Approaches to Learning: Problem Solving

Standard: Children attempt a variety of strategies to accomplish tasks, overcome obstacles, and find solutions to tasks, questions, and challenges.

Children build the foundation for problem-solving skills through nurturing relationships, active exploration, and social interactions. In infancy, children learn that their actions and behaviors have an effect on others. For example, children cry to signal hunger to their caregivers; in turn, their caregivers feed them. Caregivers' consistent responses to children's communication attempts teach children the earliest forms of problem solving. Children learn that they have the ability to solve a problem by completing certain actions. Children build this knowledge and translate it into how they interact and problem-solve in future situations.

Children discover that their actions and behaviors also have an impact on objects. They learn that certain actions produce certain results. For example, children may bang a toy over and over as they notice the sound that it makes. This behavior is intentional and purposeful; children learn that they have the ability to make something happen. As they get older, children will experiment with different ways to solve problems, such as moving puzzle pieces in different ways to place them correctly. They will use trial and error to find solutions to the tasks they are working on, and use communication skills to ask or gesture for help from caregivers.

By 36 months, children are able to decrease the amount of trial and error they use when solving problems. Their cognitive skills are maturing and they are able to use logic and reasoning when working through challenges. Increased attention allows children to focus for longer periods of time when working through challenges. Children still depend on their caregivers for help, but are likely to attempt problem solving on their own before asking someone for help.

Birth to 9 months

7 months to 18 months

16 months to 24 months

Real World Story

Sebastian, who is 25 months old, is engaged in a fine-motor activity provided by his caregiver. He is holding large, plastic tweezers and is attempting to use them to pick up big, fuzzy balls off a plastic plate and move them into a plastic cup. He is holding the plastic tweezers in one hand, and holds the plate steady on the table. He repeatedly tries to use one hand, but cannot pinch the tweezers tightly enough to pick up one of the balls. Sebastian pauses, looks around, and picks up the balls with his thumb and forefinger.

Holding the plastic tweezers in one hand and the ball in the other, Sebastian places the ball in the tweezers and then pinches it closed. He moves it over to the plastic cup and drops it inside. He then grabs another fuzzy ball and places it in the tweezers. Again, he pinches it tightly and transfers it to the cup. Sebastian engages in the same method until all the fuzzy balls on his plate are now inside his cup. Once he is done, he empties out the cup onto the plate and starts all over. After successfully completing the process again, he holds out his full cup toward his caregiver, Maria. She sees him, smiles, and gives two thumbs up. Sebastian grabs his cup and walks over to her. He hands Maria the cup and walks away from the table.

Discover how this Real World Story is related to:

- Self-Regulation: Foundation of Development
  Attention Regulation (https://illinoisearlylearning.org/ielg/attention/)
- Developmental Domain 1: Social & Emotional Development
  Self-Concept (https://illinoisearlylearning.org/ielg/self-concept/)
- Developmental Domain 2: Physical Development & Health
  Fine Motor (https://illinoisearlylearning.org/ielg/fine-motor/)
- Developmental Domain 2: Physical Development & Health
  Perceptual (https://illinoisearlylearning.org/ielg/perceptual/)
- Developmental Domain 4: Cognitive Development
  Logic & Reasoning (https://illinoisearlylearning.org/ielg/logic/)

THIS EXAMPLE HIGHLIGHTS how children use physical trial and error to solve problems. Sebastian is not successful in his initial attempts to pick up the small objects with his tweezers. However, he pauses to think about possible ways to work on this problem, and then changes his process. Instead of pinching the tweezers to grab the ball, he places the ball in between the tweezers and

then pinches it closed. This is easier for him, as he is still developing the fine motor skills necessary to be able to complete this task. Once he realizes he is successful in accomplishing his goal, he engages in this task until he has finished placing every ball on his plate into the cup. He then repeats the activity all over again. Sebastian's ability to successfully problem solve builds his self-confidence. Maria's positive acknowledgment of his accomplishment further supports his social and emotional development. A positive self-concept and increasing self-confidence is very important for Sebastian's future learning and overall healthy development.

Discover how Problem Solving is related to:

- Self-Regulation: Foundation of Development
  Emotional Regulation (https://illinoisearlylearning.org/ielg/emotional/)
- Self-Regulation: Foundation of Development
  Attention Regulation (https://illinoisearlylearning.org/ielg/attention/)
- Developmental Domain 1: Social & Emotional Development
  Relationship with Adults (https://illinoisearlylearning.org/ielg/relationship-adults/)
- Developmental Domain 1: Social & Emotional Development
  Self-Concept (https://illinoisearlylearning.org/ielg/self-concept/)
- Developmental Domain 4: Cognitive Development
  Memory (https://illinoisearlylearning.org/ielg/memory/)
- Developmental Domain 4: Cognitive Development
  Logic & Reasoning (https://illinoisearlylearning.org/ielg/logic/)

Related Resources

Early Learning Moments Videos
(https://illinoisearlylearning.org/resources/videos/ielg-moments/)

Illinois Early Learning Guidelines: Standards
(https://illinoisearlylearning.org/ielg/ielg-resources/ielg-standards/)

Guidelines Videos
(https://illinoisearlylearning.org/resources/videos/videos-guidelines/)

Guidelines Brochure
(https://illinoisearlylearning.org/ielg/ielg-resources/guidelines-brochure/)

Guidelines Poster
(https://illinoisearlylearning.org/ielg/ielg-resources/guidelines-poster/)

Illinois Early Learning Guidelines: A Guide for Parents
(https://illinoisearlylearning.org/ielg/ielg-resources/guidelines-parents/)

Interactive Guidelines Flip Book
(https://illinoisearlylearning.org/ielg/ielg-resources/guidelines-flipbook/)

Illinois Early Learning Guidelines: Crosswalks and Alignments
(https://illinoisearlylearning.org/ielg/ielg-resources/ielg-crosswalks/)

Illinois Prevention Initiative: Implementation Manual 2013
(https://illinoisearlylearning.org/ielg/ielg-resources/ipi-manual/)

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