Preschool Through Third Grade (P–3) Learning Progressions

Approaches to Learning

California Department of Education

Table of Contents

Introduction

The Preschool Through Third Grade (P–3) Learning Progressions in Approaches to Learning (ATL) extend the *Preschool/Transitional Kindergarten Learning Foundations (PTKLF) in ATL* and show how the foundational approaches to learning skills and behaviors continue to develop from preschool through third grade in three key areas of development. This resource shows how children develop their skills over the P–3 continuum to be (1) engaged learners, sustaining attention and managing distractions; (2) motivated learners, developing their curiosity, initiative, and persistence; and (3) flexible problem solvers, developing their working memory, planning, flexibility, and collaborative problem-solving skills. It also includes in-practice examples that illustrate how educators can foster children's social and emotional skills through developmentally appropriate, culturally sustaining learning experiences. *The P–3 Learning Progressions* are intended to complement other resources available for educators in this domain.

The P–3 Learning Progressions in ATL provide guidance on how to support children in being engaged, motivated learners and flexible problem-solvers from preschool through third grade.

What Are Approaches to Learning?

The ATL domain describes skills and behaviors children use and display as part of learning. It includes ways in which children take initiative and show curiosity in learning, stay engaged, persist, problem solve flexibly, and work collaboratively with others.[1] Part of the ATL domain is executive functions, a set of cognitive processes that include working memory, inhibitory control, and flexibility. Executive functions help children plan, problem solve, manage behaviors and emotions, work toward goals, and adapt to changes.[2] Children use working memory to keep in mind key information and use that information as they solve a mathematics problem, make meaning of written text, or follow instructions to complete an activity. Children use inhibitory control when they manage their behaviors and attention, for example, adapting and getting used to new classroom expectations that may differ from their home or cultural expectations. Children use flexibility when they think of different solutions to problems or come up with a new strategy while playing a game. Examples include applying what they have learned in one topic to a different topic or when they are negotiating with a peer about a strategy to use in a game.

It is important to note that there is variability in how children demonstrate ATL skills and behaviors. Children will express ATL skills and behaviors in different and unique ways. As children prepare to engage in learning activities, some may benefit from big body play, and others may benefit from working on something quietly with their

The ATL domain describes skills and behaviors children use to learn, problem solve, interact with others, persist through challenges, and discover the world around them.

hands. Children may even have various approaches throughout the day that can impact how they persevere on tasks or engage with others. For example, a child may have difficulty engaging in a learning activity after having a conflict with a peer and later become fully engaged and persevere in solving a problem of interest to them.

Furthermore, ATL skills are linked to social and emotional skills[3] as both domains are important for how children learn, manage their behaviors and emotions, and interact and build relationships with others. Executive functions in particular play a critical role in how children develop these skills.[4] While the ATL and social–emotional domains are related, they are both unique and essential to children's development.

How Does Children's Early Development in ATL Inform P–3 Teaching and Learning?

We know from developmental research and science of learning that early ATL skills are important lifelong skills that will help children be motivated and overcome challenges.[5] ATL skills support children in developing positive relationships, completing college as adults, and getting a job.[6] Children who enjoy and persist in learning grow to be individuals who take initiative and can collaborate effectively with others.[7] ATL skills also transfer to learning in other domains. Developmental research and the science of learning show that:

- Children's curiosity may be enhanced when learning is connected to diverse complex topics in their everyday lived experiences, home, and culture.[8]

ATL skills are essential tools children use as they engage in learning about different academic subjects and as they engage with peers and adults in the classroom, at recess, and in other settings. For example, children may grow curious about new topics in science or history, learn to persist as they try different ways to solve a challenging mathematics problem, and collaborate with others as they plan class projects or figure out the rules of a new game at recess.

- Engagement reflects children's ability to keep their focus on learning activities and stay motivated and curious.[9] When educators tailor information to be interesting and appropriately challenging, children can engage more deeply and for longer.
- Working memory allows children to retain, process, and use information across various subjects, like mathematics, science, literacy, history, and social sciences.[10] Educators can connect concepts to children's lived experiences and build on children's cultural knowledge to acquire new learning.
- Collaborative problem-solving is a skill children apply when working with peers and adults on group projects and learning tasks that require planning, problem-solving, and creating with others.[11] Educators can intentionally set up groups during learning activities to promote problem-solving and collaboration among peers.

Children develop ATL skills through their experiences and interactions with educators, peers, family members, and other important adults in their lives. Educators across preschool through third grade can create learning environments and experiences that encourage children to use and develop their ATL skills. For instance, creating enjoyable and appropriately challenging activities while providing support to match children's abilities helps children develop curiosity and initiative, persistence, engagement, and problem-solving skills. Playing games with children also provides them the opportunity to persist, problem solve, collaborate with others, and use their executive functions. Children can grow in their ATL skills by engaging in and practicing these skills in a nurturing and engaging context with supportive adults. Refer to the P–3 Approaches to Learning Teaching Practices in this document for ways in which educators can support children's ATL skills development.

There are also other factors that can impact children's ATL skills. Children need adequate nutrition, movement, and breaks throughout the school day to be engaged learners. Different stressors such as feeling hungry or tired, being sick, or encountering adverse childhood experiences, including trauma at home (for example, domestic violence, neglect) or at school (for example, experiences of racism, bullying), can impact children's approaches to learning. Thus, it is important for educators to consider the various factors that can influence children's ATL skills and collaborate with other adults in children's lives to create the environments and conditions at school and at home that support their development.

P–3 Approaches to Learning Teaching Practices

Educators can promote children's ATL skills through positive interactions and meaningful learning experiences that are appropriately challenging and connect to children's daily lives and cultural and linguistic experiences.

- **Plan learning activities that center on children's interests and reflect their lived experiences to foster curiosity and engagement.** Provide options for activities that allow children to pursue their own interests and encourage them to engage in these activities more deeply. Choosing materials that reflect children's daily lives and cultural and linguistic experiences will enhance children's engagement and spark their curiosity and interest.
- **Provide opportunities for hands-on, playful learning.** Create various opportunities for children to engage in playful learning. Children need playful learning experiences so they can develop new skills or knowledge.
- **Create safe and welcoming environments.** Safe and welcoming environments that affirm children's sense of self and identity allow children to feel more confident about trying new things and persisting at difficult tasks. Establish classroom norms that promote a collaborative community and foster children's ability to understand different perspectives, which contributes to respectful interactions between peers. When children respect one another and are open to other viewpoints, they can collaborate and learn from one another.
- **Connect with children's families and communities to learn about their cultural and linguistic backgrounds.** Educators can incorporate knowledge of children's cultures and linguistic backgrounds to design activities and projects that invite children to meaningfully contribute their experiences and build on prior knowledge. Encouraging children to use their cultural experiences and home languages, including varieties of English, can boost their interest and effective engagement in activities and projects.
- **Use Universal Design for Learning (UDL) and appropriate accommodations and modifications to engage all learners.** Support inclusion of all children, including those with disabilities and a range of learning needs, by adhering to UDL principles and providing adaptations when needed. Educators can scaffold, model, and offer multiple options for children. Scaffolds and universally designed environments and activities can be useful in supporting all learners. Children's ATL skills may be impacted due to their learning differences,

and they may need appropriate accommodations of the environment and modifications of the learning activities.

- **Observe children's progress and support children in cultivating a growth mindset.** Observe children's progress in learning and identify areas where children may need additional challenges or supports to develop their ATL skills. Growth mindset* strategies help children understand they can improve their skills and accomplish difficult tasks. A growth mindset also encourages children to learn from their mistakes. When educators provide growth mindset feedback and opportunities for revision, children are guided to see their work as a progression that leads to mastery, which leads to greater self-efficacy. In classrooms where educators cultivate a growth mindset mentality, children are more likely to adopt a growth mindset themselves and be more motivated to seek and conquer challenges. However, research also highlights the importance of understanding structural inequities to inform how educators support a mindset of effort and persistence. For instance, it is important for educators to address a growth mindset in contexts in which children's basic needs have already been prioritized and met.[12]

* A growth mindset is the practice of effort and persistence to improve one's skills. If someone has a growth mindset, they understand their abilities as something that can be improved, whereas a fixed mindset assumes that abilities are unchangeable.

How Do Changes in the Learning Environment from Preschool to Third Grade Impact ATL Skills?

The classroom context changes from preschool to third grade. These changes often result in more structure throughout the school day with fewer breaks and more adult-led activities and learning. These changes pose increasing demands and opportunities for children to develop their ATL skills. Some of these major changes and corresponding ATL skills that allow children to thrive are described in the table below.

Impact of Changes in the Learning Environment from Preschool to Third Grade on Approaches to Learning

Change Across P–3	Growth in ATL skills
More peers in the classroom and fewer adults per child	Having more peers in the classroom and fewer adults per child may result in less one-on-one guidance from educators, requiring children to take more initiative in learning and engage in problem-solving more independently. Children may also experience challenges managing more distractions in the classroom. With adult support, children can gradually learn to **problem solve** and **manage distractions** with increasing independence.
Longer school days	Longer school days may lead to fatigue as children adjust to the longer hours. Fatigue makes it difficult for children to **manage distractions** and sustain **engagement** and **motivation** in school tasks. Over time children can adapt to the longer days and learn to anticipate breaks. With adult support, they can learn strategies to sustain engagement and motivation.
Content becoming more complex	Increasingly complex content can make it difficult for children to remain **engaged**, stay **motivated**, and **problem solve** flexibly. Playful, enjoyable, hands-on experiences that challenge children at the appropriate level can support children's motivation and engagement in learning.

