make meaning of their experiences in the context of their families' cultural beliefs, values, and practices as they learn and develop. The ITLDF also explore how learning experiences with care educators can build on children's prior knowledge and experiences. Examples throughout the domains recognize and value the broad range of ways children of diverse racial-ethnic backgrounds, abilities, cultures, and languages might demonstrate their developing skills and knowledge. In addition, some examples identify specific cultural practices and experiences that children draw on to make meaning as they are learning. Although great care has been taken to represent children's backgrounds and experiences, the foundations are only a sampling of the rich diversity of young children's cultures, languages, and varied developmental pathways.

The ITLDF inform how care educators can responsively engage with the children, families, and communities they serve. In practice, care educators need to build a shared understanding through relationships with families based on two-way communication to create culturally responsive and affirming early learning experiences for infants and toddlers. For children and families who have experienced trauma, trauma-informed care can provide additional support for culturally responsive and affirming early learning experiences (Erdman et al., 2020; Nicholson et al., 2023).

Individual Differences

Different experiences within the family and the community contribute greatly to the uniqueness of each child. Within a family, the timing and intensity of experiences may differ between siblings. In addition, children differ in their temperament tendencies, which develop through the interaction between a child's biological makeup and their experience within the family and community. Research shows that the impact of a responsive relationship varies from child to child (Belsky, 2013). While every child benefits from an emotionally secure, responsive relationship, some benefit more than others. In addition, the absence of an emotionally secure relationship affects all children, some more than others (National Scientific Council on the Developing Child [NSCDC], 2015). For all children, a responsive relationship is important for learning and development.

A one-size-fits-all approach to supporting early learning and development will not meet the needs of all children (NSCDC, 2024). Within a responsive relationship, care educators need to adapt to each unique infant or toddler. A general developmental approach to early learning and care must have built-in flexibility to support and engage each child's individual strengths, interests, and needs.

Every child brings their own distinct perspective into the early learning and care setting, which is a reflection of the amazing diversity of how children experience and express their learning and development. Each child enriches our understanding of human potential. Care educators have the incredible opportunity to nurture every child's learning and development by creating a supportive and inclusive environment that values and encourages each child's approach to learning and development. In certain situations, some children may have diverse abilities that could benefit from personalized supports as they develop and learn. In supporting the individual strengths and needs of each child, care educators often benefit from working with other professionals such as coaches, consultants, or specialists who may be supporting a child and family. Partnering with these professionals can help care educators understand a child's strengths, needs, and background through supporting recognition of and reflection on the strengths, needs, and backgrounds that care educators bring to nurturing infants and toddlers.

Reflective of differences among children, the ITLDF are broad descriptions of development written to allow for **variability** in children's development. The ITLDF intend to illustrate the learning and development of all children. The indicators and accompanying examples are inclusive of children's diverse experiences in their family and communities, recognizing variability in children's lived experiences, cultural and linguistic backgrounds, developing racial-ethnic identities, and abilities.

Early Experiences With Language

Young children from birth to 3 years old develop and learn foundational language knowledge and skills in the languages and **language varieties** of their homes, communities, and early learning and care settings. The spoken and signed languages and language varieties children experience support their development in other domains, as language is foundational for all learning. In the early learning and care setting, care educators play an essential role in early language development as they communicate and interact with infants and toddlers. Sustained experience with any language, either spoken or signed, is central to children's language development. Whether a child experiences language interactions in a spoken language like Spanish or Mandarin or a signed language like **American Sign Language (ASL)**, these interactions establish a strong foundation. In addition, care educators foster the use of the languages and language varieties children are learning at home.

Infants and toddlers who are multilingual are developing two or more languages at the same time. **Multilingual children** are developing foundational language abilities in the context of their relationships in their homes and communities. In California, approximately 60 percent of young children live in a family where a language other than English is spoken (Giang & Park, 2022). Research demonstrates that multilingualism is an asset that affords children linguistic, social, and cognitive developmental strengths and becomes a foundation for lifelong learning (August et al., 2014; Dickinson et al., 2004; Genesee, 2010, 2016; National Academies of Sciences, Engineering, and Medicine [NASEM], 2017). It is important to note that research indicates that multilingualism does not confuse children, nor does it cause or worsen any existing communication- or language-learning delays and disabilities (NASEM, 2017; Paradis et al., 2021).

Multilingual Children

In this document the term **multilingual child** refers to a child who is developing two or more languages in the context of their family, community, or early learning and care setting. The term *multilingual children* may overlap or be inclusive of other frequently used terms, such as **dual language learner** or **multilingual learner**. A *dual language learner* is a child learning a second language while continuing to develop their first language. It is often used for children ages birth to 5 years old (NASEM, 2017). *Multilingual learner* is a broad term that encompasses multilingualism for children birth through elementary and secondary education (CDE, 2020).

Meaningful language and **literacy** experiences in the earliest years of life establish a strong foundation for learning in school and beyond (Dickinson et al., 2013; NASEM, 2017). Children benefit when they can keep developing their ability to use their home language as they experience other languages in early learning and care settings. The use of a child's home language in an infant–toddler care setting contributes to continuity of care between the home and the early learning and care setting, which supports a child's sense of belonging.

In some Tribes and tribal communities, traditional languages are the focus of language revitalization efforts to strengthen ties to cultural knowledge and practices, which are a source of strength and resilience (Grenoble, 2021; Marshall & Antoine, 2023; Whalen et al., 2022). In some communities, traditional languages may be used by families in the home or with elders in the community as part of cultural events. In addition, some Tribes and tribal communities engage in language revitalization efforts and actively use the traditional language in cultural practices within early learning and care settings (Waters et al., 2024).

Communicating With Families About Language Goals and Experiences

The key to supporting all children is to provide learning experiences and environments based on an ongoing understanding of each child's interests, strengths, needs, ways of communicating, and family priorities and cultural

experiences. It is essential that care educators communicate with families to learn about which languages they use with their children and their goals for their children's language development.[1] For example, two families may share the long-term goal that their child be multilingual and make different choices for infant–toddler early learning and care. One family may share that they speak Korean at home and that they have chosen an infant–toddler care center where care educators speak English with the children. Another family may share that they speak Spanish at home with the child and that they have chosen a family child care home where the care educators primarily use Spanish with the children.

As care educators listen to and learn from families, it is important for them to share information about the benefits of multilingualism and the critical role the family plays in their child's continued development of the home language. When care educators and families share a language, they can partner to provide experiences with the home language in the home and the early learning and care setting, which will strengthen the child's overall language development. When care educators and families do not share a language, they use various strategies to facilitate communication and understanding. For example, they:

- partner with coworkers or family volunteers who speak the child's home language;
- learn a few words and phrases from the family that can be used with the child;
- use interpreters to communicate with families and gain insights into the family's goals, priorities, and care practices as well as what a child knows and is able to do (additionally, translation technology tools can be helpful); and
- partner with the child and family's community to learn more about the community, culture, and traditions.

Languages Represented in the ITLDF Examples

The ITLDF elevate children's home languages in ways that represent some of the languages spoken most frequently by families with children from ages birth to five in California: English, Spanish, Mandarin, Cantonese, Tagalog, and Vietnamese (Giang & Park, 2022). Foundations and examples also represent the use of ASL, a language used by Deaf children and families throughout California. The ITLDF also include examples that represent the use of traditional languages to promote connections to cultural knowledge in Tribes and tribal communities. Here are ways that the examples in the ITLDF include representation of home and traditional languages:

- children communicating entirely in their home language, with examples written in English, Spanish, Mandarin, Cantonese, Tagalog, and Vietnamese. Examples also reference ASL which is a visual language expressed through movements of the hands and face.

1 To learn more about how to listen to and learn from families about their language goals for their children, care educators can refer to Head Start's Gathering and Using Language Information That Families Share (Office of Head Start, 2020).

- children **code-switching**, combining their home language and the language of their early learning and care setting to communicate with caregivers and peers. Code-switching is one example of how children **translanguage**. Children translanguage when they use resources from all the languages they are developing to learn and communicate.
- children and caregivers using traditional languages from Tribes and tribal communities, with the child's communication written in the language or **language variety** of their homes or communities, making connections to communities' cultural practices.
- caregivers communicating in the child's home language when they are proficient in that language and comfortable using that language with infants and toddlers. Examples of only caregiver speech reference specific languages but are written in English. Some lead-ins to examples reference specific languages, including Spanish, Mandarin, Cantonese, Tagalog, Vietnamese, and ASL. Many lead-ins to examples of caregiver communication use just a verb, without referencing a specific language, to be inclusive of all languages.
- caregivers using key words and phrases in a child's home language that are associated with interactions, routines, or environment and materials they have identified in partnership with families, even when they do not speak the home language fluently.

Young children develop their multilingual capabilities by using their home languages and traditional languages in their learning and daily interactions with their families, community members, peers, care educators, and other caregivers. Through rich, sustained experiences with language over time, young children develop early foundations in one or more languages.

Inclusivity and Universal Design

To promote inclusivity, the foundations use **Universal Design** for Learning, an approach that offers guidelines for all children with multiple means for engagement, representation, action, and expression (Gordon, 2024). For example, in the foundation examples, the use of the terms "communicates," "responds," "shares," and "replies," in addition to the term "says," conveys respect for the diverse ways infants and toddlers communicate, make sense of things, and learn. Using these terms also ensures the inclusion of any language and any form of communication, such as spoken or signed language, finger spelling, pictures, **augmentative and alternative communication (AAC) devices**, gesturing, or eye gaze. The terms "identifies" and "indicates" or "points to" are used to represent multiple ways of referring to indicating objects, people, or events in the environment. Actions such as scribbling, modeling with different materials, pretend play, and movement are used to describe how children might demonstrate their understanding and skills in ways other than using verbal language. This inclusive approach honors and validates every child's distinct manner of engaging with people and the physical environment to learn.

How Infants and Toddlers Communicate

Infants and toddlers communicate verbally and nonverbally in varied ways, including through spoken language, sign language, augmentative and alternative communication (AAC) devices, vocalizations, gestures, gaze, and facial expressions.

Examples are also written in language that affirms every child's identity and includes both person-first language (for example, a child with autism) and identity-first language (for example, a Deaf child). As each child's capabilities and needs are unique, some children may benefit from additional supports or adjustments to learn and demonstrate skills described in the foundations, such as the following:

- accommodations (for example, limiting background noise and other distractions, using seating that is flexible, using visual cues, or providing additional learning supports by modeling or prompting);
- adaptations to materials (for example, using eating utensils that are shorter in length with wider handles); or
- modifications to ways care educators and children interact (for example, using a tablet with an app to communicate with a child and support their language learning).

When a child has an Individualized Family Service Plan (IFSP), care educators should consult and collaborate with the family and the rest of the IFSP team. This collaboration will support the outcomes included in the IFSP as part of inclusive learning experiences. Care educators can implement accommodations, adaptations, and modifications as specified in a child's IFSP.[2]

Children With Disabilities or Developmental Delays

The term, *children with disabilities or developmental delays* is used to maintain people-first language rather than identify children solely based on their disability. At the same time, the term is not meant to identify a homogenous or monolithic group (National Center on Disability and Journalism, 2021) but rather to refer to a group of children with individual disabilities and diverse strengths and needs. *Children with developmental delays* describes infants and toddlers under three years of age who may not have been identified as having a disability but are experiencing a developmental delay in areas such as cognitive, physical, communication, social and emotional, or adaptive development and need early intervention services to support their learning and development (Individuals with Disabilities Education Act, 2004). Care educators should always engage with families to discuss their preferences for talking about their children's **individual differences** and needs.

2 For more information on early intervention for infants and toddlers with disabilities in California, visit the Early Start program site (https://www.dds.ca.gov/services/early-start/).

Guiding Principles

Several guiding principles influenced the creation of the ITLDF. These principles stem both from developmental theory and research and from best practice in the infant–toddler care field.

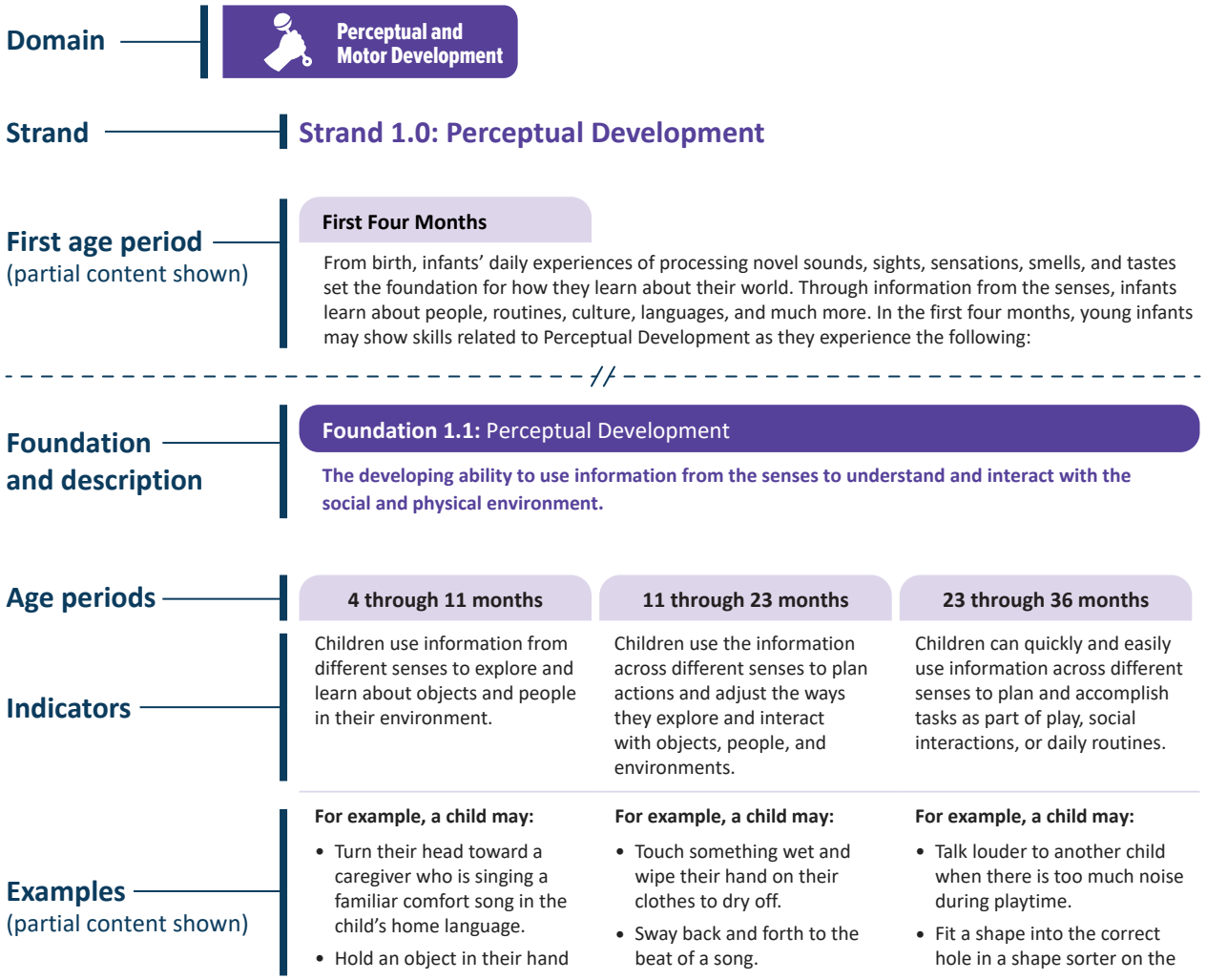
- **Infants and toddlers develop best in the context of supportive, affirming, and nurturing relationships and environments.** Infants and toddlers are competent, yet vulnerable, at every stage of development. Supportive, responsive, and consistent relationships with caregivers provide infants and toddlers with a secure base from which to explore, engage with others, and seek support when needed. In emotionally safe and secure relationships, infants and toddlers have many opportunities to follow their interests, learn how to engage and communicate effectively, make meaning, express their emotions, solve problems, and build relationships with caregivers and other children. Responsive relationships and environments help children feel emotionally and physically safe and experience security and a sense of belonging.
- **Families, their cultures, and home languages are fundamental to early learning and development.** Every child is unique, with many strengths rooted in their relationships with their families and in their communities, cultures, languages, practices, and experiences. Infants and toddlers come from a wide variety of racial-ethnic, cultural, and linguistic backgrounds and life experiences. Relationship-based, responsive, and inclusive infant–toddler early learning and care settings value, respect, and build on the backgrounds and experiences of each child. Learning experiences that authentically connect with children's cultural, racial-ethnic, and linguistic experiences in their families and communities strengthen the children's **sense of identity and belonging**.
- **Family and community partnerships create meaningful connections and support children's and families' sense of belonging.** Meaningful, authentic collaborations with families grow from authentic, respectful, reciprocal relationships in which families and care educators share responsibility for the well-being, development, and learning of children. Care educators engage families through culturally and linguistically affirming interactions. They seek to learn with and from families about each family's goals, values, and aspirations for their child. Reciprocal relationships between care educators and families build meaningful two-way collaboration and foster connections between the home and early learning and care setting that support children's learning and promote a sense of belonging for children and their families.

- **Infancy is a unique stage of life that is important in its own right.** Infants and toddlers are developing their first relationships; they are making sense of the world, people, and things that are completely new to them through active exploration and discovery; their brains are developing more rapidly than at any other time in life; and they are developing the amazing ability to communicate with language and balance and move their bodies. Infants and toddlers also develop a sense of security and safety when provided a healthy first relationship. All of this new, foundational learning and development makes infancy the unique period of life that it is.
- **Responsiveness to children's self-initiated exploration fosters learning and development.** Research shows that responsive care and nurturance promote not only the development of emotional security in children but also their learning and development in general. For example, when compared with young infants who receive nonresponsive care, young infants who receive consistent, appropriate, and prompt responses cry less often when they are older. Being responsive to **nondistress cues** from children, such as their interest in being playful, may have an impact. For example, children who experienced a high level of responsiveness to their nondistress signals at four months of age were more advanced in their language development and play at thirteen months of age than children who experienced less responsiveness (Bornstein, 2012).
- **Early learning and development are integrated.** Infants and toddlers learn in a holistic way rather than one domain at a time. They are active, curious learners who are internally motivated to use all of their abilities to explore and interact with their social and physical environments. Their motivation to learn is enhanced when their interactions with caregivers are responsive and emotionally supportive.
- **Children's home languages are an asset and establish a strong foundation for learning and development in all domains.** Learning more than one language is a strength, with broad benefits that encompass linguistic, social, and cognitive growth, including when children have an underlying intellectual or language learning delay or disability. Nurturing the home language (including in multilingual homes) builds connections with family and community, supports children's social and identity development, and sets a foundation for future success.

- **Children demonstrate varying strengths and needs in their learning and development across domains.** Each child develops in their own unique way and at their own pace. Some children may develop a particular skill early, while others may need more time to develop that skill. How children go about learning also varies from child to child. A child's individual learning path is influenced by many factors, including their temperament; racial-ethnic, cultural, and linguistic experiences; living conditions; personal strengths, interests, abilities, and dispositions; and whether they are experiencing, or have experienced, toxic stress or trauma. Responsive care educators offer learning experiences that build on each child's strengths, are meaningful, and connect with each child's diverse strengths, interests, and needs.
- **Infants and toddlers have different ways of knowing and may express their knowledge and skills across domains through various means.** Infants and toddlers may express their understanding and communicate in various ways, including vocalizations, facial expressions, and nonverbal gestures. As infants and toddlers develop, they may use their home languages or a combination of all the languages they are learning to express themselves and share meaning with others. Infants and toddlers may also use different communication modalities, such as nonverbal gestures, a picture exchange system, or an augmentative and alternative communication (AAC) device.
- **Play offers engaging, joyful opportunities for learning and development in every domain.** Through supporting infants' and toddlers' self-initiated and self-directed play and exploration, early learning and care settings provide a powerful context for engaging social interactions, **meaning making**, discovery, self-expression, problem-solving, creativity, and learning. Infant–toddler learning and care settings support children's play by providing uninterrupted time in high-quality early learning environments with a variety of choices or possibilities for child-directed play, exploration, and discovery.
- **Intentional planning enhances children's development through learning opportunities designed to be responsive to individual children's strengths, interests, experiences, and needs.** Care educators intentionally communicate with families and use observation, documentation, and reflection to build their knowledge of individual children's strengths, interests, questions, experiences, and needs. With a growing understanding of each child, care educators plan supportive approaches to interactions, predictable routines, and diverse learning and care environments that promote children's play, exploration, discovery, and meaning making.

Organization of the Learning and Development Foundations

In each of the five domains, the ITLDF are organized into strands, or themes, that identify sets of foundations centering around similar concepts and skills. Each strand begins with a section that identifies emerging skills and behaviors during the first four months (birth to 4 months) that are important for that area of learning and development. Within each strand are one or more foundations. Each foundation starts with a general statement. A second section presents indicators for each of the three overlapping age periods (4 through 11 months, 11 through 23 months, and 23 through 36 months). These indicators describe the competencies—the knowledge, skills, and behaviors—that children develop and learn during a particular age period. Children develop these competencies at different times and in different ways within their home, community, and care contexts. The indicators are intended to help care educators identify areas of early learning and development they can support. The indicators for each age period are followed by examples. The examples show how children may demonstrate a competency described by a particular indicator.



Domain, Strands, and Foundations

Social and Emotional Development Domain

The social and emotional development domain covers the following three strands and foundations:

Strand 1.0: Self. This strand includes foundations:

- **1.1 Sense of Identity and Belonging.** The developing concept of self as an individual who shares commonalities with others within social relationships.
- **1.2 Recognition of Agency.** The developing understanding that they can take action to influence the environment.
- **1.3 Expression of Emotion.** The developing ability to express a variety of feelings through facial expressions, movements, gestures, sounds, or words.
- **1.4 Regulating Emotions and Behavior.** The developing ability to manage emotional and behavioral responses, communicate feelings, and act according to social expectations, with and without assistance from a caregiver.

Strand 2.0: Social Interactions. This strand includes the following foundations:

- **2.1 Social Understanding.** The developing understanding of the intentions, responses, communication, and actions of other people.
- **2.2 Empathy.** The developing ability to share in the emotional experiences of others.
- **2.3 Interactions With Caregivers and Other People.** The developing ability to respond to and engage with caregivers and other people.
- **2.4 Interactions With Peers.** The developing ability to respond to and engage with other children.

Strand 3.0: Relationships. This strand includes the following foundations:

- **3.1 Relationships With Caregivers.** The development of close relationships with certain caregivers who provide consistent nurturance.
- **3.2 Relationships With Peers.** The development of relationships with certain peers through interactions over time.

Approaches to Learning Domain

The approaches to learning domain covers the following three strands and foundations:

Strand 1.0: Motivation to Learn. This strand includes the following foundations:

- **1.1 Curiosity and Initiative.** The developing ability of exploring the environment to learn about objects, people, and events.
- **1.2 Engagement and Perseverance.** The developing skill of engaging in activities and persisting in actions and behaviors through challenges and setbacks.

Strand 2.0: Executive Functioning. This strand includes the following foundations:

- **2.1 Attention.** The developing skill of engaging and sustaining attention in activities and interactions.
- **2.2 Inhibitory Control.** The developing skill of managing impulses and behaviors.
- **2.3 Working Memory.** The developing ability to hold information in mind (short-term memory) to use it to accomplish goals and plans.
- **2.4 Cognitive Flexibility.** The developing skill of being flexible in attention, thinking, and behavior.

Strand 3.0: Goal-Directed Learning. This strand includes the following foundations:

- **3.1 Problem-Solving.** The developing skill of using different strategies to solve a problem or get needs met.
- **3.2 Collaborative Effort.** The developing skill of working together with others to accomplish goals.

Language Development Domain

The language development domain covers the following three strands and foundations:

Strand 1.0: Attending and Understanding. This strand includes the following foundations:

- **1.1 Being Attentive to Communication.** The developing ability to be attentive to communication cues and learn language through interactions with others. This development occurs in any language, such as the child's home language or any other language that they are developing.
- **1.2 Understanding Language.** The developing ability to understand a growing number of words (oral, signed, or both) and utterances. This development occurs in any language, such as the child's home language or any other language that they are developing.

Strand 2.0: Communicating. The strand includes the following foundations:

- **2.1 Communicating and Speaking.** The developing ability to produce sounds, gestures, and words (oral and signed) and combine them. This development occurs in any language, such as the child's home language or any other language that they are developing.
- **2.2 Emerging Conversation Skills.** The developing ability to engage in back-and-forth communication. This development occurs in any language, such as the child's home language or any other language that they are developing.

Strand 3.0: Early Literacy. The strand includes the following foundations:

- **3.1 Engagement With Books, Stories, Songs, and Rhymes.** The developing understanding of how to engage with books and literacy activities. This development occurs in any language, such as the child's home language or any other language that they are developing.
- **3.2 Understanding Meaning From Books and Stories.** The developing ability to understand books and stories. This development occurs in any language, such as the child's home language or any other language that they are developing.

Cognitive Development Domain

The cognitive development domain covers the following four strands and foundations:

Strand 1.0: Exploration. The strand includes the following foundation:

- **1.1 Cause and Effect.** The developing understanding that one action brings about another.

Strand 2.0: Emergent Mathematical Thinking. This strand includes the following foundations:

- **2.1 Number Sense.** The developing understanding of number and quantity.
- **2.2 Spatial Thinking.** The developing understanding of how things move and fit in space.
- **2.3 Classification.** The developing ability to notice similarities and differences between objects or people, and to classify objects according to their characteristics.

Strand 3.0: Imitation and Symbolic Thinking. This strand includes the following foundations:

- **3.1 Imitation.** The developing ability to imitate the actions, sounds, language, or gestures of others, either immediately or later.
- **3.2 Symbolic Thinking.** The developing ability to use actions, objects, or ideas to represent other actions, objects, or ideas.

Strand 4.0: Memory. This strand includes the following foundation:

- **4.1 Memory.** The developing ability to store and later retrieve information about past experiences.

Perceptual and Motor Development Domain

The perceptual and motor development domain covers the following two strands and foundations:

Strand 1.0: Perceptual Development. This strand includes the following foundation:

1.1 Perceptual Development. The developing ability to use information from the senses to understand and interact with the social and physical environment.

Strand 2.0: Motor Development. This strand includes the following foundations:

2.1 Gross Motor Development. The developing ability to control the large muscles to move and explore.

2.2 Fine Motor Development. The developing ability to use the small muscles of their fingers and hands to explore objects and accomplish tasks.

First Four Months

During the first four months of life, infants form a close bond with the people who care for them. When caregivers respond to young infants with comfort and love, they help young infants regulate emotionally and physically. During moments of quiet alertness, young infants learn by attending to the caregiver's language and culturally based ways of communicating. As young infants notice things in the environment and movements of their bodies, they attend to patterns. Everything is connected—every experience has an emotional, social, physical, and cognitive component. When young infants feel discomfort, they cry, and a warm and caring response from their caregiver can make them feel better. Holding the infant, the caregiver may smile when the infant coos and smiles. Significant for social and emotional development, the caregiver's responses are also the infant's first experiences with cause and effect. The caregiver may also say something in response, giving the infant experience with language. The infant notices and eventually anticipates what comes next and starts to form expectations about how caregivers interact with them. The infant also explores how to make things happen when interacting with the caregiver.

As young infants develop, each waking moment is a moment of learning. Their rapidly developing brains are establishing the foundation for future learning and development in each of the domains—Social and Emotional Development, Approaches to Learning, Language Development, Cognitive Development, and Perceptual and Motor Development. Every action of young infants reflects all five domains. Yet when caregivers observe them, they may notice early signs of each domain. They can observe how each domain is starting to become distinct but remains closely connected to all of the others.

Because similar behaviors during the first four months are foundational for multiple domains of development, indicators for the first four months are presented for each strand rather than for each foundation within a strand. Moreover, within each domain, indicators in one strand will often correspond closely with indicators in other strands. Being attentive to caregivers is one example of an indicator that is similar across domains early in life.

- **Domain: Social and Emotional Development, Strand: Social Interactions**
  Infants direct their eye gaze to, make eye contact with, and track other people and objects in their field of vision.
- **Domain: Approaches to Learning, Strand: Motivation to Learn**
  Infants recognize and show comfort in response to a familiar caregiver's voice, face, or touch (for example, stops crying when hearing a soft familiar voice).
- **Domain: Language Development, Strand: Attending and Understanding**
  Infants look toward or touch the face of someone who is interacting with them.
- **Domain: Cognitive Development, Strand: Imitation and Symbolic Thinking**
  Infants imitate a caregiver's facial expressions or simple movements.
- **Domain: Perceptual and Motor Development, Strand: Perceptual Development**
  Infants track a moving face, person, or object with their eyes.

