

Cognitive Development (CD)

Construction of Knowledge: Thinking and Reasoning

1 Children use their senses to construct knowledge about the world around them. **CD-1**

Infants Birth to 12 months

- a** Discover different shapes, sizes and textures by exploring (put toys in mouth, crawl over pillows, pick up large objects). **CD-1A**
- b** Turn head or move toward sounds. **CD-1B**

Younger Toddlers 8 to 21 months

- c** Actively explore objects by handling them in many ways (moving, carrying, filling, dumping, smelling, and putting in mouth). **CD-1C**
- d** Explore space with their bodies (fit self into large box, crawl under table, climb over low walls). **CD-1D**

Older Toddlers 18 to 36 months

- e** Explore objects and materials physically to learn about their properties. **CD-1E**
- f** Experiment with safe tools to learn how they work (wooden hammer with pegs, sifter, funnel). **CD-1F**
- g** Express knowledge gathered with their senses through play (imitate something they have seen an adult do, show they understand how to sort by sorting toys as they are playing). **CD-1G**

Younger Preschoolers 36 to 48 months

- h** Explore objects, tools, and materials systematically to learn about their properties (weigh an object, observe something from the top of the object to the bottom). **CD-1H**
- i** Express knowledge gathered with their senses using play, various art forms, language, and other forms of representation. (Show an understanding that one block is heavier than another, that play dough can be modeled into longer and shorter logs, that blocks can be used to represent a telephone). **CD-1I**
- j** Enjoy fantasy and makebelieve and can sometimes distinguish appearance from reality (the person behind the mask remains the same person). **CD-1J**
- k** Group familiar objects that go together (shoe and sock, brush and paint, hammer and nail). **CD-1K**

Older Preschoolers 48 to 60+ months

- l** Explore objects, tools, and materials systematically to learn about their properties (weigh an object, observe something from the top of the object to the bottom). **CD-1L**
 - m** Express knowledge gathered with their senses using play, various art forms, language, and other forms of representation. (Show an understanding that one block is heavier than another, that play dough can be modeled into longer and shorter logs, that blocks can be used to represent a telephone). **CD-1M**
 - n** Distinguish appearance from reality (the person behind a mask is still the same person; recognize that a fantasy story could not be real). **CD-1N**
 - o** Organize and use information through matching, grouping, and sequencing. **CD-1O**
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2 Children recall information and use it for addressing new situations and problems. **CD-2**

Infants Birth to 12 months

- a** Search for objects that are hidden or partly hidden. **CD-2A**
- b** Respond differently to familiar vs. unfamiliar people, objects, and situations (reach for new interesting toy instead of old familiar toy; move toward familiar caregiver but hide head on a family member's shoulder when new person comes near). **CD-2B**
- c** Anticipate routine events (smile, wave arms and legs, move toward adult holding bottle). **CD-2C**
- d** Repeat an action to make something happen again (make sounds when music stops, bounce up and down to get adult to continue "horsey ride"). **CD-2D**
- e** Observe and imitate sounds, movements, and facial expressions, including things they have seen in the past or in other places. **CD-2E**

Younger Toddlers 8 to 21 months

- f** Search in several places where an object has been hidden recently. **CD-2F**
- g** Notice a change in familiar objects, places, or events (frown at family member with a new haircut, look for furniture that was moved). **CD-2G**
- h** Perform routine events and use familiar objects in appropriate ways (carry clean diaper to changing table, talk on phone, "water" plants with pitcher). **CD-2H**
- i** Imitate behaviors they have seen in the past or in other places. **CD-2I**
- j** Identify objects and people in pictures by pointing or looking. **CD-2J**

Older Toddlers 18 to 36 months

- k** Search for objects in several places, even when not seen recently. **CD-2K**
- l** Show they remember people, objects, and events (tell about them, act them out, point out similar happenings). **CD-2L**
- m** Show they remember the order in which familiar events happen (finish line in story or song, get ready to go outdoors after snack). **CD-2M**
- n** Choose objects to represent something else with similar features during play (block for cell phone, large sheet for tent). **CD-2N**

Younger Preschoolers 36 to 48 months

- o** Recognize whether a picture or object is the same as or different from something they have seen before. **CD-2O**
- p** Apply what they know about everyday experiences to new situations (look for the seatbelt on the bus). **CD-2P**
- q** Describe or act out a memory of a situation or action, with adult support. **CD-2Q**
- r** Make predictions about what will happen using what they know. **CD-2R**
- s** Introduce ideas or actions in play based on previous knowledge or experience. **CD-2S**
- t** Ask questions about why things happen and try to understand cause and effect. **CD-2T**

