Developmental Domain 4: Cognitive Development

Concept Development CD

Children demonstrate the ability to connect pieces of information in understanding objects, ideas, and relationships.

1. Birth to 9 months CD.1
    1. Turns head toward sounds CD.1.1
    2. Begins to focus on objects, sounds, and people CD.1.2
    3. Actively explores the environment through the five senses CD.1.3
    4. Attempts to repeat an action, e.g., pats the table and tries to pat it again CD.1.4
    5. Focuses and begins to distinguish between familiar and unfamiliar objects, sounds, and people CD.1.5
2. 7 months to 18 months CD.2
    1. Develops object permanence, aware that an object still exists even when it is not physically visible, e.g., pulls the blanket off the pacifier, cries when caregiver leaves the room CD.2.1
    2. Uses physical actions while exploring objects, e.g., rolls a ball back and forth on the floor, purposefully throws object repeatedly onto floor to be picked up CD.2.2
    3. Identifies and indicates objects and people in pictures, e.g., points CD.2.3
    4. Focuses attention on objects, people, and sounds for increasing amounts of time CD.2.4
3. 16 months to 24 months CD.3
    1. Pretends to use objects in their intended manner, e.g., holds a play phone to ear and engages in a conversation by babbling CD.3.1
    2. Begins to identify and name objects and people CD.3.2
    3. Uses an object to represent another during play, e.g., uses block as a phone CD.3.3
    4. Begins to identify characteristics of the object, e.g., “red ball” CD.3.4
    5. With assistance, groups a few objects by similar characteristics, e.g., color, shape, or size CD.3.5

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4 21 months to 36 months CD.4

1 Identifies characteristics of objects and people when named, e.g., colors CD.4.1

2 Begins to arrange objects in a line, e.g., lines up toy cars, one after the other CD.4.2

3 Uses symbolic representation during play, e.g., grabs a hair brush and uses it as a telephone CD.4.3

4 Purposefully arranges similar objects, e.g., divides plastic blocks into a red group, a blue group, and a yellow group CD.4.4

5 Identifies categories, e.g., able to point out all the animals within a picture even with different types of objects represented CD.4.5

Memory M

Children demonstrate the ability to acquire, store, recall, and apply past experiences.

1 Birth to 9 months M.1

1 Turns toward familiar voices, sounds, and/or objects M.1.1

2 Anticipates familiar events, e.g., reaches for bottle and brings to mouth M.1.2

3 Finds an object that it is partially hidden M.1.3

4 Remembers that objects and people still exist even when they are no longer physically present, e.g., looks around for parent when parent leaves the room M.1.4

2 7 months to 18 months M.2

1 Finds hidden objects, e.g., lifts a blanket to uncover a toy after seeing the caregiver hide it M.2.1

2 Shows awareness of non-present, familiar adults, e.g., while in childcare, asks for mom and dad throughout the day M.2.2

3 Searches for objects in their usual location, e.g., finds their favorite book on the bookshelf M.2.3

4 Anticipates what event comes next in his or her daily routine, e.g., sits down for a morning snack after a music activity M.2.4

3 16 months to 24 months M.3

1 Remembers several steps in familiar routines and carries out these routines with little or no prompting M.3.1

2 Recalls an event in the past, e.g., a special visitor, or a friend's birthday party M.3.2

3 Searches for objects in different places M.3.3

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4 21 months to 36 months M.4

1 Shares with adult what happened in school that day M.4.1

2 Carries out routines independently without being reminded what comes next in the daily routine. M.4.2

3 Uses play to communicate about previous events or experiences, including the sequence of events that took place, e.g., a friend's birthday party M.4.3

4 Translates past knowledge to new experiences, e.g., recalls a trip to the dentist, and narrates and acts out each step of the experience on a peer during play M.4.4

Spatial Relationships SR

Children demonstrate an awareness of how objects and people move and fit in space.

