

Cognitive Development – Approaches to Learning: Birth-5

Inquiry and Exploration 1

1 Curiosity and sensory exploration 1.1

- 1 Birth to Nine Months: Show awareness of occurrences in their surroundings and use their senses to explore people and objects 1.1.1
 - 2 Nine Months to Eighteen Months : Explore objects using their senses and manipulate them in a variety of ways 1.1.2
 - 3 Eighteen to Twenty-Four Months: Continue to investigate people and objects as tools 1.1.3
 - 4 Twenty-Four to Thirty Months: Seek information through observation, exploration, and use of simple tools (E.g. Arthur pulls a chair up to the kitchen counter to see what his father is making for dinner.) 1.1.4
 - 5 Thirty Months to Three Years: Continue to seek information through observation, exploration, and asking questions 1.1.5
 - 6 Three Years: Persist in asking “Why?” 1.1.6
 - 7a Four- and Five-Year-Olds: Observe, wonder, and/or ask questions, make guesses, and explore hypotheses 1.1.7A
 - 7b Four- and Five-Year-Olds: Use senses and tools/technology to aid in investigation 1.1.7B
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2 Cause and effect 1.2

- 1 Birth to Nine Months: Understand that their actions can have an effect on people and objects in their environment and repeat actions to duplicate effects (E.g. Colleen gently bounces 6-month-old Rory on her lap. When she stops, Rory moves his body up and down until Colleen resumes the bouncing.) 1.2.1
- 2 Nine Months to Eighteen Months : May do things to get a response from familiar adults and children (E.g. Luke drops peas and looks over to his caregiver as they fall from the table to the floor.) 1.2.2
- 3 Eighteen to Twenty-Four Months: Experiment with cause and effect while investigating their environment 1.2.3
- 4 Twenty-Four to Thirty Months: Repeat actions to create the same effect and add variations of those actions to see if the same thing happens 1.2.4

- 5 Thirty Months to Three Years: Anticipate and try to prevent another person's actions that will create undesirable effects 1.2.5
 - 6 Three Years: Use variations on previous actions in new environments and with different objects to create new and desired effects 1.2.6
 - 7a Four- and Five-Year-Olds: Sometimes use magical thinking, showing misunderstanding of cause and effect (E.g. Zeke puts his snow pants by the front door, believing that this will make it snow overnight.) 1.2.7A
 - 7b Four- and Five-Year-Olds: Continue to experiment with cause and effect 1.2.7B
 - 7c Four- and Five-Year-Olds: Engage in repeated actions to make something happen (E.g. Dannie notices that Marie buttons her own coat, so Dannie tries several methods before succeeding in buttoning her own coat.) 1.2.7C
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Reasoning and Problem Solving 2

1 Theories about the world and how things work (Reflection, critical thinking, and trial and error) 2.1

- 1 Birth to Nine Months: Seek to make sense of what happens in their environment 2.1.1
 - 2 Nine Months to Eighteen Months : Act out ideas about how things work by repeating and changing their actions (trial and error) 2.1.2
 - 3 Eighteen to Twenty-Four Months: Process and assimilate new information and experiences by comparing them to previous information and experiences to expand their understanding of the world (E.g. Margaret sees a horse for the first time and says, "Big doggie!") 2.1.3
 - 4 Twenty-Four to Thirty Months: Use multiple strategies to solve simple problems, but may become frustrated when their strategies don't work 2.1.4
 - 5 Thirty Months to Three Years: Solve some problems without having to physically try out all possible solutions and may ask for help when needed 2.1.5
 - 6 Three Years: Remember strategies that have worked and apply them to new situations (E.g. At home, Davis moves a stool to the sink so that he can reach for his toothbrush. At child care the next day, Davis struggles to reach a pencil on the counter so he picks up a chair and puts it near the counter.) 2.1.6
 - 7a Four- and Five-Year-Olds: Talk about own ideas, predictions, and plans, building on prior experiences either self-initiated or guided by adults 2.1.7A
 - 7b Four- and Five-Year-Olds: Can figure out more than one solution to a problem if the first one doesn't work (E.g. In trying to get a ball down from the tree, Marlow first throws a shoe to get it down and when that doesn't work, gets a rake to try to poke it down.) 2.1.7B
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Cooperative Learning 3

1 Cooperative Learning 3.1

- 1 Four- and Five-Year-Olds: Work with others to plan or problem solve toward a shared goal and can describe the reasons for their shared decisions (E.g. Aaron, Chuck, and Jill make a complex track for a train and discuss how sharp curves make trains derail.) 3.1.1
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1 Imitation, risk taking, and experimentation 4.1