Change Across P–3	Growth in ATL skills
More whole-group instruction and opportunities for children to engage in small-group and independent tasks	More experiences of whole-group instruction, along with opportunities for children to engage in small-group and independent tasks, require children to stay engaged in structured learning activities for longer periods. With adult support, children can gradually learn to manage distractions and sustain **engagement** and concentration during whole-group, small-group, and independent work.
More classroom responsibilities	As children participate in learning projects and collaborate with peers, they take on the role of leaders in their learning and work with others to promote collaborative learning. It is important to provide opportunities to strengthen children's **collaborative** and **problem-solving** skills. Adults can model positive interactions and provide children with opportunities to collaborate in learning and share classroom responsibilities.

How Are the P–3 Learning Progressions in ATL Organized?

Key Areas

The *P–3 Learning Progressions in ATL* delineate the development of children's ATL skills and behaviors from preschool through third grade in three key areas:

Key Area 1, Engaged Learners: Describe behaviors and skills that support children in engaging in learning activities and in interactions with others. Learning progressions for Engaged Learners include maintaining engagement, managing distractions, and managing impulsive behaviors.

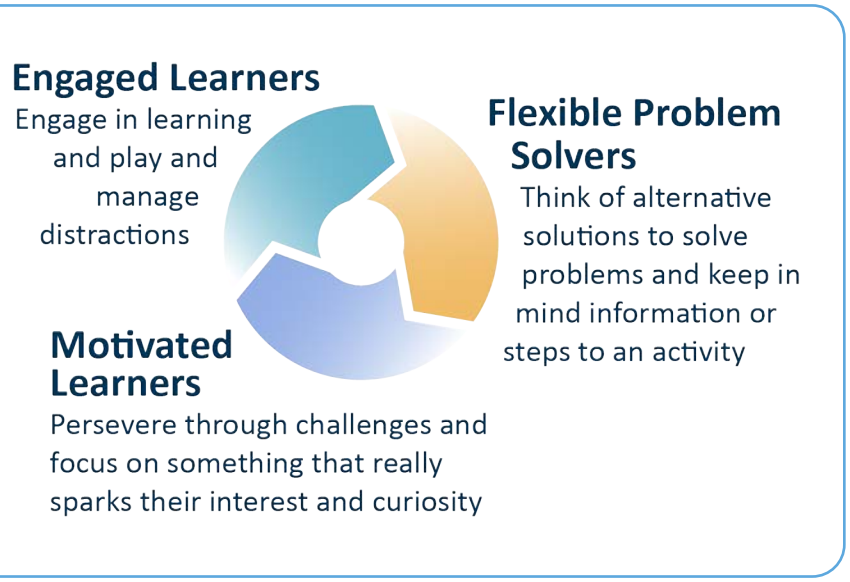
Key Area 2, Motivated Learners: Describe behaviors and skills that are part of children's intrinsic motivation, which refers to the drive of initiating and maintaining goals and the joy found in engaging in challenging tasks. Learning progressions for Motivated Learners include curiosity, initiative in learning, and persisting through challenges.

Key Area 3, Flexible Problem Solvers: Describe behaviors and skills children use to solve a variety of problems and work together with others. Learning progressions for Flexible Problem Solvers include working memory and planning, flexibility, and collaborative problem-solving.

The skills described in the three key areas—Engaged Learners, Motivated Learners, and Flexible Problem Solvers—all relate to one

another (refer to figure 1, ATL Key Areas Relate to One Another). Children use their skills to be engaged and manage distractions as they persevere through challenges and focus on learning that authentically sparks their interest and curiosity. Children use their skills to persist as they think of alternative solutions while they problem solve. Children also use their ability and strategies to keep in mind information or steps to an activity to maintain engagement during activities.

Figure 1. ATL Key Areas Relate to One Another



Learning Progressions Tables

Each key area includes learning progressions tables that present children's development of skills and behaviors from preschool through third grade drawn from existing resources and research in the field. Instead of showing specific grades across the progression, tables are organized from Early and Later Foundations in preschool through third grade. The progression descriptors in grades K–1 and grades 2–3 help highlight the continuum of ATL across the preschool through third grade years. The progression descriptors in grades K–3 aim to reflect the developmental shift in ATL skills and behaviors as children navigate the changing context and increasing demands of early elementary classrooms. The progression descriptors for grades K–1 and grades 2–3 are not standards but are intended as a guide for educators as they support children's learning and development.

In-Practice Examples

After the learning progressions tables in each area, there are in-practice examples that illustrate playful, inquiry-based, and culturally responsive practices that educators can use to support children of diverse abilities and backgrounds across different grades. A section, "Highlights from the In-Practice Examples," at the end of the in-practice examples in each key area offers a description of how educators in the examples used teaching practices to support learning and embrace the diversity of learners in their classroom.

Additionally, at the end of the document there are appendices that provide further information to support teaching. Appendix A offers guidance on strategies educators can use to support English language development for multilingual learners. Appendix B includes additional resources on how educators can promote ATL skills.

P–3 Learning Progressions in Approaches to Learning

Key Area 1: Engaged Learners

The table below shows how children develop as engaged learners from preschool through third grade. The **bolded text** highlights the changes across this continuum. During these years, children grow in their capacity to focus and concentrate more independently for longer periods of time and in a variety of contexts. They also learn to manage distractions and reengage in tasks more independently. Children's engagement skills are crucial for how they learn and absorb new information across a wide range of subjects, like math, language and literacy, history–social sciences, and science.

Learning Progression 1.1: Maintaining Engagement

Preschool/Transitional Kindergarten Learning Foundations		K–3 Approaches to Learning Skills and Behaviors	
3 to 4 ½ Years Old	**4 to 5 ½ Years Old**	**Kindergarten Through Grade 1**	**Grade 2 Through Grade 3**
PTK.Early.1.3. Actively engage by focusing and concentrating on activities for **brief** periods of time **with adult support**. *Approximately 3–12 minutes.*	PTK.Later.1.3. Actively engage by focusing and concentrating on activities for **longer** periods of time **with less adult support**. *Approximately 8–20 minutes.*	Focus and concentrate in **more structured** environments (such as educator-led activities and longer content blocks) for *approximately 15–30 minutes.* Engage in a range of structured activities such as class projects and small-group and individual activities, including those they find less interesting or enjoyable, **with some adult support**.	Focus and concentrate in more structured environments (such as educator-led activities and longer content blocks with more complex tasks) for *approximately 20–35 minutes.* Engage **more deeply** in a range of structured activities such as class projects and small-group and individual activities, including those they find less interesting or enjoyable, **with greater independence and adult support as needed**.

Most children's capability to sustain attention grows as they get older. However, at any age, children may experience momentary distractions or mental breaks when focusing on a task. In addition, the amount of time a child can engage in an activity will vary based on *what* they are engaged in (such as, is it an interesting or relevant or relatable topic? Is the educator enthusiastic about the activity or topic?) and *how* they are engaged (such as, is the activity hands-on and challenging? Is it well-scaffolded?). When activities or tasks are appropriately challenging, children are more interested and motivated to engage and persist.[13] Children are more likely to disengage when activities are too challenging or too easy. It is also important to keep in mind that children vary in their interests, so not all children will engage in an activity in the same way.

Learning Progression 1.2: Managing Distractions

Preschool/Transitional Kindergarten Learning Foundations		K–3 Approaches to Learning Skills and Behaviors	
3 to 4 ½ Years Old	**4 to 5 ½ Years Old**	**Kindergarten Through Grade 1**	**Grade 2 Through Grade 3**
PTK.Early.2.3. Demonstrate an emerging ability to ignore distractions and interruptions during independent or group activities; **however, often need adult support** to manage attention when distracted or interrupted.	PTK.Later.2.3. Demonstrate an emerging ability to ignore distractions and interruptions during independent or group activities **with less adult support**.	Ignore distractions and **re-engage** on tasks during independent or group school activities (for example, less often will require reminders from adults to stay on task) **with some adult support**.	**Self-manage** to ignore distractions and reengage on tasks during independent or group school activities (for example, ask for headphones during a computer activity when sitting next to a chatty peer) **with adult support as needed**.

Learning Progression 1.3: Managing Impulsive Behaviors

Preschool/Transitional Kindergarten Learning Foundations		K–3 Approaches to Learning Skills and Behaviors	
3 to 4 ½ Years Old	**4 to 5 ½ Years Old**	**Kindergarten Through Grade 1**	**Grade 2 Through Grade 3**
PTK.Early.2.2. Demonstrate **emerging ability** to manage habitual reactions (habits that are not useful in a particular context), impulsive behaviors (acting on a whim), and delaying gratification (resisting temptation for an instant reward) **with adult support** (for example, when reminded they raise their hand to share during story time).	PTK.Later.2.2. Manage habitual reactions (habits that are not useful in a particular context), impulsive behaviors (acting on a whim), and delaying gratification (resisting temptation for an instant reward) **with less adult support** (for example, raises their hand to share thoughts about a story during story time).	Manage habitual reactions, impulsive behaviors, and delaying gratification **when adapting to new demands** in the school environment (such as follow school and classroom expectations) **with some adult support**.	Manage habitual reactions, impulsive behaviors, and delaying gratification when adapting to new demands in the school environment (for example, take breaks while solving a difficult problem, can be an effective mediator in peer conflict) with **greater independence and adult support as needed**.