1 Birth to 9 months SR.1

1 Observes objects and people in the immediate environment, e.g., looks at own hands and feet, tracks caregiver with eyes, turns head toward sounds SR.1.1

2 Reaches and grasps for objects SR.1.2

3 Explores through the use of different senses, e.g., begins to mouth and/or pat objects SR.1.3

4 Focuses attention on an object in motion and follows it, e.g., watches a toy roll away after it falls SR.1.4

2 7 months to 18 months SR.2

1 Puts objects in a bucket and then dumps them out; repeats this action SR.2.1

2 Begins to identify physical obstacles and possible solutions when moving around, e.g., crawls around a chair instead of under it SR.2.2

3 Drops objects such as toys and watches them move SR.2.3

4 Discriminates between small and large objects, e.g., uses one hand or two hands in a variety of ways SR.2.4

3 16 months to 24 months SR.3

1 Understands words that characterize size, e.g., big, small SR.3.1

2 Uses simple trial and error to complete simple puzzles, e.g., matches piece, orients and attempts to turn to make a puzzle piece fit SR.3.2

3 Recognizes the proper direction of objects, e.g., will turn over an upside-down cup SR.3.3

4 Begins to understand simple prepositions, e.g., under, in, behind SR.3.4

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4 21 months to 36 months SR.4

1 Uses words and gestures to describe size of objects SR.4.1

2 Recognizes where his or her body is in relation to objects, e.g., squeezing in behind a chair SR.4.2

3 Completes simple puzzles with less trial and error, e.g., can match a puzzle piece to its correct slot by identifying the size and shape by simply looking at it. SR.4.3

4 Actively uses body to change where he or she is in relation to objects, e.g., climbs to sit on the couch SR.4.4

Symbolic Thought ST

Children demonstrate the understanding of concepts, experiences, and ideas through symbolic representation .

1 Birth to 9 months ST.1

1 Uses senses to explore objects, e.g., observes, mouths, touches ST.1.1

2 Interacts with caregiver(s) and the environment ST.1.2

3 Physically manipulates objects, e.g., twists and turns toys, drops items ST.1.3

4 Combines objects in play ST.1.4

5 Locates an object that has been partially hidden ST.1.5

2 7 months to 18 months ST.2

1 Demonstrates object permanence , e.g., realizes objects and people still exist, even when they are not physically visible ST.2.1

2 Imitates adult's actions, e.g., bangs a drum with a rattle, after observing an adult complete the action ST.2.2

3 Engages in simple pretend play, e.g., pretends to drink tea from a pretend tea cup, pretends to feed baby doll with toy bottle, uses a toy block as a phone, pretends to talk to mama ST.2.3

4 Recognizes familiar people and/or objects in photographs ST.2.4

3 16 months to 24 months ST.3

1 Pretends one object is really another by using substitution, e.g., a napkin for a baby's diaper ST.3.1

2 Finds objects after they are hidden in close proximity ST.3.2

3 Engages in pretend play with familiar objects and experiences, e.g., places baby doll in stroller and pushes the stroller ST.3.3

4 Identifies or names his or her drawings, e.g., points to scribble and says, "mama and dada" ST.3.4

5 Communicates labels to familiar objects and/or people, e.g., says "dog" when seeing four-legged animals ST.3.5

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4 21 months to 36 months ST.4

1 Assigns roles to peers while engaged in imaginary play ST.4.1

2 Builds in sequencing while engaged in play, e.g., beginning, middle, and end ST.4.2

3 Communicates descriptors of people or objects that are not present, e.g., says “My mommy has blue eyes” ST.4.3

4 Projects feelings and words onto stuffed animals, e.g., “The horse is sad” ST.4.4

5 Takes on different adult roles during play and uses appropriate mannerisms, e.g., pretends to be the teacher and speaks in a more adult-like voice, while pretending to read a book to students ST.4.5

Creative Expression CE

Children demonstrate the ability to convey ideas and emotions through creative expression.

1 Birth to 9 months CE.1

1 Actively explores sensory objects in the environment CE.1.1

2 Participates in interactions with caregiver(s), e.g., observes, smiles, coos CE.1.2

3 Demonstrates interest in sounds, songs, music, and colors CE.1.3

4 Listens and moves to music CE.1.4

5 Manipulates objects, e.g., turns, shakes, bangs CE.1.5

2 7 months to 18 months CE.2

1 Enjoys familiar songs and word rhymes CE.2.1

2 Begins to use symbolic play while interacting, e.g., holds a play phone to ear and has a “conversation” with grandma CE.2.2

3 Begins to stack large blocks with or without support CE.2.3

4 Participates in music activities by performing some accompanying hand movements CE.2.4

5 Engages in art activities such as coloring or finger painting CE.2.5

3 16 months to 24 months CE.3

1 Imitates basic movements during an activity, e.g., places beanbag on head CE.3.1

2 Engages in more intricate pretend play, e.g., uses a toy banana as a phone CE.3.2

3 Enjoys using instruments while listening to music CE.3.3

4 Builds by using different objects and materials, e.g., lines up cars, stacks small boxes CE.3.4

5 Enjoys breaking down what he or she has built, e.g., knocking over a stack of blocks with his or her arm CE.3.5

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6 Creates artwork; focuses and enjoys the process rather than the final product CE.3.6