Each of the above examples suggests that some form of the behavior "being attentive to adults" is an early foundational behavior in each of the domains. As infants develop, foundational behaviors during the first four months will show increasing variation in all five developmental domains. This increasing variation is described by foundations that address children from 4 through 36 months of age.

Four Through 36 Months

Foundations show how development unfolds across three age periods, 4 through 11 months, 11 through 23 months, and 23 through 36 months. For each foundation age period, indicators describe knowledge, skills, and behaviors that show the developmental progression across the age periods. Each age-referenced indicator for each foundation is illustrated through several examples.

Indicators

The indicators for the overlapping age periods of 4 through 11 months, 11 through 23 months, and 23 through 36 months are broadly defined to be inclusive of children who are developing at different rates. The foundation statements describe knowledge, skills, and behaviors that many children will likely demonstrate during the age period. An individual child may demonstrate some foundations early in an age period, other foundations around the middle of that age period, and other foundations later. As each child is developing in their own unique way, their development will often reflect variation within domains.

It is important to note that, while variation in development is expected based on children's individual developmental journeys, if concerns arise about a particular child's development, care educators can partner with the child's family to share their observations with each other and determine whether a developmental screening is needed. It is also important for families to share these observations with the child's health care provider at their next health care visit. A developmental screening may be recommended. The screening can help families and the care educator decide whether to reach out to the California Early Start program. Early Start provides a family-friendly point of contact to find out if an infant or toddler needs additional supports or adjustments and specialized services that would be defined in an IFSP.

Examples

Infants and toddlers may demonstrate the skill, concept, or behavior described by an indicator in many diverse ways. For the three age periods that span ages 4 through 36 months, each foundation has at least four examples. The examples illustrate different ways children may demonstrate their knowledge and skills. Some examples also include how a care educator may support emerging new skills as a child progresses to the next level. The examples are intended to help care educators identify a child's development level and consider how to support their learning at their current skill level and build toward the next skill level in a foundation. Key considerations that guided the development of the examples included the following:

- Each example captures a moment in time, illustrating how a child may demonstrate the skill or understanding described in the foundation within a supportive early learning environment.
- Examples show how children may demonstrate a developing skill or knowledge as part of their everyday care routines, learning experiences, and interactions with caregivers and other children.

- Taken together, the examples for each age period are only a small sample of the countless ways that children demonstrate the knowledge, skill, or behavior that an indicator generally describes, not an exhaustive list.
- The first example for most foundations is aligned across the three age periods to illustrate how a child's development may progress from one age period to another. This approach illustrates how children's knowledge, skills, and behavior develop over time.
- Examples are written to reflect the many ways children demonstrate their learning and development while being inclusive of the many cultural and linguistic backgrounds of children and families in California. The examples are also written to reflect how children may communicate their knowledge in a range of verbal and nonverbal ways or use other ways to demonstrate what they know or can do.
- Examples suggest diverse ways in which children may demonstrate their developing skills (for example, demonstrating walking using an assistive mobility device such as an adaptive walker) in different contexts, whether indoors or outdoors, and in a range of activities and routines throughout the day.

While the examples may provide care educators with valuable ideas about what to notice and how to support children's learning and development, they are only a small subset of all the different ways children may demonstrate their knowledge and skills. To gain a more complete picture of infant–toddler learning and development, care educators can participate in professional development and coaching. They can also learn to use resources that work hand in hand with the ITLDF to understand and support infants' and toddlers' learning and development across domains.

Integrated Nature of Learning and Development

While the ITLDF are organized as separate domains, children's learning and development throughout the period of birth to 3 years is integrated across domains. Infants and toddlers often learn in more than one domain at the same time. They also use their skills and knowledge in one domain to engage in learning the skills and knowledge in other domains. For example, as they learn a language, they use it to express their emotions and make sense of things. They learn through all of their senses and competencies as they learn new things and relate new experiences to prior ones. Care educators need to be alert to the developmental assets children bring to each learning experience and support connections between what children already know and can do with new learning in other areas of development.

Using the California Infant–Toddler Learning and Development Foundations

The ITLDF identify key knowledge, skills, and behaviors most children learn during the period of birth to 3 years. The ITLDF can be used by the infant and toddler care field in California to

- understand early development and learning;
- develop a shared understanding of the ITLDF with families and learn from them the unique ways their children learn and develop;
- place responsive relationships with caregivers at the center of learning and development in all the domains;
- guide developmentally appropriate, equitable, inclusive practice, including planning interaction experiences, routines, and learning environments for promoting children's integrated learning across domains;
- select and implement curricula aligned with the ITLDF;
- design and use observational assessments aligned with the ITLDF;
- guide professional development and coaching to support understanding and effective use of the ITLDF;
- enhance birth to 3 continuity of care between home and care settings and across time; and
- inform planning and ongoing quality improvement in early learning and care settings for infants and toddlers and their families.

Connecting to What Children Know

When early care and learning experiences build on what children know and invite them to use their skills and knowledge across domains as they play and explore, they fully engage in joyful learning. Their knowledge and skill development are grounded in their cultural and linguistic assets, as care educators connect with children's cultures and languages through partnerships with their families. Collaboration leads to opportunities for care educators to learn from families and share with each other their understanding and observations of how infants and toddlers learn and develop. When families and care educators work together to create connections between children's family experiences with their experiences in early learning and care settings, children can build their confidence as active learners who can share meaning with their caregivers. Children make connections across areas of learning and practice their skills in authentic ways that set a foundation for lifelong development, learning, and well-being.

The Foundations as Guideposts

The ITLDF offer guideposts that help care educators and families identify key learning and development they can support. However, they describe only the broad outline of each child's unique developmental journey. The uniqueness stems from their lived experiences, cultures, racial-ethnic backgrounds, languages, individual strengths, temperaments, and diverse ways of learning. Care educators can use their knowledge of early learning and development as a starting point in understanding each child's unique journey. They can deepen their understanding through learning from the family and from observing the child. As a care educator comes to know a child well, they can be sensitive and responsive to how that individual is developing and how best to support their development. Building a responsive relationship based on an understanding of the unique person a child is becoming provides the most important foundation for early learning and development. Through learning in supportive, responsive relationships, infants and toddlers will joyfully engage in the amazing learning and development described in the ITLDF.

Social and Emotional Development

Infant and toddler social and emotional development occurs in the context of relationships with caregivers and is shaped by **culture**. Social and emotional development during the first three years includes infants' and toddlers' **sense of self** and **agency** to make things happen in their **environment**, their expression and regulation of emotions and behaviors, and their social interaction skills. In the early years, social development is highly integrated with emotional development as infants and toddlers navigate their world in relationships with **caregivers**, peers, and other people. Infants' and toddlers' social and emotional development is critical to their mental health and overall well-being and development.

Interactions with caregivers both inside and outside of the **home** lay the essential foundations for healthy infant and toddler social and emotional development. Right from the beginning of life, infants are forming close, essential relationships with caregivers. These relationships are fundamental for attachments as well as for the interactions that shape children's emerging social and emotional development. Infants and toddlers form **attachment relationships** with individuals who provide their primary care during the early years. Attachment relationships serve as the model for infants' and toddlers' interactions and relationships with others (Dagan & Sagi-Schwartz, 2020).

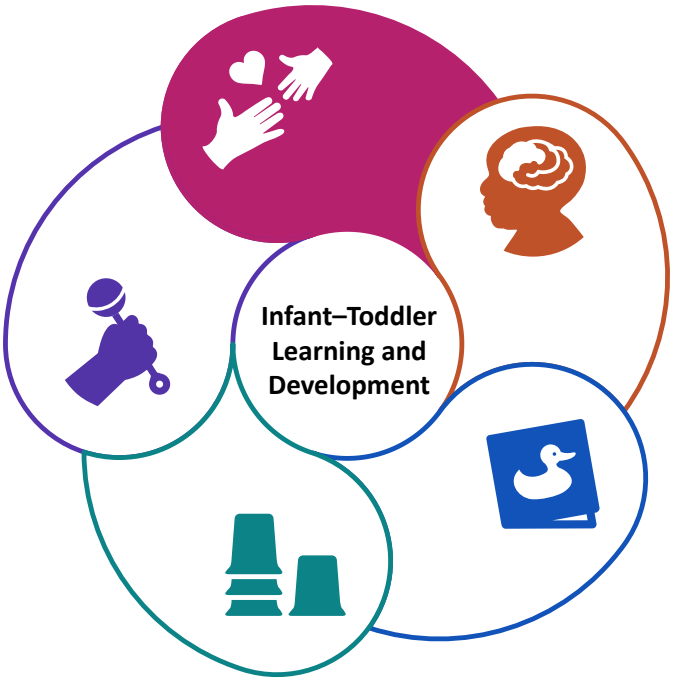
Initially, newborn behavior revolves around expressing basic bodily needs to caregivers. For example, opening their mouth to be fed or fussing when sleepy. Children's needs become more complex as their identities and relationships develop (Maslow, 1943). For example, a toddler might need additional hugs for reassurance before the caregiver leaves the **early learning and care setting** or express "no" about a certain food. In social interactions with others, infants learn from the behavior of others, primarily from caregivers, how to communicate their needs effectively, elicit desired responses from others, and express a range of emotions. As they mature, their social environment becomes more varied and what may start as an interest or curiosity flourishes into dynamic interactions with a range of people and peers and close relationships with selected people and peers.

Social and Emotional Development During the First Four Months

Infants' first few months of life is a journey of figuring out how to express themselves as well as learn about their emerging sensations, feelings, and needs. From their first cry and the first moment that their crying is soothed by a caregiver's response, infants are social and emotional beings (Rosenblum et al., 2019). The cry is just one of several ways young infants express their feelings and needs to others. These early experiences take place in interactions with caregivers that are influenced by culture.

Social and Emotional Development Is Connected to Development in Other Domains

Social and Emotional Development influences and is influenced by development in other domains, including Cognitive, Approaches to Learning (ATL), Language, and **Perceptual** and **Motor Development** (Immordino-Yang et al., 2019). Infants' brain development builds underlying capacities for social interactions and relationships. For example, **executive functions** of the brain are ATL skills that allow for regulating emotions and behavior. As children learn how to regulate themselves within the context of interactions and relationships, new brain connections develop. Cognitive development allows for children to take on others' perspectives, which is part of social understanding of others' feelings, intentions, and actions. As children develop socially and emotionally, their social interactions with others help them develop their cognitive understanding of others' perspectives. Children also learn about social interactions and behavior through the cognitive ability to **imitate** others. Infants' early development of language impacts how they express themselves; communicate their needs, feelings, and sensations; interact with others; and make sense of people and things in their world. As infants develop socially and emotionally, they experience language, which gives them the inputs they need to continue developing language. Infants' development of locomotion and motor skills impacts how they communicate and interact with others through body movements and nonverbal cues (for example, facial expressions, physical touch, pointing, motor play). Infants are motivated to use their developing motor skills to make social connections and strengthen their social relationships. Their developing emotions help them judge what kind of movements are risky.



The Context for Early Social and Emotional Development

Infant and toddler social and emotional development is grounded in relationships and culture (Vélez-Agosto et al., 2017). Within relationships, the family's beliefs, cultural values, and preferences influence the practices, experiences, and interactions they have with their children. Moreover, children grow up with a range of lived experiences. The presence and quality of relationships and the broader context shape children's social and emotional development (Li & Ramirez, 2023). In predictable, nurturing contexts with consistent, sensitive, and responsive care, children form secure attachment relationships with primary caregivers. However, children may also grow up facing early adversity and experiences of **trauma**. Understanding children's lived experience is essential for supporting their development in early learning and care settings. Depending on infants' and toddlers' relationship experiences, their culture and lived experiences in their families and communities, children's skills and trajectories of social and emotional development will vary and may require differentiated supports for their healthy development and well-being. To effectively support infants' social and emotional development, **infant–toddler care educators** (care educators) approach caring for children with a perspective of listening and learning about children's home environments. Care educators can also approach care with the understanding that social and emotional development can happen anywhere caregiver–child interactions and relationships take place.

Children who have experienced trauma may show signs of traumatic stress in their behavior, play, eating, and sleeping and in how they respond to transitions throughout the day. Care educators can seek out infant mental health resources, as needed, to recognize children's differences, appreciate their assets, and understand the factors that may activate a traumatic stress response in individual children. Care educators can support infants' and toddlers' social and emotional development as part of a trauma-informed approach by forming strong emotional connections with infants and toddlers and providing strategies to manage intense emotions and behaviors that may be challenging for care educators (Nicholson et al., 2023).[3]

Care educators can foster infants' and toddlers' developing sense of identity and belonging by creating a culturally affirming and inclusive environment. Care educators can incorporate activities and **materials** that reflect the cultures and languages spoken or communicated by children. For example, care educators can engage children in culturally relevant songs and rhymes. They can also include culturally affirming play materials, books, and visuals in the room.

Care educators can build relationships with families.

Additionally, care educators can build relationships with families to learn about families' cultural values and preferences for their child's care, as well as the stories, **routines**, and practices that they share with their child. Insights from families will help care educators understand children's behavior. Care educators must also be willing to examine their values, attitudes, and beliefs about supporting children's development. This examination can reveal biases that influence the way care educators perceive and respond to children's behavior. To support this reflective work, we include notes in the foundations on cultural variation in the development and expression of foundations.

3 For additional resources and practices for trauma and healing-informed care, care educators can refer to Head Start's resources on implementing trauma-informed practices, the *Safe Spaces: Foundation for Trauma-Informed Practice for Educational Care Settings* training, available from the Office of the California Surgeon General, and materials available online from the Positive and Adverse Childhood Experiences (PACEs) Connection Resource Center.

Individual Differences in Social and Emotional Development

The foundations are written to illustrate the **variability** in children's development, acknowledging that children develop at different rates both within a domain and across domains of development. In addition, each child is unique and demonstrates their development in a variety of ways. In certain situations, some children may have diverse abilities that could benefit from alternate methods for demonstrating their development.

In addition to the role of their relationships and environment, infants and toddlers relate to their world through unique identities, abilities, and strengths. From birth, children show some unique **temperament tendencies** such as activity level and reaction to the unexpected. Temperament tendencies emerge during infancy and influence when and to what degree infants express their emotions, behavior, and distress across situations, as well as how people respond to them (Virmani et al., 2023). It may be helpful for care educators to see temperament tendencies as a window into understanding children's behavior and how children relate to the world around them. Care educators can approach children's temperament tendencies with curiosity to identify and understand differences in children's actions and behaviors and appreciate assets and gifts that children bring to social interactions. Understanding children's temperament tendencies will also help care educators to identify children's needs, as well as how best to respond to children.

Other aspects of children's identity are their race, ethnicity, and culture, as well as the languages spoken in their family. Infants and toddlers have strengths from their racial, ethnic, and linguistic experience that help them develop and learn in new early learning and care settings. They also present with differing abilities, including developmental delays or disabilities. As they are served in care programs, children may need individualized supports for their development that reflect their strengths or assets and are responsive to their environments and needs. Building trusting, secure relationships with children and tending to their needs allow infants to become unique individuals. Creating an environment that allows children to explore safely and freely will build their agency and confidence in their abilities.

Building trusting, secure relationships with children and tending to their needs allow infants to become unique individuals.

Infants who are born prematurely and who spend significant time in the neonatal intensive care unit might have difficulty regulating emotions and behaviors and often need additional "soothing or calming" support from caregivers (for example, more time in physical proximity to the caregiver) (Browne, 2004). For toddlers who are identified as having developmental delays, care educators can connect with families and collaborate with care teams. Care teams may include infant mental health consultants, regional centers, and early identification and intervention services. Early identification can help caregivers create inclusive environments and supports for children with disabilities and delays to thrive.

When children have an Individualized Family Service Plan (IFSP), care educators should consult and collaborate with the family and the rest of the IFSP team. This collaboration will support the outcomes included on the IFSP as part of inclusive learning experiences. Care educators can implement adaptations and modifications as specified in a child's IFSP. If children don't have an IFSP, and care educators have a concern that a child's social and emotional development is delayed, they can connect with the child's family and collaborate in making a referral for a comprehensive developmental assessment. Building trusting relationships with families helps care educators to better understand the child's individual development and ways to support the child. By doing so, families and care educators can identify areas where early intervention may be beneficial.

Social and Emotional Development Foundations

The foundations statements are intended to help care educators identify how they can support children's growth in specific areas. Children develop the behaviors and skills described in these foundations at different times and in different ways within their home, various child care settings, and community contexts. Though foundations are focused on the child's development, each foundation should be considered as developing in the context of relationships with caregivers who provide nurturance and support. It is important to keep in mind that the foundations are all related to each other and work together, rather than in isolation. The skills and knowledge described in the Social and Emotional Development Domain are organized into the following three strands:

- **Self:** The Self strand includes infants' and toddlers' sense of identity as an individual and in relation to others, as well as their sense of agency and emerging abilities. The Self strand also addresses infants' and toddlers' expression and learning to **coregulate** and regulate emotions and behaviors.

- **Social Interactions:** The Social Interactions strand includes infants' and toddlers' interactions with caregivers and other people, as well as peers. The strand also addresses the skills for engaging in meaningful social interactions, such as social understanding, **empathy**, and caring.

- **Relationships:** The Relationships strand includes infants' and toddlers' close relationships with their caregivers and peers, such as attachment relationships with primary caregivers and early friendships with peers.

Though it is helpful to organize the foundations into separate strands, the Self, Social Interactions, and Relationships strands are interrelated in infant and toddler development. For example, a child's **sense of identity and belonging** and expression of emotions influence how they engage in social interactions with others. When reviewing the foundations, caregivers and care educators can consider how the strands are connected in practice.

Though foundations are focused on the child's development, each foundation should be considered as developing in the context of relationships with caregivers who provide nurturance and support. Children develop the behavior and skills described in these Social and Emotional Development foundations at different times and in different ways within their home, various early learning and care settings, and community contexts.

Each strand starts with a description of foundational skills and capacities in the first four months followed by specific foundations related to the strand. Each foundation includes indicators and examples for three age periods across infancy and toddlerhood: 4 through 11 months, 11 through 23 months, 23 through 36 months. Table 1 provides an overview of the foundations in Social and Emotional development for children 4 to 36 months organized by strand.

Table 1. Social and Emotional Development Strands and Foundations 4 to 36 Months

Strands	Foundations
1.0: Self	• **1.1: Sense of Identity and Belonging.** The developing concept of self as an individual who shares commonalities with others within social relationships. • **1.2: Recognition of Agency.** The developing understanding that they can take action to influence the environment. • **1.3: Expression of Emotion.** The developing ability to express a variety of feelings through facial expressions, movements, gestures, sounds, or words. • **1.4: Regulating Emotions and Behavior.** The developing ability to manage emotional and behavioral responses, communicate feelings, and act according to social expectations, with and without assistance from a caregiver.
2.0: Social Interactions	• **2.1: Social Understanding**. The developing understanding of the intentions, responses, communication, and actions of other people. • **2.2: Empathy**. The developing ability to share in the emotional experiences of others. • **2.3: Interactions With Caregivers and Other People.** The developing ability to respond to and engage with caregivers and other people. • **2.4: Interactions With Peers**. The developing ability to respond to and engage with other children.
3.0: Relationships	• **3.1: Relationships With Caregivers**. The child's development of close relationships with certain caregivers who provide consistent nurturance. • **3.2: Relationships With Peers**. The child's development of relationships with certain peers through interactions over time.

Strand 1.0: Self

This strand includes the following foundations:

- Foundation 1.1: Sense of Identity and Belonging
- Foundation 1.2: Recognition of Agency
- Foundation 1.3: Expression of Emotion
- Foundation 1.4: Regulating Emotions and Behavior

First Four Months

Early on, infants are actors in their environment, expressing primary emotions like joy and fear, and expressing their interests and needs. Infants' expression of emotion, their interactions, and their experiences are also influenced by their cultural context, as reflected in their family and community practices and values. In the early months, infants engage in the following:

- express their essential needs (for example, hunger, alleviating discomfort) through various nonverbal cues, vocalizations, and signs of distress (for example, crying or looking away from the caregiver's face)
- show discrete emotional expressions (for example, smiling, laughing)
- show varying temperament tendencies around activity level, reaction to the unexpected, attention and regulation, anger/irritability/frustration, and exuberance/enthusiasm/cheerfulness
- demonstrate awareness of their hands and feet as they learn how to use their bodies (for example, putting a hand in their mouth, grasping a caregiver's finger)

Foundation 1.1: Sense of Identity and Belonging

The developing concept of self as an individual who shares commonalities with others within social relationships.

First Four Months

Refer to Strand 1.0: Self.

4 through 11 months	11 through 23 months	23 through 36 months
Children show developing understanding that others are both distinct from and connected to themselves, attending to physical characteristics (for example, facial features) that are associated with race, ethnicity, and gender.	Children demonstrate awareness of their own features and express themselves as distinct persons with characteristics, thoughts, and feelings. Children also demonstrate awareness of others' behaviors, responses, and characteristics within their developing relationships with caregivers.	Children identify their feelings, needs, and interests and sometimes identify themselves and others as members of one or more groups by referring to social categories (for example, race, ethnicity, gender) or cultural practices.
For example, a child may: • Orient toward a person who calls their name. • Wave their arms and kick their legs when they see or hear a familiar person enter the room. • Cry when their preferred caregiver leaves the room. • Look at pictures of caregivers' faces on the wall with interest. • Notice when they hear a relative speaking their home language.	**For example, a child may:** • Use name or other family label (for example, nickname, birth order, "little sister") when referring to self. • Recognize their own image in the mirror and understand that it is themself. • Point to or indicate parts of the body when asked. For example, they communicate in Hupa, "*whe: da'ay*" and point to their head. • Move excitedly when approached by a person who usually engages in active play.	**For example, a child may:** • Communicate their own name. • Use pronouns such as *I, me, you, we, they, he,* and *she*. • Make a few simple comparisons between self and others. For example, they communicate, "Lucas is a boy like me." • Make comparisons between family members and others. For example, see a person dressed in a sari and communicate, "Her dress like Nani."

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Foundation 1.1: Sense of Identity and Belonging *(continued)*

The developing concept of self as an individual who shares commonalities with others within social relationships.

4 through 11 months	11 through 23 months	23 through 36 months
	• Imitate and/or learn a new action or word better from a person who speaks familiar languages compared to unfamiliar languages. • Point to a picture in a book that resembles a family member through a shared attribute such as gender or skin color (for example, point to picture of a woman with a scarf and communicate "Mama" in the home language).	• Demonstrate preference for specific items (for example, puzzles, cars, dress-up clothes) or activities. • Demonstrate play preferences with children of familiar age, gender, or race and/or children who speak the same language.

The Influence of Context on Children's Sense of Group Membership

Children learn about group membership based on the people they see and do not see on a regular basis across different types of contexts, such as care locations, offices, media, and neighborhoods. Children's sense of group membership is shaped by the type of language the people around them use to describe a person or group of people, such as language around skin color. Children benefit from becoming familiar with people who are different from them, as these experiences shape children's processing and understanding of similarities and differences in others (Ellis et al., 2017; Hwang et al., 2021).

Foundation 1.2: Recognition of Agency

The developing understanding that they can take action to influence the environment.

First Four Months

Refer to Strand 1.0: Self.

4 through 11 months	11 through 23 months	23 through 36 months
Children show an understanding that they are able to make things happen.	Children experiment with different ways of making things happen, **persist** in trying to do things even when faced with difficulty, and show a sense of satisfaction with what they can do.	Children show an understanding of their own abilities to make things happen and sometimes refer to those abilities when describing themselves.
For example, a child may: • Raise their arms to be picked up and placed on a changing table by a caregiver. • Shake a musical toy (for example, rattle) to try to make the music come on again. • Initiate a favorite game. For example, hold out a foot to a caregiver to start a game of "This Little Piggy." • Gesture at a book and smile with satisfaction after a person gets it down from the shelf. • Intentionally and repeatedly drop objects, notice what happens, and express happiness each time.	**For example, a child may:** • Gesture to caregiver that they have a soiled diaper and after caregiver helps to change their diaper, they communicate in their home language, "All clean now!" and cheer together. • Bounce with joy after making a handprint with paint. • Roll a small car back and forth on the ground, then push it really hard and let go to see what happens. • Squeeze a toy in different ways to hear the sounds it makes. • Smile after walking up a steep incline without falling or after carrying a bucket filled with sand from one place to another without spilling.	**For example, a child may:** • Insist on using the toilet by themself even after a caregiver attempts to provide assistance. • Comment about their abilities by communicating, "I doing this." • Communicate in Spanish, "*Me puse los zapatos*" (I put my shoes on) after helping to slip their sneakers on. • Finish a painting and hold it up to show another person. • Complete a challenging puzzle for the first time and clap or express in Cantonese, "我好叻砌圖。" (I'm good at puzzles).

Foundation 1.3: Expression of Emotion

The developing ability to express a variety of feelings through facial expressions, movements, gestures, sounds, or words.

First Four Months

Refer to Strand 1.0: Self.

4 through 11 months

Children express a variety of primary emotions such as contentment, joy, sadness, interest, surprise, disgust, anger, and fear in response to different experiences.

For example, a child may:

- Cry in anger when another child takes away their comfort object.
- Exhibit wariness, cry, or turn away when a stranger approaches.
- Wave their arms and legs when a caregiver sings to them.
- Stop crying and snuggle after being picked up by a caregiver.
- Open their mouth in surprise when a person removes the blanket covering their face to start a game of peekaboo.
- Laugh when a person lifts them above their head.
- Try a new food and react with a facial expression showing disgust.

11 through 23 months

Children express emotions in clear and intentional ways and express some secondary emotions, such as pride, through a variety of behaviors.

For example, a child may:

- Express anger at having a toy taken away by taking it back out of another child's hands or hitting them.
- Show affection for a person by hugging.
- Express jealousy by trying to crowd onto a person's lap when another child is already sitting there.
- Smile directly at other children when interacting with them.
- Clap or smile when correctly identifying an object in their home language.

23 through 36 months

Children express secondary, self-conscious emotions such as pride, embarrassment, shame, and guilt. Children demonstrate awareness of their feelings by communicating words or gestures to describe feelings to others or acting them out in pretend play.

For example, a child may:

- Communicate "I am angry" using a communication board and clench their fists when another child takes a toy from them.
- Hide their face with their hands when feeling embarrassed.
- Express a feeling by communicating in Spanish, "*No me gusta*" (I don't like that).
- Communicate in Tagalog, "*Miss ko si Lola*" (I miss Grandma) after talking on the phone with her.
- Act out different emotions during pretend play by "crying" when pretending to be sad and "cooing" when pretending to be happy.
- Express guilt after taking a toy out of another child's cubby without permission by trying to put it back without anyone seeing.

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Foundation 1.3: Expression of Emotion *(continued)*

The developing ability to express a variety of feelings through facial expressions, movements, gestures, sounds, or words.

Culture and Children's Expression of Emotion

Children's expression of emotion is shaped by their cultural context. Caregivers may foster expression of emotions in different ways based on their cultural values and practices. For example, a child may be raised to express their emotions either more externally or more internally, to show certain emotions but not other emotions, or to wait for cues or permission from authority to express their emotions. Family and cultural expectations may also influence whether a child may be encouraged to express certain emotions but not others based on gender expectations. Care educators can build relationships with families to learn about families' cultural values and preferences for their child's care, as well as the stories, routines, and practices that they share with their child. Given the influence of culture, care educators should also pay attention to how their own beliefs and values shape children's expression of emotion and behavior.

Foundation 1.4: Regulating Emotions and Behavior

The developing ability to manage emotional and behavioral responses, communicate feelings, and act according to social expectations, with and without assistance from a caregiver.

First Four Months

Refer to Strand 1.0: Self.

4 through 11 months

Children use simple self-soothing behaviors to comfort themselves. Children often need help managing their emotions and behavior and show emerging ability to communicate the need for help with discomfort or distress.

For example, a child may:

- Stop crying when a caregiver offers them a comfort item.
- Fuss when placed on the blanket and start smiling and making sounds of contentment when a caregiver provides a calm, attentive presence.
- Turn or crawl away from an object that makes a scary noise.
- Suck their thumb to make themself feel better.
- Turn their head away or push the bottle away when they finish eating.

11 through 23 months

Children demonstrate a variety of ways either to comfort themselves or to avoid or ignore situations that cause discomfort. Children require support with managing strong emotions and are responsive to choices and expectations set by caregivers. Children also communicate feelings and wants through words and gestures.

For example, a child may:

- Use comfort objects, such as a baby blanket or stuffed toy, to help calm down.
- Play with a toy as a way to distract themself from discomfort.
- Seek to be close to a caregiver when upset.
- React intensely such as by throwing an object, hitting, or shutting down (unable to express themself or becoming nonresponsive) when activated or frustrated.