How to Support Engaged Learners

Children can sustain their engagement for longer periods of time as they grow, but they also need adults' guidance in learning how to manage distractions. By helping children develop strategies to manage their attention and behaviors, and intentionally setting up the physical environment to minimize distractions, educators can support children in becoming engaged learners.

Support children in recharging and regaining focus. Educators can support children in maintaining their attention by offering breaks when needed, especially breaks where children are moving their bodies.[14] Examples include dancing, running, balancing, or playing Simon Says. Breathing strategies (using strategies such as watching their belly go up and down or focusing on how air feels going in and out their nostrils) also help children recharge, redirect attention, and manage their behaviors.[15]

Set up an organized environment with clear cues that describe what can be done in a designated area. While the classroom environment should be inviting and allow for flexibility in how children use materials as they play and engage with others, it should also be organized in ways that are consistent and predictable for all children. The environment should allow enough space for equipment or assistive technology such as wheelchairs or walkers needed by children with limited mobility. It is also important to have consistent designated areas for children to engage in activities and include visual reminders that are clear and not overwhelming. Too many visuals, pictures, or words on a wall can be distracting. An organized environment will promote children's sense of agency, minimize distractions, and increase engagement.[16]

Provide children with clear instructions and objectives. Educators can support children's engagement skills by providing clear objectives and instructions, visually and auditorily, when presenting an activity or project. Children benefit from rubrics, checklists, and timelines for projects and assignments. Being clear with instructions and objectives can also be a useful strategy for children in managing attention, distractions, and time.[17] However, in some cases, children may experience circumstances that can impact their ability to remain engaged, such as lack of consistent housing, frequent moves, or recent immigration to the US, and may require additional scaffolds to encourage engagement and participation in the activity.

Acknowledge biases when supporting children's inhibitory control. Managing behaviors and impulses, or inhibitory control, is a complex skill that develops with support of caring adults. Thus, it is important that educators are aware of their own biases and prioritize and foster positive relationships with children, especially those they perceive as "misbehaving." Research has found that Black children and multilingual children are rated by educators as having lower inhibitory control.[18] In turn, children who are perceived as having lower inhibitory control skills may also be seen as defiant. For instance, Black boys are more likely to be blamed for not adhering to classroom rules and may experience disproportionate rates of expulsion or suspension that can have detrimental long-term effects.[19] Empathetic interactions and positive relationships with children and their families can help educators develop a better understanding about how to support children and will result in their being more likely to reshape biases that impact children in their care.[20]

In-Practice Examples

Learning Progression 1.2: Managing Distractions

Managing Distractions During Stories and While Drawing

Managing distractions is an important skill that supports children's learning. The in-practice examples below demonstrate how educators help children during a literacy activity regain focus and manage distractions and thereby stay engaged in a preschool/transitional kindergarten (TK) and a second-grade classroom. While the in-practice examples below are grade specific, educators in other grades can adapt similar strategies to support children in managing distractions.

As you read,

Notice how children of different ages and in different grades:

- Gradually manage attention and distractions with less adult support.
- Use various strategies to manage attention and distractions.

Notice how educators:

- Set up an organized environment with clear cues to describe the literacy activity.
- Create an environment where all children can access the materials they need.
- Give clear instructions when introducing children to activities.
- Support children in regaining focus by initiating small breaks.
- Observe and respond to children's learning and development.
- Are familiar with children's cultural and linguistic background, and plan activities to foster engagement and raise cultural awareness.

Managing Distractions During a Small Group Reading Activity (Preschool/Transitional Kindergarten)*

Ms. Ana plans a small group hands-on literacy activity. She decides to read a book to the children and have them draw key events or characters from the story or make them out of clay. In preparation for the activity, she creates and posts a visual of the steps of the activity. She also makes sure all supplies are in a clearly labeled designated area within reach of all children. Tommy has an orthopedic impairment and knows exactly where to find his adaptive crayons. After listening to the story, children decide what event or character from the story they want to make. They I get their materials and begin the activity in their small groups. Ms. Ana reminds a child to look at the steps posted on the board when the child begins to wander off instead of getting the materials they need for their drawing.

Ms. Ana walks around the classroom and joins groups to help children make connections between the literacy activity and their own experiences. Ms. Ana approaches a group and asks, "Does the modeling clay remind you of anything else you have made or used at home?" Maria, a child in the group, appears to be thinking for a moment and then tells Ms. Ana, "The clay reminds me of *masa de maíz* (corn dough)." Ms. Ana asks her, "*Masa de maíz*? Can you tell me more about *masa de maíz?* I'm not sure I know what that is." Maria responds, "I use it to make tortillas with my grandma!"

Ms. Ana responds, "Homemade tortillas are yummy! You noticed that the *masa de maíz* is similar to the clay you're using to make your character." Maria responds, "Yeah! Clay is soft and squishy like masa."

After the class has been working for some time, Ms. Ana notices some children are having trouble staying engaged in the activity. Ms. Ana tells the class, "We worked hard staying focused on our task. How about taking a moment to take some deep breaths and we'll find out if that helps." Ms. Ana guides children through some light movement and breaths. Then she asks, "So, what do you think? Ready to go back to work again?" Most children respond, "Yes!" and seem to reengage in the activity, but Ms. Ana notices Lila is fidgeting with something at her table and does not seem reengaged.

Ms. Ana approaches Lila and asks her how she is doing. Lila responds, "I don't want to color. And the clay feels weird. I see kids playing baseball outside. I want to play like Toni Stone."** Ms. Ana tells Lila, "Toni Stone! What a great memory! That is who we learned about last week." Children in Lila's group join in on the conversation, saying, "I want to play baseball too!" Another child says, "Can we read the story about Toni Stone again?" Ms. Ana tells Lila and her group, "I am so glad you want to learn

* This transitional kindergarten in-practice example can also apply to preschool programs serving four- and five-year-old children.

** Toni Stone was a Black female baseball player. She was one of the first women to play professional baseball.

more about Toni Stone! These are good ideas for later! Right now, we are going to keep working on reading activities. Sometimes we don't feel like doing things and we can easily get distracted. Lila, let's think of a way you can show us some key events or characters from the story." Ms. Ana and Lila brainstorm together. Ms. Ana asks, "Want to present to the class a character you remember from this story we just read? Or want to use blocks to try to build a key event you found exciting?" Lila responds, "I want to talk about it!" Ms. Ana says, "Okay! Let's wait until others are done. While we wait, can you look around the classroom for a toy that helps represent the character you'll talk about?" Lila agrees and finds a horse in the plastic animals bin to use while she talks about the character.

Create opportunities for children with disabilities to practice and develop their ATL skills. Children with disabilities may need extra support and opportunities to practice their ATL skills, such as managing distractions and sustaining attention or initiating tasks. Children with disabilities, including, but not limited to, attention-deficit/hyperactivity disorder (ADHD) or autism spectrum disorder, may need extra support to manage impulsive behaviors and attention. If a child qualifies for a 504 plan or an Individualized Education Program (IEP), educators, families, and other specialists* work together to support children in learning ways to stay engaged and manage behaviors.

* Specialists include providers or therapists such as a speech or occupational therapist, a special education educator, and other individuals who have knowledge or special expertise about the child or their disability.

Managing Distractions During a Small-Group Literacy Activity (Second Grade)

After a read-aloud of the book *Chicano Jr's Mexican Adventure*, children are drawing comic strips in small groups to tell the story from a particular character's viewpoint. When Mr. Eduardo is creating the groups, he combines children with varying skill levels so that children can draw from one another's strengths and support one another. As Mr. Eduardo is explaining the steps of the activity, cross talk between the children increases. Mr. Eduardo uses a brief call and response that the children know well to reengage them. He calls out, "One, two, three, macaroni and cheese," and children respond, "Freeze" as they reengage. Mr. Eduardo then quickly continues explaining the small-group activity protocol.

To maximize engagement, each child agrees to take on a crucial role as they create the comic strip with their group. Julian is the materials getter, and two other children make sure everyone has

a chance to color a section. When it is Julian's turn to draw, he raises his hand and tells Mr. Eduardo he is excited to draw but is distracted by the other children's conversation. Mr. Eduardo asks Julian, "What can you do to concentrate on your piece of the comic strip?" Julian responds, "I want to work on it by myself. Then I can come back to the group." Mr. Eduardo responds positively to Julian's proposed strategy to stay engaged in the reading activity, saying, "That is a good idea, Julian! What will your comic strip piece be about?" Julian responds, "It's the part where Chicano Jr eats spicy guacamole. I eat my *abuela's* [grandmother in Spanish] guacamole too, but hers is not spicy." Mr. Eduardo replies, "Thanks for sharing, Julian. I can see the connection to the reading activity." Kritika chimes in, "I am drawing when he met his grandparents for the first time! I went to India to meet my grandparents for the first time. I tried a green food too!" Mr. Eduardo says, "Wow! So many similarities between your family experiences. Later we can explore more similarities and differences between your experiences."