- 1 Birth to Nine Months: Engage in turn taking interactions with adults and explore a variety of materials including their own bodies, people, and objects 4.1.1
- 2 Nine Months to Eighteen Months : May initiate turn taking with a trusted adult (E.g. Spencer gives a small toy to his grandmother and she gives another toy to him. They repeat this several times.) 4.1.2
- 3 Eighteen to Twenty-Four Months: Enjoy using their whole bodies in active play 4.1.3
- 4 Twenty-Four to Thirty Months: Try out new actions, roles, and words that they imitate from others 4.1.4
- 5 Thirty Months to Three Years: Take risks in big body play, expanding their physical abilities 4.1.5
- 6 Three Years: Engage in pretend play that includes roles and experiences that they find challenging (E.g. After a visit to the doctor, Brett gives her doll a shot.) 4.1.6
- 7a Four- and Five-Year-Olds: Co-create elaborate pretend play with other children, including scenarios with multiple roles, ideas, and co-negotiated rules 4.1.7A
- 7b Four- and Five-Year-Olds: Engage in pretend play with others to explore and understand life experience and roles 4.1.7B
- 7c Four- and Five-Year-Olds: Create sophisticated structures alone and with others, using various constructive materials, sometimes used in pretend play 4.1.7C

2 Creativity, imagination, and inventiveness 4.2

- 1 Birth to Nine Months: Infants this young do not demonstrate creativity, imagination, and inventiveness in ways that adults can easily interpret 4.2.1
- 2 Nine Months to Eighteen Months : May invent ways to attract adult attention and engage with them (E.g. Greta pretends to cough to gain her teacher's attention and repeats this when her teacher laughs.) 4.2.2
- 3 Eighteen to Twenty-Four Months: Play with toys in ways of their own invention. (E.g. Kai puts blocks and cars together in a single structure.) 4.2.3
- 4 Twenty-Four to Thirty Months: Begin to engage in simple pretend games 4.2.4
- 5 Thirty Months to Three Years: Engage in more extended pretend play 4.2.5
- 6 Three Years: Invent stories and characters 4.2.6
- 7a Four- and Five-Year-Olds: Show delight in all aspects of play from planning to describing the experience 4.2.7A
- 7b Four- and Five-Year-Olds: May play with language including "bathroom" words 4.2.7B
- 7c Four- and Five-Year-Olds: Begin to understand simple jokes 4.2.7C
- 7d Four- and Five-Year-Olds: May share physical humor with one another 4.2.7D

3 Sense of delight and humor* *delight and humor are culturally influenced 4.3

- 1 Birth to Nine Months: Show pleasure in simple sensory games (E.g. AJ's mother tugs at the blanket in his hands and he tugs it back toward himself. They do this several times as AJ laughs.) 4.3.1
- 2 Nine Months to Eighteen Months : Express delight in ways appropriate to their culture 4.3.2
- 3 Eighteen to Twenty-Four Months: Take delight in repetitive games and interactions (E.g. Bodhi and his teacher pass a ball back and forth and each time the teacher pretends to stop, Bodhi says, "again" and laughs when the teacher starts again.) 4.3.3
- 4 Twenty-Four to Thirty Months: Are amused by incongruity (E.g. Jonah laughs hysterically when his father pretends to put Jonah's shoes on his big feet.) 4.3.4
- 5 Thirty Months to Three Years: Play exuberantly 4.3.5
- 6 Three Years: Laugh at themselves when they do something silly 4.3.6
- 7a Four- and Five-Year-Olds: Tell elaborate stories of their own invention or add details to stories 4.3.7A
- 7b Four- and Five-Year-Olds: Create games that continue to evolve as they plan 4.3.7B
- 7c Four- and Five-Year-Olds: Pretend to be characters from stories, books, television shows, movies, or their own invention 4.3.7C

Executive Function 5

1 Adaptability of thought processes, planning, and intentionality 5.1

- 1 Birth to Nine Months: Can act intentionally to achieve a goal (E.g. 8-monthold Oscar rolls across the floor to reach a toy.) 5.1.1
- 2 Nine Months to Eighteen Months : Can carry out their own onestep plan (E.g. Penthia puts a hat on her head.) 5.1.2
- 3 Eighteen to Twenty-Four Months: Plan and implement a two-step dramatic play (E.g. Ezra pretends to feed the baby doll and then puts it in the baby bed.) 5.1.3
- 4 Twenty-Four to Thirty Months: Can try to figure out what is getting in the way of their plan 5.1.4
- 5 Thirty Months to Three Years: Plan their own simple activities and organize the materials they need 5.1.5
- 6 Three Years: Can adapt plans to incorporate new materials 5.1.6
- 7a Four- and Five-Year-Olds: Begin to show ability to adapt their plans when they can't follow through with their original idea 5.1.7A
- 7b Four- and Five-Year-Olds: Can adapt their plan to include other children with adult guidance 5.1.7B
- 7c Four- and Five-Year-Olds: Can engage in increasingly complex planning (E.g. The 4-year-olds create very complex rules for the game they are playing on the playground.) 5.1.7C
- 7d Four- and Five-Year-Olds: May ask for help on own or with teacher prompting or seek more information when needed 5.1.7D