23 through 36 months

Children anticipate the need for comfort and try to prepare themselves for transitions. Children sometimes manage behaviors and emotions with little or no caregiver support. Children show many self-comforting behaviors, depending on the situation, and communicate specific feelings.

For example, a child may:

- Gesture to ask a caregiver for a comfort item before getting into the car seat for a long ride.
- Show the care educator that they like a special song during naptime by humming the melody of a song while lying on the cot.
- Make fewer attempts to bite other children when provided with a chewing necklace.
- Have a developmental delay, and when prepared ahead of time or when they have some choice over what happens, handle transitions better.

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Foundation 1.4: Regulating Emotions and Behavior *(continued)*

The developing ability to manage emotional and behavioral responses, communicate feelings, and act according to social expectations, with and without assistance from a caregiver.

4 through 11 months	11 through 23 months	23 through 36 months
• Stop crying when rocked back and forth by a caregiver.	• Stop coloring on the wall and choose to color on an easel when a caregiver explains that they can color on paper or the easel but not on walls. • Approach the care educator for a hug and express in Mandarin, "奶奶上班" (Grandma work), then point to the door to communicate they miss their grandma.	• Play quietly in a cozy corner of the room right after drop-off until ready to play with the other children. • Share or cope with emotions by acting out emotional experiences or traumatic events while playing to try to gain mastery over or cope with their feelings.

Note: This foundation is closely related to Foundation 2.2 **Inhibitory Control** in the ATL domain. Both foundations play an important role in how children learn to manage their behaviors and emotions.

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Foundation 1.4: Regulating Emotions and Behavior *(continued)*

The developing ability to manage emotional and behavioral responses, communicate feelings, and act according to social expectations, with and without assistance from a caregiver.

Variation in Children's Regulation of Behavior

Children's behavior and regulation of behavior are influenced by individual factors, such as temperament tendencies, and environmental factors, such as cultural beliefs and practices and relationships with caregivers. Caregivers may demonstrate varying expectations and goals around children's behavior. At home, a child may be encouraged to move around freely. Another child may be encouraged to be quiet as a sign of respect for authority figures or maintain harmony within the group.

Children's unique temperament tendencies influence their behavior in different situations, including the ways they voluntarily regulate their emotions and behaviors. Infants vary in their capacity to focus, shift, and sustain attention as needed, which in turn impacts the extent to which they demonstrate emotional and behavioral self-regulation. (See this chapter's introduction for information on development of temperament tendencies.)

Importantly, children develop skills and strategies for regulating their emotions and behaviors within relationships with caregivers. Caregivers can demonstrate awareness of their own emotional responses and behaviors, and how to regulate them, by showing nurturing and responsiveness to children's emotions and behaviors. In this way, caregivers create the conditions for coregulation, where they **model** and support infants and toddlers in practicing the regulation of their emotions and behaviors. Children who have experienced trauma may demonstrate heightened levels of stress and activation in response to specific events, changes, or transitions during the day. Infant mental health resources can help care educators learn how to support children in regulating reactions to behavior and stress.

Strand 2.0: Social Interactions

This strand includes the following foundations:

- Foundation 2.1: Social Understanding
- Foundation 2.2: Empathy
- Foundation 2.3: Interactions With Caregivers and Other People
- Foundation 2.4: Interactions With Peers

First Four Months

Young infants observe and respond to stimuli in their social environment as part of early Social Interactions, initially learning from others' social bids, such as a parent's facial expressions, gestures, or speech directed toward them (Rosenblum et al., 2019). The more responsive and reciprocal the interactions between infants and the caregivers in their lives are, the more infants can learn how to communicate their needs effectively, elicit desired responses from others, and express a range of emotions. In the early months, infants engage in the following:

- use their available senses to perceive faces, sounds, and objects in their environment (for example, **mouthing**, touching, listening, looking at)
- direct their eye gaze to, make eye contact with, and track other people and objects in their field of vision
- perceive human voices, smell, and speech of others (for example, recognizing a caregiver's voice)

Foundation 2.1: Social Understanding

The developing understanding of the intentions, responses, communication, and actions of other people.

First Four Months

Refer to Strand 2.0: Social Interactions.

4 through 11 months	11 through 23 months	23 through 36 months
Children show interest in objects that familiar people are attending to or actions that familiar people are doing. Children sometimes demonstrate understanding of how to get other people's attention, engage in back-and-forth interactions with others, and imitate the simple actions or facial expressions of others.	Children demonstrate knowing how to get familiar people to respond in a specific way through gestures, vocalizations, and shared attention; use another's social cues to guide their own responses to events; and demonstrate learning how to interact with familiar people in more complex and prosocial ways (for example, helping and hindering actions) through imitation and observation.	Children sometimes communicate about their own needs, feelings, and intentions as well as those of other people and engage with others in more extended interactions and common activities (for example, goal-oriented activities, conversations). As part of understanding others' needs, children also express an interest in how others are treated as well as how resources are being distributed and used (for example, taking turns).
For example, a child may: • Participate in playful, face-to face interactions with a caregiver, such as back-and-forth communication when making facial expressions or vocalizing. • Squeal in anticipation of a caregiver uncovering their eyes during a game of peekaboo. • Learn simple behaviors by imitating a familiar person's expressions, gestures, or sounds (for example, blowing a kiss).	**For example, a child may:** • Engage in purposeful back-and-forth play, such as tapping another person's nose. • Gesture toward a desired object or food while reaching, making vocal sounds ("Yeh, yeh!"), and looking toward a caregiver. • Express "No!" repeatedly when presented with choices for which bedtime story to read.	**For example, a child may:** • Move into and out of pretend play roles, tell a person what they should do in their roles, or extend the sequence, such as by asking in Vietnamese "*Uống gì không*?" (Wanna drink?) after bringing pretend food to the table as a waiter. • Name their own feelings or desires, explicitly contrast their feelings or desires with another's, or describe why they feel the way they do.

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Foundation 2.1: Social Understanding *(continued)*

The developing understanding of the intentions, responses, communication, and actions of other people.

4 through 11 months

- Try to get a familiar game or routine started with a familiar person by prompting them.
- Demonstrate **social referencing** by relying on others' faces, voices, or gestures to decide what to do in an uncertain situation (for example, hearing an unfamiliar sound).
- Follow caregiver's gaze to look at a toy.

11 through 23 months

- Look in the direction of a person's gesturing or pointing, especially when that person shares the child's culture and language.
- Pick up keys dropped by a caregiver and then give them to the caregiver.
- Learn more complex behaviors through imitation, such as watching an older child put toys together and then trying to do it themself.

23 through 36 months

- Describe what happens during the bedtime routine or another familiar everyday event.
- Communicate, "*Manita* (approximation of little sister in Spanish) needs milk!" when noticing a baby sibling crying.
- Help a caregiver clean up at the end of the day by putting toys in their usual places.
- Bring a toy to a peer when noticing a peer does not have a toy.

Note: This foundation is closely related to Foundation 2.1 Attention and Foundation 3.2 Collaborative Effort in the ATL domain. Together, these foundations all describe how children learn through shared focus of attention between individuals and a shared object or event.

Social Referencing and Similarity

As infants and toddlers learn about their environment and social behavior through strategies like following eye gaze and imitation, they tend to rely on caregivers of a similar background to them. Thus, an infant may be more likely to imitate a caregiver who speaks their home language (Altınok et al., 2022; Marno et al., 2016) or who is of the same race (Dillmann et al., 2024).

Foundation 2.2: Empathy

The developing ability to share in the emotional experiences of others.

First Four Months

Refer to Strand 2.0: Social Interactions.

4 through 11 months	11 through 23 months	23 through 36 months
Children demonstrate awareness of others' feelings by mirroring or reacting to their emotional expressions.	Children change their behavior in response to the feelings of others even though their actions may not always make the other person feel better. Children show an increased understanding of the reason for another's feelings and have emotional responses based on others' emotional experiences (for example, become distressed by the other's distress).	Children show an understanding that other people have feelings that are different from their own. Children show concern for others and sometimes respond to other people's emotional needs in a way that might make that person feel better.
For example, a child may: • Frown or cry when another child cries. • Stop playing and turn their head toward a child who is crying. • Laugh when an older sibling or peer makes a funny face. • Return the smile of a familiar person. • Laugh and squeal when another child laughs and squeals.	**For example, a child may:** • Notice a playmate crying and pull on a caregiver's clothes to get the caregiver to come over. • Become upset when another child throws a tantrum. • Gently pat a crying peer on their back, just like a caregiver did earlier in the day. • Try to hug a peer who appears upset or nervous. • Stop playing and look with concerned attention at a child who is screaming. • Bring a stuffed animal or comfort item to a child who appears upset.	**For example, a child may:** • Make a funny face to try and make a crying sibling smile. • Communicate, "Erin is mad 'cuz Alma didn't share." • Sign in **American Sign Language (ASL)**, "Auntie sad," when they see their aunt crying in response to a movie. • Communicate the feelings of a character in a story based on a picture, saying in Spanish, "*¡Oso está feliz!*" (Bear is happy!). • Comment in a shared home language, "It's okay" to a child who has fallen down and is crying and get a caregiver to help.

Foundation 2.3: Interactions With Caregivers and Other People

The developing ability to respond to and engage with caregivers and other people.

First Four Months

Refer to Strand 2.0: Social Interactions.

4 through 11 months	11 through 23 months	23 through 36 months
Children purposefully engage in reciprocal interactions and follow the gaze of a familiar person (for example, care educator) to an object or person. Children are both interested in and cautious of unfamiliar people.	Children participate in routines and complex back-and-forth interactions and engage familiar people intentionally to receive help with meeting their needs. Children continue to show interest in unfamiliar people, and gradually interact with them in the presence of a familiar person. Children also check with a familiar person when uncertain about something or someone.	Children interact with familiar and unfamiliar people to play, solve problems, or communicate about experiences or ideas.
For example, a child may: • Nestle/snuggle up in the arm of the care educator when a visitor enters the classroom but watch the visitor with interest. • Engage in games such as pat-a-cake and peekaboo. • Take a familiar person's hands and rock forward and backwards as a way of asking the person to sing a favorite song. • Vocalize to get a familiar person's attention. • Follow the gaze of a familiar person with interest as they reach for a favorite rattle.	**For example, a child may:** • Watch how the caregiver interacts with an unfamiliar person and gradually approach that person to show them a favorite toy. • Seek reassurance from a familiar person when unsure if something is safe. • Take a washcloth to a familiar person when the person points to the washcloth and verbally prompts them. • Allow an unfamiliar person to get close only after the person shows interest in a wooden spoon that is also interesting to the child. • Watch and then help a familiar person as they prepare a snack.	**For example, a child may:** • Ask a classroom visitor their name using words or picture symbols. • Participate in storytelling with a visitor. • Point out a rainbow to a person and communicate in Mandarin, "彩虹" (Rainbow). • Problem-solve how to fill the watering can for the plants with a familiar person. • Tell a care educator from the classroom next door about an upcoming birthday party.

Foundation 2.4: Interactions With Peers

The developing ability to respond to and engage with other children.

First Four Months

Refer to Strand 2.0: Social Interactions.

4 through 11 months

Children show interest in familiar and unfamiliar peers. Children stare at other children, explore other children's faces and bodies, or respond to siblings and older peers.

For example, a child may:

- Coo or vocalize as a sibling engages in interaction with them.
- Observe a crying peer with a serious expression.
- Watch other children with interest.
- Touch the eyes or hair of a peer, if infant primarily relies on touch.
- Laugh when an older sibling makes a funny face.

11 through 23 months

Children engage in simple back-and-forth interactions with peers for short periods of time.

For example, a child may:

- Take turns with a sibling snuggling with a weighted stuffed animal.
- Grab a toy back from another child who took the toy.
- Offer a snack to another child, with encouragement from a caregiver.
- Tickle another child who laughs, get tickled back and laugh, and tickle the other child again.
- Place a basket on their head and then laugh when a peer does the same with their own basket.

23 through 36 months

Children engage in simple cooperative play with peers around a shared goal or a shared activity.

For example, a child may:

- Share items with two peers at the play kitchen as part of acting out household tasks.
- Communicate with peers about what they are making while playing together with outdoor materials.
- Act out different roles with peers, sometimes switching in and out of their role.
- Build a tall tower with one or two other children.
- Give a peer a block or piece of railroad track when building something together.

Note: This foundation is closely related to Foundation 3.2 Collaborative Effort in the ATL domain. Both foundations all describe how children learn through interactions with others.

Strand 3.0: Relationships

This strand includes the following foundations:

- Foundation 3.1: Relationships With Caregivers
- Foundation 3.2: Relationships With Peers

First Four Months

Young infants attach with caregivers who provide physical closeness and care, especially when that care is consistently responsive in addressing their needs and interests and regulating their distress. Infants learn from the relationships they form in the first few months of life about how to interact with other people. In the early months, infants experience the following:

- often express the most pleasure or show least signs of distress when being held or when they are physically close to their primary caregivers during waking hours
- respond to the behaviors and emotional expressions of others (for example, sticking their tongue out when a familiar person sticks their tongue out or matching the pitch of vocal sounds)
- respond to others' social bids with engagement cues such as social smiles (for example, smiling or laughing in response to caregiver)

Foundation 3.1: Relationships With Caregivers

The development of close relationships with certain caregivers who provide consistent nurturance.

First Four Months

Refer to Strand 3.0: Relationships.

4 through 11 months	11 through 23 months	23 through 36 months
Children initiate interactions and seek proximity with familiar caregivers with whom they have developed an attachment relationship (attachment figures).	Children explore the environment in the presence of attachment figures. Children prefer people they trust to provide comfort. When distressed, children often seek to be physically close to attachment figures.	When exploring the environment, children occasionally reconnect with attachment figures (for example, through eye contact, facial expressions, and shared attention through conversations about shared feelings, activities, or plans). When distressed, children may seek to be physically close to these caregivers.
For example, a child may: • Cry out or follow after a family member when that person leaves the child care setting and seek comfort from a caregiver by crying and looking for them. • Continue crying for several minutes after their parent leaves, and eventually be soothed when the care educator rocks their baby basket. • Lift their arms to be picked up by a caregiver. • Crawl quickly toward a caregiver when alarmed by a loud noise.	**For example, a child may:** • Cry when a family member leaves the child care setting but calm down when that person comes back for another hug and stands for a few minutes outside the window. • Run in wide circles around the outdoor play area, circling back each time and hugging the legs of the care educator before running off again. • Wave at a caregiver from the top of the play structure to make sure they are watching. • Follow a caregiver physically around the room.	**For example, a child may:** • Call out for a family member and briefly look out the window for that person after they leave the child care setting. • Communicate to their caregiver in Spanish, "*Nos gusta este*" (We like this one) while gesturing at an image in the funny story they are reading together. • Play on the other side of the play yard, away from the care educator, but cry to be picked up after falling down. • Call "Mama!" from across the room while playing to make sure that their mother is paying attention.

(continued on following page)

Foundation 3.1: Relationships With Caregivers *(continued)*

The development of close relationships with certain caregivers who provide consistent nurturance.

4 through 11 months

- Turn excitedly and raise their arms to greet a family member at pick-up time.

11 through 23 months

- Play away from a caregiver and then move close to them from time to time to check in.

23 through 36 months

- Bring a caregiver's favorite book to them and express in Cantonese, "再多一本?" (One more?) to see if the caregiver will read one more book, even though the caregiver had just said to the child in Cantonese, "我地睇完書。依家係時候去瞓覺啦。" (We're all done reading. Now it's time for nap).
- Seek the attention of a caregiver and communicate in Spanish, "*¡Míra!*" (Watch!) before proudly displaying a new skill.
- Look around anxiously when seeing cars pulling up for pick-up and calm down when the care educator points out different colors of the cars with picture cards and communicates, "Your mommy has a white truck. Let's name the colors of the cars together!"

(continued on following page)

Foundation 3.1: Relationships With Caregivers *(continued)*

The development of close relationships with certain caregivers who provide consistent nurturance.

Multiple Attachment Figures

Infants and toddlers may develop relationships with multiple attachment figures, including parents, extended family, relatives, and care educators (Cassidy & Shaver, 2008; De Schipper et al., 2008). Children benefit when they have access to caregivers who provide sensitive and responsive care, both at home and from other relatives or caregivers outside the home. It is important to note that sensitive, responsive, and consistent relationships with care educators in early care and education may offer children an opportunity to develop alternative or new working models of relationships that they might not have access to at home (Howes & Ritchie, 2002).

Foundation 3.2: Relationships With Peers

The development of relationships with certain peers through interactions over time.

First Four Months

Refer to Strand 3.0: Relationships.

4 through 11 months	11 through 23 months	23 through 36 months
Children show interest in other children's actions, feelings, and interests.	Children prefer to interact with one or two familiar children in a shared space and engage more frequently in the same kind of back-and-forth play when interacting with those children.	Children prefer to interact with the same small number of children in the group and engage in more complex play with those children than with other peers (for example, extended pretend play with roles, games with movement).
For example, a child may: • Laugh when a peer bangs an object against a table where they are sitting. • Attend to a crying peer with a serious expression. • Watch other children with interest. • Stretch their foot out to touch a peer. • Try to get the attention of another child by smiling at them or babbling to them.	**For example, a child may:** • Bang objects on the table while nearby peers one after the other squeal with excitement. • Choose to play in the same area as other peers. • Show a toy to a peer. • Play the same kind of game, such as run-and-chase, with the same peer almost every day. • Imitate parts of a familiar story that a sibling is reading to them in Tagalog. • When a peer starts making a pile of small sticks during supervised play, add a stick to the pile and get frustrated when the pile falls down.	**For example, a child may:** • Watch and stay close to two friends busy playing with bongo drums and frown when not invited to play. • Choose to play with a sibling instead of a less familiar child. • Exhibit sadness when their favorite friend is absent one day. • Seek one friend for running games and another friend with sensory sensitivity for playing at the sand table. • Engage in social pretend play with one or two friends (for example, pretend to be a horse while a friend pretends to be the farmer).


Ready
to
explore

Approaches to Learning

The Approaches to Learning (ATL) domain describes the development of important skills and behaviors that help **infants and toddlers** learn, play, and engage with others. This domain is organized into three major strands: Motivation to Learn, which includes curiosity, **initiative**, engagement and perseverance; **Executive Functioning**, which includes attention, **inhibitory control**, **working memory**, and **cognitive flexibility**; and Goal-Directed Learning, which includes problem-solving and collaborative effort.

We can notice the development of ATL skills and behaviors unfold when we observe infants and toddlers in everyday activities and interactions. Imagine an infant excitedly moving toward a ball as an **infant–toddler care educator** (care educator) encourages them. How is the infant demonstrating their curiosity and initiative? Now imagine the infant trying to pick up food from their plate. How do they demonstrate engagement, perseverance, and problem-solving skills? Another example to consider is a toddler playing a hide-and-find game with their **caregiver**. The caregiver hides an object under a blanket and asks the toddler to find it. As the toddler keeps in mind that the object is hidden and reaches under the blanket for it, they are using their developing working memory. Inhibitory control, which involves managing behavior, impulses, and attention, develops during back-and-forth interactions. An example is when an infant quiets their crying and calms when they notice a caregiver coming to soothe them. As infants and toddlers learn, play, and engage with others throughout the day, we can notice how they approach learning and support them in strengthening their skills and behaviors.

What Are Executive Functions?

Executive functions are cognitive processes that contribute to problem-solving, planning, focusing, and managing behavior (Miyake et al., 2000; Zelazo, 2020; Zelazo et al., 2003). Executive functions include the following:

- Working memory, which helps children briefly hold information in mind and use it in everyday activities. For example, children use their working memory when they are searching and reaching for a toy during a hide-and-find game or when following one-step directions.
- Cognitive flexibility, or flexibility, which includes shifting attention, thinking, and behavior. Children demonstrate their flexibility as they shift their approach to a problem or engage in pretend play and use objects in new ways. For example, a child shifts how they hold a shape to insert it into a shape sorter.
- Inhibitory control, which involves managing behaviors, impulses, and attention. Inhibitory control helps children adapt to various **environments** or circumstances, such as a new or different **routine**. Children need patient, supportive caregivers to help them develop inhibitory control. For example, a child may need support in managing their behaviors and impulses as they interact with others during play or are adjusting to a new setting.

ATL skills and behaviors set the foundation for lifelong learning habits. The early development of ATL influences how children continue to learn, problem-solve, overcome challenges, and collaborate with others. Research over time shows that a child's executive functions as a toddler are related to their executive functions at ages four and nine. Children rely on executive functions as they transition through school, encounter challenges, and form relationships with others (Broomell & Bell, 2022; Li-Grining et al., 2010; Spiegel et al., 2021; Vitiello & Greenfield, 2017).

Approaches to Learning Development During the First Four Months

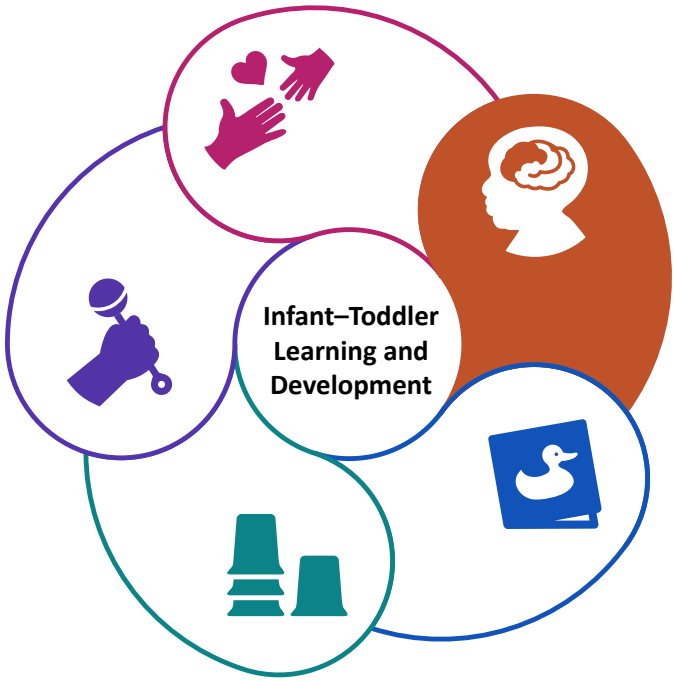
From the moment they are born, infants are curious about the world around them. Early in development, infants begin to curiously gaze at their surroundings and even notice familiar voices (Kuhl et al., 2014; Mai et al., 2012; Partanen et al., 2013). Shortly after birth, infants have learned their caregivers' scents, and within weeks they have learned to recognize their caregivers' faces (Bushnell et al., 1989; Doucet et al., 2007; Field et al., 1984; Pascalis et al., 1995; Rekow et al., 2024). While infants are born ready to learn, they need support from warm and responsive caregivers to continue to grow as learners. For instance, infants are not born with executive functions; they depend on caregivers to help soothe them and provide predictability that will continue to shape the way in which they develop executive functions (Fay-Stammbach et al., 2014; Ramos et al., 2023).

As early as the first year of life, a baby's brain doubles in size (Gilmore et al., 2018, 2020). Infants learn and grow at a rapid pace. Early nurturing experiences and responsiveness help shape infants' brains and neural connections (Kok et al., 2015; Rifkin-Graboi et al., 2015; Sethna et al., 2017). Each day is a new adventure for infants' developing minds and bodies and an opportunity for adults to connect with them. Infants' **prefrontal cortex** plays a crucial role in their development of ATL skills, like executive functions. The prefrontal cortex is one of the brain regions that takes the longest to mature (Sowell et al., 2003; Tsujimoto, 2008). Supporting children as their prefrontal cortex develops requires a lot of patience and care. We know from neuroimaging research that the prefrontal cortex grows rapidly during the first few years of life (Hodel, 2018). This rapid development becomes clear to us by observing children's growing capacity to manage their impulses, behaviors, and attention in early childhood.

Caregivers play an integral role in how children develop ATL skills and behaviors. For instance, children learn how to approach learning by watching how others approach everyday problems. When infants observe caregivers persisting and using different strategies to solve a problem, they are also more likely to try different strategies and persist when solving a problem (Leonard et al., 2017; Lucca et al., 2020). This research finding does not mean caregivers should not make mistakes; rather it means that infants and toddlers are already thinking about what works and what doesn't work in how to approach challenges and are learning from observing how others approach challenges.

Children also depend on caregivers to provide a safe and predictable environment. As children engage in their environment, they strengthen their ATL skills and behaviors. Most importantly, children need a predictable, secure relationship with their caregivers to explore and learn at their best. **Responsive interactions** with caregivers allow children to engage in and build upon early ATL skills and behaviors.

Approaches to Learning Is Connected to Development in Other Domains



ATL skills and behaviors support learning and development in the domains of Social and Emotional Development, Language Development, Cognitive Development, and Perceptual and Motor Development. Research finds that supporting approaches to learning skills and behaviors has a positive impact on their early science, math, language, and social and emotional development (Bustamante & Hindman, 2020; Bustamante et al., 2018, 2020; Fantuzzo et al., 2007; Razza et al., 2015; Ten Braak et al., 2022). The ATL domain describes core skills and behaviors that children use to engage in learning, such as curiosity and initiative, engagement and perseverance, working memory, and inhibitory control.

Curiosity and initiative are integral to how children learn, play, explore, and experiment while supporting learning across domains. In the Cognitive Development domain, children demonstrate curiosity as they experiment with **cause-and-effect** relationships. For instance, a child curiously approaches a clear container and puts balls in it, then turns it over to watch the balls fall out. In the social and emotional development domain, with caregiver support, children engage in inhibitory control as they manage feelings and emotions. For instance, children use inhibitory control as they adjust to a new **early learning and care setting**. Children also demonstrate the ATL foundation of collaborative effort across domains as they build relationships and play with others. Finally, in the Perceptual and Motor Development domain, we observe children persisting through setbacks as they master their **fine motor skills** and **gross motor skills**. For instance, a child may continually try to grab a piece of food on their tray. As the child continually tries to grab the piece of food, despite it slipping out of their hands, they are demonstrating **persistence**.

The Context for the Early Development of Approaches to Learning

Reliable and responsive relationships are fundamental for young children's development in any domain, including Approaches to Learning. Through predictable, trusting relationships, infants and toddlers form a secure base for the development of approaches to learning skills and behaviors. The early relationships children develop with caregivers are among the most important relationships they will develop. Children's early relationships during their everyday experiences have a lasting impact on their development, including on how their brain develops (Hofer, 2006; Kraemer, 1992). Children who have secure relationships with caregivers are more likely to be enthusiastic about learning, be persistent, and be flexible learners (Sroufe 2005; Sroufe et al., 2005). When caregivers can engage with infants and toddlers in a predictable and nurturing way, infants and toddlers can more easily focus their energy on practicing their executive function skills, exploring, and experimenting in their environment (Landry & Smith, 2010).

Families and culture shape how children develop and express approaches to learning skills and behaviors. Infants and toddlers develop ATL skills and behaviors through interactions and experiences with their families and care educators. Families have their own values and expectations or rules for children that are influenced by their **culture** and lived experiences. Some families may have a heightened focus on how their children learn to manage behaviors early in life because of their cultural values, family dynamics, and social dynamics in the wider community (Fung et al., 2018; McGuire et al., 2022; Trommsdorff & Rothbaum, 2008). Being responsive to families' expectations for their children's behaviors is important in supporting children's approaches to learning skills and behaviors.

Infants and toddlers learn to manage their impulses and behaviors through interactions with others, like with their families and in early learning and care settings. The way we respond to infants as they are learning to manage their impulses and behaviors affects how they develop this skill. It is important for care educators to establish and maintain an open line of communication with families to ensure that **home** and early learning and care settings approaches to fostering the development of children's inhibitory control skills are aligned. Collaborating with families supports infants and toddlers in managing impulses and behaviors.

Infants and toddlers learn to manage their impulses and behaviors through interactions with others, like with their families and in early care and learning settings.

There are also cultural differences in what children pay attention to and how they pay attention to things in their surrounding environments. Research has found that children, even toddlers, are more likely to focus their attention on several things happening at once if they are growing up in cultures where it is important to focus on ongoing family and community activities because the child is expected to contribute to these activities in a meaningful way (Correa-Chávez & Rogoff, 2009; López et al., 2010; Morelli et al., 2003; Rogoff et al., 2018). For example, a child may pay attention to how a caregiver prepares a meal or feeds a younger child and later apply what they learned when helping with similar activities. Research also finds cultural differences in the way toddlers direct attention to objects and events (Waxman et al., 2016). In some cultures, toddlers may focus more on objects than actions and in other cultures, toddlers may focus more on actions than objects. Each way of attending is appropriate and adaptive to the child's context. One way is not better than another. However, this knowledge is important for care educators because it shows that children pay attention and learn in different ways.

