

#### FIRST YEARS > Developmental Milestones, birth to 8 years

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Children grow and develop at different rates. However, most pass through an identifiable skill "set" along the way. Called developmental milestones, these Color codes: are skills which build on each other, from simple to complex, during predictable time periods. For example, a child must babble single syllables (4 - 6 months) before multiple syllables (7 to 9 months) before speaking 2-word sentences (18 - 24 months). Milestone charts represent a "timetable" for mastery of these skills -- a guide to "normal" development. Keep in mind, however, that children vary in their development and that an individual child may develop more quickly in one area than in another.

Below are general guidelines for hearing/auditory, cognitive, speech (sound production) and language (listening, understanding and using words) development. Most children will demonstrate these skills within six months of

#### **Chart Legend**

Abbreviations used: Hearing dB: decibel LF: low frequency HF: high frequency Speech CV: consonant-vowel IPA Chart (if needed) Language R: Receptive E: Expressive

MLU: Mean Length of

Utterance

the times listed. In reality, these areas overlap, as development in one area is reinforced and enhanced by growth in others.

For visual, motor, social and emotional developmental milestones, visit these sites from How Kids Develop: What is child development and what skills do children develop at different ages?

- First 6 Weeks
- 1 to 2 Years
- 1½ to 3 Months
- 2 to 3 Years
- 3 to 6 Months
- 3 to 5 Years
- 6 to 9 Months
- 9 to 12 Months
- 5 to 7 Years

# Developmental Milestones

# Age 0-3 mos.

#### Hearing

#### Auditory detection/ attention:

- · reacts to loud sounds with startle (Moro reflex)
- reacts initially to sounds that are close by; between 2-4 months begins to develop distance hearing
- responds to LF sounds (vowels) better than to HF sounds (consonants)
- is awakened by loud voices and sounds
- By the end of the 3rd month, an infant recognizes his mother's voice; stops crying to listen; listens to his/her own sounds
- enjoys a few noisemakers

#### Speech

- Infants are unable to control motor movements; therefore, most actions are reflexes. The most important reflex for speech development is the rhythmic suck-swallow pattern, established 3 months prior to birth.
- produces sounds such as fussing, crying, burping, and
- produces most sounds on exhalation with lengthy vowel-like sounds (back vowels)
- makes single vowel sounds "ah" "eh" "uh" -- one syllable
- sustains cooing 15-20 seconds
- Different kinds of crying for pain and hunger

#### Language

- attends to speaker's mouth
- moves in response to voice
- expresses feelings by cooing (one syllable "ah"), gurgling (at back of throat), and crying (E)
- exhibits differentiated crying (E)
- vocalizes to caregiver's smile and voice and to express pleasure (E)

#### Cognition

- responds to and imitates facial expressions of others (Meltzoff & Moore, 1977)
- recognizes bottle or breast
- · briefly looks at objects