Older Preschoolers 48 to 60+ months

- u** Demonstrate their ability to apply what they know about everyday experiences. **CD-2U**
- v** Describe past events in an organized way, including details or personal reactions. **CD-2V**
- w** Improve their ability to make predictions and explain why things happen using what they know. **CD-2W**
- x** Introduce more elaborate or detailed ideas or actions into play based on previous knowledge or experience. **CD-2X**
- y** Try to reach logical conclusions (including conclusions regarding cause and effect) about familiar situations and materials, based on information gathered with their senses. **CD-2Y**
- z** Speculate and imagine what might happen next. **CD-2Z**

3 Children demonstrate the ability to think about their own thinking: reasoning, taking perspectives, and making decisions. **CD-3**

Infants Birth to 12 months

- a** Show awareness of others' reactions to people, objects, and events. **CD-3A**
- b** Show awareness of another person's intentions by establishing joint attention (look at an object, then at caregiver, and back at object). **CD-3B**

Younger Toddlers 8 to 21 months

- c Show awareness of others' feelings about things by looking to see how they react. **CD-3C**

Older Toddlers 18 to 36 months

- d Use words like "think," "remember," and "pretend." **CD-3D**
- e Talk about what they and other people want or like. **CD-3E**

Younger Preschoolers 36 to 48 months

- f Use language to identify pretend or fantasy situations (say, "Let's pretend we're going on a trip." "That's a pretend story."). **CD-3F**
- g Use words like "think" and "know" to talk about thoughts and beliefs. **CD-3G**
- h Recognize that beliefs and desires can determine what people do (e.g., a person will look for a missing object based on where they think it is rather than where it actually is). **CD-3H**
- i Remember and describe at the end of the day what they had done while at school. **CD-3I**

Older Preschoolers 48 to 60+ months

- j Use language to identify pretend or fantasy situations (say, "Let's pretend we're going on a trip." "That's a pretend story."). **CD-3J**
- k Express understanding that others may have different thoughts, beliefs, or feelings than their own ("I like ketchup and you don't."). **CD-3K**
- l Use language to describe their thinking processes with adult support. **CD-3L**
- m Work on a project over several days, solving problems and making their work more elaborate. **CD-3M**

Creative Expression

4 Children demonstrate appreciation for different forms of artistic expression. **CD-4**

Infants Birth to 12 months

- a Show wonder or fascination with objects, activities, or experiences (gaze at an object, become quiet or vocal when they hear lullabies, show bodily excitement when they hear music). **CD-4A**
- b Hold, touch, and experience different textures (fuzzy blanket smooth skin, rough carpet) **CD-4B**

Younger Toddlers 8 to 21 months

- c Show interest or pleasure in response to images, objects, and music (say, "Aaah" and reach for a brightly colored picture, look at or reach toward fluttering leaves). **CD-4C**
- d Participate in and explore a wide range of media (use finger paint, glue scraps of paper on another paper, dance to music). **CD-4D**

Older Toddlers 18 to 36 months

- e Express pleasure in different forms of art (express preferences, choose to look at book of photographs or listen to music again). **CD-4E**
- f Participate in and describe art, music, dance, drama, or other aesthetic experiences (describe dancers spinning round and round; talk about colors in a painting). **CD-4F**

Younger Preschoolers 36 to 48 months

- g Express pleasure in different forms of art (express preferences, choose to look at book of photographs or listen to music again). **CD-4G**
- h Participate in, describe and ask questions about art, music, dance, drama, or other aesthetic experiences (describe dancers spinning round and round; talk about colors in a painting). **CD-4H**

Older Preschoolers 48 to 60+ months

- i Express pleasure in different forms of art (express preferences, choose to look at book of photographs or listen to music again). **CD-4I**
- j Participate in, describe and ask questions about art, music, dance, drama, or other aesthetic experiences (describe dancers spinning round and round; talk about colors in a painting). **CD-4J**
- k Use art-specific vocabulary to express ideas and thoughts about artistic creations more clearly (say, “We need a stage for our puppet show.”). **CD-4K**
- l Recognize the value of artistic expression and the role the arts play in people’s lives. **CD-4L**