Each way of attending is appropriate and adaptive to the child's context. One way is not better than another.

Children express their ATL skills and behaviors in many ways. For instance, children often learn to use words and phrases in their home language that help them play and explore. If a child has limited verbal skills, they demonstrate ATL skills through their behavior or other nonverbal cues. While each caregiver develops their own unique relationship with a child, it is important for every caregiver to collaborate with families to better understand the child and family values, goals, preferences, and practices. Sharing common goals and practices with families helps care educators provide infants and toddlers with consistent care. Consistency between home and group care supports the development of children's ATL skills.

Traumatic Experiences and Approaches to Learning

Experiences that are emotionally distressing may be traumatic and may have adverse effects on children's development of their approaches to learning (Kavanaugh et al., 2017; Park et al., 2014; Wilson et al., 2011). When children experience excessive levels of stress, they may be less effective at managing their behaviors and impulses, exploring, or problem-solving (Skowron et al., 2014; Vasilevski & Tucker, 2016). Experiences that may be traumatic include, but are not limited to, experiencing poverty, racism and discrimination, domestic violence, and emotional and physical neglect (Office of Head Start, Early Childhood Learning & Knowledge Center, 2024). Care educators can create an environment that best supports children's ATL skills by understanding the impact of **trauma** and implementing trauma-informed practices. For instance, responsive practices have been found to be a **protective factor** for children who are at risk for trauma and who may otherwise be more likely to have lower levels of executive functions (Dryer et al., 2022; Ku & Blair, 2023). Responsive practices include being emotionally supportive and responding to children's cues or behaviors consistently and predictably. Additional protective factors that support ATL for children experiencing trauma or living in underresourced communities include the following:

- having supportive relationships with care educators and positive relationships with peers in early learning and care settings (Yule et al., 2019)
- connecting with family's cultural history and assets and having a safe environment to share feelings (Afifi & MacMillan, 2011; Racine et al., 2020)
- experiencing community involvement and cohesion (Jean-Thorn et al., 2023)
- getting good sleep (Beaugrand et al., 2023; El-Sheikh et al., 2022; Mindell et al., 2018)
- engaging in play (Thibodeau-Nielsen et al., 2020)
- **scaffolding** or providing guidance and gradually removing guidance as children become more competent (Obradović et al., 2019)

Individual Differences in Approaches to Learning

The foundations are written to illustrate the **variability** in children's development, acknowledging that children learn and develop at different rates both within a domain and across domains of development. In addition, even within a social and environmental context, each child is unique and demonstrates their development in a variety of ways. In certain situations, some children may have diverse abilities that could benefit from alternate methods for demonstrating their development. For instance, infants and toddlers differ in how they express and develop approaches to learning skills and behaviors. All children can be curious, engaged, and persistent learners with responsive and nurturing support. However, the way they develop ATL skills varies, and the way they show their ATL skills will differ based on their **individual differences**.

A child's temperament tendencies in relating to people and things also may impact how that develops and shows ATL skills. For instance, some infants and toddlers may be more cautious about exploring new environments and new people than others. Some might need to be offered more comfort to explore a new setting or extra time to adjust to a new change. While all infants and toddlers are active in their own ways, some may have intense reactions or may approach situations with eagerness and may need more help managing their behaviors and impulses. When caregivers are responsive to each child's unique way of being, infants and toddlers can better regulate their behaviors and impulses to problem-solve more effectively.

All children are curious learners and the way they demonstrate their curiosity will differ based on individual and cultural differences and experiences.

All children are curious learners and the way they demonstrate their curiosity will differ based on individual and cultural differences and experiences. For instance, some children may first visually explore an object carefully, whereas other children may jump right into exploring an object with their hands. Research also finds differences in the type of questions children ask when they are expressing their curiosity or seeking new information. In some cultures, children are more encouraged to ask "why" questions, and in other cultures, children are encouraged to ask "what" questions (Callanan et al., 2020). Thus, it is important to understand how families think about questions as an opportunity for promoting curiosity.

Children with disabilities might need additional support to develop or show their ATL skills and behaviors. For instance, Deaf babies might not show the same auditory attention pattern as hearing babies but may show some enhanced visual attention (Brooks et al., 2020). Another

example to consider is an infant or toddler with a physical disability, such as cerebral palsy. They might need extra help to move or stand to support their curiosity about and engagement with people and things in their environment. There is also variability within developmental disabilities: for example, some babies with Down syndrome show more passive object play (looking at toys more than physically manipulating them), whereas others show more active object play (engaging in more multimodal play with manual, visual, and oral exploration) (Fidler et al., 2019). A developmental delay may also impact when ATL skills and behaviors emerge. Families and care educators who notice or suspect a developmental delay should share their observations with the professionals in health care and early childhood interventions that can identify a delay and an appropriate remediation. When the child has an Individualized Family Service Plan (IFSP), care educators should consult and collaborate with the family along with the rest of the IFSP team. This collaboration will support the outcomes included in the IFSP as part of the inclusive learning experiences. Care educators can implement adaptations and modifications as specified in a child's IFSP. If the child doesn't have an IFSP, and care educators have a concern that a child's approaches to the learning domain are delayed, they can connect with the child's family and collaborate in making a referral for a comprehensive developmental assessment. Building trusting relationships with families helps care educators to better understand the child's individual development and in which ways to support the child. By doing so, families and care educators can identify areas where early intervention may be beneficial.

Approaches to Learning Foundations

The foundations statements are intended to help care educators identify how they can support children's growth in specific areas. Children develop the behaviors and skills described in these foundations at different times and in different ways within their homes, various child care settings, and community contexts. Though foundations are focused on the child's development, each foundation should be considered as developing in the context of relationships with caregivers who provide nurturance and support. It is important to keep in mind that the foundations are all related to each other and work together, rather than in isolation. The skills and behaviors described in the approaches to learning domain are organized into the following three strands:

- **Motivation to Learn**: This strand describes how infants and toddlers develop curiosity and initiative, engagement, and perseverance. These skills and behaviors motivate children to keep learning new things. Infant and toddlers show these skills and behaviors through their actions, visual preferences, and vocalizations.
- **Executive Functioning**: This strand describes how infants and toddlers develop their executive functions, inhibitory control, working memory, and flexibility. These skills support children in problem solving, planning, and accomplishing goals. Children express their executive functions through their interactions with others, during play, and when engaging in routines.
- **Goal-directed Learning**: This strand describes how infants and toddlers develop problem-solving and collaborative effort skills. These skills support children in setting goals as they learn, working together with others, and finding ways to solve problems.

Each strand starts with a description of foundational skills in the first four months followed by specific foundations related to the strand. Each foundation includes indicators and examples for three age periods across infancy and toddlerhood: 4 through 11 months, 11 through 23 months, and 23 through 36 months. Table 2 provides an overview of the foundations in approaches to learning for children 4 to 36 months organized by strand.

Table 2. Approaches to Learning Strands and Foundations 4 to 36 Months

Strands	Foundations
1.0: Motivation to Learn	• **1.1: Curiosity and Initiative.** The developing ability of exploring the environment to learn about objects, people, and events. • **1.2: Engagement and Perseverance.** The developing skill of engaging in activities and persisting in actions and behaviors through challenges and setbacks.
2.0: Executive Functioning	• **2.1: Attention.** The developing skill of engaging and sustaining attention in activities and interactions. • **2.2: Inhibitory Control.** The developing skill of managing impulses and behaviors. • **2.3: Working Memory.** The developing ability to hold information in mind (short-term memory) to use it to accomplish goals and plans. • **2.4: Cognitive Flexibility.** The developing skill of being flexible in attention, thinking, and behavior.
3.0: Goal-Directed Learning	• **3.1: Problem Solving.** The developing skill of using different strategies to solve a problem or get needs met. • **3.2: Collaborative Effort.** The developing skill of working together with others to accomplish goals.

Strand 1.0: Motivation to Learn

This strand includes the following foundations:

- Foundation 1.1: Curiosity and Initiative
- Foundation 1.2: Engagement and Perserverance

First Four Months

Within the first few weeks of life, young infants' behaviors give us an insight into early skills and behaviors related to Motivation to Learn. We can see infants as motivated to learn through their developing curiosity, initiative, engagement, and persistence. For instance, when a young infant is gazing into a caregiver's eyes in the early weeks of development, we get a glimpse into the development of curiosity and initiative. They begin to demonstrate these skills by showing interest in the world around them. In the first four months, young infants may show motivation to learn by how they engage in the following:

- attend to faces of familiar caregivers or orient toward them in other ways (for example, turn their head to get a better view of a familiar caregiver)
- react to loud sounds or sudden movements
- explore what they can do with their mouth and hands
- follow or track objects
- try to reach toys by swinging their arms at them
- try to push up using their body

Foundation 1.1: Curiosity and Initiative

The developing ability of exploring the environment to learn about objects, people, and events.

First Four Months

Refer to Strand 1.0: Motivation to Learn.

4 through 11 months

Children explore objects or **materials** using their senses (**mouthing**, touching, looking, listening) and repeat the same action multiple times. Children also attend closely to details about things around them.

For example, a child may:

- Stare and smile or laugh in response to a familiar persons' exaggerated expressions (such as a change in tone of voice and new gestures).
- Dump play fruit out of a basket and then dump out a second basket to explore what happens.
- Grab different textured books and put them in their mouth.
- Drop their sippy cup from their highchair, watch it fall to the floor, and drop it again once the caregiver hands it back to them.

11 through 23 months

Children explore by seeking information (using gestures or some words or vocalizations) and purposefully test cause-and-effect through simple actions. Children also show interest in participating in new experiences or activities.

For example, a child may:

- Point to an older child who is playing with a toy firetruck, join the child while observing what they are doing with the toy firetruck, and imitate the older child.
- Turn a sand bucket upside down to show a familiar person what they have and say "Drum!" as they begin to use the sand bucket like a drum.
- Grab a ball to put on the ball run; look for other objects to put down the ball run, like toy cars and shapes from the shape sorter; signal for "help" when a shape gets stuck in the ball run; and then continue to try to put the shape in the ball run with the caregiver.

23 through 36 months

Children use a variety of strategies to explore and seek information, such as making observations and asking questions. Children also pay attention to things around them more closely.

For example, a child may:

- Ask, "Where Ricardo go?" when they notice Ricardo getting picked up by their family member.
- Communicate in **American Sign Language (ASL)**, "Rock?" when they hold up a large woodchip to show their peer while playing outside.
- Notice a dog eating food in a picture book and ask a caregiver if the dog is hungry.
- Drop rocks, sticks, and leaves in the water during supervised play to observe whether they float back up or sink.

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Foundation 1.1: Curiosity and Initiative *(continued)*

The developing ability of exploring the environment to learn about objects, people, and events.

4 through 11 months

- Look toward an older child and smile while clapping their hands when they hear the child sing in Mandarin, “七色光之歌” (“The Song of Sunlight”) or “The Wheels on The Bus.”

11 through 23 months

- Take the new child-safe animal magnets one by one off the fridge and place them back on the fridge, then try sticking them on a wooden cabinet. Once they fall off the wooden cabinet, the child goes back to placing them on the fridge.
- Approach a person preparing a snack and grab a pot and spoon to “prepare a snack,” too.
- Eagerly try a new activity, using crayons and making marks on paper.

23 through 36 months

- Spend time looking at blooming flowers in the outdoor garden area with peers and communicate in their home language, “Look, a ladybug!”
- Ask questions like, “What is that?”

All Children Are Curious Learners

To recognize progress in the development of infants and toddlers, it is important to be aware of the different ways they express their curiosity and initiative. For instance, an infant who is more inclined to visually observe versus explore by touch is no less curious than the infant exploring by touch. Some toddlers are more curious about people, whereas other toddlers are more curious about exploring the physical world (Lee et al., 2023). Children are unique and express their skills in their own ways.

Foundation 1.2: Engagement and Perseverance

The developing skill of engaging in activities and persisting in actions and behaviors through challenges and setbacks.

First Four Months

Refer to Strand 1.0: Motivation to Learn.

4 through 11 months	11 through 23 months	23 through 36 months
Children try to make things happen and repeat actions they find interesting. Children also express distress when they are stopped from doing something and express pleasure when they accomplish simple goals.	Children spend time trying to accomplish goals and express pleasure or pride when successful. Children also sometimes continue working through an activity with caregiver support.	Children spend more time working through tasks to master them. With caregiver guidance, children find several ways to cope with distress that arises when they encounter challenges.
For example, a child may: • Continue to try to reach for an object that a caregiver puts in front of them. • Use a plastic toy hammer to push a tennis ball around again and again. • Put a toy into a small container and shake it and when the toy falls out, express frustration and drop the container. The child may then get the toy and put it back in the container and express pleasure. • Cry loudly and try to reach for a toy that a caregiver removed because it broke and was not safe to play with. • Open a drawer and repeatedly take out plastic lids.	**For example, a child may:** • Continue to try to reach for a ball that is under the couch, reaching their hand as far as they can and then crying. The caregiver reaches for the ball and places it within the child's reach, when the child grabs the ball, they clap and smile. • Spend time placing most of the shapes into the shape sorter and then struggle to get the star to fit, continuing to try to insert the star. The caregiver gently turns the star, and the child then finishes pushing the star in and smiles. • Continue to look for a specific ball at the bottom of the toy basket, pulling out large and small toys until they find the ball they were looking for.	**For example, a child may:** • Get frustrated that they cannot reach a block under a piece of furniture. The caregiver asks them, "What can you use to get the block?" The child goes to grab a toy broom to push the block from under the furniture piece. • Try to push their foot into their shoes repeatedly before playing outside, with caregiver support. • Spend time rebuilding a block structure that fell over. When a caregiver tries to help, they react in Cantonese, "唔駛! 我" (No! I can). • Return to a block building they were creating the previous day to try to make it bigger.

(continued on following page)

Foundation 1.2: Engagement and Perseverance *(continued)*

The developing skill of engaging in activities and persisting in actions and behaviors through challenges and setbacks.

4 through 11 months

- Smile at a familiar person and express excitement when the person smiles back and then continue to smile. When the familiar person turns to talk with another person, the child makes a loud noise to try to get the person's attention again.

11 through 23 months

- Try to grab repeatedly a hand-sized rock that is stuck in the dirt. Once they get the rock, they eagerly show another child.
- Get frustrated when the sand tower they are building continues to fall and almost give up. With the help of a caregiver, they mix water with sand and continue building the tall tower.
- Bring a spoonful of food to their mouth and when it falls before reaching their mouth, they try again. When they get the food in their mouth, they look at a person and gesture, "Mm mm yum!"

23 through 36 months

- Use their **augmentative and alternative communication (AAC) device** to ask for help finding a lost puzzle piece after they have looked for the missing puzzle piece for a few minutes.
- Climb a slide but continue to slip, expressing frustration as they continue to try; then they may hold on to the edge of the slide to try to pull themselves up as they climb.

Strand 2.0: Executive Functioning

This strand has the following foundations:

- Foundation 2.1: Attention
- Foundation 2.2: Inhibitory Control
- Foundation 2.3: Working Memory
- Foundation 2.4: Cognitive Flexibility

First Four Months

During early responsive interactions, such as crying for food or comfort and getting those needs met, important relationships are formed. These relationships serve as a foundation for developing Executive Functioning. For instance, through **coregulation**, young infants become soothed by caregivers. Young infants also show early executive functions as they adapt to routines and engage in simple back-and-forth interactions. In the first four months, young infants may show the foundational development of executive functions by how they engage in the following:

- attend to faces and voices of familiar caregivers or orient toward them in other ways (for instance, turn their head toward the room that they hear a familiar caregiver's voice coming from)
- attend to things in their environment (for instance, prefer to look at things with visual contrast, like a black-and-white picture of a ladybug in a book)
- recognize and show comfort in response to a familiar caregiver's voice, face, or touch (for example, stops crying when hearing a soft familiar voice)
- remember the sound of their caregiver's voice (for example, smiles when they hear their caregiver singing to them)

Foundation 2.1: Attention

The developing skill of engaging and sustaining attention in activities and interactions.

First Four Months

Refer to Strand 2.0: Executive Functioning.

4 through 11 months	11 through 23 months	23 through 36 months
Children are easily distracted and shift their attention to different things and people. Children also follow another person's attention to things in their environment.	Children demonstrate some ability to maintain attention in highly predictable routines. Children switch focus back and forth between a person and the thing that the person is referring to.	Children demonstrate some ability to manage distractions and attention, with caregiver guidance. Children pay attention more carefully and to more than one thing at a time in an orderly and predictable environment.
For example, a child may: • Look at a familiar person who is singing to them as they are getting their diaper changed. • Explore a toy by banging, mouthing, or looking at it. Drop the toy when they notice other children playing with a ball. • Play with a baby gym after following the caregiver's gaze to it. • Focus on a bright stuffed animal that is just out of reach while repeatedly reaching for it. Stop reaching for it when they notice a bright toy car.	**For example, a child may:** • Take a book to the caregiver, glance at the book, sit on the caregiver's lap, glance back at the book, and then glance back to the caregiver again. The child then may turn the page of the book when the caregiver asks them to. • Maintain focus on building a tower with cups, carefully picking up one cup at a time to place it on the other cups. • Expect favorite songs or rhymes, like a song in Spanish, "*Pin Pon es un Muñeco*" ("Pin Pon Is a Doll") or a nursery rhyme in English, "Humpty Dumpty," to be sung the same way each time and protest if the familiar person changes the words.	**For example, a child may:** • Engage in a short story that is read by an elder or caregiver by asking follow-up questions. • Maintain focus while building a block tower with another child. The child may wait and see where the other child is placing the block before they place their block. • Find another activity to do, like playing in the pretend kitchen or with cars, when the caregiver asks them to find a play activity because the caregiver is preparing snacks and cannot play with them.

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Foundation 2.1: Attention *(continued)*

The developing skill of engaging and sustaining attention in activities and interactions

4 through 11 months

- Stare at the play of older children during drop-off and not immediately notice their family member leaving.
- Stop feeding when they hear a noise, then push away with their legs and fists before settling back into feeding.

11 through 23 months

- Stop playing with the toy cars briefly to help clean up when they hear, "It's clean-up time," and then return to play with the toy cars. After another reminder, they help put away the toy cars with the caregiver.
- Get flustered and have difficulty settling back into their previous activity after a fire drill and need comfort from a familiar care educator. The child then transitions back to activities as they normally would.
- Spend some time focusing on the toy cars they are using to go over a pretend bridge before moving on to another activity.

23 through 36 months

- Spend time scribbling on a piece of paper and communicate to the caregiver that they drew a dog while other children nearby are painting, and then they rush through the last part of their drawing to join the children painting.
- Continue playing with their favorite ball outdoors while at the same time responding to the caregiver's question about whether they want a drink of their water.

Foundation 2.2: Inhibitory Control

The developing skill of managing behaviors and impulses.

First Four Months

Refer to Strand 2.0: Executive Functioning.

4 through 11 months

Children react when having to wait for needs to be met (such as arching their back and crying or other signs of discomfort or distress). Children respond to being soothed by caregivers.

For example, a child may:

- Cry loudly while waiting for a familiar caregiver to prepare their bottle. Stop crying once they have the bottle.
- Reach for their sippy cup on a table, and when a person calls their name, they stop for a moment before continuing to reach for their cup.
- Crawl toward the door when another child is being picked up to go home. A care educator calls their name and says, "Hold on. Your auntie is not here yet." The child stops for a moment and glances back at the care educator before continuing to crawl toward the door.

11 through 23 months

Children stop or adjust their actions in response to cues from others (such as facial expressions or gestures) and consider choices with caregiver support to manage their impulses and behaviors.

For example, a child may:

- Throw their food on the floor. When a caregiver says, "Keep your food on your plate, please. Are you done eating or do you want more?" the child shakes their head, then waits until the caregiver turns around to continue throwing food on the floor. The child stops throwing food as soon as they notice the caregiver has turned back around.
- Try to take a toy from another child. The caregiver brings over a book and a ball and asks the child what they would rather play with. The child takes a moment to settle down, takes the ball, and begins playing ball with the caregiver.
- Start to rush outside before getting sunscreen on. The caregiver says in Mandarin, "Hold on. We need to get some sunscreen on you. It's sunny outside." The child waits as the caregiver is looking for the sunscreen and follows the caregiver around.

23 through 36 months

Children communicate more specific information about their wants or needs and adjust their actions to manage their impulses and behaviors, with caregiver guidance.

For example, a child may:

- Stop making a mess with their food when asked by the caregiver. The caregiver turns around to help another child. The child continues to listen to the caregiver and stops playing with their food, even though the caregiver is not watching them.
- Let a caregiver know when they are tired or thirsty by using gestures or short phrases.
- Approach a baby playing on the floor and, while looking at the caregiver, say, "Look at me!" as they gently touch the baby's hand with a greeting. "Hi, baby!" The caregiver says, "Good job! You remembered to be gentle with the baby."

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Foundation 2.2: Inhibitory Control *(continued)*

The developing skill of managing behaviors and impulses

4 through 11 months

- Approach another child and try to touch them but briefly stop as a familiar person says "Gentle, touch the baby gently."
- Throw their spoon on the floor and cry as they are waiting for their food. They stop crying once the caregiver brings their plate of food to them.
- Cries during drop-off. Respond to soothing of a familiar caregiver by calming down.

11 through 23 months

- Notice their family member leaves during drop-off and cries. The care educator comforts the child and shows them the ball they were playing with yesterday, asking the child, "Want to play with the ball? When Grandpa comes back, he can play with you too! Is it okay if I play with you for now?" The child nods and slowly warms up to playing with the caregiver.
- Shake their head and say, "No-no," as they go near a stool that the caregiver asked them not to climb on. The caregiver says, "The stool is not for playing on. You use it when you are going to wash your hands. Do you want to play cooking? Where's your pan and spatula?" The child looks for the pan and spatula to play with.
- Picks up a cup to drink water. When the caregiver says, "Wait, please. Your cup needs a lid." The child stops and looks at the cup and then gives it to the caregiver so the caregiver can put the lid on it.

23 through 36 months

- Wait their turn to try to blow bubbles, and the caregiver lets them know it's their turn after one more child. The child may have some trouble ending their turn to pass the bubbles to the child next in line, but with caregiver support, they pass the bubbles.
- Play a game where they must listen to the commands of the bear puppet but not the dragon puppet. The child listens to the bear and sometimes to the dragon.
- Approach a caregiver and say, "I need to go potty."

Note: This foundation is closely related to Foundation 1.4 Regulating Emotions and Behaviors in the Social and Emotional Development domain. Together, these foundations play an important role in how children learn to manage their behaviors and emotions.

Foundation 2.3: Working Memory

The developing ability to hold information in mind (short-term memory) to use it to accomplish goals and plans.

First Four Months

Refer to Strand 2.0: Executive Functioning.

4 through 11 months	11 through 23 months	23 through 36 months
Children look for people or objects that are hidden in front of them.	Children keep in mind information about people or objects even when out of sight. Children also follow simple one-step directions with caregiver support.	Children demonstrate the ability to keep simple rules or concepts in mind with caregiver support.
For example, a child may: • Look for a ball that a person hid under a blanket in front of them and easily give up after not finding the ball quickly. • Pull at a blanket that a person is using to hide their face behind during a game of peekaboo. • Pick up and investigate a small basket after they see a person place a toy in it. • Drop a spoon off of the high chair tray and then look for it on the ground. • Put a toy under a blanket and then lift the blanket to see if the toy is still there. • Laugh during a game of peekaboo.	**For example, a child may:** • Get a ball (although it is not in clear sight) when a person says, "The ball! Can you bring me the ball?" The child does not bring the ball to the caregiver, begins playing with it instead. • Continue to look for a missing piece of a puzzle. They look and find the missing puzzle piece. • Go to the kitchen to wash their hands when a caregiver says in Tagalog, "Time to wash our hands! We are going to get ready for mealtime." • Copy an adult putting books onto a shelf by placing books in the shelf too when the adult asks, "Can you help me put these books back?"	**For example, a child may:** • Go to the ball bin and bring a caregiver the ball when they ask for it. • Copy an adult as they sort different toys into bins and say, "Blocks go in there and balls go in here." The child successfully **imitates** and places the blocks and balls in their corresponding bins. • Grab their jacket and hat out of their cubby when a care educator asks them to get their clothes to go outside. • Communicate to a care educator in American Sign Language (ASL), "I have this car at home," when playing with a toy car outside.

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Foundation 2.3: Working Memory *(continued)*

The developing ability to hold information in mind (short-term memory) to use it to accomplish goals and plans.

4 through 11 months	11 through 23 months	23 through 36 months
	• Go to the reading area when a care educator says in Spanish, "It is time to read before our nap. Can you pick a book?" • Grab a diaper when the person asks, "Can you give me the diaper? It's time to change you!" while the child is on the changing table.	• Hum the beat to a new song, like the "ABC song" or "*Soualle*" ("Good Night," an African lullaby) as they learn to match the words to the song. • Remember the rules of the freeze dance. The child stops dancing when the music stops.

Note: This foundation is closely related to Foundation 4.1 Long Term Memory in the Cognitive Development domain. Both foundations are important parts of memory and learning.

Foundation 2.4: Cognitive Flexibility

The developing skill of being flexible in attention, thinking, and behavior.

First Four Months

Refer to Strand 2.0: Executive Functioning.

4 through 11 months

Children explore objects and attend to things in their environment, changing the focus of their exploration when they notice some-thing that interests them.

For example, a child may:

- Play with a toy phone.
- Shake a ball and then try to push it.
- Pull off a familiar person's glasses and put the glasses in their mouth.
- Bring a spoon to their mouth with food then throw the spoon on the floor. When a caregiver reacts, the child laughs.
- Roll over to grab a toy. When the child rolls over, they notice a different toy and try to grab that toy instead.
- Dump blocks out of a transparent container before pushing the container across the rug.

11 through 23 months

Children are flexible in their attention and behaviors and adapt to changes in routine with caregiver support. Children also explore simple ideas during pretend play.

For example, a child may:

- Use a toy block as a phone by holding it to their ear.
- Pretend they are eating food or drinking out of a cup.
- Use their favorite cup during mealtime but when the cup is not available, switch to using a similar but different cup.
- Shift from playing and climbing on a toy ramp to sitting with their peers to sing a song, with support from a caregiver.
- Place a sippy cup they were using to drink out of upside down to see water or milk come out of it. When they notice a few drips, they begin to shake it.

23 through 36 months

Children shift attention and adapt behaviors in different situations. Children also engage in more complex pretend play.

For example, a child may:

- Pretend to hold an invisible phone while "talking" to their dad and say in Spanish, "*¡Hola papi! ¿Vamos a tienda?*" (Hi daddy! Go to store?).
- Communicate goodbye to a family member in their home language during drop-off and then begin playing with another child, communicating in their shared home language.
- Use their assistive mobility device (such as an adaptive walker) to adjust their movements as they pass a big ball to another child. They ask for help when the big ball gets stuck and they are unable to pick it up.

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Foundation 2.4: Cognitive Flexibility *(continued)*

The developing skill of being flexible in attention, thinking, and behavior.

4 through 11 months	11 through 23 months	23 through 36 months
	• Play in the sand with a wooden spoon and then notice a child digging with their hands, so they begin to use their hands too.	• Use a toy broom to pretend to fly in the sky, then use the same broom to try to reach a ball that is stuck under the couch. When the broom does not work, the child seeks a caregiver for help. • Place the red blocks in the red container and then switch to placing the blue blocks into the blue container. • Concentrate on building a "ramp" with building blocks. When the ramp falls apart, they get a book and use that as a ramp like they saw their peer do the other day.

Strand 3.0: Goal-Directed Learning

This strand includes the following foundations:

- Foundation 3.1: Problem Solving
- Foundation 3.2: Collaborative Effort

First Four Months

Within the first few weeks of life, young infants' behaviors give us an insight into the early development of Goal-Directed Learning. Young infants use simple movements and vocalizations to explore the world and make their needs known. They reach for things in their immediate surroundings. When they want something or need help, they may cry or fuss to get what they want. As they move their body, they learn that they can make things happen with their movements too. These early movements and vocalizations are foundational for developing goal-directed learning. In the first four months, young infants may show emerging goal-directed learning by how they engage in the following:

- bring their hand or objects to their mouth
- try to reach toys by swinging their arms at them
- wiggle around and get to know their own space and body by moving their arms and legs
- cry or vocalize when they are hungry, tired, need comfort, or want an object

Foundation 3.1: Problem Solving

The developing skill of using different strategies to solve a problem or get needs met.

First Four Months

Refer to Strand 3.0: Goal-Directed Learning.