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#### Hearing Speech Language Cognition Age · turns his eyes/head to · vocalizes in self-initiated smiles at speaker (R) · explores with hands and 4-6 search for sounds sound play vocalizes to objects (E) mouth mos. enjoys hearing his own coos to music laughs smiles/vocalizes to mirror vocalizes "ma" or "mu" says "mama/dada" without sounds (gurgling, image; reaches out to mirror laughing, and babbling) tries to repeat heard sound meaning (E) image - auditory feedback loop babbles to gain attention experiments with sequences develops babbling begins cause-effect: shakes rattle (E) enjoys sound of musical experiments/plays with shows pleasure/ reaches for objects toys (rattles, bells) sounds (yells, gurgles, displeasure by vocalizing responds to voices by blows raspberries and (E) babbling bubbles) begins differentiating varies volume, pitch, and between environmental rate (suprasegmentals) and speech sounds after hearing his mother's voice, cries if the face he/she then sees is not his mother's face recognizes familiar sounds for feeding (e.g. spoon in a dish) Hearing Speech Language Cognition Age searches for partially hidden 7-9 · in sitting position, turns · produces sounds in one recognizes names of family eye/head/body to source breath members (R) object mos. of sound (sound enjoys imitating sound responds to "no" most of struggles to get objects that localization); has the time (R) are out of reach sequences difficulty locating babbles with some CV plays game like "peek-a-boo" attends to pictures (R) sounds above or behind syllables ("bababa") uses gesture and imitates simple acts, e.g. uses /m/, /n/, /b/, /p/, /t/, /d/ vocalization to protest (E) responds to simple clapping, nodding requests in babbling vocalizes during games (E) gives, points, shows modifies speech to pulls rings off peg imitates sounds, cough, sings along with a familiar match what was heard tongue clicking (increased song (E) imitates speech and tongue tip activity), etc. non-speech (blowing imitates some raspberries) sounds onomatopoeias responds to name babbling shows pitch and attends to music/singing inflectional changes understands many copies (sometimes onomatopoeias inaccurately) intonational (Learning to Listen contours Sounds) beginning of adult speech (starting to develop certain vowels, syllables, diphthongs) Hearing Language Cognition Age Speech · responds physically to uses variegated recognizes familiar persons · tries to accomplish simple 10-12 (non-reduplicative) babbling music or objects when named (R) goals (seeing and then mos. crawling to a toy) responds to questions ("dageedagee") looks at named pictures 1 yr. begins changing babbling to looks for/finds objects that are by searching with an adult (R) can look for named attends to new words (R) out of sight (such as a spoon real words that falls under the table) object that is out of sight continues imitating sounds identifies two body parts on understands some begins using more back stacks rings on peg begins awareness of in/out vowels, central vowels, and gives objects upon verbal common phrases request. (R) (objects/ containers) consonants uses social gestures (waving "bye-bye") (E) vocalizes with intent frequently (E) uses onomatopoeias to refer to objects (E) says one to two words spontaneously **Hearing** Age Speech Language Cognition • uses <u>echolalia</u> and explores objects in many shows interest in follows 1-step commands 12-18 sounds of radio and unintelligible speech/jargon without a gesture/verbal different ways (shaking, mos. television · omits some initial cue alone (R) banging, throwing, dropping)

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- listens to simple stories, songs, and rhymes
- demonstrates 2 item memory
- consonants and almost all final consonants
- continues to develop vowels and diphthongs
- varies pitch when vocalizing
- uses 21 different phonemes
- imitates words inexactly
- · uses true words within jargon-like utterances (E)
- combines vocalization and gesture to obtain a desired object (E)
- identifies/points to 3+ body parts (on self or doll), clothing item, or a toy on verbal request (R)
- · names objects on request (E)
- gives objects if asked (R)
- by 18 months, uses 20 -100 meaningful words; 50% of words are nouns (E)

- points to named pictures
- begins to use objects correctly (drinking from cup, brushing hair, dialing phone, listening to receiver)
- laughs at silly actions (as in wearing a bowl as a hat)
- solves problems by trial and error, e.g. inverts bottle to obtain object; obtains toy with
- scribbles spontaneously

#### Age

18-24

mos.

2 yrs.

#### Hearing

#### · understands when called from another room

- remembers what was heard in the correct order (e.g. "Put the fish in the water and the turtle on the grass.") (auditory sequencing)
- follows a conversation when the topic is known
- answers questions about a picture or book

## Speech

- jargon peaks at 18 mos.
- correctly pronounces most vowels
- uses /m/, /p/, /b/, /w/, /n/, /t/, /d/ correctly in the beginning of syllables and short words
- 2 years: 25% 50% intelligibility
- commonly uses 25 different phonemes
- uses beginning consonants
- word-final consonants emerge
- pitch is lower and more stable

#### Language

- · follows 2-step related commands without visual cues (R)
- points to 4+ body parts (on self or doll) (R)
- uses question intonation to ask yes/no questions (E)
- uses 2-word phrases/sentences frequently by 24 months ("more milk," "a doggie," "read book"); MLU 1.50-2.0 (E)
- names most common objects (E)
- understands questions where? and what's that?
- begins using pronouns like "my," "me," "mine"; refers to self by name (E)
- uses 200+ words (E)

#### Cognitive

- finds objects even when hidden under two or three
- likes to take things apart
- stacks rings on peg in order of size; builds higher towers
- turns one page at a time
- activates mechanical toy
- pretend plays about familiar situations

#### Age

#### 2 - 2 1/2 yrs.

answers questions about a story

Hearing

#### Speech

- 60% of speech is intelligible by 30 months of age
- continues to develop front consonants

#### Language

- responds appropriately to location phrases ("in," "on") (R)
- recognizes family member names (R)
- uses "and" ("mommy and daddy") (E)
- uses 3-word sentences frequently; MLU 2.0-2.5 (E)
- begins using verb endings (-ing) ("Mommy pushing") (E)
- refers to self as "me" rather than by name (E)
- asks simple questions ("Where ball?" "What Daddy doing?" "What color?") (E)
- uses number + noun ("two doggie") (E)

