



# Approaches to Learning





# 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).

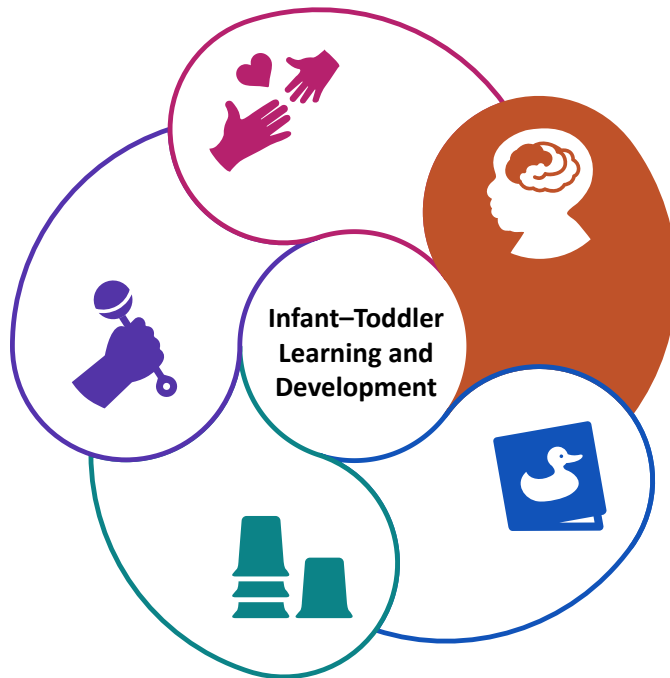
As early as the first year of life, a baby's brain doubles in size (Gilmore et al., 2018, 2020). Infants learn and grow at a rapid pace. Early nurturing experiences and responsiveness help shape infants' brains and neural connections (Kok et al., 2015; Rifkin-Graboi et al., 2015; Sethna et al., 2017). 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. Infants 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
<b>1.0: Motivation to Learn</b>	<ul style="list-style-type: none"> <li>• <b>1.1: Curiosity and Initiative.</b> The developing ability of exploring the environment to learn about objects, people, and events.</li> <li>• <b>1.2: Engagement and Perseverance.</b> The developing skill of engaging in activities and persisting in actions and behaviors through challenges and setbacks.</li> </ul>
<b>2.0: Executive Functioning</b>	<ul style="list-style-type: none"> <li>• <b>2.1: Attention.</b> The developing skill of engaging and sustaining attention in activities and interactions.</li> <li>• <b>2.2: Inhibitory Control.</b> The developing skill of managing impulses and behaviors.</li> <li>• <b>2.3: Working Memory.</b> The developing ability to hold information in mind (short-term memory) to use it to accomplish goals and plans.</li> <li>• <b>2.4: Cognitive Flexibility.</b> The developing skill of being flexible in attention, thinking, and behavior.</li> </ul>
<b>3.0: Goal-Directed Learning</b>	<ul style="list-style-type: none"> <li>• <b>3.1: Problem Solving.</b> The developing skill of using different strategies to solve a problem or get needs met.</li> <li>• <b>3.2: Collaborative Effort.</b> The developing skill of working together with others to accomplish goals.</li> </ul>



## Strand 1.0: Motivation to Learn

This strand includes the following foundations:

- [Foundation 1.1: Curiosity and Initiative](#)
- [Foundation 1.2: Engagement and Persistence](#)



### 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.

(continued on following page)



### 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

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.

**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.

#### 11 through 23 months

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.

**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.

#### 23 through 36 months

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:**

- 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.



## 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

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.

##### 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.

#### 11 through 23 months

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.

##### 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.

#### 23 through 36 months

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:

- 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.



## 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.”



## 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

Children look for people or objects that are hidden in front of them.

#### 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.

#### 11 through 23 months

Children keep in mind information about people or objects even when out of sight. Children also follow simple one-step directions with caregiver support.

#### 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?”

#### 23 through 36 months

Children demonstrate the ability to keep simple rules or concepts in mind with caregiver support.

#### 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.



### 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 something 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.



## 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

- 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.

### 23 through 36 months

- 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.



### 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.