5 Children demonstrate self-expression and creativity in a variety of forms and contexts, including play, visual arts, music, theater, and dance. **CD-5**

Infants Birth to 12 months

- a Use toys and household objects in a variety of different ways during play (wave, then scrunch, then throw scarf). **CD-5A**
- b Explore sensory properties of art media (smear paint, pat and pound dough). **CD-5B**
- c Make a variety of sounds with simple instruments, toys, and their own voice. **CD-5C**
- d Express themselves by moving their bodies (wave arms when excited, hug soft toy). **CD-5D**

Younger Toddlers 8 to 21 months

- e Use hats and clothes for dress-up make-believe. **CD-5E**
- f Explore art materials freely (make marks, squeeze clay, tear paper). **CD-5F**
- g Use materials purposefully to create sounds (bang blocks together, ring bell, shake can to make contents jingle). **CD-5G**
- h Move to music in their own way. **CD-5H**

Older Toddlers 18 to 36 months

- i Recreate familiar scenes using play materials, language, and actions. [CD-5I](#)
- j Experiment and create art with clay, crayons, markers, paint, and collage materials. [CD-5J](#)
- k Make up simple nonsense songs, sign, chant, and dance (sing “la-la-la-la” on two pitches, twirl around and fall down, “march” by lifting knees high). [CD-5K](#)
- l Express ideas and feelings through music, movement, and dance. [CD-5L](#)

Younger Preschoolers 36 to 48 months

- m Choose to participate and express themselves through a variety of creative experiences, such as art, music, movement, dance, and dramatic play. [CD-5M](#)
- n Show creativity and imagination when using materials and assuming roles during pretend play. [CD-5N](#)
- o Explore the properties of art materials and use them with purpose to draw, paint, sculpt, and create in other ways. [CD-5O](#)
- p Show awareness of different musical instruments, rhythms, and tonal patterns as they make music or participate in music activities. [CD-5P](#)
- q Show awareness of various patterns of beat, rhythm, and movement through music and dance activities. [CD-5Q](#)

Older Preschoolers 48 to 60+ months

- r Choose to participate and express themselves through a variety of creative experiences, such as art, music, movement, dance, and dramatic play. [CD-5R](#)
- s Plan and act out scenes based on books, stories, everyday life, and imagination. [CD-5S](#)
- t Plan and complete artistic creations such as drawings, paintings, collages, and sculptures. [CD-5T](#)
- u Recall and imitate different musical tones, rhythms, rhymes, and songs as they make music or participate in musical activities (clap previous beat to a new song). [CD-5U](#)
- v Recall and imitate patterns of beat, rhythm, and movement as they create dances or participate in movement and dance activities. [CD-5V](#)

Social Connections

6 Children demonstrate knowledge of relationships and roles within their own families, homes, classrooms, and communities. [CD-6](#)

Infants Birth to 12 months

- a Intently observe actions of children, adults, pets, and objects nearby. [CD-6A](#)
- b Seek family members, siblings, caregivers, and teachers for play and for meeting needs. [CD-6B](#)

Younger Toddlers 8 to 21 months

- c** Imitate routine actions of their caregivers (rock a baby doll, push a lawnmower, “read” a magazine). **CD-6C**
- d** Know whom they can go to for help (regular caregiver vs. visitor, family member vs. neighbor). **CD-6D**

Older Toddlers 18 to 36 months

- e** Use play to show what they know about relationships and roles in families and other familiar contexts. **CD-6E**
- f** Talk about what others do during the day (“Mommy at work. Mimi at home.”). **CD-6F**
- g** Help with daily routines (put cups out for lunch, feed pets, wash tables). **CD-6G**

Younger Preschoolers 36 to 48 months

- h** Talk about close family members, name their relationships to each other, and describe family routines (“Marika is my sister.” “My grandma takes care of me at night.”). **CD-6H**
- i** Adopt roles of family and community members during play, given support and realistic props. **CD-6I**
- j** Identify and talk about the roles of some community helpers (police, fire fighters, garbage collectors). **CD-6J**

Older Preschoolers 48 to 60+ months

- k** Talk about a wide circle of family members and other people important to the family, their relationships to each other, and shared experiences. **CD-6K**
- l** Adopt roles of a wide variety of family and community members during dramatic play, using props, language, and actions to add detail to their play. **CD-6L**
- m** Recognize and identify the roles of a wide variety of community helpers (police, fire fighters, garbage collectors, doctors, dentists). **CD-6M**