Highlights from the in-practice examples

The educators set up an organized environment with materials that are easily accessible to all children and clearly labeled. Having materials easily accessible and organized (such as designated predictable spaces) is a UDL strategy that supports all children's learning and engagement. An organized environment also helps switch focus during transitions as children know where to look for the supplies to a new activity. In both examples, all children are easily able to find the supplies or materials they need. For instance, Tommy knows where to find his adaptive crayons and they are within reach. Lila is able to easily find a toy to go with her presentation to the class. Designated areas for supplies or for doing specific tasks help children focus on the activity at hand.

Here are some additional examples of how an educator may set up the environment to make it easily accessible:

- Arrange the physical space in ways that allow children with physical mobility impairments to navigate the room without impediments or barriers.
- Ensure that there is sufficient natural light or appropriate lighting to boost concentration. Variation in visual stimulation is a UDL approach that helps minimize distractions and support engagement.
- Label areas using various languages or visuals for children who speak a language other than English.
- Post charts of classroom procedures and rules that are accessible and understandable to all children. Educators can also invite children to help create classroom expectations and the visual reminders to post on a wall.
- Create areas that are quieter and have minimal distractions (such as away from doors or windows that look out onto busy areas). Encourage children to go to use these areas when they face distractions or need a quiet space to focus.

The educators plan engaging activities and support children in staying engaged in the activities. Both educators combined a literacy activity with an art activity that is age and ability appropriate. Providing a variety of activities that are age and ability appropriate is a UDL strategy that supports engagement for all children. The same activity over and over can feel repetitive, but changing it up a bit, like adding a new component such as coloring or singing, can make it fun and engaging. Additionally, when activities are developmentally appropriate and challenging at an appropriate level, children can become engaged as they try to master new skills or concepts. Ms. Ana gave children the option of drawing or using clay to illustrate parts of a story. Ms. Ana also supported children's engagement by posting the plan of the activity. Mr. Eduardo had children

draw a comic strip based on characters' viewpoints from a story. Both Ms. Ana and Mr. Eduardo support children's engagement by redirecting children's attention to the activity, providing them feedback, and checking in with them as they work through the activities.

Here are some additional strategies to consider when supporting children to stay engaged in activities:

- Plan activities around children's interests and experiences that are related to their daily lives. Choose stories that follow up on children's interests and experiences.
- Ensure that activities are multimodal. For example, provide learning activities that engage multiple sensory systems, like presenting visual and auditory information or providing options of multiple ways that children can express knowledge such as a class presentation or a picture, to increase engagement and joy.
- Provide children with various methods of tracking their own assignments, such as a visual chart, a daily checklist, or color-coded folders. Different methods may work better for different children. When children can learn to keep track of their own assignments, they can be more focused on next steps and what needs to get done. This helps to minimize distractions.
- Use growth mindset strategies such as offering children feedback and tips for revisions to keep them engaged, as well as using growth mindset language ("Mistakes can help us learn" or "We need to keep trying for a little longer").

The educators support children in regaining focus by creating attention grabbers. Both Ms. Ana and Mr. Eduardo observe children's engagement in learning activities and help children regain focus as needed. Ms. Ana notices that children are distracted and helps them reengage in a learning activity by pausing and breathing with them, and Mr. Eduardo uses a call and response "One, two, three, macaroni and cheese." Ms. Ana gives options for the class activity, which is a UDL strategy to enhance learner engagement by optimizing choice and autonomy. For instance, Ms. Ana offers options for other activities when Lila expresses that she does not want to color or use the clay. Providing Lila an alternative way of expressing her knowledge allows her to fully participate in the learning activity. Mr. Eduardo checks in with Julian and is flexible about how he can participate in the group activity. Checking in can be supportive for a lot of children, including **children with disabilities** who may engage with learning activities in diverse ways.

Here are some additional strategies educators may use

to support children in managing their attention and distractions:

- Reflect on their own inhibitory control skills and strategies. When is it more difficult to focus? What helps them concentrate and focus? Reflecting on their experiences can help educators be more empathetic to children's experiences with learning to regulate their impulses.
- Model what to do when people feel overwhelmed by pausing and taking a deep breath or pausing and talking out loud to them about next steps.
- There may be times when children benefit from calming breaks or activities. When children come in from recess with high energy, a calm activity like drawing or reading may help children relax into the next activity. Other times, children may benefit more from active breaks or activities. If children seem sleepy in the mornings, an active break of jumping jacks or singing may help children be alert for the day.
- Some children can better maintain attention when allowed to use fidget objects such as a stress ball or another small object.

The educators plan activities that connect to children's home languages, cultures, and traditions to promote children's engagement and sense of belonging.

Mr. Eduardo learned in parent–educator conferences that some of the children in his classroom identify as Mexican. He regularly chooses books that represent children's heritages, like the book *Chicano Jr's Mexican Adventure* in which the main character is born in Mexico. Ms. Ana fosters an environment where children feel comfortable using the languages they know to communicate and sharing about their home and family, which helps children remain engaged and draw from what they already know to what they are learning. She also invites connections between the class activities and experiences children have had at home, like making tortillas.

Here are some additional strategies to consider when planning activities that connect to children's backgrounds to promote engagement and a sense of belonging:

- Encourage children to bring their cultures and family backgrounds into the classroom. Educators can invite family volunteers to share a family tradition or bring a book in their children's home languages based on a topic the class is learning.
- Encourage children to use their home language and share their language with others.
- Create activities that support children in exploring their own culture, as well as the cultures of others.

Key Area 2: Motivated Learners

The tables on the following pages focus on how children develop as motivated learners from preschool to third grade, growing in their curiosity, initiative, and persistence. The **bolded text** highlights the changes across this continuum. Over time, children grow in their initiative and curiosity by discovering and developing new skills and knowledge and expanding their interests. Children also grow in their ability to find effective ways to persist through difficult problems with less adult support. Developing the skills described in this key area allow children to play an active role in their learning experiences and work through challenges that come their way. For instance, children take initiative to pursue interests and try something new. They also persist through setbacks as they are learning new skills in writing, reading, or math problem-solving.

Learning Progression 2.1: Curiosity

Preschool/Transitional Kindergarten Learning Foundations		K–3 Approaches to Learning Skills and Behaviors	
3 to 4 ½ Years Old	**4 to 5 ½ Years Old**	**Kindergarten Through Grade 1**	**Grade 2 Through Grade 3**
PTK.Early.1.1. **Express interest in some** familiar and new objects, people, and activities in their immediate environment. Seek information by exploring with their senses and **asking simple questions**.	PTK.Later.1.1. Express interest in a **broader range** of familiar and new objects, people, and activities by exploring more extensively with their senses and **asking more detailed questions**.	**Expand** on their interests by exploring a range of activities, materials, resources (for example, books). **Ask more complex questions** to gather information about a topic or **understand others' reasoning** or **the cause** of an event.	**Pursue self-directed** interests by seeking information about a topic of interest or begin to gain mastery in a topic of interest (for example, practicing for the spelling bee). Ask higher-order **questions to analyze and evaluate information**. **Refer to sources** of information **to find evidence** to answer their questions.

Learning Progression 2.2: Initiative in Learning

Preschool/Transitional Kindergarten Learning Foundations		K–3 Approaches to Learning Skills and Behaviors	
3 to 4 ½ Years Old	**4 to 5 ½ Years Old**	**Kindergarten Through Grade 1**	**Grade 2 Through Grade 3**
PTK.Early.1.2. **Demonstrate initiative by attempting** to independently start activities (such as simple play scenarios), initiate social interactions (such as helping others), and seek solutions to problems.	PTK.Later.1.2. Demonstrate initiative **by more independently** starting activities (such as detailed and more complex play scenarios), initiating social interactions (such as helping others), and seeking solutions to problems **more persistently**.	Take initiative in **planning and completing** class projects and activities of interest (for example, designs and constructs a marble run with peers and an educator) **with some adult support**. Initiate **positive interactions** with peers (such as organizing games with advanced rules or providing emotional support) and **resolve conflicts** with peers, **with some adult support**. Take initiative in **offering** and **explaining reasonable solutions** to problems **with some adult support**.	Take initiative in planning and completing **more complex** class projects and activities of their own interest (for example, design and construct a model of an amusement park with a partner) **with greater independence and adult support as needed**. Initiate positive interactions with peers (such as expressing caring for their friend's feeling and sharing interests) and resolve conflicts with peers **with greater independence and adult support as needed**. Take initiative in offering and explaining reasonable solutions to **more complex problems with greater independence and adult support as needed**.

Learning Progression 2.3: Persisting Through Challenges

Preschool/Transitional Kindergarten Learning Foundations		K–3 Approaches to Learning Skills and Behaviors	
3 to 4 ½ Years Old	**4 to 5 ½ Years Old**	**Kindergarten Through Grade 1**	**Grade 2 Through Grade 3**
PTK.Early.1.4. Demonstrate persistence, with adult support, when engaging in an activity despite encountering setbacks or boredom. **Make an effort, with adult support, to cope** with emotions that arise (for instance, frustration, sadness, anger, excitement) **although may shift to another activity after a short while**.	PTK.Later.1.4. Demonstrate persistence **for longer periods of time** when engaging in an activity despite encountering setbacks or boredom. **More consistently cope** with emotions that arise (for instance, frustration, anger, sadness, excitement) and can continue engaging in an activity **with less adult support** (for example, works on an art project over two days despite setbacks, like having to repaint an area and waiting for it to dry.	Persist through challenges and frustrations by **using effective coping** strategies (such as pausing and breathing or finding effective ways to communicate how they feel) with some adult support.	Use effective coping strategies (such as articulating thoughts and feelings more explicitly instead of lashing out) to persist through challenges and frustrations **with greater independence and adult support as needed**.