# Cognition

- begins to sort by shapes and colors
- names one color
- begins make-believe play; dramatizes mother and baby
- begins to understand functional concepts of familiar objects and part/whole concepts
- shares toys

#### Age

#### **Hearing**

## begins making cognitive judgments about what

#### Speech

- are encountered
- exhibits repetitions,

#### Language

- answers questions with "yes" or "no" (E)
- understands the concepts

#### Cognition

matches an object in hand or in the room to a picture in a book

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completes 5+ piece puzzle

#### 2 1/2 - 3 yrs.

- was heard, e.g. "Tell me about your trip to Disney
- · continues use of echolalia when difficulties in speech
- of "one" and "all" (R)

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World," (auditory processing)

- answers questions about an undisclosed but familiar topic
- especially starters ("I" and first syllables)
- · speaks with a loud voice
- · increases range of pitch
- consistently uses initial consonants (some are misarticulated); frequently omits medial consonants; frequently omits or substitutes final consonants
- By age 3, 90 % of children produce the following consonants in conversation: /p/, /m/, /n/, /h/, /w/
- accurately pronounces all vowels and <u>diphthongs</u> (except those with an r, such as in the word "bird")
- uses approx. 27 <u>phonemes</u>
- 3 years: 75 80% intelligibility
- masters 2/3 of the adult speech sounds

- uses subject pronoun: he (E)
- asks "What happened?"
   (E)
- uses "gonna" and "wanna"(E)
- uses 3-4 word sentences; converses with self; MLU 2.5-3.0 (E)
- shows interest in "why" and "how" explanations (R)
- expands use of verb endings (-ing), plurals/possessives ("eat cookies"), contractions (E)
- begins the "why" question stage; asks "wh"questions ("What's that?" and "Where ball?") (E)
- uses 2-/3-word negative phrases (/"no want that")(E)
- asks for "another" (E)
- understands "now," "soon," and "later" (R)
- begins using singular/ plural noun-verb agreement (E)
- "converses:" relates simple imaginative tales; describes actions in book (E)
- vocabulary: 900+ words (E)

- counts 2 to 3 objects; knows more numbers (but not always in the right order)
- remembers what happened yesterday
- knows where things usually belong
- substitutes one object for another in pretend play (as in pretending a block is a "car")
- laughs at silly ideas (like milking a dog)
- avoids some dangers, e.g. a hot stove or a moving car
- selects objects not the same / Which doesn't belong? from set of objects
- names own drawings
- pretends to be caregiver
- holds up fingers to tell age
- states first & last name

#### Age **Hearing**

#### 3 - 4 yrs.

- improves listening skills; comprehends auditory information in a variety of settings (auditory understanding)
- listens attentively and retells stories
- accurately repeats sentences with high predictablility
- identifies objects based on description (open set)

## Speech

- substitutes some stops for fricatives (i.e. "tat" for "sat")
- increases speech rate
- may delete a syllable in multi-syllabic words
- simplifies words with blends
- 4 yrs: 80 % 90% intelligibility
- The following consonants emerge: /r/, /l/, /s/, /t<sup>f</sup>/(ch), /<sup>f</sup>/sh, /z/
- By 4, 90% of children have mastered the following sounds in conversation: /b/, /k/, /d/, /j/ , /f/, /g/

#### Language

- uses possessives (E)
- uses "we," "she," and "they" (E)
- uses "some," "many," and "all" (E)
- uses present progressive: is/are/am + verb ing (E)
- Uses some irregular verbs
   (E)
- Uses "can't," "not," and "didn't" (E)
- uses "hafta," "have to," and "want to" (E)
- uses 3rd person singular
   -s (E)
- expresses ideas and feelings rather than just talking about the world around him/her (E)
- begins using analogies, comparisons; can complete opposite analogies ("sister is a girl; brother is a \_\_\_\_.")
- describes the use of objects such as "fork," "car" (E)
  enjoys poems and
- recognizes language absurdities such as, "Is that an elephant on your head?" (R)
- uses do to ask yes/no questions (E)
- vocabulary: 1500+ words
   (E)

#### Cognition

- identifies and names primary colors
- · counts to ten
- approaches problems from a single point of view
- begins to have a clearer sense of time; wants to know what will happen next
- engages in fantasy play; distinguishes between the real and pretend worlds
- takes turns and can do so without always being reminded
- identifies situations that would lead to happiness, sadness, or anger
- draws somewhat recognizable picture that is meaningful to child if not to adult; names and briefly explains picture
- distinguishes day activity (playing) from night activity (sleeping)
- sequences familiar routines, simple finger plays, patterns of blocks
- traces/copies figures (squares), drawn objects
- knows division of day morning, afternoon, night
- matches object to occupation fishing rod to fisherman

### Age

#### Hearing

#### Speech

#### Language

#### Cognition

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4 - 5 yrs.