7 Children recognize that they are members of different groups (e.g., family, preschool class, cultural group). **CD-7**

Infants Birth to 12 months

- a** Show a clear preference for familiar people. **CD-7A**

Younger Toddlers 8 to 21 months

- b** Recognize children and others they spend a lot of time with (make sounds, say name, move toward or away from child). **CD-7B**

Older Toddlers 18 to 36 months

- c** Put self into categories based on age, gender, and physical characteristics (“I’m a girl.” “I have long hair.”). **CD-7C**

Younger Preschoolers 36 to 48 months

- d** Identify self as a part of a specific family, preschool class, or other familiar group (e.g., point to picture and say, “That’s my family,” or “I’m in Ms. Emily’s class.”). **CD-7D**

Older Preschoolers 48 to 60+ months

- e** Identify and express self as a part of several groups (e.g., family, preschool class, faith community). **CD-7E**

8 Children identify and demonstrate acceptance of similarities and differences between themselves and others. CD-8

Infants 0 to 12 months

Emerging

Younger Toddlers 8 to 21 months

- a** Compare their own physical features with those of others by looking and touching. **CD-8A**

Older Toddlers 18 to 36 months

- b** Describe people who are similar and different based on characteristics such as age, gender, and other physical characteristics. **CD-8B**
- c** Show awareness of similarities and differences among people and families during play. **CD-8C**

Younger Preschoolers 36 to 48 months

- d** Show acceptance of people who are different from themselves as well as people who are similar. **CD-8D**
- e** Given support and guidance, explore different cultural practices during play and planned activities. **CD-8E**

Older Preschoolers 48 to 60+ months

- f** Show acceptance of people who are different from themselves as well as people who are similar. **CD-8F**
- g** Talk about how other children have different family members and family structures than their own (“I live with my Grandma and Shanika lives with her Mom and Dad.” “David’s dad works but my Daddy stays home and takes care of me.”). **CD-8G**
- h** Show acceptance of different cultures through exploration of varying customs and traditions, past and present (how people dress, how people speak, food, music, art, etc.). **CD-8H**

9 Children explore concepts connected with their daily experiences in their community. CD-9

Infants 0 to 12 months

Emerging

Younger Toddlers 8 to 21 months

Emerging

Older Toddlers 18 to 36 months

- a** Use play to communicate what they know about their community (pretend to go to the store, pretend to be a police officer). **CD-9A**

Younger Preschoolers 36 to 48 months

- b** Describe characteristics of the places where they live and play (say, “My house is big and there are trees in my yard.” “The playground has swings and a sandbox.”). **CD-9B**
- c** Notice changes that happen over time (seasons, self or others growing bigger). **CD-9C**
- d** Notice and talk about weather conditions. **CD-9D**
- e** With prompting and support, participate as a member of a democratic classroom community (vote for name of class pet, wait turn to paint when easels are full). **CD-9E**

Older Preschoolers 48 to 60+ months

- f** Describe characteristics of the places where they live and play (say, “My house is big and there are trees in my yard.” “The playground has swings and a sandbox.”). **CD-9F**
- g** Observe and talk about changes in themselves and their families over time. **CD-9G**
- h** Observe and talk about how people adapt to seasons and weather conditions (put on sunscreen on sunny days, wear rain gear). **CD-9H**
- i** Show awareness of the basic needs all families have (food, shelter, clothing) and how needs are met (work, help each other). **CD-9I**
- j** Demonstrate positive social behaviors and take personal responsibility as a member of a group (share, take turns, follow rules, take responsibility for classroom jobs). **CD-9J**

Scientific Exploration and Knowledge

10 Children observe and describe characteristics of living things and the physical world. **CD-10**

Infants 0 to 12 months

- a** Observe and explore natural phenomena indoors and outdoors using all senses (rub hands over grass, lift face to feel wind, pat family dog, splash water). **CD-10A**

Younger Toddlers 8 to 21 months

- b** Use abilities to observe and explore natural phenomena indoors and outdoors with focus using all senses (notice and interact with small insects, smell flowers, catch falling snow, shuffle through leaves). **CD-10B**

Older Toddlers 18 to 36 months

- c Participate in the care of living things with guidance and support (water plants, help to feed the classroom pet). **CD-10C**
- d Show curiosity and investigate the world of nature indoors and outdoors (pick up rocks, scratch frost on window, ask questions about things seen outdoors). **CD-10D**