4 through 11 months

Children use one or two simple actions to achieve simple goals or get their needs met.

For example, a child may:

- Pull the string of a wooden toy to get it closer even when it gets momentarily stuck on something.
- Reach for a cup using their prosthetic hand. When they can't reach the cup with that hand, they use their other hand.
- Reach for a rain-stick as it rolls away.
- Turn the sippy cup around to get the drinking spout in their mouth.
- Lift a rebozo (Mexican shawl-like cloth) to search for a toy that is hidden underneath.

11 through 23 months

Children use trial and error to solve everyday problems with caregiver support. Children use gestures or simple phrases when they need help.

For example, a child may:

- Reach for a ball under the bookshelf. When they cannot reach the ball with their hands, the caregiver suggests that they use the handle of a toy broom to dislodge it. With the caregivers' help, they dislodge the ball.
- Hand a care educator a puzzle piece that they are having trouble placing in the puzzle.
- Climb onto a chair and move their leg down to try to get off the chair. When they notice they cannot reach the ground, they seek a care educator for help.
- Try to fit toys into a big bowl. When the toys are spilling out of the top, they put the extra toys in another bowl when the caregiver suggests that idea.
- Look at a plate of food that is out of reach and then look at a caregiver and communicate "more."

23 through 36 months

Children use a variety of strategies to solve problems, such as asking for help when they need it and applying previously learned strategies to familiar and new situations.

For example, a child may:

- Ignore the block that is much too short to reach a desired object and instead choose a long block that looks as if it may be long enough. Express joy when the long block works.
- Stack only the cubes with holes in them on the stacking post, ignoring the cube-shaped blocks without holes that got mixed into the bin.
- Use their augmentative and alternative communication (AAC) device to ask a caregiver to help move the train tracks over so that the child can build a block tower on the floor.
- Express joy as they work through a matching game and match objects of a similar color and shape with a caregiver.
- Climb up a new safe, age-appropriate playground after having observed another child carefully climb onto the playground.

Foundation 3.2: Collaborative Effort

The developing skill of working together with others to accomplish goals.

First Four Months

Refer to Strand 3.0: Goal-Directed Learning.

4 through 11 months

Children engage in interactions with caregivers and show interest in other children. Children also show an early understanding of others' intentions and goals.

For example, a child may:

- Pay attention to a caregiver getting a bottle for another child who is crying.
- Move toward a familiar caregiver who is showing them a stuffed animal.
- Crawl toward a child who is lying on their tummy and watch them.
- Laugh when a person waves back to them and continue to wave to get them to wave back.
- Laugh when a person makes a silly, exaggerated facial expression.
- Clap with a care educator and other children.

11 through 23 months

Children engage with caregivers to accomplish simple goals. With caregiver support, they can sometimes play with other children in a coordinated way.

For example, a child may:

- Pick up a toy that a caregiver accidentally dropped on their way to the toy container during cleanup time and place the toy in the intended container.
- Roll a ball back and forth with another child and a caregiver.
- Give a caregiver a shape that the caregiver requests as they are placing shapes into a shape sorter.
- Grab a towel when the caregiver exclaims, "Oh no! A spill. I need a towel." The child then claps after the caregiver cleans up the spill.
- Give another child a shovel in the sandbox when the caregiver communicates to the child, "Let's all dig a hole. You have two shovels. Give one to your friend, please."

23 through 36 months

Children play with each other and engage in shared activities to accomplish simple goals or tasks, with increasing independence.

For example, a child may:

- Put blocks away with another child during clean-up time.
- Work with another child to pull a tricycle off the grass so they can ride it more easily.
- Communicate, "Let me try!" as they are trying to pull a drawer open with another child.
- Push a toy car down a ramp as another child is waiting at the bottom of the ramp to catch it.
- Twist a lid as hard as they can to remove it from a container. When that does not work, they take the container to an older child for help.
- Pass a block to another child as they build a tower together when that child communicates that they need another block.

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Foundation 3.2: Collaborative Effort *(continued)*

The developing skill of working together with others to accomplish goals.

4 through 11 months	11 through 23 months	23 through 36 months
	• Grab a toy broom to help sweep when the caregiver says, “Clean-up time!” as they begin to sweep.	

Note: This foundation is closely related to Foundation 2.1 Social Understanding and Foundation 2.4 Interactions with Peers in the Social and Emotional Development domain. Together, these foundations are important for how children learn to actively work with others to accomplish goals.


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Language Development

Infants and toddlers are motivated to communicate their needs, share meaning with others, and learn about their world by interacting with their **caregivers** and communities. Language provides children with a powerful tool to share their own thoughts and learn information from others. Over the first 3 years of life, children learn to understand the languages being used around them and communicate using facial expressions, gestures, and words, in addition to other ways.

Language is an important means of communication. At birth, an infant's brain is organized to develop language. Infants are ready to learn any language used by their caregivers and can learn more than one language at the same time. They develop language by listening to sounds, watching their caregivers, and making connections between those sounds and actions and using language to communicate. As they grow older, infants and toddlers learn to connect language to people, objects, and actions in their world. They also develop the capacity to make the sounds of spoken language or the hand movements of signs, producing their first words. Language is at the core of human communication, and the foundations in the Language Development domain describe how children learn to understand and use language over the first 3 years.

Infants and toddlers develop language and early **literacy** skills by interacting with people around them. They may watch a parent signing words for favorite foods and toys. They may experience their grandmother telling a story. They may turn the pages of a board book with a trusted caregiver and explore the pictures, symbols, and pages. These daily experiences, and many others, form the foundations of young children's language development.

Language Development During the First Four Months

Even before they are born, infants hear sounds and learn about the language they experience in the womb (DeCasper & Fifer, 1980; Kisilevsky et al., 2003; May et al., 2011). During the early months, young infants experience sounds, signs, gestures, and facial expressions from the people around them. These experiences, as part of warm and **responsive interactions**, teach children how to communicate and respond to others (Golinkoff et al., 2000). Some infants might experience only one language in their **home** environment, while others might experience more than one language. Children's language development will differ based on the number of languages they experience, which languages they experience, and their family and cultural practices around language and literacy. Even so, many aspects of language development are similar across **cultures**, languages, and **language varieties**. Children's language development in the first four months of life form the foundations of their future development in any language they learn.

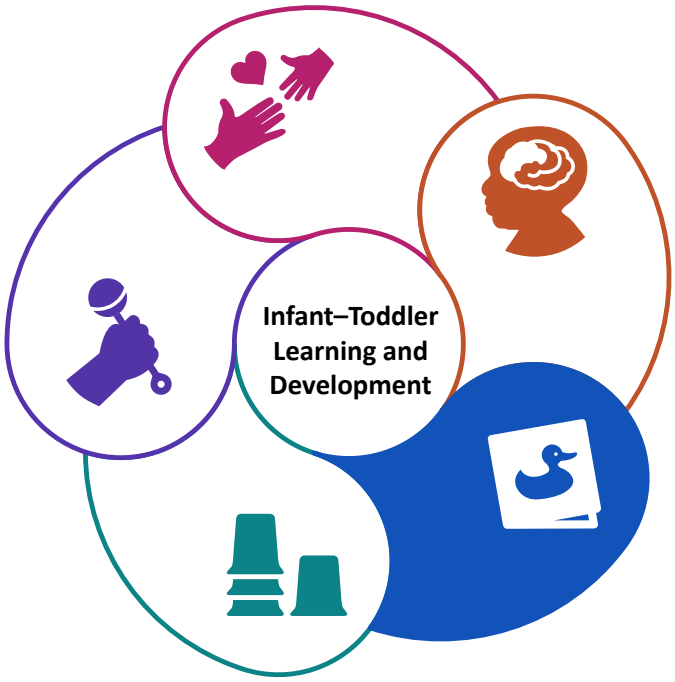
Early Literacy Development During the First Four Months

Infants respond to early literacy experiences even before they are able to understand the meaning behind a story or a song. Songs, rhymes, and finger plays can be engaging literacy experiences for young infants. Caregivers can also show and communicate about books in the first months of life. Because infants' vision is still developing at this time (Banks & Salapatek, 1978), they often enjoy books with contrasts in color and sensory experiences. Very young infants' experiences with books might include very few words and bright, high-contrast images or "touch and feel" books with different textures to explore.

Language Development Is Connected to Development in Other Domains

An important aspect of early development, Language Development is closely related to development in other important domains, such as Social and Emotional Development, Approaches to Learning, Cognitive Development, and Perceptual and Motor Development. Children develop language within early relationships to communicate their needs and share information with their caregivers. As children learn to use language, they develop the ability to communicate their social and emotional needs to others (Irwin et al., 2002). In addition, language development is related to young children's abilities to regulate their emotions (Roben et al., 2013; Vallotton & Ayoub, 2011) and demonstrate **empathy** for others (Ornaghi et al., 2020; Rhee et al., 2013). Understanding and using language supports children's development of friendships with family members, peers, and others. Early language also supports the development of **executive functions**, such as **cognitive flexibility**, **inhibitory control**, and attention shifting (Kuhn et al., 2014; Romeo et al., 2022), important skills in children's developing approaches to learning.

Language development is also closely related to children's **motor development** and cognitive development. As children gain motor skills, their curiosity leads to exploration of their



environment. While exploring their environment, children experience language describing new objects and actions (Iverson, 2021). They often gesture to ask caregivers to label the new things they see. Learning words helps children learn to **classify** things in their world into categories, a key cognitive skill. For example, to understand that a turtle and a dog are both animals, an infant must form a cognitive category of "animal" (Nazzi & Gopnik, 2001).

The Context for Early Language Development

Children are motivated to develop language to connect with the people who are caring for them. Language allows children to communicate needs and develop a shared understanding of the world around them. Caregivers bring language, culture, and their lived experiences together, creating a shared understanding with their infant and toddler. The shared meaning created within these important caregiving relationships influences how children understand new relationships and experiences.

Language is made up of a stream of sounds or motions. Infants use experiences with their caregivers to identify the sounds of their language (or hand shapes and placements for a sign language), distinguish separate words, and use rules about the order of words in sentences. When speaking or signing to infants and toddlers, most people use a singsong tone, simpler sentences, and a slower rate of speaking or signing (Schick et al., 2022; Singh et al., 2009; Song et al., 2010). This type of speech is often called **child-directed speech**. Child-directed speech is used around the world by speakers of different languages. It helps babies learn to identify words and the structure of language. In addition to using child-directed speech, caregivers can support learning by responding to the child's cues and where the child is directing attention. For example, if a child points to an object across the room, a caregiver can respond to this communication by following where the infant is pointing. The caregiver can then communicate with the infant by replying, "Oh yes, there's a picture of your family! Would you like to look at it?"

How do Infants and Toddlers Communicate?

Infants and toddlers communicate in varied ways, including through spoken language, sign language, **augmentative and alternative communication (AAC) devices**, vocalizations, gestures, and facial expressions.

All children develop language in the context of the culture of their families and communities. In some cultures, caregivers frequently speak to children directly. In other cultures, children primarily learn by observing caregivers speaking to each other (Ochs & Schieffelin, 2011; Padilla-Iglesias et al., 2024; Shneidman & Goldin-Meadow, 2012). Cultures also vary in their norms around eye contact, body language, and gesturing, as well as many other aspects of communication and language.

Cultural differences are also evident in the diverse varieties of a language. No language has a single correct version. Languages have diverse varieties, with differences in vocabulary, sounds, and grammar (Christodoulou & Tsimpli, 2023; Craig & Washington, 1994; Lee-James & Washington, 2018). For example, some families may speak varieties of English based on the region they live in or their cultural community. The **language variety** a child speaks with their family is the language through which they make sense of their world and experience comfort, security, and love. Valuing the different language varieties of families supports their infants and toddlers in learning to understand and communicate with the people who are most important to them.

Children's experiences with literacy will also vary based on their family's cultural traditions and practices. For example, the stories, nursery rhymes, and songs children experience will vary based on their cultural and language backgrounds. In addition, children from many cultures develop early literacy knowledge primarily through storytelling rather than books (Heath, 1982; McCarty & Watahomigie, 2004; Piquemal, 2003). **Infant–toddler care educators** (care educators) should partner with families to support children in developing language and literacy in a way that makes sense for the family and maintains a connection with children's home cultures.

Multilingual children are children who are developing in more than one language in the context of their families, communities, or early learning and care settings. Being a **multilingual child** looks different within every family, and care educators should learn from families about the languages used in the child's home. Below are several examples of the diverse multilingual environments children experience:

- One child might experience different languages from different caregivers in their home. For example, the child may hear Vietnamese with their grandmother, who cares for the child while parents are working, and hear English with their parents.
- Another child might experience different languages from the same member of their household. For example, the child's mother, father, and siblings may all speak Hindi and Marathi and may use both languages throughout the day. Another family might speak both Mam and Spanish but primarily use Mam at home and Spanish in the community.
- Another child might experience one language at home and another in an **early learning and care setting**. For example, the child may hear Korean from their parents and may hear primarily English in the family child care home or might hear Cantonese at home and Mandarin in the child care center.

Children draw from their knowledge in one language when learning another. Children who are learning and developing in more than one language may demonstrate skills and behaviors at different times compared to children who are developing in only one language. They will use all of their languages to communicate with their caregivers (Espinosa, 2015; García, 2011). For example, they may use words from two languages in a single sentence. **Multilingual children** may know more words in one of their languages than another or may start putting words together in phrases in one language before another. For example, a child who experiences both Mandarin and English might understand both languages but communicate mostly in Mandarin. Over time, children may shift in how much they use each of their languages.

Translanguaging

Children learn to use all of the languages in their language repertoire together, which is known as **translanguaging**. One way they may use all of their languages is by combining what they are learning across languages within a single phrase, sentence, or conversation, which is known as **code-switching**. For example, a child might say, "I need *ayuda*" (I need help), combining Spanish and English.

Because children's brains are capable of learning more than one language, experiencing multiple languages does not confuse infants and toddlers. Supporting and responding to children's use of their home language helps them form important foundations of language and literacy. It also strengthens connections to their families and communities.

Some children may experience trauma in the first 3 years of life, such as experiencing violence in their communities, losing or being separated from a significant caregiver, experiencing a medical crisis in their family, or facing other instabilities. Caregivers play an important role in creating a safe learning environment for the child who has experienced **trauma**. They can create stable **routines** and engage in responsive care interactions. Children who have experienced trauma may have language delays or may stop talking (De Bellis et al., 2009; Yehuda, 2005; Zajicek-Farber, 2010). An important aspect of a safe and stable learning environment is continuing to provide rich language input, including language around emotions, to support children's language development and their ability to communicate and share meaning in a nurturing relationship.

Individual Differences in Language Development

The foundations are written to illustrate the **variability** in children's development, acknowledging that children develop at different rates both within a domain and across domains of development. In addition, each child is unique and demonstrates their development in a variety of ways. In certain situations, some children may have diverse abilities that could benefit from alternate methods of demonstrating their development.

Children use language to learn and communicate, and each child develops language at a different rate for a wide variety of reasons.

Children use language to learn and communicate, and each child develops language at a different rate for a wide variety of reasons. For example, children with disabilities or infants who are born prematurely may take longer to understand language or express themselves through speaking or signing (Ionio et al., 2016). Children who do not yet use speech or signs to express themselves often communicate in other ways. For example, infants and younger toddlers may look toward, reach for, or move to people or objects that interest them. In this way, they communicate without speaking. Older toddlers may also communicate through moving, reaching, and gesturing. They may also use AAC devices, such as card systems or tablet-based programs. Responding to children's communication will support their continuing language development as well as their development in other domains.

When children have an Individualized Family Service Plan (IFSP), care educators should consult and collaborate with the family and the rest of the IFSP team. This collaboration will support the outcomes included on the IFSP as part of inclusive learning experiences. Care educators can implement adaptations and modifications as specified in a child's IFSP. If a child does not have an IFSP and care educators have a concern that the child's language development is delayed, they can connect with the child's family and collaborate in making a referral for a comprehensive developmental assessment. For children who may benefit from early identification and intervention services, the care educator often plays an important role in the referral process.

Research has shown that children with disabilities can learn more than one language and being a multilingual child does not cause or increase language delays (Byers-Heinlein & Lew-Williams, 2013). To support the child's language growth, care educators should communicate with families about the languages that are used in the child's home and early learning and care settings. Building trusting relationships with families helps care educators better understand the child's individual development and ways to support the child. By doing so, families and care educators can identify areas where early intervention may be beneficial.

Language Development in Deaf and Hard of Hearing Children

Deaf and Hard of Hearing children have varying experiences with language development. The foundations in this document are inclusive of diverse language experiences, but there are some unique aspects to language development in Deaf and Hard of Hearing children to consider while reading the foundations.

Some children who are Deaf or Hard of Hearing may have hearing aids or **cochlear implants** that allow them to hear spoken language, while other children may not have much or any access to sound. Families whose children use hearing aids or cochlear implants may choose to have their child develop only spoken language. Children developing spoken language with hearing aids or cochlear implants may first hear sounds later than other infants, depending on when they receive the devices, which may impact the timing of their language development.

Other families may teach their child a sign language such as **American Sign Language (ASL)**. Some children may use ASL as their only language, while other children might develop in ASL as well as in a spoken language. ASL is a language expressed with movements of the hands and face. It is a language just as English, Vietnamese, or Spanish are languages. It has its own vocabulary, word order, and grammar rules. Like spoken languages, ASL is a complex language that a child can use to express all of their needs, thoughts, and ideas. Its complexity makes it different from using "baby signs," which is a method many care educators use to help babies (including hearing children) to communicate simple words or phrases. Since the majority of Deaf children are born to hearing families (Mitchell & Karchmer, 2004), families are often learning ASL alongside their children. Because families are still learning ASL, children may receive more language input as they get older than they do as young infants, which may also impact the timing of their language development.

Language Development Foundations

The foundations statements are intended to help care educators identify how they can support children's growth in specific areas. Children develop the behaviors and skills described in these foundations at different times and in different ways within their home, various early learning and care settings, and community contexts. Although foundations are focused on the child's development, each foundation should be considered as developing in the context of relationships with caregivers who provide nurturance and support. It is important to keep in mind that the foundations are all related to each other and work together, rather than in isolation. The skills and knowledge described in the Language Development domain are organized into the following three strands:

- **Attending and Understanding:** This strand describes how children develop the ability to make sense of language.
- **Communicating:** This strand describes how children develop the skills to communicate through sounds, gestures, and words (oral and signed) and communicate back-and-forth with another person.
- **Early Literacy:** This strand describes how infants and toddlers learn to engage with books, stories, songs, and rhymes and begin to make meaning of these literacy experiences. While infants and toddlers are not learning to read yet, they are learning about print and how stories, songs, and rhymes are a way of creating shared experience and knowledge.

Representing Multilingual Children

Young children who are developing in more than one language may understand or express themselves more often in one of the languages or the other and may use different languages in different contexts or with different people. All foundations and examples are written to represent skills and concepts children have developed in at least one language.

Each strand starts with a description of foundational skills and capacities in the first four months followed by specific foundations related to the strand. Each foundation includes indicators and examples for three age periods across infancy and toddlerhood: 4 through 11 months, 11 through 23 months, and 23 through 36 months. Table 3 provides an overview of the foundations in Language Development for children 4 to 36 months organized by strand.

Table 3. Language Development Strands and Foundations 4 to 36 Months

Strands	Foundations
1.0: Attending and Understanding	• **1.1: Being Attentive to Communication.** The developing ability to be attentive to communication cues and learn language through interactions with others. This development occurs in any language, such as the child's home language or any other language that they are developing. • **1.2: Understanding Language.** The developing ability to understand a growing number of words (oral, signed, or both) and utterances. This development occurs in any language, such as the child's home language or any other language that they are developing.
2.0: Communicating	• **2.1: Communicating and Speaking.** The developing ability to produce sounds, gestures, and words (oral and signed) and combine them. This development occurs in any language, such as the child's home language or any other language that they are developing. • **2.2: Emerging Conversation Skills.** The developing ability to engage in back-and-forth communication. This development occurs in any language, such as the child's home language or any other language that they are developing.
3.0: Early Literacy	• **3.1: Engagement With Books, Stories, Songs, and Rhymes.** The developing understanding of how to engage with books and literacy activities. This development occurs in any language, such as the child's home language or any other language that they are developing. • **3.2: Understanding Meaning From Books and Stories.** The developing ability to understand books and stories. This development occurs in any language, such as the child's home language or any other language that they are developing.

Strand 1.0: Attending and Understanding

This strand includes the following foundations:

- Foundation 1.1: Being Attentive to Communication
- Foundation 1.2: Understanding Language

First Four Months

Infants develop their capacity to understand language through their very first interactions with their caregivers. Infants learn to distinguish between the stimuli in their environment, which over time allows them to determine the meaning of the communication from people around them. Some of the ways infants show a developing capacity to be attentive and understand in the first four months include the following:

- look toward or touch the face of someone who is interacting with them (for example, they may gaze at the face of a caregiver who is talking to them while feeding them a bottle)
- recognize the voices of familiar people who are caring for them (for example, they may smile when they hear a parent singing while rocking them)
- notice sounds in their environment (for example, they may turn to look toward a door that has been closed or startle after a falling object makes a loud noise)

Foundation 1.1: Being Attentive to Communication

The developing ability to be attentive to communication cues and learn language through interactions with others. This development occurs in any language, such as the child's home language or any other language that they are developing.

First Four Months

Refer to Strand 1.0: Attending and Understanding.

4 through 11 months	11 through 23 months	23 through 36 months
Children focus on the face, hands, or voice of a person who is communicating with them. Children also increasingly follow another person's gaze or gesture to look at objects and people. A child who is blind may follow cues other than visual attention, such as sound or touch.	Children follow another person's gaze or gesture to look at objects and people, looking back and forth between the other person and the object of shared attention. Children show understanding of new words experienced through interactions and watching or listening to others. A child who is blind may follow cues other than visual attention, such as sound or touch.	Children listen to oral language or watch signed language to learn about objects, actions, people, and ideas. Children show increasing ability to understand words, phrases, and sentences communicated to them or others, even when the object, action, person, or idea is not present. A child who is blind may follow cues other than visual attention, such as sound or touch.
For example, a child may: • Smile and look at the face of an adult who holds out a hat and communicates, "Let's put on your hat before we go outside." • Watch the face and hands of an adult who is reading to them in American Sign Language (ASL).	**For example, a child may:** • Look from a caregiver to a blue hat, back to the caregiver, and then to a yellow hat as the caregiver asks, "Do you want your blue hat or your yellow hat?" while holding and showing each hat. The child then reaches for the blue hat.	**For example, a child may:** • Move to the other side of the room and pull a hat from the dress-up box when an older child communicates during play, "I'm gonna be the cook. Where's the chef hat?" • Say in Tagalog and English, "*Nawala ni* Dina jacket *niya*" (Dina lost her jacket) after overhearing a conversation between two care educators.

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Foundation 1.1: Being Attentive to Communication *(continued)*

The developing ability to be attentive to communication cues and learn language through interactions with others. This development occurs in any language, such as the child's home language or any other language that they are developing.

4 through 11 months

- Look across the room when an older child points and says in Vietnamese, a language they share, "There's the dog!"
- Coo when their grandmother says in a sing-song voice in Kumeyaay, "What is your name?" and says the child's name in Kumeyaay.

11 through 23 months

- Look back and forth between an older child and a hand-sized rock sitting on a cubby shelf when the older child asks in Spanish, a language they share, "Do you want to see my new rock?" while gesturing toward the rock on the shelf.
- Move to look at a caterpillar on the ground after a care educator communicates in the child's home language, "Come look at the caterpillar!" while pointing at the caterpillar.
- Look back and forth between a care educator, a bucket, and a sand shovel when the care educator communicates, "Should we play with this bucket and shovel?" holding up the objects as they say the words. When the care educator then asks, "Could I have the shovel?" and points at the shovel, the child says, "Shovel," and hands the care educator the shovel.

23 through 36 months

- Observe two other children who are holding scarves around their shoulders and pretending they are capes. Later, the child holds one of the scarves toward a care educator, requesting, "I want a cape."
- Look toward a patch of grass and flowers when a caregiver gestures at it and says in Spanish, "Look, daisies!" When the caregiver asks in Spanish, "What does the daisy smell like?" the child walks to the flowers and sniffs a daisy, then turns back to the caregiver and smiles.
- Observe an adult who is struggling to open a lid and communicating, "I'm having trouble with this!" Later in the day, while trying to reach for an object, the child communicates, "I'm having trouble!"

Foundation 1.2: Understanding Language

The developing ability to understand a growing number of words (oral, signed, or both) and utterances. This development occurs in any language, such as the child's home language or any other language that they are developing.

First Four Months

Refer to Strand 1.0: Attending and Understanding.

4 through 11 months	11 through 23 months	23 through 36 months
Children understand several familiar words and react to a caregiver's overall tone.	Children understand many words for familiar objects, people, and actions. Children demonstrate the ability to understand directions.	Children understand many words about a variety of topics and learn new words after experiencing them only one or two times. Children understand others' comments, questions, requests, or stories.
For example, a child may: • Wave arms and kick legs in excitement when a care educator says in Spanish, "I have your bottle." • Smile and look toward the door when a care educator communicates in the child's home language, "Look, Daddy is here!" • Reach up when a family member asks, "Would you like to be picked up?" • Look to a person who has just said the child's name. • Start to cry after a care educator yells, "Ouch!" after dropping something on the care educator's toe.	**For example, a child may:** • Point to the milk carton when a care educator who is preparing lunch asks in Spanish, "What do you want to drink?" • Look at a tree when a care educator says in Cantonese, "Look! A squirrel!" • Run away across the yard when a care educator communicates in the child's home language, "It's time to go inside." • Point to their own belly button when a care educator reads the line, "Where is the belly button?" in a favorite Spanish-language picture book.	**For example, a child may:** • Take a milk carton off a tray when a care educator serving lunch asks in Spanish, "It's your turn to pick. Which drink do you want?" • Put the apples in the bigger of two bowls while helping to make a snack when the care educator communicates, "After I wash the apple, put it in the big bowl." • Point to the bucket in a picture book and reply, "Yeah, here!" when a care educator asks, "Do you see the bucket in the picture? It looks just like our orange one."

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Foundation 1.2: Understanding Language *(continued)*

The developing ability to understand a growing number of words (oral, signed, or both) and utterances. This development occurs in any language, such as the child's home language or any other language that they are developing.

4 through 11 months	11 through 23 months	23 through 36 months
	• Pick up a ball and respond, "Here, ball," when an older child asks, "Where is the ball?"	• Communicate, "elephant" and "penguin" with their augmentative and alternative communication (AAC) device after an adult asks, "What animals did you see at the zoo?" • Get their boots and jacket when a care educator says in Tagalog, "It's raining outside. We need to wear our coats and boots to play in the rain." • Move to the snack table after observing a care educator tell another person, "I'm going to put out snacks."

Language Input for Deaf and Hard of Hearing Children

All children need to experience rich language input from infancy. For children who are Deaf or Hard of Hearing, it is particularly important to ensure they receive language input early in infancy. Deaf or Hard of Hearing children may receive early language input through sign language, even if their caregivers are still learning the language. Families who choose to use hearing aids or cochlear implants for their children may choose to use sign language alongside spoken language, or if their child receives their hearing aids or cochlear implant early in infancy, they may choose to use only spoken language.

Strand 2.0: Communicating

This strand includes the following foundations:

- Foundation 2.1: Communicating and Speaking
- Foundation 2.2: Emerging Conversation Skills

First Four Months

From the time they are born, infants produce sounds, such as cries and whimpers, to communicate their needs (Harding & Golinkoff, 1979; Zeskind & Lester, 1981). As children grow older, they learn to communicate, using gestures and words, and engage with others in conversation. Before they reach this level of development, some of the ways infants communicate and interact in the first four months include the following:

- cry to express their needs or express discomfort (for example, they may cry when hungry or tired)
- make cooing sounds with their mouths, both in response to others and when alone (for example, they may coo "ahhh" in response to a caregiver saying "Hello, baby," or coo "oooh" while lying by themself on a blanket)
- respond to another person in a back-and-forth manner, almost like a conversation (for example, they may squeal or giggle in response to a caregiver talking to them or making silly faces, or they may respond, "ah" after a caregiver says, "ah," as if having a conversation)

Foundation 2.1: Communicating and Speaking

The developing ability to produce sounds, gestures, and words (oral and signed) and combine them. This development occurs in any language, such as the child's home language or any other language that they are developing.

First Four Months

Refer to Strand 2.0: Communicating.