- recalls 5+ facts from a familiar story
- identifies word that rhymes or doesn't rhyme in set of 3-4
- 5 vears: 98 100% intelligibility
- By age 5, the phonological processes of syllable deletion and fronting are suppressed.
- · The following consonants emerge:  $(/d^3/)$  -"j" as in jump, /v/, voiced(/ð/) and voiceless(/ $\theta$ /) "th"
- asks what/who/where or why do questions (E)
- asks what/who/where or why did questions (E)
- asks whose (E)
- uses does to ask yes/no questions (E)
- converses with longer, more complex sentences, but still makes grammar errors; MLU 4.5+ (E)
- uses has, does, had (E)
- uses because, when, if, and so in clauses (E)
- uses these and those (E)
- uses before and after (E)
- uses comparative adjectives ("small-smaller") (E)
- answers "why" and "how" questions; replies to questions like "What is a house made of?" (E)
- By age 5, uses 2500 words (E)
- ends conversations appropriately

- draws recognizable pictures; copies more complex figures (triangle)
- likes cutting/pasting
- knows own street and town begins to relate clock time to daily schedule
- identifies a problem, lists possible solutions verbally and chooses which one(s) are appropriate
- tells color of unseen object -"What color is an apple?
- categorizes, naming items without visual clues, e.g. animals, food, toys; decides own criteria for categories
- predicts story from book cover
- names penny, nickel and dime
- · knows days of the week

#### Age

#### 5 - 6 yrs.

## expansion of auditory

Hearing

- understanding can provide a word that rhymes with a given word
- learns letter-sound associations

#### Speech

- · By 6, 90% of children have mastered the following sounds in conversation: /t/, /r/, /<sup>‡</sup>]/(ng), /l/
- uses a variety of blends
- · self-monitors speech

#### Language

- stabilizes correct usage of irregular plurals and past tense/irregular verbs (E)
- uses pronouns, prepositions, and articles correctly, consistently (E)
- uses superlative -est (E)
- uses -er to form nouns (teach/teacher) (E)
- uses future progressive: will be + verb + \_\_ing (E)
- asks wh questions with does (E)
- · uses sentences with 8+ words; uses compound and complex sentences (E)
- understands time sequences (what happened first, second, etc.) (R)
- vocabulary: 2800+ words (R); 2500+(E)

#### Cognition

- says letters of alphabet understands that letters
  - written on a page represent spoken words
  - understands number concepts to "ten"
- rote counts to 30+
- recognizes and can reproduce many shapes, letters, and numbers
- plays games by the rules
- understands seasons of the
- begins to think about their own behavior/actions and to see consequences/ explain situations
- begins to read and write, distinguishing capitals and lowercase
- uses invented spelling (e.g. color could be spelled "kulr")
- arranges objects in order, according to size
- completes simple maze
- adds, subtracts
- comprehends directional commands - left/right

#### Age

6 - 8

yrs.

#### provides a synopsis/ summary after listening to information one time

Hearing

#### Speech

- Most children have typical articulation by age 7.
- By 7, 90% of children have mastered the following sounds in conversation: /<sup>∫</sup>/(sh), /√/(ch), /j/ <mark>④</mark>, voiceless (/ A /) "th"
- By 8 90% of children have mastered the following sounds in conversation: /s/, /v/, /z/

#### Language

- uses irregular comparative/ superlative: better, best: worse, worst (E)
- uses past perfect tense ("She had read the book.")
- uses past perfect progressive ("had been camping") (E)
- asks have questions with present perfect ("Have you been there before?") (E)
- passive voice developed by most children (E)

uses well formed narratives

Cognition

- can develop a plan to meet a goal
- rote counts to 100+
- understand/use riddles and idioms ("Hold your horses.")
- tells jokes
- tells own address, phone
- names months of the year
- names month for a given holiday
- can tell time

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(E)

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