Younger Preschoolers 36 to 48 months

- e Participate in the care of living things, with guidance and support (water plants, help to feed classroom pet). **CD-10E**
- f Notice and react to the natural world and the outdoor environment. **CD-10F**
- g Notice and describe characteristics of plants and animals, such as appearance, similarities, differences, behavior, and habitat. **CD-10G**
- CD-10h.** Notice and describe current weather conditions. **CD-10H**
- i Notice and describe properties of materials and changes in substances (water freezes into ice, pudding thickens, clay hardens). **CD-10I**
- j Participate in activities that help to care for the environment, with guidance and support (pick up trash, recycle paper). **CD-10J**

Older Preschoolers 48 to 60+ months

- k Collect items from nature (rocks, leaves, insects) and classify them using physical characteristics (color, size, shape, texture). **CD-10K**
- l Notice and react to the natural world and the outdoor environment. **CD-10L**
- m Describe some things plants and animals need to live and grow (sunlight, water, food). **CD-10M**
- n Take responsibility for the care of living things (independently feed classroom pet as daily chore, water plant when dry, weed vegetable garden). **CD-10N**
- o Notice and describe weather conditions, position of the sun and moon at different times, and seasonal changes. **CD-10O**
- p Notice, describe, and attempt to explain properties of materials and changes in substances (metal railing is hot because the sun shines on it; ice melts when it gets warmer). **CD-10P**
- q Participate in activities that help to care for the environment and explain why they are important with guidance and support (gathering cans for recycling, planting trees). **CD-10Q**

11 Children explore the world by observing, manipulating objects, asking questions, making predictions, and developing generalizations. **CD-11**

Infants 0 to 12 months

- a Gather information through sight, hearing, taste, smell, and touch. **CD-11A**
- b Use multiple senses to focus intently on objects, displays, materials, or events. **CD-11B**

Younger Toddlers 8 to 21 months

- c** Use all senses to examine the environment carefully (reach out to touch rain, stop playing to watch shadows, gaze at moon). **CD-11C**
- d** Use toys and other objects to make things happen (kick a ball, push a button on a toy). **CD-11D**
- e** Explore objects and materials by handling them in many ways (moving, carrying, filling, dumping, smelling, putting in mouth). **CD-11E**

Older Toddlers 18 to 36 months

- f** Investigate differences between materials (sand, water, goop, moving air) **CD-11F**
- g** Use simple tools to manipulate and explore objects and materials, with guidance and support (containers for pouring, sand mold, magnifying glass) **CD-11G**
- h** Notice changes in materials when mixing and manipulating (paint, PlayDoh®, food ingredients). **CD-11H**

Younger Preschoolers 36 to 48 months

- i** Represent what they learn during scientific exploration through drawing, modeling, building, movement, or other methods. **CD-11I**
- j** Observe objects, materials, and everyday events, and describe what they notice (temperature, texture, size, weight, color, etc.). **CD-11J**
- k** Ask questions to find out more about the natural world. **CD-11K**
- l** With guidance and support, use simple tools to investigate objects and materials (magnifying glass, sifter, ramps for rolling balls and cars). **CD-11L**
- m** Describe and predict changes that take place when mixing and manipulating materials. **CD-11M**

Older Preschoolers 48 to 60+ months

- n** Represent what they learn during scientific exploration through drawing, modeling, building, movement, or other methods. **CD-11N**
- o** Ask questions and identify ways to find answers (look in a book, use the computer, try something and watch what happens). **CD-11O**
- p** Compare objects, materials, and phenomena by observing and describing their physical characteristics. **CD-11P**
- q** Use an increasing variety of tools to investigate the world around them (measuring tools, balance, prism, droppers). **CD-11Q**
- r** Make and check predictions through observations and experimentation, with adult support and guidance. **CD-11R**
- s** Manipulate the environment to produce desired effects and invent solutions to problems (attach a piece of string to the light switch so they can independently turn off the lights). **CD-11S**
- t** Engage in the scientific process by observing, making predictions, recording predictions (through photographs, drawings or dictations), developing plans for testing hypotheses, trying out ideas and communicating outcomes. **CD-11T**
- u** Analyze the result of an attempted solution and use new information to solve a problem (e.g. after observing a paper boat sinking in the water, making a new boat out of a different material to see if it would float). **CD-11U**