4 through 11 months	11 through 23 months	23 through 36 months
Children experiment with and practice making sounds or hand shapes. Children use sounds or gestures to communicate needs, wants, and interests. Children who are developing in sign languages will babble by moving their hands in sign-like shapes.	Children use several words for people they know, objects they use, and actions they perform in their daily lives. Children use gestures and a few words to tell others about their needs, wants, and interests. Children who do not yet use speech or signs to express themselves may use augmentative and alternative communication (AAC) devices, such as card systems, communication boards, or tablet-based programs.	Children use vocabulary about a variety of topics. Children communicate in a way that can be understood by a familiar person who speaks or signs the child's language. Children also combine words into two- or three-word sentences and modify some words (for example, changing verbs to past tense) but with many inaccuracies. Children who do not yet use speech or signs to express themselves may use AAC devices, such as card systems, communication boards, or tablet-based programs.
For example, a child may: • Open and close their hand in response to a caregiver who is signing to them in American SIgn Language (ASL). • Lift arms and vocalize to communicate to a caregiver the desire to be held.	**For example, a child may:** • Sign "cracker" in ASL to request more crackers at snack time. • Point to the sky and communicate "moon" on their AAC device when the moon is visible.	**For example, a child may:** • Sign, "More crackers, please," in ASL to request more crackers at snack time. • Ask a caregiver in Cantonese, "呢個係乜嘢?" (What's this?) while pointing at insects in a garden.

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Foundation 2.1: Communicating and Speaking *(continued)*

The developing ability to produce sounds, gestures, and words (oral and signed) and combine them. This development occurs in any language, such as the child's home language or any other language that they are developing.

4 through 11 months

- Vocalize to get attention from a family member.
- Babble, "da da da da" while playing.
- Clap their hands after dumping objects out of a container.

11 through 23 months

- Say in Samala, "*Swe' swe*" (Sleep, sleep) while covering a teddy bear with a blanket.
- Say, "*¿Vamos parque?*" (Go to park?) in Spanish while gesturing to a photo of the family at the park.
- Say, "See Pampa" (the child's approximation of "Grandpa") while tugging on a caregiver's hand, indicating that they want to go to their grandfather, who is in the next room.

23 through 36 months

- Comment, "She falled down," when explaining why another child is crying.
- Yell in Vietnamese, "*Tới phiên tớ*" (It's my turn!) to another child at the top of a slide.
- Tell a care educator in Spanish, "*Me gusta rojo*" (I like red) when picking out colors for painting.
- Make a request by saying in English and Spanish, "I need *ayuda*" (I need help) to a parent.

Foundation 2.2: Emerging Conversation Skills

The developing ability to engage in back-and-forth communication. This development occurs in any language, such as the child's home language or any other language that they are developing.

First Four Months

Refer to Strand 2.0: Communicating.

4 through 11 months	11 through 23 months	23 through 36 months
Children participate in back-and-forth communication through gestures, facial expressions, and sometimes limited verbal responses.	Children use gestures, words, or babbles to respond to communication from another person or to start conversations with that person. Children who do not yet use speech or signs to express themselves may use augmentative and alternative communication (AAC) devices, such as card systems, communication boards, or tablet-based programs.	Children engage in back-and-forth conversations in which they respond to another person about the same conversational topic in general. Children who do not yet use speech or signs to express themselves may use AAC devices, such as card systems, communication boards, or tablet-based programs.
For example, a child may: • Make cooing sounds back and forth with a caregiver who is cradling them and talking to them. • Babble back and forth with a caregiver during a diaper change. • Put their arms up above head when a caregiver says, "Soooo big."	**For example, a child may:** • Shake their head or express "no" when a caregiver asks if the child is ready to go back inside. • Hold a favorite toy out to a caregiver as if asking to play. When the caregiver asks, "Should we play with this?" bounce up and down excitedly in reply.	**For example, a child may:** • Tell a caregiver, "It flied." When the caregiver responds, "It flew? What flew?" the child replies, "The bird." • Say in Tagalog and English, "*Pusa ko yan. At* rainbow. Love *ko ang* rainbow" (That's my kitty. And a rainbow. I love rainbows) while gesturing to scribbles they have made when asked, "*Ano yang* drawing *mo?*" (Can you tell me about your drawing?).

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Foundation 2.2: Emerging Conversation Skills *(continued)*

The developing ability to engage in back-and-forth communication. This development occurs in any language, such as the child's home language or any other language that they are developing.

4 through 11 months

- Try to get a caregiver to play peekaboo by hiding their own face behind a blanket, uncovering their face, and laughing.
- Try to clap hands to get a caregiver to continue playing a hand-clapping rhyme in English, "Pat-a-Cake," or a finger-play rhyme in Spanish, "*Cuando vayas a la carnicería*" ("When You Go to the Butcher Shop").
- Flap their hands in the air while a caregiver sings a finger play song such as "包餃子" ("Making Dumplings") in Mandarin or "The Itsy Bitsy Spider" in English.
- Open and close their mouth trying to imitate a caregiver after the caregiver blows a raspberry (making a sound by sticking out their tongue and blowing).

11 through 23 months

- Communicate "cheese" using a card communication system when a care educator asks in the child's home language, "What would you like with your snack today, cheese or yogurt?"
- Say in Spanish, "*Adios, mamá*" (Bye-bye, mama) and "*Adios, papá*" (Bye-bye, dada).
- Babble into a toy phone, pausing from time to time as if listening to someone on the other end.
- Respond to a caregiver's comment about an object with a related action or comment. For example, make a barking sound after a caregiver says, "Nice doggie," in Tagalog while patting a toy dog.
- Reply in Mandarin, "熊" (Bear) to request a favorite story, 棕熊，棕熊，你看到了什么? (*Brown Bear, Brown Bear, What Do You See?*) after a caregiver asks, "你想看书吗" (Would you like to read a book?)

23 through 36 months

- Reply in Spanish, "*Allí*" (Over there) and point to the corner when a care educator asks, "*¿Adónde está?*" (Where did it go?) When the care educator replies, "*¿Vamos a buscarlo?*" (Should we go look for it?) the child responds, "*Sí, vamos*," (Yeah, come on) and holds out their hand for the care educator to hold.
- Nod to indicate "yes" when a care educator asks if the child would like to use the paint on the table. When the care educator asks the child what color they would like, the child points to the blue paint. After the care educator confirms, "You'd like the blue paint?" the child nods again.
- Ask a child who is sitting next to them and eating oranges, "Do you like oranges?" When the second child replies, "Yeah," the first child responds, "I got yogurt."

Strand 3.0: Early Literacy

This strand includes the following foundations:

- Foundation 3.1: Engagement With Books, Stories, Songs, and Rhymes
- Foundation 3.2: Understanding Meaning From Books and Stories

First Four Months

In the first four months of life, children's responses to books, stories, songs, and rhymes look similar to their responses of attending to and understanding other language-related experiences. Some of the early ways infants engage with literacy include the following:

- watch or listen to the experience of a caregiver signing or telling them a story, reading to them, or showing and communicating about a book (for example, they may gaze at the face of a caregiver who is telling a story or reading a book, or they may reach to touch a book)
- respond to songs that are sung to them (for example, they may make cooing sounds in response to a song or become relaxed when experiencing a lullaby)

Foundation 3.1: Engagement With Books, Stories, Songs, and Rhymes

The developing understanding of how to engage with books and literacy activities. This development occurs in any language, such as the child's home language or any other language that they are developing.

First Four Months

Refer to Strand 3.0: Early Literacy.

4 through 11 months	11 through 23 months	23 through 36 months
Children watch or listen to a caregiver who is signing or telling a brief story, reading a short book, or signing or reciting a song or rhyme. Children explore books and pictures together with a caregiver.	Children watch or listen to a caregiver who is signing or telling a story, reading a book, or signing or reciting a song or rhyme. Children interact with books (such as holding, exploring covers and pages, or showing the book to a caregiver). They also participate by pointing at a book, flipping pages, or making one- or two-word comments.	Children engage with storytelling, books, songs, or rhymes by watching or listening, asking short questions, and making comments. They demonstrate basic understanding of how to interact with a book, such as turning the pages. Children also demonstrate an emerging understanding that written text represents words.
For example, a child may: • Make sounds and wave their arms in excitement when a caregiver is reciting a song or nursery rhyme. • Hold a book and touch the pages while a caregiver describes what is on the pages. • Watch a caregiver who is signing a story in American Sign Language (ASL). • Coo and babble in response to a caregiver who is singing a lullaby or telling a story to the child.	**For example, a child may:** • Make hand motions as part of an interactive rhyme, such as clapping during a rhyme in Spanish, "*Tortillitas para mamá*" ("Tortillas for Mama") or moving their hands in a circle during a song in English, "The Wheels on the Bus." • Attempt to turn the pages of a book, turning more than one page at a time and turning pages in different directions. • Bring a caregiver a favorite book to read.	**For example, a child may:** • Sing along with a few repetitive words in the chorus of a familiar song. • Use their finger to flip the pages on a screen back and forth on an accessible device they are learning to use. • Count in Mandarin, "一二三" (One, two, three) together with a caregiver and other children as they count objects on a felt board as part of a nursery rhyme.

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Foundation 3.1: Engagement With Books, Stories, Songs, and Rhymes *(continued)*

The developing understanding of how to engage with books and literacy activities. This development occurs in any language, such as the child's home language or any other language that they are developing.

4 through 11 months

- Chew on a board book while a caregiver reads the book.
- Rub the page of a touch-and-feel book while a caregiver reads the book.

11 through 23 months

- Open a book using a craft stick a caregiver has taped to the cover to aid the child in their **fine motor skills**.
- Communicate "soft" while touching a fuzzy page in a touch-and-feel book.
- Hold out their arms to indicate "big" when a caregiver who is telling a story says, "Show me how big you think the fish was."
- Point to a seashell when a caregiver asks in Mandarin, "Do you see the seashell? Where is the seashell?" while reading a seek-and-find book.

23 through 36 months

- Communicate their favorite line of a story they have experienced many times when a caregiver pauses while telling the story.
- Pretend to read a book to a younger infant or stuffed animal by communicating about the pictures on each page and turning the book around to show the picture.
- Examine the text on the back of a cereal box and ask, "What's this says?" demonstrating an understanding that the text represents words.

Providing Accessible Print Materials

Children who are blind or have low vision should receive daily opportunities to engage with books and print. Caregivers can provide these opportunities by engaging children with touch-and-feel books, books with large print or **braille**, picture books accompanied by life-sized objects representing the images in the book, or audiobooks.

Foundation 3.2: Understanding Meaning From Books and Stories

The developing ability to understand books and stories. This development occurs in any language, such as the child's home language or any other language that they are developing.

First Four Months

Refer to Strand 3.0: Early Literacy.

4 through 11 months	11 through 23 months	23 through 36 months
Children watch or listen to a caregiver who is signing or telling a brief story, reading a short book, or signing or reciting a song or rhyme. Children explore the pictures and pages of a book while a caregiver reads.	Children make connections between words or events in stories or books and in real life. Children participate in storytelling and reading by making one- or two-word comments or pointing to pages in a book while babbling, showing an understanding of elements in the story.	Children show a basic understanding of the main idea or subject of a story or book they have experienced many times.
For example, a child may: • Pat the page of a book while a caregiver reads. • Watch or listen to a caregiver who is signing or telling a story. • Lift the flaps of an interactive book while a caregiver reads, although not always at the appropriate time in the book. • Focus on a caregiver who is wiggling the child's fingers while singing a familiar rhyme in Spanish, "*Este dedito compró un huevito*" ("This Little Finger Bought an Egg"). • Look at pictures that a caregiver points to while reading a book.	**For example, a child may:** • Pat an illustration of a character's hat and communicate, "hat," then pat their own head. • Bounce up and down during their favorite part of a familiar story. • Say or sign familiar words in their home language, such as "cup" or "bed," when experiencing the illustrations in a book. • Pretend to fall down and roll on the floor when a character in a familiar story falls down.	**For example, a child may:** • Point to the illustration of a character in a familiar book while a caregiver is reading. Communicate, "He's doesn't like the eggs," demonstrating an understanding of the message repeated throughout the book. • Ask a caregiver in the home language to read "the ballerina book," which is a book about a girl who is learning ballet that is one of the child's favorites. • Move across the room making engine sounds after experiencing a book about vehicles several times.

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Foundation 3.2: Understanding Meaning From Books and Stories *(continued)*

The developing ability to understand books and stories. This development occurs in any language, such as the child's home language or any other language that they are developing.

4 through 11 months	11 through 23 months	23 through 36 months
	• Point to their ears, nose, and mouth when a caregiver points to pictures of each body part in a book about bodies and faces. • Communicate, "moon," while patting an illustration showing a moon through a window, then look to the window of their own room to see the moon.	• Communicate in Spanish, "*¡Chistoso!*" (Silly!) after experiencing a funny story many times. • Make roaring sounds while a caregiver tells a folk tale about a bear, which the child has previously experienced several times. • Giggle and move their legs while a caregiver reads the line, "legs that dance away" in the book *Brown Sugar Baby*, which the two have read together several times.

Storytelling Traditions

Many cultures have a rich tradition of storytelling. Experiencing stories, folk tales, and rhymes invites children to engage with literacy in a way that can connect them with cultural practices in their families and communities. Storytelling traditions are often called "oral storytelling" to highlight that the stories are passed down as they are told, but storytelling may be through spoken or signed language.

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Cognitive Development

Infants and toddlers develop cognitive skills through their everyday interactions, experiences, and play. For example, imagine an infant repeatedly dropping a spoon from their highchair, watching with fascination as it falls to the floor, and waiting for their **caregiver** to pick it up once more. Imagine a toddler picking up different shaped blocks and pushing them down a ramp, noticing how they move. Through playful explorations like these, infants and toddlers learn about objects and people, how different objects fit and move together in space, and about **cause and effect**. They are also learning about mathematical ideas like "more" and "less."

As they develop, infants and toddlers learn to rely on their memory to distinguish between familiar and unfamiliar people and objects. They make connections to past experiences and learn to anticipate familiar **routines**. Infants and toddlers explore actions or ideas through **imitation** of past experiences. Imitation is one of the ways infants and toddlers acquire knowledge and develop understanding of social situations. Imitation can take place in the context of **symbolic thinking** activities like pretend play. During pretend play, young children may imitate or reenact past experiences, routines, or interactions with people or things. For example, a toddler may imitate the routine of setting the table for breakfast while taking care of a baby doll in the **dramatic play** area.

Cognitive Development During the First Four Months

Even before birth, infants are learning and from the moment they are born, they are actively making sense of the people and things around them. Infants in the womb can hear certain sounds (Carvalho et al., 2019), notice light patterns (Reid et al., 2017), and experience certain tastes and smells (Ustun et al., 2022). These early experiences in the womb allow infants to learn about the world they will experience around them once they are born. Once born, infants continue to attend to the information coming through their senses, such as the faces of their caregivers or the sounds in the room. They process this sensory information by noticing patterns and integrating information across their senses. For example, they might notice the difference between faces and nonfaces (Easterbrook et al., 1999; Simion & Giorgio, 2015). They develop memories as they learn to recognize their caregiver both by hearing the caregiver's voice and seeing their face (Bushnell, 2001; Sai, 2005).

As children continue to learn about the environment through their senses, they form expectations for how objects move or act, which is important for their developing understanding of cause and effect. For example, young infants understand that when an object passes behind a curtain it will disappear from view (Lin et al., 2022; Mayer & Liszkowski, 2025). They also have a basic understanding of quantity. For example, they expect to hear four sounds when they see four objects presented to them (Izard et al., 2009). The first four months form the foundation for children's cognitive development in the years to come.

What Is Cognitive Development and Why Is it Important?

Cognitive development describes how infants and toddlers think, reason, and understand. It includes the development of knowledge and skills that allow children to understand and relate to the world around them. Children learn about the world by exploring, observing, reasoning, experimenting, and interacting with objects and people in their environment. As infants and toddlers explore their environment, their brains process and organize new information, notice patterns, and form memories that support their ongoing learning. The more opportunities infants and toddlers have to interact with objects, test out ideas, or explore new environments, the stronger the connections in the brain and the stronger the learning (Casey et al., 2000, 2005).

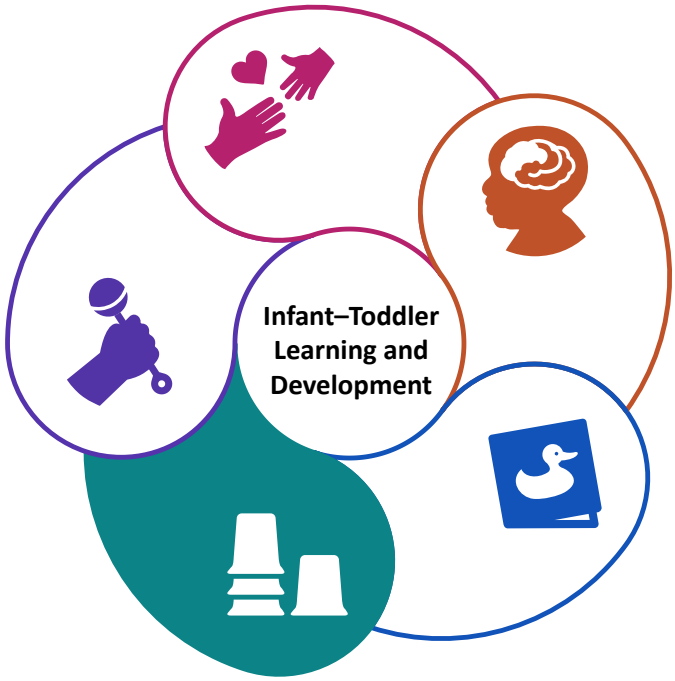
Cognitive development is essential for children's overall learning and development. Symbolic thought, for example, sets the foundation for early **literacy**. Cognitive skills also form the foundation for increasingly complex skills in STEM (Science, Technology, Engineering, and Math) in later years. Children's understanding of cause and effect is very important for their abilities to understand how objects work, make predictions, and solve problems. Children's developing abilities to understand quantity, count, and manipulate objects in space is important for their learning in math. Additionally, children's capacity for symbolic thought eventually allows them to solve math problems that are more abstract, such as algebraic equations.

Importance of Play

Play provides young children with meaningful and joyful opportunities to learn about the world and themselves. Through play, children can develop concepts and skills in cognitive development (Zosh et al., 2017). For example, children can learn about cause and effect when they push over a tower of objects or remember and act out parts of a routine while playing in the dramatic play area. Play encourages children to practice important cognitive skills like noticing, predicting, problem-solving, and spatial awareness in real-world contexts. For example, as children are trying to fit objects of different shapes and sizes into a container, they may attend to the size, shape, and quantity of the objects and engage in problem-solving as they try to orient the object to make it fit through the opening of the container.

Cognitive Development Is Connected to Development in Other Domains

Infants' and toddlers' Cognitive Development is closely related to their development in other domains, including Social and Emotional Development, Approaches to Learning (ATL), Language Development, and Perceptual and Motor Development. Children's ability to explore their environment using their senses and bodies is important for cognitive development. As children gain motor skills like learning to crawl or walk, they are also able to learn from their environment in new ways. For example, they can move toward an object that rolled under the table. Once children can move through space on their own, they are also able to bring objects to others, creating opportunities for interactions with caregivers and peers. Skills and behaviors in ATL, such as curiosity, attention, and problem-solving, also support children's cognitive development. Children's curiosity and **initiative** are essential to children's motivation to explore and make sense of their environment. Similarly, children's abilities to pay attention, engage in problem-solving, and persevere are key to their learning. For example, when solving problems like trying different ways to make an object fit into something else, they demonstrate perseverance.



Children's cognitive development is also nurtured through their growing social skills. They thrive in safe, stable, and nurturing relationships. Imitation, which is one of the earliest mechanisms for learning in young children, is dependent on children's early relationships with caregivers and peers. Infants will observe their caregivers or peers and imitate their behaviors to learn. Infants also engage in imitation for social reasons. Infants feel more connected to the people that imitate them because it suggests that these people are similar and familiar to them (Powell & Spelke, 2018). For example, a caregiver imitating the babbling sounds an infant makes or smiling back at an infant are ways caregivers and infants engage in social imitation.

Finally, cognitive development is closely related to children's language development. Children's growing vocabulary supports their cognitive growth. Infants are born with the ability to develop concepts for objects and people in their environment through cognitive processes like **classification** (Spelke, 2000). For example, as children encounter new objects and people in their

environment, they learn to classify and form concepts such as "mama," "book," or "dog." Language plays a very important role in helping young children refine the concepts they are developing (LaTourrette & Waxman, 2020). For example, they might notice that a caregiver uses the word "dog" for only some animals with four legs, but not all. This then helps children refine their concept of "dog." Similarly, learning number words (one, two, three) supports children's understanding of quantity and early counting.

The Context for Early Cognitive Development

Responsive relationships are fundamental for young children's development in any domain, including Cognitive Development. Early experiences and caring relationships with caregivers shape infants' and toddlers' brain development (Center on the Developing Child, 2007; Schore, 2005). Caregivers play a vital role in supporting the cognitive development of infants and toddlers when they provide a healthy interpersonal or social and emotional context in which cognitive development unfolds. Caring, responsive caregivers—whether parents, foster parents, or extended family—provide the basis from which children can optimally engage in behaviors and interactions that promote learning and development. Young children are more likely to be curious and interact with novel environments when they know a dependable, responsive caregiver is emotionally and physically available to them. Children who are more confident in their explorations are more likely to interact with their environment in new ways, experiment, and problem-solve, skills that are important for children's cognitive development (Lally & Mangione, 2017).

All children develop cognitive knowledge and skills in the context of the culture of their families and communities. People differ in how they perceive their environment and where they choose to focus their attention when exploring and investigating. For example, people from some **cultures** are more likely to pay attention to the characteristics of objects, while those from other cultures are more likely to notice the relationships between objects (Boduroglu et al., 2009; Nisbett & Miyamoto, 2005). These differences in how people observe and reason about their environment emerge early on and are influenced by how caregivers interact and speak with their children (Kuwabara & Smith, 2012). Some caregivers are more likely to let children initiate the exploration of the environment, while other caregivers are more likely to lead children to notice and observe specific aspects of their environment. Research suggests that where caregivers focus their own attention (on objects or the relationships between objects) and the way caregivers interact with children (caregiver-led interactions compared to child-led interactions) can influence what children pay attention to and learn from their environment (Senzaki & Shimizu, 2022).

Children's linguistic background influences the way they develop and express their cognitive knowledge and skills. Languages may differ in the words they use to describe concepts. For example, Spanish uses several words to describe distance. Spanish uses *ahí* for near distances and *allí* and *allá* for farther distances that in English would all be described as "there" or "over there." Because of such differences, the language or languages a child learns will influence how they think about certain concepts.

Multilingual children are children who are developing two or more languages at the same time. Multilingual children draw from their knowledge in all their languages when learning new skills and behaviors or communicating with others. For example, in cognitive processes like classification or cause and effect, multilingual children can use what they learn from all of their languages to sharpen the concepts they are developing (LaTourrette & Waxman, 2020). Multilingual children may also communicate their knowledge in more than one language and may know more words in one language than in another. For example, research on multilingual children's counting skills shows that as children first learn to recite number words, they may not know the same number words in each of their languages (Wagner et al., 2015). A child may be able to recite "one, two, three, four, five" in Korean but only know the number word to describe their age ("three") in English. **Translanguaging** may also happen as children develop concepts. Translanguaging is when children use all of the languages in their language repertoire. For example, when working on a puzzle, a child who speaks Vietnamese and English may say "circle" in English but "square" in Vietnamese.

Children's lived experiences influence their cognitive development. Young children need consistent, loving caregivers to provide a safe and secure base for exploration. They thrive in learning environments that allow them to discover and explore. The environment can include items found in the **home** (for example, pots and pans, boxes that items come in, and clothing) for engagement and exploration. Every home environment can offer possibility for engagement, exploration, and interactions that foster children's cognitive development. Partnerships between families and caregivers can help support the best ways to work together to ensure that, whether at home or in the caregiving setting, infants and toddlers have safe, supportive environments that encourage them to explore and discover.

Trauma is an emotional and physiological response to events such as physical neglect, natural disasters, experience of or exposure to violence, or housing insecurity (American Psychological Association, n.d.). When children experience prolonged periods of trauma or stress, this may have a negative impact on children's brain development and cognitive development (National Academies of Sciences, Engineering, and Medicine, 2019). Repeated experiences of trauma have an impact on children's long-term cognitive development (Enlow et al., 2012; Pechtel & Pizzagalli, 2011; Wang et al. 2024). **Infant–toddler care educators** (care educators) who implement trauma-informed practices and create an environment where young children feel safe, loved, and cared for can serve as a **protective factor** for children who are at risk for trauma (Bhushan et al., 2020).

Individual Differences in Cognitive Development

The foundations are written to illustrate the **variability** in children's development, acknowledging that children develop at different rates both within a domain and across domains of development. In addition, each child is unique and demonstrates their development in a variety of ways. In certain situations, some children may have diverse abilities that could benefit from alternate methods of demonstrating their development.

Infants and toddlers differ in how they express and develop cognitive knowledge and skills. All infants and toddlers develop cognitive knowledge and skills, but differences in their interests and opportunities may lead individual children to explore their environment in different ways. For example, some children may show interest in exploring motion and therefore may gravitate toward objects that roll or have wheels. Other children may be interested in the different textures of objects and enjoy **mouthing** and touching objects with interesting textures.

Children might have different assets that influence how they develop and show their cognitive knowledge and skills. An infant or toddler who is blind may explore objects primarily through touch or by listening to the sounds it makes when shaking, throwing, or

squeezing it. Infants and toddlers who do not yet use speech or signs to express themselves often communicate in other ways. For example, young children may demonstrate what they learn about cause and effect by watching a caregiver bang a spoon on the bottom of a pot and then touch a caregiver's hand to ask them to do it again. In this way, they communicate their understanding without speaking.

Infants and toddlers with disabilities or developmental delays, or infants born preterm, may demonstrate imitation, long-term memory, and problem-solving skills at a later age or in unexpected ways (Ledford & Wolery, 2011; Martínez-Nadal & Bosch, 2021; Vicari et al., 2016). In inclusive **early learning and care settings**, children benefit from individualized supports that are responsive to their interests, strengths, and needs and that optimize their participation and interaction with their peers. When the child has an Individualized Family Service Plan (IFSP), care educators should consult and collaborate with the family and the rest of the IFSP team. This collaboration will support the outcomes included on the IFSP as part of inclusive learning experiences. Care educators can implement adaptations and modifications as specified in a child's IFSP. If the child does not have an IFSP, and caregivers have a concern that a child's cognitive development is delayed, they can connect with the child's family and collaborate in making a referral for a comprehensive developmental assessment. Building trusting relationships with families helps care educators better understand the child's individual development and ways to support the child. By doing so, families and care educators can identify areas where early intervention may be beneficial.

Cognitive Development Foundations

The foundations statements are intended to help care educators identify how they can support children's growth in specific areas. Children develop the behaviors and skills described in these foundations at different times and in different ways within their home, various child care settings, and community contexts. Although foundations are focused on the child's development, each foundation should be considered as developing in the context of relationships with caregivers who provide nurturance and support. It is important to keep in mind that the foundations are all related to each other and work together, rather than in isolation. The skills and knowledge described in the cognitive development domain are organized into the following four strands:

- **Exploration:** This strand focuses on how infants and toddlers develop an understanding of cause and effect through the exploration of their environment. Related skills and behaviors such as children's curiosity, initiative, and problem-solving skills are addressed in the ATL domain.
- **Emergent Mathematical Thinking:** This strand focuses on infants' and toddlers' developing understanding of number and spatial relationships and their ability to classify objects into groups based on similarities and differences.
- **Imitation and Symbolic Thinking:** This strand focuses on how infants and toddlers imitate other people's actions or sounds, and children's understanding that certain objects or actions can represent other objects or actions.
- **Memory:** This strand focuses on infants' and toddlers' abilities to recognize familiar people and objects, remember information over a longer period of time, and remember how to perform familiar actions or routines.

Each strand starts with a description of foundational skills and capacities in the first four months followed by specific foundations related to the strand. Each foundation includes indicators and examples for three age periods across infancy and toddlerhood: 4 through 11 months, 11 through 23 months, and 23 through 36 months. Table 4 provides an overview of the foundations in cognitive development for children 4 to 36 months organized by strand.

Table 4. Cognitive Development Strands and Foundations 4 to 36 Months

Strands	Foundations
1.0: Exploration	• **1.1: Cause and Effect:** The developing understanding that one action brings about another.
2.0: Emergent Mathematical Thinking	• **2.1: Number Sense:** The developing understanding of number and quantity. • **2.2: Spatial Thinking:** The developing understanding of how things move and fit in space. • **2.3: Classification:** The developing ability to notice similarities and differences between objects or people, and to classify objects according to their characteristics.
3.0: Imitation and Symbolic Thinking	• **3.1: Imitation:** The developing ability to imitate the actions, sounds, language, or gestures of others, either immediately or later. • **3.2: Symbolic Thinking:** The developing ability to use actions, objects, or ideas to represent other actions, objects, or ideas.
4.0: Memory	• **4.1: Memory:** The developing ability to store and later retrieve information about past experiences.