4 21 months to 36 months CE.4

1 Selects movements that reflect mood, e.g., jumps up and down when excited CE.4.1

2 Identifies and discusses characters that are meaningful to him and her CE.4.2

3 Builds increasingly complex structures and expands upon them, e.g., uses smaller blocks to build taller towers, lines up materials and adds other components to create a “road” leading up to the tower CE.4.3

4 Uses imaginary play to cope with fears, e.g., puts monster in a closet CE.4.4

5 Plays dress-up and invites caregiver(s) to play along CE.4.5

Logic & Reasoning LR

Children demonstrate the ability to use knowledge, previous experiences, and trial and error to make sense of and impact their world.

1 Birth to 9 months LR.1

1 Uses nonverbal and verbal communication to generate responses from caregiver(s), e.g., coos, reaches, laughs LR.1.1

2 Repeats similar actions on different objects, e.g., shakes stuffed animal in the same manner as a rattle to hear noise LR.1.2

3 Looks for and finds an object that has fallen LR.1.3

2 7 months to 18 months LR.2

1 Uses objects as they are intended, e.g., pretends to drink milk out of a toy bottle LR.2.1

2 Attempts different ways to move an object to see what happens, e.g., rolls a ball gently at first and then hard to see how fast and far it will move LR.2.2

3 Uses different actions for an intended result, e.g., builds tower with blocks and then knocks it down with his or her hand, repeats the activity and uses his/her head to make the tower tumble LR.2.3

4 Imitates adult’s body language and simple actions, e.g., puts hands on hips or pretends to brush crumbs off table LR.2.4

3 16 months to 24 months LR.3

1 Repeats actions over and over to cause desired effect, e.g., dumps out a bucket and refills it with objects LR.3.1

2 Starts to predict the consequence of simple and familiar actions, e.g., knows that flipping the light switch will either turn on or turn off the light LR.3.2

3 Understands functionality of objects, e.g., mop is used to clean the floor LR.3.3

4 Begins to understand certain behaviors are related to certain contexts, e.g., behaves differently at childcare than at home LR.3.4

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4 21 months to 36 months LR.4

1 Recognizes actions and objects and can generalize meaning, e.g., sees someone opening an umbrella and can attribute that to the fact that it may be raining LR.4.1

2 Makes a prediction of what will happen next in a sequence of events LR.4.2

3 Applies past experiences to new situations LR.4.3

4 Expresses cause and effect in certain situations, e.g., “I fell down and now I have a boo-boo.” LR.4.4

Quantity & Numbers QN

Children demonstrate awareness of quantity, counting, and numeric competencies.

1 Birth to 9 months QN.1

1 Uses sounds and body language to signal for more, e.g., begins to cry when finishing a bottle of milk and is still hungry QN.1.1

2 Explores objects one at a time, e.g., mouths one toy and drops it to grab hold of another, or drops toys in a container QN.1.2

3 Expresses desire for more through facial cues, sounds, gestures, and actions, e.g., bangs, opens mouth, points, reaches QN.1.3

4 Holds on to more than one object at a time, e.g., grasps a rattle in one hand, and reaches for block QN.1.4

2 7 months to 18 months QN.2

1 Understands the concept of “more” in regard to food and play; signs or says, “more” QN.2.1

2 Imitates counting, e.g., climbs stairs and mimics “one, two” QN.2.2

3 Uses nonverbal and verbal communication to express more complex concepts, e.g., “some,” “again,” “all done” QN.2.3

4 Begins to understand descriptive words and apply attributes to people, e.g., points to himself when asked, “Who’s a big boy?” QN.2.4

5 Begins to use number words to label quantities, even though incorrect QN.2.5

3 16 months to 24 months QN.3

1 Communicates amount of familiar objects, e.g., sees two apples and says, “two” QN.3.1

2 Uses nonverbal gestures to demonstrate understanding of quantities, e.g., holds up two fingers to express two of something QN.3.2

3 Begins to use “one,” “two,” and “three” to identify very small quantities without counting them QN.3.3

4 Begins to use descriptive words for people in a more complex fashion, e.g., “he big,” “she baby” QN.3.4

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4 21 months to 36 months QN.4

1 Understands progressive number order, e.g., recites the number series to ten QN.4.1

2 Begins to count objects; may count objects twice and/or skip numbers QN.4.2

3 Begins to identify quantity comparison, e.g., “Which group has more blocks?” QN.4.3

4 Assigns meaning to numbers; understands the concept of a small number or big number, e.g., communicates “wow” when a caregiver shares that he or she is 35 years old QN.4.4

5 Uses descriptive words when communicating about others, e.g., “She ran fast,” “He is short,” “Look how far away I am” QN.4.5

Science Concepts & Exploration SCE

Children demonstrate a basic awareness of and use scientific concepts.

