

TABLE 3. Cognitive Development

AGE IN MONTHS	PROBLEM-SOLVING	LANGUAGE		RED FLAGS
		RECEPTIVE	EXPRESSIVE	
1	Fixes on red ring Follows face	Alerts to sound	Throaty noises Cries	Failure to alert to environmental stimuli may indicate sensory impairment
2	Tracks horizontally past midline Tracks vertically	Regards speaker	Social smile Coos Vocalizes single vowel sounds	
3	Regards a 1-inch block Follows ring circularly Visual threat		Chuckles Echoes speaker immediately Cry varies (hunger, pain)	
4	Reaches for objects Mouths objects Shakes rattle Regards objects while handling	Orients to voice	Laughs out loud “Ah-goo” Silent and listens to speaker; vocalizes when speaker stops	
5	Attains dangling ring Regards pellet	Orients Bell—I	Razzes (raspberries) Smiles and vocalizes to mirror Sing-song vocalizations that mimic speaker’s voice	Failure to reach for objects may indicate motor, visual, and/or cognitive deficit
6	Looks to floor when drops toy Attains partially hidden object Removes cloth covering face Discriminates strangers		Babbles: “baba,” “gagaga” Consonant production without symbolic meaning or communicative intent	Absent babbling may indicate hearing deficit
7	Bangs/shakes toys Attempts to grasp second cube; drops first Pats mirror image	Orients Bell—II	Adult reinforcement begins to give meaning to random babbling	Absent stranger anxiety may be due to multiple care providers (eg, neonatal intensive care unit)
8	Pulls string to obtain ring Inspects ring/bell Seeks yarn ball after fall; silent landing	Enjoys peek-a-boo and other gesture games	“Dada” inappropriately Mimics sounds already in repertoire	
9	Rings bell Bangs objects on table Uncovers hidden object under cloth	Associates words with meanings	“Mama” inappropriately Waves “bye bye”	
10	Bangs two cubes together Isolates index finger and explores by poking Looks at pictures in book	Comprehends “no” Orients to name Orients Bell—III	Dada/Mama appropriately	Inability to localize sound may indicate unilateral hearing loss

11	Uncovers toy under cup	Looks for familiar family member when named	First word Imitates simple sounds	
12	Looks selectively at round hole on form board Removes lid to find toy	Follows command with gesture ("Give me.")	Immature jargonizing Protoimperative pointing (goal = desired object)	Persistent mouthing may indicate lack of intellectual curiosity
13	Solves glass frustration task Unwraps toy in cloth Functional play	Looks appropriately when asked "Where is (familiar object)?"	2 to 3 words "Oh-oh"	Normal receptive language up to this point is compatible with hearing loss
14	Combines two cubes into one hand to take third Dumps pellet after demonstration	Follows command without gesture	Names one object Says "no" meaningfully Protodeclarative pointing (goal = adult's attention)	
15	Places circle in form board Symbolic play toward self	Points to a body part or favorite toy	3 to 5 words Mature jargonizing	Lack of consonant production may indicate mild hearing loss
16	Pellet in and out without demonstration Finds toy hidden under layered covers Follows observed sequential displacements	Fetches object from another room on request Points to 1 to 2 body parts	5 to 10 words	Lack of imitation may indicate deficits in hearing, cognition, and/or socialization
18	Matches pairs of objects Round form in reversed board after searching Symbolic play directed at doll	Points to 3 body parts Points to self	10 to 25 words Giant-words ("Thank you," "Stop it," "Let's go") Names one picture on command	Lack of protodeclarative may indicate problem in social relatedness
20	Places square in form board Deduces location of hidden object (unwitnessed displacement)	Points to several clothing items on request Selects 2 of 3 familiar objects Points to 6 body parts	2 word combinations (noun-noun) Holophrases	
22	Completes 3-piece form board	Points to 3 to 4 pictures	25 to 50 words Rapid vocabulary expansion	Advanced, noncommunicative speech (echolalia, rote phrases) may indicate autism
24	Adapts to form board reversal after 4 trials Sorts objects Matches objects to pictures Attempts to fold paper	Two-step commands ("Close the book and give the doll to mommy") Comprehends "another" Points to 6 pictures Understands me/you	50+ words 2 to 3 word sentences (noun-verb) Refers to self by name Intelligibility = 50% + Uses "I," "you," "me"	Absent symbolic play may indicate problems in cognitive and/or social development