Strand 1.0: Exploration

This strand includes the following foundation:

- Foundation 1.1: Cause and Effect

First Four Months

Infants are born curious to discover the world around them. They learn about objects, people, and events by using their senses. Young infants explore their environment and develop an understanding of cause and effect as they experience the following:

- startle at loud sounds by kicking their legs, moving their arms, arching their back, or crying
- pay particular attention to faces or voices of caregivers (for example, they may look at a caregiver's face during feeding time or smile when they hear a caregiver talking)
- visually track objects or people in their field of vision by focusing their gaze on areas of high contrast (for example, their gaze may follow a caregiver walking from one side of their crib to the other)
- explore objects by holding them in their hands, touching them, looking at them, listening to the sound they make, or bringing them to their mouth
- act on objects within their reach to explore cause and effect (for example, infants might kick their legs or move their arms to cause a baby gym to move, or push objects away from their body to watch how they move)

Foundation 1.1: Cause and Effect

The developing understanding that one action brings about another.

First Four Months

Refer to Strand 1.0: Exploration.

4 through 11 months	11 through 23 months	23 through 36 months
Children perform simple actions to make things happen. Children may repeat the same action multiple times.	Children purposefully and repeatedly perform simple actions to cause things to happen. Children change the way they perform these actions or interact with objects and people to observe how it changes the outcome.	Children make simple predictions about what will happen and reflect upon what caused something to happen.
For example, a child may: • Drop an object from their highchair and watch it fall with fascination, wait for a caregiver to hand the object back to them, then drop the object to the floor again. • Shake a rattle, hear the sound it makes, and then shake it again. • Smile in response to a family member gently shaking a rattle and listen to the sound the rattle makes. • Loudly bang their hands on the table, notice the loud sound, and do it again.	**For example, a child may:** • Drop a ball down a ramp to see how far it will go, then drop a cube block down the same ramp. • Splash their hands in water repeatedly and notice how their face gets wet, and then splash their hands even harder, noticing how the water splashes up higher. • Push the button on a favorite music toy and begin to sway to the music, then push the button again when the music stops. • Build a tower with objects and kick it over to make it fall, then build it again and knock it down with their hand.	**For example, a child may:** • Drop different toys like balls and cars down a ramp, then point to a ball and communicate in Spanish, "*Este va más rápido*" (This one goes faster). • Make a prediction about what will happen next in the story when a caregiver asks, "What do you think will happen next?" • Watch a bird eat some seeds from the ground, then communicate to the caregiver that the bird is hungry. • Observe a bandage on a peer's knee and ask in Mandarin, "怎么了" (What happened?).

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Foundation 1.1: Cause and Effect *(continued)*

The developing understanding that one action brings about another.

4 through 11 months	11 through 23 months	23 through 36 months
• Squeeze a piece of fruit in their hands and notice how it softens, then grab another piece of fruit and squeeze it again. • Put an object into a container, turn the container over and watch the object fall out, and then fill the container up again.		• Scoop sand into a sifter, notice the sand pour out of the sifter onto the ground, and then move the sifter over a bucket to fill it. • Communicate in their home language, "She misses her mommy" when a child cries after her mother leaves in the morning.

Children's Interests and Curiosity Drive Their Exploration

Curiosity and initiative, skills and behaviors in ATL, support children's cognitive development. Infants and toddlers are naturally curious to explore their environment. They learn about objects and people through exploration. The ways children explore may differ based on individual and cultural differences and experiences. For instance, some children are more curious about people, whereas others are more curious about objects (Lee et al., 2023). Some children may be interested in exploring objects visually (Piccardi et al., 2020), while others may enjoy exploring with their hands. Children's interests and curiosity drive their exploration.

Strand 2.0: Emergent Mathematical Thinking

This strand includes the following foundations:

- Foundation 2.1: Number Sense
- Foundation 2.2: Spatial Thinking
- Foundation 2.3: Classification

First Four Months

As infants explore their world, they encounter a variety of objects and people. Through interactions with objects, infants notice similarities and differences between them. They notice the size, shape, color, or quantity of objects. They also explore how objects and their own body move in space. These skills are important precursors to infant's emergent mathematical thinking. Some of the ways infants develop early mathematical knowledge and skills include the following:

- notice when a familiar person enters the room (for example, by smiling at them)
- shift their gaze back and forth between two objects to notice similarities and differences (for example, they may look back and forth between two blocks of different shapes)
- follow the movements of objects in space, such as a mobile
- hold objects and explore them by touching them, putting them in their mouth, looking at them, hearing them make sounds, and moving them (for example, they may put a rattle in their mouth or shake it)
- interact with two objects at the same time, such as holding one object in each hand or putting them into their mouth one at a time
- notice or show interest when the number of objects in their environment changes (for example, they notice when a caregiver adds two new objects to their playmat)

Foundation 2.1: Number Sense

The developing understanding of number and quantity.

First Four Months

Refer to Strand 2.0: Emergent Mathematical Thinking.

4 through 11 months

Children notice quantity in their environment using their senses or physically interacting with objects.

For example, a child may:

- Follow the movement of four animal characters hanging from their baby gym and then reach for one of the animals, following its movement.
- Observe a person who is stacking one ring after the other onto a post.
- Explore one object at a time by holding it, shaking it, or putting it in their mouth.
- Choose the plate with more crackers.

11 through 23 months

Children notice quantity when playing and interacting with objects. Children understand and sometimes use language to refer to quantity (for example, "more" and "all").

For example, a child may:

- Notice another toy animal on the other side of the rug, while playing with two toy animals. Move over to grab the third toy animal and communicates to a caregiver in Cantonese, "睇吓，多啲。" (Look, more).
- Hold up two fingers when a family member asks in their home language, "How old are you?"
- Pick up hand-sized rocks on the ground, then hold up each rock and give them to the caregiver to put in a bucket.
- Make a big pile of objects and a little pile of objects.
- Communicate in Tagalog, "*Ubos na*" (All gone) when they finish eating their lunch.
- Communicate "more" and point to a bowl of fruit.

23 through 36 months

Children use number words to refer to quantity or when answering the question "How many?" Children recite parts of the count list, although they may make mistakes (for example, "one, two, four, five").

For example, a child may:

- Begin to count a set of three toy animals when a caregiver asks in Cantonese, "你有幾多隻動物?" (How many toy animals do you have?). Point to the same animal twice and communicate in Cantonese, "一、二、四、五。" (One, two, four, five.)
- Join in with a caregiver who is counting from one to ten while reading a book and then repeat some but not all of the number words, "One, two, three, five, five, … ten!"
- Recite the numbers from one to ten, while singing a familiar counting song.
- Communicate in Spanish, "*Tienes más*" (You have more) when comparing the objects in their basket and their peer's basket.
- Grab two spoons and give them to a person after they ask, "Can you give me two spoons?"

Foundation 2.2: Spatial Thinking

The developing understanding of how things move and fit in space.

First Four Months

Refer to Strand 2.0: Emergent Mathematical Thinking.

4 through 11 months

Children explore the movement of their bodies, how people and objects move through space, and the size and shape of objects.

For example, a child may:

- Follow a person with their gaze as the person walks around the room.
- Grab a piece of fruit and put it in their mouth, transfer it to their other hand, then put it in their mouth again.
- Put a stuffed animal into a basket, dump it out, and then put the stuffed animal back in the basket.
- Drop a ball and watch it roll away under a chair.
- Stack one object on top of another and then observe the objects tumble down as they try and add a third object to the tower.

11 through 23 months

Children demonstrate understanding of where objects are located in space, and use trial and error to discover how objects, or their bodies, move and fit in space.

For example, a child may:

- Watch as a person jumps over a hurdle in an obstacle course, and then after the child tries to jump over the hurdle a few times, they crawl under the hurdle instead.
- Notice an object roll under a chair and then move to the chair to grab it.
- Try to move their assistive mobility device (such as an adaptive walker) from the grass to the asphalt when the surfaces are uneven.
- Stack three containers of different sizes inside one another, after trying some combinations that do not work.

23 through 36 months

Children predict how objects will fit and move in space without having to try out every possible solution. Children show understanding of words used to describe sizes (for example, big, small, little), locations (for example, in, on, under) or directions (for example, up, down) in space.

For example, a child may:

- Crawl through a tunnel and jump into a hoop in an obstacle course. When arriving at a hurdle, the child communicates in Mandarin, “太高了” (Too high) and crawls under the hurdle rather than jumping over it.
- Turn a puzzle piece so that it fits in the right place of a puzzle.
- Get the big plates from the cupboard after a caregiver asks in **American Sign Language (ASL)**, “Can you get the big plates for lunch today?”
- Look under the table when a caregiver communicates, “I think your cup fell under the table.”

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Foundation 2.2: Spatial Thinking *(continued)*

The developing understanding of how things move and fit in space.

4 through 11 months	11 through 23 months	23 through 36 months
	• Climb into a low laundry basket and then climb back out. • Try to fit a shape block into the shape sorter, and when it does not fit, turn the shape until it fits.	• Use an **alternative and augmentative communication device (AAC)** to communicate big or little when playing a game "Is It Big? or Is It Little?" with a peer. • While pretending to cook food, follow another person's directions in Vietnamese, "First you put it in the pan, then you stir it, then you put the lid on top."

Foundation 2.3: Classification

The developing ability to notice similarities and differences between objects or people, and to classify objects according to their characteristics.

First Four Months

Refer to Strand 2.0: Emergent Mathematical Thinking.

4 through 11 months

Children notice and attend to similarities and differences between objects (for example, based on color, shape, size, or texture) and distinguish between familiar and unfamiliar people, places, or objects.

For example, a child may:

- Choose to play with the same stuffed animal they played with yesterday even though there are other stuffed animals nearby.
- Explore how various objects feel by putting them in their mouth.
- Look in the direction of an unfamiliar voice when they hear it as the person enters the room.
- Choose two red cars from a pile of differently colored toy cars.

11 through 23 months

Children match objects that are the same or sort objects into two groups based on similarities and differences in one attribute (for example, color, shape, size, or texture).

For example, a child may:

- Notice a toy animal in a basket of cars and communicate in Spanish, "*Mira*" (Look), and then grab the toy animal out of the basket and put it with the other toy animals.
- Eat only the melon pieces in their fruit salad, leaving the rest of the fruit on their plate.
- Look around and point to a toy fire truck, when a caregiver asks in Spanish, "Can you find another fire truck like this one?"

23 through 36 months

Children sort objects into two or more groups based on similarities and differences in one attribute (for example, color, size, shape, or function). Children sometimes label these groups, although these labels may be overgeneralized (for example, labeling all fruits "banana").

For example, a child may:

- Put all the toy animals in one pile and all the cars in another pile and label the piles in Spanish "*animales*" and "*carros*" (animals and cars).
- Put all cups on one shelf and all plates on another shelf while playing in the dramatic play area.
- Name all four-legged animals at the farm "*músmus*" (cow) in Karuk even though some are sheep and others are horses.
- Place all big leaves in one pile and all small leaves in a second pile.

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Foundation 2.3: Classification *(continued)*

The developing ability to notice similarities and differences between objects or people, and to classify objects according to their characteristics.

4 through 11 months	11 through 23 months	23 through 36 months
• Explore a new fruit at lunchtime by touching, squeezing, tasting, and looking at the fruit.	• Put all the small socks into one basket and all the big adult socks into another basket. • Point to a cowboy hat, a baseball cap, and a winter hat in a book when the caregiver asks, “Where are the hats?”	• Sort blocks into three piles by color regardless of their shape: red, yellow, and blue.

Strand 3.0: Imitation and Symbolic Thinking

This strand includes the following foundations:

- Foundation 3.1: Imitation
- Foundation 3.2: Symbolic Thinking

First Four Months

Infants use caregivers as a model for how to behave and how to interact with objects and the environment. Infants notice what caregivers do and imitate them. Imitation is one of the earliest tools for learning cognitively and socially. Imitation is also important for children's later symbolic thinking. In the first four months, children develop an understanding of objects, people, and actions, as they engage in the following:

- make cooing sounds in response to others, sometimes in a back-and-forth manner, almost like a conversation (for example, they may make the sound "ahh" in response to a caregiver saying, "Good morning!")
- imitate a caregiver's facial expressions or simple movements (for example, they may smile or stick out their tongue in response to a caregiver doing the same)
- hold objects and explore them by touching them, putting them in their mouth, looking at them, hearing them make sounds, and moving them (for example, they may put a rattle in their mouth or shake it)

Foundation 3.1: Imitation

The developing ability to imitate the actions, sounds, language, or gestures of others, either immediately or later.

First Four Months

Refer to Strand 3.0: Imitation and Symbolic Thinking.

4 through 11 months	11 through 23 months	23 through 36 months
Children imitate simple actions, sounds, or facial expressions of others during interactions.	Children imitate simple actions, sounds, or gestures that they have observed others doing in the moment or at an earlier time.	Children imitate gestures, language, and actions with multiple steps that they have observed others doing at an earlier time and/or in a different context.
For example, a child may: • Babble "babababa" when a family member says "bye-bye" to them. • Smile in response to a familiar person smiling. • Imitate the caregiver's movements when playing peekaboo. • Clap their hands together in response to hearing a caregiver clap their hands. • Push a button on a music toy after watching another person do it first.	**For example, a child may:** • Take a purse from the dramatic play area and say "bye-bye" while walking toward the door. • Hold a family member's cell phone up to their ear after watching the family member talk on the phone a few hours earlier. • Rock the baby doll to sleep and pat its back. • Flip through the pages of a book and then close it, communicating "all done" in their home language. • Imitate using a toy hammer after watching construction workers outside using tools.	**For example, a child may:** • Communicate, "See you later alligator," when saying goodbye to a person, after having heard a caregiver say this same phrase to them. • Pick up a toy phone, pretend to dial a number, hold it up to their ear and say a heartfelt greeting in Yurok "*Aiy-ye-kwee*" (Hello, I missed you!). Then engage in a pretend conversation on the phone. • Play a dance game that involves imitating a person who jumps, twirls, and claps. • Reenact parts of a birthday celebration by pretending to blow out candles on a cake. • Pretend to get their doll ready for bed by brushing their teeth, changing their clothes, and communicate "good night" in their home language.

Foundation 3.2: Symbolic Thinking

The developing ability to use actions, objects, or ideas to represent other actions, objects, or ideas.

First Four Months

Refer to Strand 3.0: Imitation and Symbolic Thinking.

4 through 11 months

Children become familiar with objects and actions through active exploration. Children also build knowledge of people, actions, objects, and ideas through observation.

For example, a child may:

- Hold a toy bus and explore how the wheels move.
- Explore objects by holding them and putting them in their mouth.
- Cause a rattle to make noise by shaking and banging it on the ground.
- Roll an object back and forth on the floor.

11 through 23 months

Children use one object to represent another object. Children engage in one or two simple actions of pretend play.

For example, a child may:

- Move a toy bus on the carpet and make the sound "vroom vroom."
- Pretend to suck from a baby bottle then say in Vietnamese, "*uống hết rồi*" (Drank it all).
- Put leaves in a pot and start stirring with a wooden spoon, pretending to make soup.
- Make marks on paper and sign in American Sign Language (ASL), "dada."
- Put a doll in a bed and place a blanket over the doll, then communicate, "night night" in the home language.

23 through 36 months

Children use objects to represent other objects during pretend play. Sometimes children pretend by imagining an object without needing the concrete object present.

For example, a child may:

- Sit down in a chair and pretend to be a bus driver, while playing in the dramatic play area.
- Draw circular shapes on a piece of paper and communicate that they drew a snowman.
- Build a structure with objects and use toy dinosaurs to knock the structure down, making different dinosaur sounds as the dinosaurs break the structure.
- Point to picture in a book and communicate in Spanish, "*¡Se escondió!*" (He hid!).
- Plan with another person to pretend to be dogs and then start crawling on all fours, sticking out their tongue, and making barking noises.

Strand 4.0: Memory

This strand includes the following foundation:

- Foundation 4.1: Memory

First Four Months

Infants develop memories of their caregivers very early on. Right from birth they notice regularities and patterns in their daily routines—for example, patterns in feeding and sleeping schedules. Infants remember these patterns, which allows them to anticipate routines and actions in the future. In the first four months, infants develop memories of caregivers and routines as they engage in the following:

- show recognition of familiar caregivers (for example, they may smile in response to seeing or hearing a familiar caregiver entering the room)
- anticipate simple routines by taking action (for example, they may open their mouth at the approach of bottle or breast)

Foundation 4.1: Memory

The developing ability to store and later retrieve information about past experiences.

First Four Months

Refer to Strand 4.0: Memory.

4 through 11 months

Children recognize familiar people, objects, and routines in the environment. Children show awareness that familiar people still exist even when they are no longer physically present.

For example, a child may:

- Hold up their arms to be picked up after a caregiver communicates in Spanish, "Are you ready to go outside for our walk?"
- Continue to play peekaboo after a familiar person has stopped playing.
- Kick to make toys hanging from the baby gym move.
- Smile and kick their legs when they see or hear a familiar person walk into the room.
- Crawl toward the door after a family member leaves the room.

11 through 23 months

Children remember the typical actions of people, location of objects, and steps of routines. Children use this information as they engage with people or objects or participate in routines doing one or two steps.

For example, a child may:

- Move toward the shoe bin after a caregiver says in Spanish, "We're going outside. Where are your shoes?"
- Play a hide-and-seek game with a person, and after watching the person hide a ball inside one of three containers, reach for the correct container to find the ball and communicate in their home language, "Ball!"
- Observe a photo of their grandma and say in Cantonese, "婆婆" (Nana).
- Sit down at the table when they notice a caregiver is preparing lunch.

23 through 36 months

Children anticipate the series of steps in familiar routines or activities, remember characteristics of the environment or people in it, and sometimes communicate about recent past events or act them out.

For example, a child may:

- Take off their shoes and hang up their coat in the cubby after playing outdoors, then walk over to the sink to wash their hands.
- Act out a trip to the grocery store while playing in the dramatic play area; get a cart, put food in it, and pay for the food at the cash register.
- Go sit in their basket or lay down on their cot in anticipation of naptime.
- Ask to play with the big foam blocks that are in a storage cabinet by signing "big blocks" to a caregiver in American Sign Language (ASL).

(continued on following page)

Foundation 4.1: Memory *(continued)*

The developing ability to store and later retrieve information about past experiences.

4 through 11 months	11 through 23 months	23 through 36 months
• Turn their head toward the front door when hearing the doorbell ring.	• Walk to their cubby at naptime to get their blanket from inside the bag. • Remember how to play with a music toy by pushing the piano keys, after playing with it for the first time the day before.	• Tell their family member in the home language, "We jumped in puddles outside" when getting picked up from their care program. • Sing some of the lyrics to their favorite song or chant.

Note: This foundation is closely related to Foundation 2.3 Working Memory in the ATL domain. The foundation in the Cognitive Development domain describes children's ability to store and remember past events or experiences. The foundation in the ATL domain describes children's ability to hold information in mind at a given moment while engaged in everyday interactions and activities. Both foundations are important parts of memory and learning.

Perceptual and Motor Development

Some of the most memorable moments for **caregivers** who observe a child's early growth and development revolve around the new perceptual and motor skills **infants and toddlers** develop. When an infant starts to recognize the voice or face of a caregiver, they are using their developing perceptual skills to recognize faces or sounds. When an infant successfully rolls over by themselves or learns to sit up without help, they are demonstrating that they have gained increasing control over muscles in their neck, arms, torso, and legs to accomplish this new **gross motor skill**. Similarly, when a toddler develops the ability to grip a crayon to scribble their first piece of art, they are demonstrating greater control of the muscles in their hands and fingers, which is part of developing **fine motor skills**. These are just some examples of the remarkable and dramatic changes seen from birth to 36 months in the Perceptual and Motor Development domain.

Perceptual Development refers to children's ability to select, organize, and interpret information coming through their senses to understand their world. When talking about the senses, most people refer to touch, sight, smell, hearing, and taste. In addition, most humans also have a sense of balance and movement, which helps them establish awareness of where their body is in relation to other things (**proprioception**), and the ability to sense pain, hunger, and temperature (**interoception**). All of these sensory systems are part of perceptual development.

Infants and toddlers use perceptual information as part of their daily exploration and interactions with others. For example, children use various senses when recognizing faces (Reynolds & Roth, 2018), objects, voices, and the sounds of songs and chants; their senses of taste and smell when identifying their favorite foods (Beauchamp & Mennella, 2011; Forestell, 2017; Werner & Lipsitt, 1981); and their sense of touch when preferring a warm touch or soft clothes (Bremner & Spence, 2017; Johnson & Hannon, 2015; Piek, 2006). These early abilities to recognize consistent patterns and **routines** in their daily experiences help infants learn about the world around them (Bahrick & Lickliter, 2003).

A major aspect of perceptual development involves integrating information across the senses (Bahrick & Lickliter, 2003; Johnson, 2011; Watson et al., 2014). For example, an infant's early experiences seeing and touching different shaped blocks help them recognize what size are the blocks, what sides are smooth, and which parts have corners. Integrating this information in their brain helps them later place the blocks correctly in a shape sorter. Similarly, a child who is blind or has low vision may integrate sound, touch, and proprioception to play with an object or find a peer during playtime.

Motor Development describes children's growing ability to control and move their bodies. Motor development skills are often described as gross motor or fine motor skills. Children's early gross motor development includes motor skills that involve the use of large limbs (these include head, neck, arms, torso, and legs) or the whole body. Skills such as lifting their head while lying on their tummy, rolling over, sitting, crawling, and walking are common gross motor skills that children learn during infancy and toddlerhood. Each new gross motor skill provides new opportunities for learning. Changes in an infant's posture, such as sitting, crawling, or standing, dramatically affect what an infant can experience in their **environment** (Franchak et al., 2018; Kretch et al., 2014; Soska et al., 2015). When children can move longer distances, either by scooting, crawling, walking or by using an **assistive technology device** (a device or tool that helps maintain, gain, or improve daily functioning, like a scooter board, wheelchair, or walker), their ability to move around expands their access to places, people, and things that are farther away (Adolph & Tamis-LeMonda, 2014).

Fine motor skills refer to the use of smaller muscles in the hands and fingers. Skills such as grasping with the whole hand or more precise grasping using only a few fingers to pick up something small, scribbling and drawing, and using eating utensils are all part of fine motor development. Early fine motor skills, such as grasping, allow infants to explore objects and learn about them: what they look like, sound like, feel like, and can do. Exploring can include behaviors like **mouthing**, banging, dropping, and throwing. With more experience and time, infants use both their hands, together, to learn about the function of objects. For example, a child shaking a plastic screw-top jar, as part of pretending to cook during play, may hold the jar with one hand and use their other hand to try to unscrew the lid. Gaining control of the muscles in the hands helps children with **activities of daily living** (the basic activities and routines that are part of everyday life). For example, when a child picks up a small piece of food to eat using their fingers, this action involves using fine motor skills. Infants and toddlers who need additional support with fine motor skills benefit from having available adapted materials or assistive technology devices, such as crayons or pencils with thicker grips, loop scissors, or books with thicker pages.

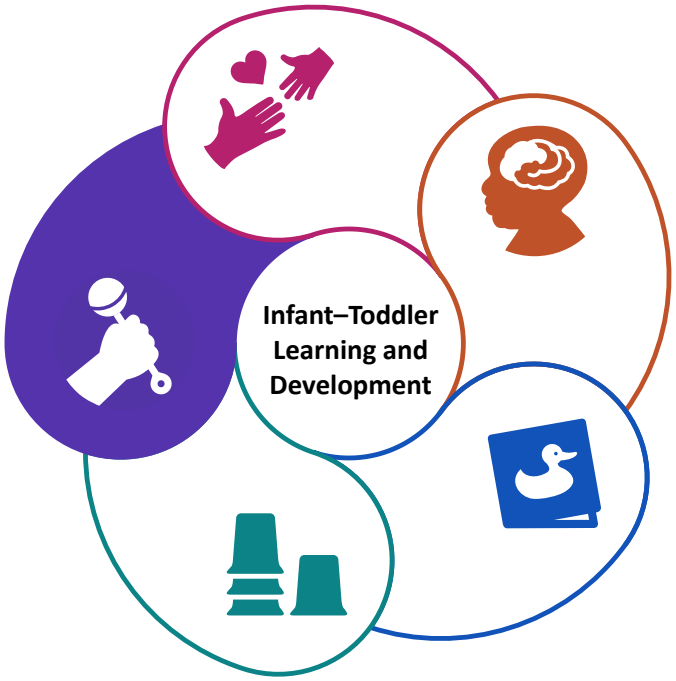
Although perceptual, gross motor, and fine motor development are often described separately, these three areas grow hand in hand. Motor actions are guided by and generate perceptual information. This means that motor actions like reaching, crawling, or walking are frequently guided by our senses. For example, an infant hears a nearby object make a sound (perceptual) and based on this sensory information, they turn their head and body (motor) to find where the noise is coming from. At the same time, the motor actions in this sequence provide a stream of new perceptual information. Once the infant turns around, they can look directly at the object and determine how close it is to them. The infant can then use their perceptual and fine motor skills together (also known as **hand-eye coordination**) to reach out and grasp the object.

Perceptual and Motor Development During the First Four Months

Prior to birth, infants have had multiple months of sensory and motor experience in the womb (Johnson & Hannon, 2015; Piek, 2006). Kicking; arm movements; changes in position; and even reactions to sounds, tastes, and light are part of the roots of perceptual and motor development in the womb. After birth, infants continue to use their senses and movement to explore their social and physical environment. Infants' earliest movements, like spontaneously waving their arms and legs, turning their head from one side to another, or lifting their head while lying on their tummy, all help form the foundation for later motor skills like sitting, reaching, grasping, crawling, or walking (Adolph & Berger, 2007; Michel et al., 2013). These early sensory and motor experiences lay the groundwork for children's later perceptual and motor development skills.

Perceptual and Motor Development Is Connected to Development in Other Domains

Perceptual and Motor Development is connected to the other domains described in the Infant–Toddler Learning and Development Foundations (ITLDF). Infants and toddlers use all their available perceptual and motor skills as part of exploring and learning about everyday objects, engaging in play and other activities, navigating their environment, and interacting with others.



For language development, perceptual information related to sights and sounds is a crucial part of how children come to understand and say or sign words. Recent research has found that changes in motor skills, like learning to walk, are linked to learning new words (Gonzalez et al., 2019; Libertus & Violi, 2016; Walle, 2016). Although researchers are still investigating exactly how these changes are related, the new motor skills children learn may provide new opportunities for hearing and learning words. For example, when an infant can reach and grasp an object, a caregiver might talk about what the child is doing. For example, a caregiver might say, "You grabbed the block!" or "It looks like you are going to stack the cups," or describe the object by talking about its shape or color, which can help support the infant's language development (West & Iverson, 2017; West et al., 2022, 2023). Infants' and toddlers' changing perceptual and motor skills can also support social and emotional development. Changes in vision, hearing, and even smell allow infants to recognize the familiar faces, soothing voices, and comforting smell of caregivers. Changes in children's motor skills can lead to new ways of interacting with other people as part of everyday play. Recent research demonstrates that when infants learn to walk, they are more likely to move farther distances to interact with a caregiver and share an object or interact with them (Karasik et al., 2012; Walle, 2016). Similarly, fine motor skills can lead to interactions with peers and caregivers during daily activities and routines like eating or dressing, experiences that strengthen relationships with adults and peers.

Perceptual and motor development is also central in children's exploration of the physical world, supporting learning and problem-solving. For example, an infant's ability to perceive the different features of objects through their senses and active fine motor exploration (grasping, poking, banging) is important for learning about the properties of objects (like shape, quantity, size, and color) and their functions (Eppler, 1995; Soska et al., 2010). Everyday problem-solving and exploration of physical objects, using perceptual and motor skills, support children's cognitive development and approaches to learning. For example, when children explore "risky" situations, like sliding down a slide, they use their perceptual and motor skills together to decide whether it is safe to use the slide (Adolph et al., 1993). A toddler may look at and touch the slide and bang on it to learn whether it is firm and safe. They may also use their motor skills to figure out whether the slide is safe by choosing to scoot, crawl, or walk to get closer to the slide.