How to Support Motivated Learners

Educators can support children to grow as motivated learners who are increasingly interested in and curious about their world. Engaging children in tasks that align with their personal interests and relate to their daily lives increases their motivation to learn. Additionally, the support and feedback children receive as they learn and encounter new challenges can help them feel more motivated.

Encourage a sense of agency by providing opportunities for children to try new things and make decisions. When children feel they have agency in their learning (that is, that they can make decisions about what and how they learn), they are more likely to be persistent.[21] Encouraging children to try new things and make decisions about their learning in a safe environment with supportive adults can create opportunities for children to take initiative and become risk takers. Modeling curiosity toward trying new things can also encourage children to try new things and take on new challenges.

Regularly offer children meaningful choices and responsibilities. Meaningful choices (as in choices that help them feel control over what they do) can encourage motivation in children.[22] Children also benefit from taking on various responsibilities and roles. Various responsibilities and roles encourage children to take initiative as team players.

Acknowledge the importance of practice. Practice is important for building competencies. Learning a new skill and knowledge can be difficult and challenging, but practice makes certain skills automatic and easier.[23] Practicing may feel boring to some children but practice helps the brain build connections and learn!

Encourage children's participation in challenging activities and provide meaningful feedback. Provide children with opportunities to engage in activities that allow them to use their abilities while also challenging them. If an activity is too challenging, children may feel overwhelmed and give up easily. If an activity is too simple, they may get bored and lose interest in continuing the activity. Model how you may approach a challenging task or activity. Children are more likely to persevere when they see adults around them persevere.[24] To support children's persistence during challenging tasks, provide them genuine feedback and encouragement that matches their abilities.[25]

In-Practice Examples

Learning Progression 2.1: Curiosity

Getting Curious About Our Community

Children's curiosity, initiative, and motivation are related. When children are curious and taking initiative in their learning, they are more motivated to learn and enjoy learning. The pair of in-practice examples below demonstrate how educators support children's developing curiosity, initiative, and motivation by planning class projects related to children's real-world experiences and community in a TK and third grade classroom. While the in-practice examples below are grade specific, educators in other grades can adapt similar strategies to help children grow in their curiosity and initiative.

As you read,

Notice how children of different ages and in different grades:

- Demonstrate curiosity by asking increasingly more complex questions.
- Grow their capacity to take initiative in classroom activities with greater independence.
- Develop their ability to pursue self-directed interests with greater independence.

Notice how educators:

- Provide activities and assignments that spark wonder and encourage children to seek and build on information.
- Challenge children to expand their curiosity and model their own curiosity and enthusiasm for learning.
- Build children's curiosity and interest in their own and their classmates' cultures, home languages, and communities.
- Provide children with choices to accommodate the ways children learn as well as children's varying abilities.
- Observe and respond to children's learning and development.

Becoming Curious About Our Spring Traditions (TK)

It's springtime! Ms. Martha asks families to share spring traditions with their children for them to share with the rest of the class. Evelyn shares that at their grandparents' home for Easter they use leaves to make designs on eggs. At pickup, Ms. Martha learns from Evelyn's grandfather that it is a Belgian tradition to use leaves to create designs on eggs. Ms. Martha invites Evelyn's grandfather to visit the classroom to show children how eggs are painted in Belgium before the class dives into their own egg painting activity.

Prior to Evelyn's grandfather's visit in the classroom, Ms. Martha asks children what questions they would like to ask Evelyn's grandfather. Some children ask, "Is your grandpa a painter?" "What colors does he use?" Other children ask questions about the eggs. A child asks, "What kind of eggs does he paint?" Another asks, "Where does he get the eggs?" "Is he going to bring some painted eggs?"

Evelyn's grandfather brings pictures of the painted eggs to show children the various unique and colorful leaf patterns that can be made. These pictures are passed around while the teacher describes what is in the photos so all children have access to the information. As children are observing and listening to the description of the photos, Ms. Martha invites the children to notice similarities to some of their home experiences, cultural traditions, and celebrations. Pradyumna says, "Ooh look at that one! It has a lot of colors! We have a lot of colors in Holi."* Evelyn responds, "What is Holi?" And Pradyumna replies, "We dance and there is a lot of colors!" The educator replies, "Holi sounds so fun! I will ask if someone in your family can come and share with us more about Holi!" Pradyumna responds, "Yes! I will tell my mom."

Build on children's cultural values, home practices, and home languages to promote ATL skills. Educators can promote ATL skills for all children by implementing culturally and linguistically sustaining practices. Educators can place children's cultures and home languages at the center of learning activities to promote children's engagement and curiosity.[26] Prioritizing activities that encourage children to explore their cultures and backgrounds is an opportunity for educators to collaborate with children's families and learn about their values. Learning from children's families and connecting their family values and languages to the classroom activities can boost children's interest in learning, persistence, and engagement.[27]

Evelyn's grandfather continues to show the children pictures of the eggs. Another child asks him, "Where did you find all those

* Holi is a popular Hindu festival celebrated in spring.

leaves? Do you have the leaves with you?" He responds, "Actually, I only kept this leaf because it looked special to me" (he pulls out the leaf to show children). A child exclaims, "Wow! I want to find a leaf like that! Did you use it to draw on the egg?" Michelle says in a mix of Tagalog and English, "My *tiya* [aunt in Tagalog] paints eggs with me! We hide them in her garden for my *ate* [sister in Tagalog] to find." Ms. Martha, who speaks Tagalog, replies, "I used to hide eggs for my sisters to find too! Can you remind everyone again what *tiya* and *ate* mean?" Michelle says, "*Tiya* means aunt, and *ate* is sister!"

Becoming Curious About Our Community Members (Third Grade)

Mr. Thomas has planned a three-week unit in which the children will research and present a biography of a person they choose from their community. Mr. Thomas eagerly shares with the children that he conducted a video interview of his neighbor, a Mexican bilingual nurse at the local hospital. Marcela is intrigued by the story shared by Mr. Thomas. She asks why his neighbor decided to become a nurse and whether it helps to be bilingual. "I speak two languages too, Spanish and English," shares Marcela.

After explaining the project and showing the class his video interview, Mr. Thomas gives the children the opportunity to brainstorm with a partner to decide who they will interview and how they will conduct their interview. Children can choose to do a written interview, where they ask questions to the interviewee and jot down their responses, or borrow equipment from the computer lab to do an audio- or video-recorded interview. Robert and Marcela are partners for the brainstorming activity. Robert tells Marcela that he does not want to interview anyone and that it is boring. Overhearing this conversation, Mr. Thomas goes over to the two children and says to them, "There must be someone you want to know more about. Think of someone in your life and what you might find interesting about that person." Marcela asks Robert, "What about someone in your family or a friend?"

Robert continues brainstorming someone to interview, but Marcela quickly thinks of her baseball coach, Coach Angie, who has been her coach for two years. Baseball is Marcela's favorite sport, and she often talks about playing baseball. After watching Marcela's excitement, Robert decides he will interview his grandfather because he really enjoys listening to his grandfather play the piano. Robert wonders out loud, "How did my grandpa learn to play the piano so good!?"

Without any prompting, Marcela continues to plan her project by referencing the clear guidelines on the board. She decides she wants to interview her coach with an audio recorder but does not know what questions to ask. Mr. Thomas has a question bank children can refer to and encourages them to come up with their own questions based on the research they do on the person's occupation. Marcela looks at the question bank to get some ideas.

During computer time, Marcela spends her time researching what coaches do to help her figure out what questions to ask during her interview. She can think of only a few questions and feels a little stuck. She asks Mr. Thomas to read them before she types them up. Mr. Thomas reassures Marcela saying, "These are questions that will give you a lot of information for your interview! What else could you ask Coach Angie based on the research you found? You mentioned you found that there are a lot of boy baseball coaches." Marcela says, "Yeah, I did find that!" Mr. Thomas asks Marcela, "Do you want to ask Coach Angie how she felt playing a sport that mostly boys play?" Marcela responds, "Yeah, I like that idea."

Marcela and Robert go back to the computer to type up questions. Robert has a specific learning disability that affects how he spells words. He also has difficulty finding the right words to express what he means. Mr. Thomas supports him in using a spell checker to help catch spelling errors and pick words. As Marcela and Robert are drafting questions, Marcela overhears that one of her peers would like to interview the school bus driver but does not know how to translate the questions he has written in Spanish. Marcela approaches her peer and suggests they ask Mr. Thomas to help them use Google Translate. She then says to the peer, "Let's look together. I know Spanish too."

Highlights from the in-practice examples

The educators model their own wonder and initiative by enthusiastically participating in activities and following along with children. Ms. Martha asks follow-up questions and shows her enthusiasm as she invites Evelyn's grandfather to visit the classroom. Ms. Martha also shows enthusiasm about the children's cultural practices and experiences when she asks Pradyumna whether his relatives also would like to talk to the class. Mr. Thomas shows his enthusiasm when he shares about his interview with his neighbor.

Here are some additional examples of how educators may model their own wonder and curiosity:

- When giving examples of how to start a project or activity, educators can share their own personal interests (such as, "I chose a lion because growing up, that was my favorite animal!").
- Let children know that educators do not have all the answers and model how to seek the answer to something they want to learn or find out.
- Educators can ask open-ended questions that show their curiosity about children's ideas and interests.