1 Birth to 9 months SCE.1

1 Observes people and objects in his or her environment SCE.1.1

2 Engages in social interactions with familiar adults SCE.1.2

3 Actively explores new objects found in the environment, e.g., mouths, pats, grasps SCE.1.3

4 Uses all of his or her senses to explore and discover new things, e.g., reaches out to touch rain or snow SCE.1.4

2 7 months to 18 months SCE.2

1 Actively explores objects and experiences their properties through the different senses, e.g., color, texture, weight, taste SCE.2.1

2 Repeats actions that attracts his or her attention, e.g., drops object onto floor to hear the sound it makes SCE.2.2

3 Experiments with different textures found in the outside environment, e.g., runs fingers through dirt, crumbles dry leaves SCE.2.3

3 16 months to 24 months SCE.3

1 Shows interest in own body; may know names for certain body parts SCE.3.1

2 Begins simple categorizing, e.g., cats and dogs are animals SCE.3.2

3 Asks simple questions about nature SCE.3.3

4 Attempts new tasks during familiar activities, e.g., plays at the water table, and instead of using hands, tries to use head to make the water move SCE.3.4

5 Uses motion and sound to represent an observation, e.g., “snake, ssssss!” SCE.3.5

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4 21 months to 36 months SCE.3

1 Begins to identify characteristics of animals, e.g., “The dog barks” SCE.3.1

2 Identifies various attributes of objects, food, and materials, e.g., color, shapes, size SCE.3.2

3 Draws on past experience to describe and communicate about observations and experiences, e.g., knows what happens when one blows on a candle, discusses what happens to snow when the temperature is warmer SCE.3.3

4 Engages in processes to reach an outcome, e.g., mixes three different colors of paint to see what color emerges SCE.3.4

Safety & Well-Being SWB

Children demonstrate the emerging ability to recognize risky situations and respond accordingly.

1 Birth to 9 months SWB.1

1 Signals needs through reflexes and sounds, e.g., demonstrates rooting reflex when hungry, cries when uncomfortable SWB.1.1

2 Actively observes and explores environment SWB.1.2

3 Demonstrates interest in own body, e.g., stares at hands, mouths feet, pokes at belly button SWB.1.3

4 Uses physical movements to explore environment, e.g., reaching, sitting, rolling SWB.1.4

5 Demonstrates trust in caregiver(s), e.g., reaches for adult, comforted when soothed, looks for caregiver in novel situations SWB.1.5

2 7 months to 18 months SWB.2

1 Uses social referencing to assess uncertain situations, e.g., looks at a caregiver for social cues as to whether or not to proceed SWB.2.1

2 Actively climbs to reach for wanted objects during play SWB.2.2

3 Responds to cues from caregiver in uncertain and unsafe situations SWB.2.3

4 Hesitates and demonstrates caution in new and/or changing situations, e.g., stops crawling when reaches the edge of an uneven surface SWB.2.4

5 Responds to warnings and changes in tone of voice; needs assistance and redirection to stop unsafe behavior, e.g., looks up after hearing a stern “no” but does not necessarily stop the behavior or action SWB.2.5

3 16 months to 24 months SWB.3

1 Understands when “no” and “stop” is communicated through either words or gestures SWB.3.1

2 Responds to warnings and begins to change behavior accordingly, e.g., moves away from the outlet after caregiver communicates “no” SWB.3.2

3 Seeks comfort when fearful SWB.3.3

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4 Imitates adults’ actions during play, e.g., tells baby doll “no touch” when walking by the pretend stove SWB.3.4

4 21 months to 36 months SWB.4

1 Pays attention to safety rules but still needs supervision to keep self safe SWB.4.1

2 Communicates to an adult if something is wrong, e.g., a peer is hurt or missing SWB.4.2

3 Remembers and begins to apply past experiences to future situations, e.g., walks carefully and slowly when there is snow on the ground SWB.4.3

4 Reminds younger peers of rules, e.g., holds hands with a younger peer while walking outside SWB.4.4