The Context for Early Perceptual and Motor Development

Relationships with caregivers have an important role in children's perceptual and motor development. Very early in development, some of infants' most notable perceptual skills revolve around learning to recognize familiar caregivers' faces, voices, or smells. Children's consistent daily sensory experiences of caregivers, like seeing the faces of their closest caregivers often or hearing their voices repeatedly, allow children to quickly distinguish a stranger's face or voice from that of a familiar caregiver's. Using auditory information, they can even distinguish a familiar person's voice from a voice they have not heard before.

Relationships with caregivers also shape children's motor development. For children to confidently explore and practice their gross and fine motor skills, they need nurturing and supportive caregivers who provide infants and toddlers a sense of emotional and physical safety while also allowing them to explore and practice their skills. For example, when children **cruise**, by taking early steps sideways while holding on to a stable object (like a table or couch), a supportive caregiver relationship can provide a safe environment and a secure base for the child to explore this new ability. When infants are starting to learn a new skill, caregivers protect them from risky situations. For example, a toddler who just learned to crawl and is curious to use their new gross motor skill to go up the stairs is guided by a caregiver to move away from the stairs because it is unsafe. Or the caregiver might take that opportunity to help the child practice going up the stairs, providing guidance on what to do and how, while being watchful and safe. Taking every opportunity to show children how to be safe creates further opportunities for children to build confidence in their own abilities. Caregivers also help shape children's fine motor skills. For example, while participating in daily activities and routines like eating or dressing, caregivers provide verbal and physical support for children to successfully use their fine motor skills, such as showing them how to button their shirt or twist off a lid (Kaplan et al., 2023).

The development of perceptual and motor skills is closely related to culture and language. Part of learning spoken languages requires us to perceive and distinguish specific sounds. This is called **speech perception** (Werker, 2018). Different languages categorize and use different sounds. With increased exposure to their home language and the languages in their community, infants get better at perceiving the categories and sound patterns specific to the languages they most often hear. This process is called **perceptual narrowing**

(Byers-Heinlein & Fennell, 2014; Werker, 2018). For children who hear more than one language, this perceptual narrowing happens across all the languages they hear daily. In fact, the ability to notice the unique categories of sounds across all of their languages is a strength that can help them maintain their home languages while also learning a new language. This **cognitive flexibility** may contribute to future cognitive benefits (Bialystok, 2020; Brito et al., 2021) and can help children maintain a connection to various cultures and identities.

Differences in cultural norms and family practices mean that children's daily experiences vary, which may influence the timing or the ways children learn and demonstrate their perceptual and motor skills (Sara et al., 2013). For example, family or cultural preferences for movement and exploration may be related to differences in when children learn different gross motor skills, like sitting or walking (Adolph & Hoch, 2019). Expectations and practices around feeding can also vary between families and cultures. Some families may prefer to have a caregiver feed the child during mealtimes, while other families may prefer to encourage self-feeding earlier in development. Cultures may also vary in the types of eating utensil they use during mealtimes or whether they use their hands to eat. These cultural differences in experiences mean that children may not always demonstrate very specific skills that a majority culture expects (like using a fork if their home culture doesn't encourage fork use). However, they may be demonstrating the foundational perceptual and motor skills in other ways (like showing greater precision when grasping a small item to stack to make a tower). It is important to be open and learn about each child's family traditions and preferences to understand the whole child, particularly how their culture and experiences shape their development.

An important influence on children's perceptual and motor development is access to environments, objects, and activities where they can explore, practice, and develop skills. Safe and supervised environments that support the use of certain gross motor skills like small stairs, slides, and uncluttered open spaces can help support children as they learn and practice. While having ample space to move is important, so is having toys or everyday objects that encourage movement throughout a play space (Hoch et al., 2019, 2024). Even in environments where space may be limited, spreading out toys and

objects that are attractive to infants and toddlers throughout the play space (like on a visible low shelf or uncluttered floor) can encourage infants and toddlers to move from one place to another. To use their fine motor skills on their own successfully, all children need access to items that are appropriate in size, like age-appropriately sized cups for drinking, toothbrushes, and clothing. Pencils, crayons, and paintbrushes can have thicker grips to make them easier for young children to use for scribbling, drawing, and painting. It is also important to note that infants and toddlers use their perceptual and motor skills to play with everyday objects that caregivers may not think of as toys, such as boxes, food, cups, pots, or pans—the list can go on (Herzberg et al., 2022)! Children's play does not always have to be restricted to toys. Exposure to everyday items in a supervised environment can help children learn about an object's properties and everyday use as part of perceptual and motor development.

Lived experiences related to trauma or poverty can influence children's physical and brain development, which can have lasting effects on perceptual and motor development. **Malnutrition**, meaning lack of proper nutrition, can result in stunted physical growth and other impacts on development. Recent research indicates that malnutrition is related to delays in achieving certain motor skills like sitting, crawling, and walking (Cavagnari et al., 2023). Consistent opportunities for healthy snacks and meals can help mitigate the impact of malnutrition for children experiencing poverty.

Children from all socioeconomic backgrounds need access to a variety of opportunities to use their perceptual and motor skills. These opportunities for learning happen daily in everyday environments and activities (during feeding time, walking outside on the sidewalk, shopping in the grocery store). Enriching opportunities for perceptual and motor learning can happen with everyday objects (boxes, cups, paper) and do not require elaborate toys or gadgets (Herzberg et al., 2022). The partnership between families and **infant–toddler care educators** (care educators) can be especially helpful in understanding the best ways to work together to ensure that, whether at **home** or in the **early learning and care setting**, infants and toddlers are encouraged to explore their environment for the benefit of developing motor and perceptual skills.

Individual Differences in Perceptual and Motor Development

The foundations are written to illustrate the variability in children's development, acknowledging that children learn and develop at different rates both within a domain and across domains of development. In addition, each child is unique and demonstrates their development in a variety of ways. In certain situations, some children may have diverse abilities that could benefit from alternate methods of demonstrating their development.

Variability in Development

The skills that infants and toddlers learn as part of their perceptual and motor development are sometimes described as "milestones." **Milestones** refers to a significant qualitative change in development or the attainment of a skill, such as crawling or walking (Adolph & Robinson, 2013). As most caregivers know, all children develop differently and at their own unique pace. Yet, it can sometimes be tempting to compare the timing and types of skills one child learns to other children. It is important for caregivers to know that there is a lot of expected **variability** for when children achieve milestones. Variability means that development is not one size fits all!

For example, an infant may learn to sit at a younger age than their peers. One child may crawl on their hands and knees while a different child prefers to scoot on their bottom and another child belly crawls using their arms and upper body to move from place to place. Some children may skip crawling altogether and begin walking once they can stand on their own.

Children vary in their perceptual and motor development. Their physical and biological characteristics, temperament, culture, and other unique life experiences all contribute to **individual differences** in children's perceptual and motor development.

For caregivers, it is important to be aware that variability is common across children's development and, in fact, expected. Knowing this, one can more fully support each child's unique needs and development.

While variability in perceptual and motor development is expected for all children, there are cases where a child is specifically diagnosed at birth or later with a perceptual or motor disability. When the child has an Individualized Family Service Plan (IFSP), care educators should consult and collaborate with the family and the rest of the IFSP team. This collaboration will support the outcomes included on the IFSP as part of inclusive learning experiences. Care educators can implement adaptations and modifications as specified in a child's IFSP. If the child doesn't have an IFSP, and care educators have a concern that a child's perceptual or motor development is delayed, they can connect with the child's family and collaborate in making a referral for a comprehensive developmental assessment. Development for children with disabilities may follow a different trajectory. Children with disabilities, like all children, still thrive under conditions where they can use their perceptual and motor skills to interact with caregivers and peers and explore their environment and the objects in it. These behaviors and skills may just look different or require different types of supports. Building trusting relationships with families helps care educators better understand the child's individual development and ways to support the child. By doing so, families and care educators can identify areas where early intervention may be beneficial.

Assistive technology and applications are increasingly available to help children with various disabilities.[4] Children who are Deaf or Hard of Hearing can be supported using sign language or **augmentative and alternative communication (AAC) devices**. Children with visual impairments may require glasses, magnifiers, or other assistive technology devices early in development to help them navigate their environment. Other assistive technology like mobility devices can give children with gross motor disabilities the opportunity to demonstrate skills like locomoting. For children who move with assistive devices, it is important to support their exploration by ensuring that they have access to appropriate technology and safe spaces where they can engage in exploration and play. For children with disabilities related to fine motor development, recent advances in three-dimensional printing allow many people to access everyday objects with adaptations specific to their unique fine motor development. Children who have sensory issues may also require adaptations to their environment, like changes in lighting or noise level, depending on their unique development. Similarly, children with low vision or who are blind may also benefit from adaptations to their environment, such as reducing clutter in areas to allow for uninterrupted and safe movement and maintaining consistency in the location of furniture and objects.

Overall, working with a team (family, early intervention providers, healthcare providers) that is familiar with the child can help care educators adapt the early care program environment and activities to be more inclusive of children with disabilities. It is important to support children with disabilities through providing adaptations to the environment and access technologies as early as possible so that they can participate with their peers and have more equitable access to the physical and social world.

4 For additional resources related to assistive technology, care educators can refer to their state assistive technology center. The Assistive Technology Act requires every U.S. state and territory to have an assistive technology center. Ability Tools (https://www.abilitytools.org/) is the assistive technology center that serves California and is a useful resource for care educators and families.

Perceptual and Motor Development Foundations

The foundations statements are intended to help care educators identify how they can support children's growth in specific areas. Children develop the behaviors and skills described in these foundations at different times and in different ways within their home, various child care settings, and community contexts. Though foundations are focused on the child's development, each foundation should be considered as developing in the context of relationships with caregivers who provide nurturance and support. It is important to keep in mind that the foundations are all related to each other and work together rather than in isolation. The skills and knowledge described in the Perceptual and Motor Development domain are organized into the following two strands:

- **Perceptual Development:** This strand describes the continuous process of taking in, organizing, and interpreting information drawn from the senses.
- **Motor Development:** This strand describes anges over time in children's ability to control and move their bodies.

Though it is helpful to organize the foundations into separate strands, the skills and behaviors described in both the perceptual and motor development strands are closely interrelated. For example, a child's perceptual abilities, such as using their sense of touch or sight to learn about objects in their environment, also guide their motor behaviors. Similarly, as children learn new motor skills like sitting or grasping, their perceptual skills also shift and change. When reviewing the foundations, care educators can consider how the strands are connected in practice.

Each strand starts with a description of foundational skills in the first four months followed by specific foundations related to the strand. Each foundation includes indicators and examples for three age periods across infancy and toddlerhood: 4 through 11 months, 11 through 23 months, and 23 through 36 months. Table 5 provides an overview of the foundations in perceptual and motor development for children 4 to 36 months organized by strand.

Table 5. Perceptual and Motor Development Strands and Foundations 4 to 36 Months

Strands	Foundations
1.0: Perceptual Development	• **1.1: Perceptual Development.** The developing ability to use information from the senses to understand and interact with the social and physical environment.
2.0: Motor Development	• **2.1: Gross Motor Development.** The developing ability to control the large muscles to move and explore. • **2.2: Fine Motor Development.** The developing ability to use the small muscles of their fingers and hands to explore objects and accomplish tasks.

Strand 1.0: Perceptual Development

This strand includes the following foundation:

- Foundation 1.1: Perceptual Development

First Four Months

From birth, infants' daily experiences of processing novel sounds, sights, sensations, smells, and tastes set the foundation for how they learn about their world. Through information from the senses, infants learn about people, routines, culture, languages, and much more. In the first four months, young infants may show skills related to Perceptual Development as they experience the following:

- respond by calming down when rocked, touched, or bounced
- track a moving face, person, or object with their eyes
- turn their head toward a loud sound
- react to changes in temperature (for example, is startled by cold water)
- maintain their vision on high-contrast objects, like books with black-and-white pictures or patterns

Foundation 1.1: Perceptual Development

The developing ability to use information from the senses to understand and interact with the social and physical environment.

First Four Months

Refer to Strand 1.0: Perceptual Development.

4 through 11 months	11 through 23 months	23 through 36 months
Children use information from different senses to explore and learn about objects and people in their environment.	Children use the information across different senses to plan actions and adjust the ways they explore and interact with objects, people, and environments.	Children can quickly and easily use information across different senses to plan and accomplish tasks as part of play, social interactions, or daily routines.
For example, a child may: • Turn their head toward a caregiver who is singing a familiar comfort song in the child's home language. • Hold an object in their hand and switch from touching to mouthing to looking at the object as they explore it. • Crawl or turn their body toward a familiar person who is calling their name. • Place their hand on a touch-and-feel book to feel the different textures. • React with their facial expressions and body movements when tasting new food.	**For example, a child may:** • Touch something wet and wipe their hand on their clothes to dry off. • Sway back and forth to the beat of a song. • Walk without help on flat surfaces like the floor but switch to crawling when moving across a soft and uneven surface like a mat or couch cushion. • Stop pouring sand into a bucket that is already full. • Try to fit a shape into the correct hole on a shape sorter and is sometimes successful after turning the shape in the correct direction.	**For example, a child may:** • Talk louder to another child when there is too much noise during playtime. • Fit a shape into the correct hole in a shape sorter on the first try. • Move slowly when holding a full cup that might spill. • Press harder on a clump of clay than on play dough. • If the child is blind or has low vision, use their hands and arms to touch and detect obstacles in their way and adjust their reach accordingly while reaching for a water bottle.

Strand 2.0: Motor Development

This strand includes the following foundations:

- Foundation 2.1: Gross Motor Development
- Foundation 2.2: Fine Motor Development

First Four Months

Early on, infants' motor skills focus on gaining basic control and strength of their larger muscles (head, arms, and torso) through spontaneous, repetitive, uncontrolled movements (wiggling, flailing, and bouncing). These movements help strengthen muscles and allow infants to explore their body's capabilities. At the same time, infants are also gradually gaining control of their smaller muscles (hands and fingers). At birth, it's common for infants to have tight, closed fists. Over time, they open their hands more often, and they slowly gain more control over their individual fingers. In the first four months, young infants may show early motor skills as they engage in the following:

- move both arms and legs spontaneously
- open their hands more frequently (from usually closed, tight fists)
- hold their head steady when sitting with support
- touch a nearby object with their hands when waving their arms
- grasp and hold on to an object placed directly in their hand
- bring their hands and objects to their mouth to explore how they feel
- lift their head (or push up on elbows) when placed on tummy

Foundation 2.1: Gross Motor Development

The developing ability to control the large muscles to move and explore.

First Four Months

Refer to Strand 2.0: Motor Development.

4 through 11 months	11 through 23 months	23 through 36 months
Children develop increasing control of large muscle groups, such as their neck, arms, torso, and legs, helping them maintain or change positions or move short distances.	Children coordinate large muscle groups to move from one place to another, adjusting their movement as needed to adapt to different surfaces and places.	Children demonstrate increasingly complex ways of coordinating their large muscle groups to move and explore in various ways (such as running, jumping, dancing).
For example, a child may: • Roll from back to tummy or from tummy to back without help. • Sit upright, initially sitting with the support of an object or a person. • Show signs of wanting to move short distances, like shuffling on their bottom while on the floor or pulling themselves along on a mat while on their tummy. • Crawl on hands and knees for short distances. • Hold on to nearby furniture or a familiar person to help pull themselves up to stand and take a few steps.	**For example, a child may:** • Crawl across a room on hands and knees to reach a familiar person. • Walk or "cruise" while holding on to furniture or a familiar person's hands. • Use an assistive mobility device (such as an adaptive walker) to walk on a sidewalk. • Walk across a room without holding on to anything. • Climb up and down a couch, with some help from a familiar person. • Run in short bursts as part of playing.	**For example, a child may:** • Walk up and down the playground steps. • Jump with both feet off the ground. • Participate in dance time by waving their arms, shaking their head, and/or moving their wheelchair in different directions. • Try to kick a ball toward their friend, with some success. • Run longer distances as part of playing. • Use an assistive mobility device (such as an adaptive walker) to walk over uneven outdoor surfaces like grass.

Foundation 2.2: Fine Motor Development

The developing ability to use the small muscles of their fingers and hands to explore objects and accomplish tasks.

First Four Months

Refer to Strand 2.0: Motor Development.

4 through 11 months	11 through 23 months	23 through 36 months
Children use their hands and fingers to explore objects through activities like reaching, grasping, shaking, banging, and poking.	Children use both hands, together, to manipulate objects.	Children use both hands together to manipulate objects and tools in intricate ways, allowing them to accomplish tasks more precisely and efficiently as part of play and learning.
For example, a child may: • Hold on to a rattle after it is placed in their hand and shake it to make a sound. • Reach and grasp a block in front of them with one of their hands. • Bring both hands together in front of them to hold a big stuffed animal. • Hold a small cup in one hand and explore by banging it on a surface, turning it, mouthing it, or moving it to their other hand. • Use their whole hand to press down on a button of a pop-up box toy. • Use their whole hand to pick up large food pieces to eat.	**For example, a child may:** • Use their thumb and index finger to pick up small pieces of food to eat. • Turn pages of a board book, sometimes turning more than one page at once. • Press an adaptive switch to activate a toy that moves and makes sounds. • Hold a cup in one hand and use their other hand to pull out an object that is stuck inside of it. • Scribble on a paper using a thick crayon or a crayon with an adapted foam grip, sometimes holding the paper down with their other hand.	**For example, a child may:** • Use one hand to hold a bottle and their other hand to unscrew the lid. • Turn pages of a book one at a time. • Use an age-appropriate spoon or adaptable grip spoon to feed themselves. • Build a tower using multiple blocks. • Fold a piece of paper in half, making a crease. • Draw some simple shapes that resemble, for example, lines or circles. • Bang along to a song on their drum, with one hand holding the drumstick and the other hand holding the drum.

(continued on following page)

Foundation 2.2: Fine Motor Development *(continued)*

The developing ability to use the small muscles of their fingers and hands to explore objects and accomplish tasks.

4 through 11 months	11 through 23 months	23 through 36 months
• Hold an object in one hand and use the other hand to touch or poke it.	• Use one hand to stack a ring on a post, while holding the post with the other. • Use both hands to hold a cup and drink from it, while sometimes spilling the cup's contents.	

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Glossary

activities of daily living: The basic activities and routines that are part of everyday life.

agency: A child's ability to initiate actions and make things happen.

American Sign Language (ASL): The sign language commonly used in the United States and much of Canada. Many different sign languages (such as Mexican Sign Language and Nicaraguan Sign Language) exist in the world. Sign languages have their own vocabulary and grammar; they are not "signed versions" of spoken languages.

assistive technology device: A device or tool that helps an individual maintain, gain, or improve daily functioning (for example, wheelchairs, glasses, hearing aids, ramps); devices can range from low-tech options like foam pencil grips to higher tech devices like speech recognition devices.

attachment relationships: The relationships a child forms in infancy and toddlerhood with the individuals who provide their primary care that serve as the model for infants' and toddlers' interactions and relationships with others.

augmentative and alternative communication (AAC) device: A tool used by individuals with impairments in speech-language production and/or comprehension to improve functional daily living. AAC uses a variety of techniques and tools, including, but not limited to, picture communication boards and speech-generating devices.

braille: A system for writing that employs raised dots to represent letters used by those who are visually impaired to read through touch. Braille is not a language but a tactile system that represents each letter, number, and punctuation mark used to write in English.

caregiver: The person responsible for the care, well-being, safety, and education of a child. The caregiver might be an infant–toddler care educator providing care in a center or the care educator's home. The caregiver might also be a relative, such as an immediate or extended family member or a person known as a family member who takes care of the child in the child's home or their own home.

cause and effect: The relationship in which one event (the cause) makes the other event happen (the effect).

child-directed speech: A type of speech people naturally use when communicating with infants and toddlers. Child-directed speech usually involves speaking or signing slowly, exaggerating vowel sounds, and using a singsong tone. Phrases and sentences are usually short, simple, and repetitive.

child's home: The place where a child is living and being cared for by their family.

classification: The process of grouping objects or items based on similarities in qualities or attributes.

cochlear implant: A device that is connected surgically to a person's inner ear, with an external processor in or around the ear. Cochlear implants allow individuals who are Deaf or Hard of Hearing to perceive sound.

code-switching: The use of two or more languages within a single phrase, sentence, or conversation. The skill of code-switching is a form of translanguaging.

cognitive flexibility: The ability to think in new or alternative ways and adjust behavior based on needs and goals.

coregulation: The process of providing children with supportive, calming interactions that help them regulate their emotions and behaviors. Coregulation involves caregivers responding sensitively and appropriately to children's needs, such as providing comfort, soothing, and attention, which helps the child feel secure and supported.

cruise: A gross motor skill where infants and toddlers can stand upright but need to hold on to a stable object (like a table or couch) or a person to take sideways steps.

culture: The customs, values, beliefs, and practices of a group of people. Cultural values and norms inform family roles, rituals, communication styles, emotional expression, social interactions, and learned behavior.

dramatic play: Imaginative or pretend play. This type of play helps children understand the world, build language skills, and develop social abilities like sharing and cooperating with others.

dual language learner: A child from birth to 5 years of age who is acquiring two or more languages at the same time or a child who is learning a second language while continuing to develop their first language.

early learning and care setting: A place in which caregivers provide early learning experiences and nurturance to support young children's development and well-being. Settings may include home-based, center-based, or community-based care environments.

empathy: The ability to understand or share the feelings of others.

environment: A space that is intentionally set up by a care educator in a setting where children receive care, learn, and develop.

executive functions: Neurocognitive skills that contribute to planning, problem-solving, managing behavior and attention, holding information in mind, and applying the information to complete tasks and goals. These skills include the processes of inhibitory control, working memory, and cognitive flexibility.

family partnership: The relationship between the family and the care educator in which each has a role in supporting the child's experience at home and in the early learning and care setting. The care educator is responsible for engaging with the family to develop a relationship and learn from the family about their child and the way in which they care for their child. Based on what the family shares, the care educator works to make the child's experience in the early learning and care setting consistent with the child's experience with the family. In the relationship, the family and care educator share ideas and experiences with each other and learn together to continue to support the child's development.

fine motor skills: A subset of motor skills that use the smaller muscles in the hands and fingers.

gross motor skills: A subset of motor skills that involve the use of large limbs (these include neck, arms, torso, and legs) or the whole body.

hand-eye coordination: The combined use of the senses and fine motor skills to perceive and modify how the hands and fingers move to act on everyday objects.

imitation: The ability to copy the words or behaviors of others.

individual differences: Traits or other characteristics by which individuals may be distinguished from one another.

infant–toddler care educator: A person responsible for the care, well-being, safety, and education of infants and toddlers in an early learning and care setting.

infants and toddlers: Children who range in age from birth to age 3. Infants are children from birth to around 12 months. Toddlers are children from around 12 months to 36 months.

inhibitory control: The ability to manage impulses, reactions, emotions, and attention. Includes the ability to delay gratification and adjust behaviors to meet the expectations of a situation.

initiative: An infant's or toddler's motivation to explore and try things on their own by taking the first steps to play, ask questions, or solve problems.

intergenerational trauma: The emotional and psychological effects spanning generations that result from intensely adverse experiences of a group or community.

interoception: A person's ability to sense pain, hunger, and temperature.

language variety: A specific form of a language that may include variations in grammar, pronunciation, and vocabulary. Language varieties occur naturally out of differences in geography, demographics, and context.

literacy: The ability to communicate through reading and writing. Literacy activities for young children include experiencing books, stories, songs, and rhymes with caregivers.

malnutrition: The lack of proper nutrition.

materials: The objects and equipment placed in the learning and care environment for children to explore and interact with.

meaning making: The process by which people make sense of and understand things, actions, and events. Infants and toddlers engage in meaning making by exploring, observing, and interacting with people and things in their environment.

milestone: A significant qualitative change in development or the attainment of a skill, such as crawling or walking.

modeling: A type of scaffolding through which a child learns how to do something by observing a caregiver or peer. The person who is the model may intentionally demonstrate the action that the other person learns through observation.

motor development: The changes over time in children's ability to control and move their body.

mouthing: A form of exploration in which an infant puts an object or a part of their body (like hands or feet) in their mouth to sense the texture, taste, firmness, temperature, and other aspects of the object or body part.

multilingual child: A child who is developing two or more languages in the context of their family, community, or early learning and care setting.

multilingual children: Children who are developing in more than one language with their families, in their communities, or in early learning and care settings.

multilingual learner: A broad term that encompasses multilingualism for children from birth through elementary and secondary education.

nondistress cues: An infant's signals or behaviors that communicate comfort and contentment, rather than upset or need. These signals might include coos, smiles, eye contact, or a relaxed physical state that often indicate an infant's contentment or readiness to engage with their social and physical environment.

number sense: The understanding of quantities and numbers, including concepts such as more or less.

perceptual development: The continuous process of taking in, organizing, and understanding information through the senses.

perceptual narrowing: The process in which the perception of what an infant frequently senses becomes more focused, specialized, and specific.

persistence: Continuing to try engaging in an action or behavior, even when facing challenges or setbacks.

prefrontal cortex: The part of the brain located in the front of the brain's frontal lobe. It plays an important role in the regulation of cognitive, emotional, and behavioral functioning.

proprioception: A person's sense of balance and movement that makes possible awareness of where the body is in relation to other people and things.

protective factors: Conditions or personal attributes that lower the likelihood of negative outcomes.

resilience: The ability to adapt and grow stronger when faced with challenges and stress. As a person grows, they learn to use supports and strategies to maintain their well-being, even in difficult situations.

responsive interactions: Back-and-forth exchanges between the caregiver and the child in which the caregiver pays attention to the child's interests and their emotional and behavioral cues and responds to the child promptly and according to the child's needs. Engaging in responsive interactions consistently over time helps to build trusting, emotionally secure relationships with the child while supporting the child's learning and development.

responsive relationship: A relationship in which a caregiver is attentive to the infant or toddler and sensitively observes the child's cues. Based on the child's cues, the caregiver promptly responds in a way that connects with the child's interest or meets the child's need. If the first response does not connect with the child, the caregiver continues to observe and respond to the child's cues until the caregiver's response is in tune with the child's interest or need. Experiencing responsive nurturance in a relationship helps children feel secure, supported, and understood, which promotes their social and emotional development as well as their overall well-being and learning.

routine: Consistent and predictable sequence of events or actions that meet the care and learning needs of individual infants or toddlers. Routines include feeding/mealtimes, diaper changes, nap times, greetings, and departures.

sense of belonging: The feeling infants and toddlers have of being accepted, valued, and connected when they enter a new community, particularly early learning and care settings. It is fostered through nurturing relationships, inclusive practices, and environments that reflect and respect their backgrounds and identities.

sense of identity and belonging: The developing concept of self as an individual who shares commonalities with others within social relationships. Closely related terms include sense of self and sense of self and belonging.

sense of self/identity: The developing awareness infants and toddlers have of themselves as individuals who share commonalities with others within social relationships. This includes recognizing their own thoughts, feelings, and abilities and is nurtured through interactions with caregivers and exploration of their environment.

social determinants: Social determinants, or social determinants of health, are the conditions in the environment where people are born, grow, live, and age as well as the greater systems shaping those conditions that influence a range of health risks and outcomes. Examples include education, food security, and housing security.

social referencing: When a person intentionally uses the actions, facial expressions, gestures, or vocalizations of others as a guide for how to behave in a situation.

spatial thinking: The ability to understand and visualize space, including the ability to reason and communicate about the location, distance, and direction of objects and people in space.

speech perception: The ability to perceive and distinguish the specific sounds in a spoken language.

symbolic thinking: The ability to use actions, objects, or ideas to represent other actions, objects, or ideas.

systemic oppression: The unjust and inequitable treatment of a group or individual by a system based on their social identity. It stems from historical patterns of mistreatment that society continues to foster. Examples of systems of oppression are racism, sexism, ableism, and social classism.

temperament tendencies: The physiological, emotional, and behavioral ways in which infants and young children relate to people, things, and situations. Temperament tendencies include how active children often are, how reactive they are to unexpected situations, and how attentive they are when there are distractions.

traditional language: A language from a family's culture or country of origin.

translanguaging: A multilingual individual's use and understanding of their full language repertoire—all of their knowledge about language—without separation of the languages. Translanguaging encompasses many skills and behaviors, such as code-switching, which allows a multilingual individual to use language fluidly.

trauma: A harmful, sometimes prolonged psychological and/or physiological stress response caused by an adverse environment or stressful event (including, but not limited to, experiencing emotional or physical neglect, natural disasters, or housing insecurity; growing up with an incarcerated parent; or living in a household where there is substance abuse and/or domestic violence).

Universal Design: An approach that offers guidelines for supporting the learning of all children through using multiple means for engagement, representation, action, and expression.

variability: The wide range of differences in the timing and types of ways children learn and develop.

working memory: The ability to briefly keep in mind and manipulate necessary information for complex cognitive tasks, such as learning, reasoning, and language comprehension.