The educators provide activities and assignments that spark curiosity and support children in deepening their interest and sustaining their motivation to learn. Both activities facilitated by Mr. Thomas and Ms. Martha spark children's curiosity and interest by inviting children to explore their communities. Ms. Martha plans an activity in which children explore their own and their peers' traditions around springtime. Mr. Thomas plans an activity in which children explore their own interests while also becoming curious about their wider community outside of the classroom. Planning activities that are socially relevant, such as activities about children's own interests and wider community, help spark curiosity and may sustain motivation to learn. Socially relevant activities are also a UDL approach that supports learners' engagement by making learning meaningful. When children learn together, they are more engaged in their learning. Mr. Thomas provides ways to accommodate an activity when children need additional encouragement and support. Some children, like those with **specific learning disabilities**, may need extra support (such as time, options for assignments, or specific tools) to sustain their motivation to learn. Children may also have difficulty expressing curiosity or be reluctant to take initiative in assignments. Thus, it is important to provide children the tools and accommodations they need to fully participate in assignments and activities. Mr. Thomas is ready to provide tools to accommodate children's needs, as in the example of Robert using a spell checker or other device to support writing.

Here are some strategies educators may use to spark children's curiosity and sustain their motivation:

- Create a motivational "hook" in each activity or assignment, such as sharing a story, raising a problem, and generating anticipation, or asking children to name one thing they hope to learn in the activity or assignment.
- Use multimodal hooks like a musical tune or multimedia that is current and relevant in the lives of students when introducing an activity. Providing alternative ways (or illustrating information through multiple means) of presenting information is a UDL approach to increase engagement by optimizing challenge and support.
- Offer activities that build motivation by focusing on children's lived experiences (such as exploring their family or cultural histories, biographies about people in their communities, or previous experiences or life events).
- Choose activities that support children in evaluating information and developing their own opinions (such as having a class debate, writing a book review, or solving an engineering problem).

The educators create an environment that welcomes children to use their home languages and to share their cultural traditions. For instance, Ms. Martha invites children to share their family traditions and asks follow-up questions that model her own curiosity about **children's cultural backgrounds**.

Asking children about their traditions and lived experiences allows Ms. Martha to get to know children more personally and create meaningful activities that relate to children's backgrounds. Ms. Martha asks Michelle to remind the class of the meaning of two words she uses to refer to family members in her home language during a class discussion. Giving children the opportunity to share with others their **home language can promote connections to children's families and cultural backgrounds and supports all children's eagerness to explore further.**

Here are some strategies educators may use to support children in sharing their home language and cultural experiences:

- Choose activities that encourage children to talk with their families about where certain family traditions come from or how their families engaged in those traditions when they were growing up.
- Ask families and other adults in children's lives about common words and phrases in their home language so that these words and phrases can be shared with the class.
- Have books written by diverse authors and about characters who live in or come from different cultures or speak the home languages of the children.

The educators offer children meaningful choices.
Ms. Martha provides children with options for classroom roles and participation when she asks them to help with Evelyn's grandfather's presentation. Mr. Thomas supports children in taking initiative by giving them choices of who they will interview and how they can conduct their interview (audio, video, or written). Having options for how to complete an activity gives all children, **including those with disabilities**, the opportunity to build their skills and knowledge in their individual ways. When children can make a choice about how they are going to participate, they are more likely to take initiative in their participation and be motivated. Offering children meaningful choices is part of a UDL approach to recruit learners' interest by optimizing individual choice and autonomy and increasing engagement.

Here are some strategies educators may use to offer children meaningful choices:

- Provide a way to rotate roles and responsibilities in the classroom so children have an opportunity to take on different roles and responsibilities.
- Offer different ways for children to share information, such as visually or verbally.
- As educators get to know the children better, educators should consider the possible impact of the number of choices they plan to offer in activities. Some children are likely to find too many choices overwhelming, while other children may feel limited when offered only a few choices. Educators can adjust the number of choices offered based on the individual child's disposition.

Key Area 3: Flexible Problem Solvers

The tables on the following pages focus on how children develop as problem solvers from preschool to third grade. The **bolded text** highlights the changes across this continuum. Over time, children develop as flexible problem solvers by being able to work through challenging problems and be flexible in how they shift between strategies when approaching problems. Children also develop in their ability to remember more complex information and apply that information as problem solvers. Children gradually develop their planning skills, like going from planning simple short plans to more elaborate, long-term, multistep plans.

Learning Progression 3.1: Working Memory and Planning

Preschool/Transitional Kindergarten Learning Foundations		K–3 Approaches to Learning Skills and Behaviors	
3 to 4 ½ Years Old	**4 to 5 ½ Years Old**	**Kindergarten Through Grade 1**	**Grade 2 Through Grade 3**
PTK.Early.2.1. Hold approximately **one to two pieces of information** in mind for a short time and use it to guide behavior when **performing tasks and engaging in play**, with adult support. PTK.Early.3.1. Demonstrate **emerging ability to set and carry out simple goals** (for example, one- to two-step plans and goals), with adult support. (For example, gathers materials needed to make an animal habitat of their choice, such as leaves, toy animals, and dirt, but needs to be reminded to get a shoebox to place the habitat in.)	PTK.Later.2.1. Hold approximately **two to three pieces of information** in mind for longer periods of time and use it to guide behavior when engaging in **multistep tasks and complex play, with less adult support**. PTK.Later.3.1. Demonstrate ability to **set and carry out more complex plans** (for example, two- to three-step plans and goals), **with less adult support**. (For example, gathers string, beads, and a plate to build a necklace.)	Hold information in mind and can use it to make and follow **short-term, multistep** tasks and activities (for example, projects that extend over a few days) **with some adult support**. Develop plans (including written plans) with strategies and expected results **with some adult support**.	Hold more **complex information** in mind and can use it to make and follow **long-term, multistep** tasks and activities (for example, projects that extend over a few weeks or months) **with greater independence and adult support as needed**. Develop plans (including written plans) with strategies and expected results **with greater independence and adult support as needed**.

Learning Progression 3.2: Flexibility

Preschool/Transitional Kindergarten Learning Foundations		K–3 Approaches to Learning Skills and Behaviors	
3 to 4 ½ Years Old	**4 to 5 ½ Years Old**	**Kindergarten Through Grade 1**	**Grade 2 Through Grade 3**
PTK.Early.3.2. Make attempts to adjust a problem-solving approach or strategy by reflecting on and analyzing their current approach, **with adult support**. (For example, builds a marble run and with adult help shifts the incline to see if it changes how far the marbles go.) PTK.Early.2.4. Demonstrate **emerging ability** to shift their behavior and think about things in a new way, **with adult support**.	PTK.Later.3.2. Make attempts to adjust a problem-solving approach or strategy by reflecting on and analyzing their current approach, **with less adult support**. (For example, plays with a ball maze toy and adjusts it one way and then another in order to get the ball through the maze.) PTK.Later.2.4. **More consistently** shift their behavior and think about things in a new way, **with less adult support**.	**Evaluate and modify** approaches or strategies to problems by **noticing mistakes or alternative solutions with some adult support**. **Consider relevant resources** (for example, books) and **prior experiences** when shifting behavior and thinking about things in a new way **with some adult support**.	Evaluate and modify approaches or strategies to **more complex** problems by noticing mistakes or alternative solutions **with greater independence and adult support as needed**. Consider a **greater variety** of relevant resources (for example, informational texts or online resources) and prior experiences when shifting behavior and thinking about things in a new way **with greater independence and adult support as needed**.

Learning Progression 3.3: Collaborative Problem-Solving

Preschool/Transitional Kindergarten Learning Foundations		K–3 Approaches to Learning Skills and Behaviors	
3 to 4 ½ Years Old	**4 to 5 ½ Years Old**	**Kindergarten Through Grade 1**	**Grade 2 Through Grade 3**
PTK.Early.3.3. Collaborate with peers in problem-solving during play and learning activities, sometimes for a **short amount of time and sometimes longer**. PTK.Early.3.4. **Notice, with adult support**, that others have different approaches and preferences although often have difficulty accepting others' approaches or preferences.	PTK.Later.3.3. Engage in **extended** collaborative problem-solving during play and learning activities. **Communicate** with peers about how to solve a problem and help peers when needed. PTK.Later.3.4. **Demonstrate understanding** and **explain** that others can have different approaches and preferences and more consistently accept others' approaches and preferences, **with less adult support**.	Engage collaboratively with peers and educators in learning activities, problem-solving, and play by **communicating effectively, respecting others' opinions**, and **comparing** different viewpoints. **Respond proactively to constructive feedback** (for example, attempting to incorporate suggested feedback and not letting feedback set them back) and **provide feedback to peers with some adult support**.	Engage collaboratively with peers and educators in learning activities, problem-solving, and play by being able to **delegate various tasks** and **explain** why they may favor one approach over another. Respond proactively to constructive feedback (for example, ask clarifying questions about specific suggestions they receive) and provide feedback to peers **with greater independence and adult support as needed**.

How to Support Flexible Problem Solvers

Children grow as flexible problem solvers when they practice their problem-solving skills in a wide range of contexts (such as various academic subjects, in various social situations) with adult support. When children are given opportunities to be creative and apply what they have learned in other settings or across other subjects to learning activities, they are utilizing their flexibility and learning how to apply information from one context to another and come up with novel solutions. Educators can help children problem solve by supporting them in making plans, following through with those plans, reflecting, and revising possible solutions.