2 Working memory and focus and attention 5.2

- 1 Birth to Nine Months: Begin to maintain focus despite distractions during brief delays 5.2.1
- 2 Nine Months to Eighteen Months : Can have expectations of what will happen based on previous experiences (E.g. Wilfred pulls his mother’s hand to bring her to the refrigerator knowing she will offer juice to him.) 5.2.2
- 3 Eighteen to Twenty-Four Months: Stay focused on simple stories or books for brief periods of time 5.2.3
- 4 Twenty-Four to Thirty Months: Have increased attention spans for activities that interest them or that they initiate 5.2.4
- 5 Thirty Months to Three Years: Can maintain attention on their choice of activity until they have achieved their goal (E.g. Cheng draws one more line on her picture and says, “All done.”) 5.2.5
- 6 Three Years: Can play simple memory games such as matching pictures on cards 5.2.6
- 7a Four- and Five-Year-Olds: Pay attention to and remember details 5.2.7A
- 7b Four- and Five-Year-Olds: Keep track of more than one thing at a time 5.2.7B
- 7c Four- and Five-Year-Olds: Stay focused for longer periods of time on activities that interest them and return to those activities 5.2.7C

3 Motivation, initiative, and persistence 5.3

- 1 Birth to Nine Months: Persist in pursuing objects of interest (E.g. 9-month-old Jasper crawls after her family’s cat.) 5.3.1
 - 2 Nine Months to Eighteen Months : Explore objects that interest them with focus and persistence 5.3.2
 - 3 Eighteen to Twenty-Four Months: Initiate simple plans (E.g. 20-month-old Abreeanna pulls on her teacher’s hand and says, “out”, as she walks to the door.) 5.3.3
 - 4 Twenty-Four to Thirty Months: Persist in following their own curiosity even if adults try to deter them (E.g. 24-month-old Sebastian keeps dropping his toy cars in the toilet bowl even though his mother tells him not to.) 5.3.4
 - 5 Thirty Months to Three Years: Demonstrate the motivation to master simple tasks 5.3.5
 - 6 Three Years: Show initiative in a variety of ways including offering to help 5.3.6
 - 7a Four- and Five-Year-Olds: Demonstrate a desire to please adults and may seek adult attention (E.g. 4-year-old Zara yells “Watch me! Watch me!” as she walks across the balance beam.) 5.3.7A
 - 7b Four- and Five-Year-Olds: Take the initiative carrying out their own plans and persist until the goal is achieved 5.3.7B
 - 7c Four- and Five-Year-Olds: May get frustrated if they cannot carry out their goals to the level of mastery they desire 5.3.7C
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Symbolic Representation 6

1 Representational process 6.1

- 1 Birth to Nine Months: Calm in the presence of their primary caregiver (E.g. Gigi clings to her teacher when a stranger enters the classroom.) 6.1.1
- 2 Nine Months to Eighteen Months : May draw comfort from objects that represent family members or primary caregivers (E.g. Bertti keeps her mother's scarf in her cubby and clings to it when upset.) 6.1.2
- 3 Eighteen to Twenty-Four Months: Use an object to represent something else 6.1.3
- 4 Twenty-Four to Thirty Months: Use a variety of materials, media, and other forms of selfexpression to represent their thinking (E.g. Tessa makes up songs about herself.) 6.1.4
- 5 Thirty Months to Three Years: Understand that some signs in the community represent familiar places 6.1.5
- 6 Three Years: Are aware that some symbols represent words and numbers 6.1.6
- 7a Four- and Five-Year-Olds: Use objects to represent other objects in their pretend play (E.g. Hadley and Kayla build an elaborate castle using couch cushions and blankets.) 6.1.7A
- 7b Four- and Five-Year-Olds: Understand that symbols on pictographs and bar graphs indicate quantity (E.g. Chethan puts a sticker on the class graph to show that he has a cat at home and remarks, "More children have a dog at home than a cat.") 6.1.7B