

## Speech Sound Development Chart



YEARS OF AGE

	2	3	4	5	6	7	8
p							
m							
h							
n							
w							
b							
k							
g							
d							
t							
ng							
f							
y							
r							
l							
s							
ch							
sh							
z							
j							
v							
(thumb)							
(this)							
(measure)							
zh							

\*Allow a grace period of approximately 6 months for each age group since all children do not develop at the same rate.\*

### A guideline for expected intelligibility (number of words understood):

0-18 months	0-25%	37-42 months	81-90%
19-24 months	26-50%	43-47 months	91-99%
25-30 months	51-70%	48 months	100%
31-36 months	71-80%		

Sources:  Sander, Eric K. "When Are Speech Sounds Learned?" *Journal of Speech and Hearing Disorders*, 37 (1972).  
 Pond, R., Steiner, V., & Zimmerman, I. (2002). *Preschool Language Scale (Fourth Edition)*. Psychological Corporation.  
 Weiss and Lillywhite (1981).

## Examples of Phonological Error Patterns

Typical Phonological Error Pattern	Age	Description	Example
Cluster Reduction	3:0-4:5	One or more consonants are deleted from a cluster	spider-pider bread-bed
Deaffrication	3:0-3:11	An affricate (ch or j) is replaced with a fricative (s, z, sh, zh)	watch-wash bridge-briz
Fronting	3:0-4:5	The target consonant's place of articulation is moved to a more anterior position. (k, g, ng) is replaced with (t, d, n)	egg-edd car-tar
Gliding	3:0-5:5	A liquid (l, r), nasal (m, n, ng), or stop consonant (p, b, t, d, k, g) is replaced with a glide (w, y)	rabbit-wabbit present-pwesent
Stopping	3:0-4:5	A consonant, typically a fricative (s, z, sh, zh, th) or affricate (ch, j) is replaced with a stop consonant (p, b, t, d, k, g)	van-ban zebra-debra
Vocalization of Liquids	3:0-4:11	A liquid (er, l) occurring after a vowel is replaced with a vowel (uh)	feather-feathuh
Weak Syllable Deletion	3:0-3:11	An unstressed syllable is deleted.	tomato-mato umbrella-brella

Atypical Phonological Error Pattern	Description	Example
Backing	A consonant's place of articulation is moved to a more posterior position	teeth-keeth
Consonant Harmony	The place of articulation of a consonant within the word influences the production of another consonant in the same word.	yellow-lellow
Medial Consonant Deletion	A consonant (or consonant cluster) between 2 vowels is deleted or replaced with a glottal stop or /h/.	feather-fea/er or feaheer
Palatalization	An alveolar consonant (t, d, n, s, z, l) is replaced with a palatal fricative or affricate (sh, zh, ch, j).	sack-shack zebra-zhebra

*Source: Crosbie, S., Dodd, B., Holm, A., Hua, Z., & Ozanne, A. (2002). Diagnostic Evaluation of Articulation and Phonology, U.S. Edition (DEAP). Psychological Corporation.*

\*\*By the end of preschool a **typically developing Spanish speaking child** may still have problems with one or more of the following sounds in Spanish: th-, h-, s-, n-, ch-, r-, rr-, and l-.

### Typical problems for Spanish speakers learning English:

- **sh-** substituted for **ch-** as in "shair" (for "chair")
- **b-** substituted for **v-** as in "vat" (for "bat")
- **th-** substituted for **d-** as in "dere" (for there")
- Adding **e-** to **skw-**, **sl-**, and **st-** words as in "estation" (for "station") or "esquare" (for "square")