Model being a flexible problem solver. Encourage children to pause before approaching a problem and ask themselves questions to figure out how to best approach a problem at hand by modeling pauses yourself and exploring strategies out loud. It is also useful for children to understand that mistakes are part of problem-solving and learning. The way adults deal with mistakes and setbacks has a great influence on how children feel about and overcome mistakes. Educators should model how to reconsider a possible solution when initial attempts do not go as planned.

Provide children the opportunity to problem solve with peers. Engage children in problem-solving and planning with real-world problems. Providing children with various opportunities to play together and collaborate on learning activities allows them to engage in and practice their problem-solving skills. Encourage teamwork and children's collaborative efforts. Structure small-group work with tasks that promote cooperation, and use protocols to encourage participation and strengthen children's abilities to make decisions collaboratively.[28]

Provide support based on children's individual abilities. Encourage children to tackle problems or activities with increasing level of difficulty based on where children are in their learning or development of skills.[29] Scaffolding is important in supporting how children approach difficult problems and work through them. Educators can scaffold children's problem-solving and gradually reduce the level of support provided. In the beginning of a school year when a concept is new, children may need more support. However, as the year progresses, children may require less support and show that they can solve more intricate problems. Gradually removing support as children become increasingly competent builds their confidence and motivation as independent problem solvers.

Reserve time and space for children to engage in reflection. When adults jump in and answer questions or help too soon, children are not able to engage in reflection and consider solutions to problems on their own.[30] Ask children open-ended questions instead of questions that limit possible answers. Engage children in reciprocal conversations that help them develop critical thinking skills.[31]

In-Practice Examples

Learning Progression 3.3: Collaborative Problem-Solving

Building Problem-Solving Skills

Problem-solving is an important skill that children use to collaborate with others, manage their behaviors and emotions, and work through difficult problems across a variety of topics. The in-practice examples below demonstrate how educators help children build their problem-solving skills in a preschool and a first-grade classroom. To support children as problem solvers, the educators prepare interactive challenging activities that encourage children to use their mathematics skills and tailor the activities to fit with children's abilities. While the in-practice examples below are grade specific, educators in other grades can adapt similar strategies to help children grow in their problem-solving skills.

As you read,

Notice how children of different ages and in different grades:

- Adjust their problem-solving strategies with greater flexibility.
- Shift their problem-solving strategies based on the feedback from other children or their educator with greater ease.
- Develop their skills to work together with others on a learning activity and engage in collaborative problem-solving.

Notice how educators:

- Provide activities and assignments that are hands-on and engage children's skills to think critically with others.
- Make time for children to engage in reflection and consider how to tackle a problem or come up with a new solution.
- Model problem-solving skills, such as taking time to think, responding positively to feedback, and framing mistakes or errors as part of the learning process.
- Are welcoming of children's linguistic and cultural backgrounds.
- Support individual children's needs.

Building a Bridge Together (Preschool)

Mr. Nguyen plans an activity for his preschool classroom (ages three to four years old) to work together to build a city out of blocks. Some children will be in a group with Mr. Nguyen, and some children will be in a group with the educator aide, Ms. Tatumn. As children start playing with the blocks, they brainstorm with one another how to build their city. One child proposes, "Let's build tall towers," and another says, "Let's make tall towers and have a bridge for the cars."

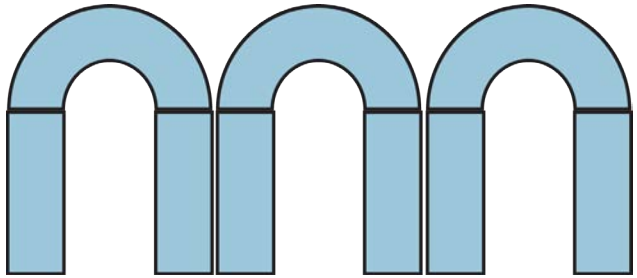
As children are stacking blocks, Mr. Nguyen notices that the children are running out of blocks and may not have enough to make the bridge. He asks, "What is your plan for building the bridge with the blocks you have left? Take some time to pause and think about a strategy." Children begin to wonder whether they will not be able to build the bridge. Eddie suggests, "Move the towers closer!" He looks at Mr. Nguyen, who he knows also understands Vietnamese and frequently encourages children to share words and ideas in their home languages. Eddie explains in Vietnamese that they should move the towers closer to use fewer blocks. Mr. Nguyen replies to Eddie while translating for the rest of the group, "I see, Eddie. Your idea is to move the towers closer so you use fewer blocks. What does everyone think?"

Mr. Nguyen thinks that this may cause the towers to fall, but he pauses and waits to see what the rest of the children will say. The children express their worry that the towers might fall if they try to move them. Mr. Nguyen comments, "That is a possibility. The towers might fall. How could we test what will happen if we move the towers together?" Eddie tries to move one very carefully and notices that his classmates are correct, the tower almost tipped over. Mr. Nguyen asks the group, "What else could we do to build the bridge?" Some children are trying to reconfigure some of the blocks. Mr. Nguyen says out loud, "Hmm. Let's take some time to think about what options we have. How can we still build a bridge?" After a brief pause, he says, "Let's look at what shapes we have available and make a plan for how to use them to build the bridge."

The children begin to sort the shapes. They count three arch-shaped blocks and six long blocks. As the children are sorting, one child says to another, "We can put the long blocks up." Eddie grabs some of the long blocks and an arch and puts them together. "Look, I made a mini bridge." Another child says, "I want to make one!" Eddie notices that if they make one more mini bridge, they can have a long bridge made up of mini bridges. (Figure 2 refers to

how children make use of the remaining blocks by making three mini bridges to connect towers.)

Figure 2. Children's Mini Bridges



The children shout, "Yes! Let's make the three mini bridges." Mr. Nguyen tells the children, "Wow! Great thinking! What a creative solution."

Buying Fruit with Beads (First Grade)

Ms. Maria comes up with a fun way to build on children's mathematics skills of counting and solving addition problems. Children work together in pairs. They are given 16 beads to exchange for pretend play fruit from the classroom market. Each fruit has a tag with the number of beads needed to exchange for it. Ashley, one of the children, has autism and can sometimes experience sensitivity to materials used for activities. Ms. Maria chooses beads for the activity instead of using coins because she knows Ashley dislikes how the coins feel in her hand and enjoys playing with beads.

Ms. Maria pairs Ashley and Cheyanne because she has noticed that Ashley and Cheyanne work really well together. Cheyanne tells Ms. Maria, "I want a lemon. I love lemons because my uncle lives on the rez* and has lemon trees." Ms. Maria says, "That is so awesome, Cheyanne. I see that you got one lemon." Ashley says, "I like oranges. I want to get three oranges." Cheyanne then decides to get more lemons but realizes that all of their beads have been used. She becomes upset and says, "I don't want that many oranges. I want more lemons, but now we don't have any more beads!"

* Rez is short for reservation, which is an area reserved for Native nations and tribal communities.

Ms. Maria notices that Cheyanne and Ashley are having a disagreement about how to use their beads. Ashley says, "We need more oranges because oranges are good luck. My āyí [aunt in Mandarin] gives oranges for Chinese New Year."* Cheyanne is still upset and insists they get more lemons instead. Ms. Maria asks, "How might we find out how to use the beads to get an equal number of lemons and oranges?" The children gather all 16 of their beads. "Let's split them up so we can each have the same number," Ashley suggests. Ashley and Cheyanne take turns dividing the beads, one at a time, into two groups. They figure out that they can each have eight beads to use for their fruit. After Cheyanne and Ashley exchange their beads for fruit, Ms. Maria says, "You both worked together to figure out how to divide the beads equally! What fruits do you each have now?" Cheyanne responds, "I have two lemons, and Ashley has two oranges."

* Chinese New Year, or Lunar New Year, is a 15-day celebration filled with various traditions.

Highlights from the in-practice examples

The educators plan group activities that provide children the opportunity to problem solve in meaningful ways. Mr. Nguyen plans a hands-on activity that encourages children to come up with new solutions as they build a city out of blocks. Ms. Maria plans an activity where children solve a problem that is related to a real-world scenario of purchasing items as they would in a store outside the classroom. In both activities, children solve mathematics problems in playful ways.

Here are some additional examples of how educators may provide children the opportunity to problem solve:

- Integrate real-world situations or community events that the children experience firsthand into learning activities. Integrating real-world scenarios into learning activities can extend children's problem-solving skills to their everyday lives.
- Encourage children to share about their cultural and family backgrounds to connect their experiences with learning activities. When children care about what they are learning, they can be more reflective and use their own past experiences to help them solve problems.
- Create groups of children with diverse abilities so that they can learn from one another as they problem solve.

The educators model how to approach a task, activity, or problem by taking a moment to pause and think of the problem out loud and consider solutions. Mr. Nguyen pauses and asks children to consider what options they might have for building a bridge. When children feel that mistakes are a natural part of learning, they are more likely to work through problems.

Here are some other ways educators may model problem-solving skills:

- Use setbacks during learning activities as opportunities for children to observe how their educator considers possible solutions when things do not go as planned. Educators can start by identifying the problem and stating it out loud and then sharing their thought process.
- Ask for children's help when working on a problem. Asking children to help can encourage them to ask for help when they need it and can support children in thinking about something in a new way.

