

EARLY SOUND ACQUISITION STAGES

Chart was developed from combined sources: Oller and Griebel, 2008 and Cress, et al.,2010

STAGE AND AGE	VOCAL DEVELOPMENT
Phonation Stage: Birth to Two Months	Quasi vowels, glottals Reflexive vocals: cry, fuss No articulation; breathing patterns unchanged Not intentional; not socially directed the first month At 2-3 months will become more social in face to face interactions
Primitive Articulation Stage: Two to Four Months	Breathing patterns change; take a breath in order to phonate Long and short sounds; louder to softer sounds; high and low pitch Phonation and supraglottal (above vocal cords)articulation Cooing is result of primitive articulation Increase in vowel- like sounds Coo and laughter
Expansion Stage: Three to Six Months	Repetitive sequences of sounds alternating between contrasting feature: from high to low Development of rudimentary sound categories: squeal, growl, raspberries Sound categories are required to build more refined sounds Observing mouth movements and attempting imitation of movement (phonation may or may not occur) Syllable- like vocals emerging Some full vowel sounds emerging
Canonical Stage: Developed sometime in the 5 th to 10 th month	Syllable with vowel like sound followed by consonant; rapid transition between the sounds Repetitive syllables; controlled by the infant Parents are very good at identifying canonical syllables Require coordinated phonation and supraglottic articulation Begin to see emergence of lips, tongue, jaw in articulation /p/,/m/,/h/,/g/ Vowels are typically, low tongue position and front to back movement vs height Previous stages required to expand sound categories at this stage Expression of specific states with these syllables: angry, happy, neutral etc. Vocal imitation begins; must have control of phonation and articulation in order to imitate
Communication with words: Varies beginning at 9-10 months	Rote practice and analysis occur to refine articulation of the word. Primarily mono syllabic single syllable- VC, CV, CVC in first year (after canonical babbling) Two syllable- reduplicated consonant, same vowel Two syllable- reduplicated consonant, vowel change

	<p>Two syllable- consonant change, vowel change</p> <p>Developmental Charts (Talking Child, 2003) indicate that between one and three the following consonants are developed in two <u>word</u> positions: p, m, w, h, b and n. Final consonants used: /m/, /h/</p>
<p>Communication with Words and Phrases 12- 24 months</p>	<p>By 24 months: all vowel sounds except diphthongs Phonological Processes still evident (WNL): final consonant deletion, cluster reduction, gliding, stopping, fronting of velars, context sensitive voicing Phonological Processes declining (WNL): consonant harmony, reduplication</p>

Cress, J., Gergen, M., Lippincott, K., Moore, E., Slattery, M., Davidson, S., Farmer, P., Harris, K., Lindsey, M., Schulte, M. (2010). Assessing domains of early communication development in infants 0-12months. ASHA Convention. Retrieved from <http://www.asha.org/events/convention/handouts/2010/1744-cress-cynthia/>.

Oller, K., Griebel, U. (2008). Contextual flexibility in infant vocal development and the earliest steps in the evolution of language; Evolution of Communicative Flexibility, Ch. 7, MIT Press