The educators encourage reflection and tailor approaches to children's needs by waiting before jumping in to give children the answers. Mr. Nguyen and Ms. Maria ask children open-ended questions that allow children to think of various possibilities on their own. Both Mr. Nguyen and Ms. Maria

give children time to think of solutions on their own before jumping in with their own ideas.

Here are some strategies educators may use to encourage reflection and tailor their approaches:

- Create activities that are challenging but not too challenging so that children can expand their problem-solving skills by applying them to new challenges and problems.
- Use a combination of open-ended questions (such as, "Tell me about the blocks you are using. What do you think is the best solution?") and specific questions (such as, "Show me the hardest part of this problem. Have you considered moving this block over there?") to help support children as they problem solve. Some children may benefit from the guidance of more specific questions.
- Model reflecting after implementing a solution and discussing any changes needed to improve the solution.

The educators create an inclusive learning environment that allows children to focus on problem-solving. Ms. Maria has used beads to remove any unnecessary distraction or discomfort caused by coins so that Ashley can focus on solving the problem at hand. **Some children with disabilities** benefit from educators modifying the environment to remove external stimulus that might be distracting or make children feel uncomfortable. Additionally, some children with autism may experience sensory sensitivities to noises, textures, or scents.

- Have a variety of materials that can accommodate children's abilities and preferences.
- Change the physical space to limit distractions during small- or whole-group activities, like moving tables closer together when children are expected to work in larger groups.

The educators create a welcoming environment for children's diverse languages and cultures. Mr. Nguyen has created an environment in which Eddie feels comfortable sharing his explanation in his **home language**. Mr. Nguyen also demonstrated he is supportive of children using their home language as he translates Eddie's explanation rather than asking Eddie to give his explanation in English. Ms. Maria has chosen to have items in the classroom store that connect to children's diverse cultures. Ms. Maria learned at drop-off from families that children regularly go to the farmers market on the weekends. She also heard from Cheyanne's uncle that Cheyanne enjoys going over to his house to pick fruit from his trees.

Here are some strategies educators may use to create an inclusive environment:

- Create activities that reflect children's everyday lives or real-world community events.
- When relevant, share about your own family or upbringing. For instance, when Cheyanne shared about visiting her uncle's lemon trees, Ms. Maria could have shared about her own upbringing visiting a family member and picking fruit or she could have shared the name of the fruit she enjoys eating. Sharing and connecting is a two-way street. When educators share experiences with children and connect with them, children may feel more inclined to share.
- Create cooperative learning groups with clear goals, roles, and responsibilities for all children. Fostering collaboration and community is a UDL approach that supports sustaining effort and persistence, which is an important aspect of being a flexible problem solver.
- Vary activities so that they are culturally relevant and responsive. Optimizing relevance, value, and authenticity is a UDL approach that highlights the importance of relevant individual learning that supports children's engagement in activities.

Appendix A

Supporting English Language Development Across the P–3 Continuum

Multilingual children in California schools and early education programs are developing proficiency in both English and one or more other languages. Supporting multilingual learners' language development involves promoting the continued development of the home language and English. Regardless of the language or languages used during instruction, linguistically sustaining educators are aware that multilingual children's home languages are valuable personal, intellectual, and community resources.* They recognize that children are at risk of losing their home language competence as they develop their English language skills. Linguistically sustaining educators also acknowledge the importance of supporting the development of the heritage language for children from Native nations and tribal communities that are engaged in language revitalization efforts. Children's home language development is foundational to learning additional languages. Educators can create classroom environments that invite children's use of home languages and heritage languages throughout the day. Educators can also encourage families to maintain and continue to develop the home languages and heritage languages in their communities as children add English to their linguistic repertoires. Overall, children's multilingualism should be valued as an asset.

For many multilingual learners, the P–3 school environment is the primary context for learning English. English language development (ELD) instruction provides equitable access to, and meaningful participation in, learning activities conducted in English and supports children's steady progress toward full proficiency in the English language. In preschool and transitional kindergarten (TK) programs, educators integrate ELD throughout daily routines and classroom activities. In K–12, educators take a comprehensive approach to ELD instruction, which includes both integrated ELD (instruction that occurs throughout the day in all content areas) and designated ELD (dedicated ELD instructional time).**

Teaching Strategies to Support English Language Development

Educators use engaging and interactive teaching strategies to support ELD using a culturally and linguistically sustaining approach. While particularly helpful when supporting English learners, the following strategies can benefit all children's learning:

* Chapter 3 in *Improving Education for Multilingual and English Learner Students* provides an overview of language acquisition program models and pedagogical approaches.

** Integrated and designated ELD are explained in chapter 2 in the *English Language Arts/English Language Development Framework* (CA ELA/ELD Framework). Content referencing transitional kindergarten should be used alongside the *Preschool/Transitional Kindergarten Learning Foundations*.

- **Hands-on learning:** Engage children in experiential learning activities where they interact with the content actively and in collaboration with peers. For example, children engage in a science investigation in which they use three-dimensional models to share what they have observed or use art to create a visual representation of what they learned about a topic. These opportunities deepen understanding of content and provide authentic opportunities for children to practice their English.
- **Props and concrete objects:** Use concrete objects and materials, including props, visual representations, and costumes, to help children learn new vocabulary in English and make meaning about new topics. For example, invite children to reenact a story or invent a new story using props. Using these materials helps children deepen their understanding of content presented in English. It also presents an opportunity to practice using content-related language they are learning in English, including vivid vocabulary and dialogue.
- **Protocols and discussion norms:** Provide protocols with clear roles and steps or norms for participating in discussions in English. Providing protocols or discussion norms helps children engage meaningfully in productive discussions, reinforces their discussion skills such as turn taking, and strengthens their English language proficiency as speakers and listeners.
- **Language frames:** Provide and model the use of language frames in English (for example, "I think ____, because ____."). Language frames should be developmentally and linguistically appropriate and, over time, can contain increasingly complex grammatical structures or reference word banks for specific parts of speech (for example, "I think the character was behaving ____ + adverb because ____." *Adverb word bank: selflessly, recklessly, selfishly, angrily*). Language frames introduce language patterns and academic terms that children can then use, unprompted, in spoken and written English. This helps them to express themselves effectively and expands their grammatical knowledge.
- **Think-pair-share:** Provide children opportunities to discuss an idea or solution to a problem with a partner in English after they have had a chance to think about it independently. This peer-to-peer discussion strengthens children's use of English and expands their conceptual understanding. Think-pair-share also supports children in rehearsing the language they might later use in a whole-group setting. It is important to structure the think-pair-share with a protocol that sets expectations for listening, speaking, and using conversation norms.
- **Vocabulary instruction:** Use explicit instructional routines to help children learn new academic vocabulary in English and model appropriate use of vocabulary. Encourage them to use the words over time in various activities, such as in the context of hands-on learning activities or free play with peers. This instruction helps children learn the words deeply so they can use them intentionally in speaking and writing.
- **Songs, chants, and gestures:** Use songs or chants in English about a novel concept or topic, using new vocabulary and gestures. This use reinforces children's conceptual understandings and strengthens their ability to use new vocabulary in English.

- **Wide reading:** Provide high-quality children's literature from different genres and informational texts on diverse topics to help build children's knowledge about language and content in English. To ensure children see themselves reflected and represented in texts, choose texts that are relevant to children's families and communities and are written by authors from those communities. Support children through educator read-alouds, independent reading, and shared reading experiences with other children (for example, engaging in small-group discussions about a text). These practices enhance children's literacy skills, vocabulary expansion, and content knowledge.
- **Graphic organizers and visual supports:** Incorporate graphic organizers with language supports and visuals as scaffolds during learning activities conducted in English. Educators might provide graphic organizers that contain visuals or descriptions of key vocabulary in a text or language frames to support children's discussions or written responses to the text. These materials support children's comprehension of English texts and productive spoken and written language in English.
- **Translanguaging:** Offer opportunities for children to leverage all their linguistic resources, including the home language or other languages the child uses, whether instruction is provided in English, their home language, or another language the child uses. Translanguaging, when children combine and integrate languages they know when communicating, is a natural part of being multilingual that helps with learning. For example, educators can pair children who share the same home language in a think-pair-share activity to discuss an idea before sharing it in a small group.

Appendix B

Additional Resources

Supporting Approaches to Learning (ATL) Through Universal Design for Learning and the Pyramid Model

Universal Design for Learning

Universal Design for Learning is a framework to improve and optimize teaching and learning for all people.

The Pyramid Model for Promoting Social–Emotional Competence in Infants and Young Children

The Pyramid Model is a tiered intervention framework for promoting the social, emotional, and behavioral development of young children.

Resources on Supporting Executive Functions (EF)

Supporting EF Through Games and Activities

Enhancing and Practicing Executive Function Skills with Children from Infancy to Adolescence This resource provides an activity guide with games and activities that support executive functions for children from infancy to adolescence.

Executive Function Activities for 3- to 5-year-olds This resource provides a list of suggested games and activities for children aged three to five years old and describes how they relate to EF.

Executive Function Activities for 5- to 7-year-olds This resource provides a list of suggested games and activities for children aged five to seven years old and describes how they relate to EF.

Executive Function Activities for 7- to 12-year-olds This resource provides a list of suggested games and activities for children aged seven to twelve years old and describes how they relate to EF.

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