



# PHONOLOGICAL PROCESSES

Phonological processes are **patterns of sound errors** that typically developing children use to simplify speech as they are learning to talk. A phonological disorder occurs when phonological processes persist beyond the age when most typically developing children have stopped using them or when the processes used are much different than what would be expected.

SUBSTITUTION	Definition	Example	Age of elimination
<b>Backing</b>	When alveolar sounds (t, d, n, s, z) are substituted with velar sounds (k, g, ng) or palatal sounds (ch, j, sh, zsh).	"cape" for "tape" "she" for "sea"	Usually seen in more severe phonological delays
<b>Fronting</b>	When velar sounds (k, g, ng) or palatal sounds (ch, j, sh, zsh) are substituted with alveolar sounds (t, d, n, s, z).	"dough" for "go" "Sue" for "shoe"	k, g, ng = 3 yrs. old ch, j, sh, zsh = 5 yrs. old
<b>Stopping</b>	When a fricative (h, f, v, sh, s, z, th) or affricate (ch, j) is substituted with a stop consonant (p, b, t, d, k, g).	"pan" for "fan" "dump" for "jump"	h, f, s = 3 yrs; v, z = 3.5 yrs; sh, ch, j = 4 yrs; th = 5 yrs.
<b>Affrication</b>	When a stop or fricative sound (p, b, t, d, k, g, h, f, v, sh, s, z, th) is substituted with an affricate sound (ch, j).	"joor" for "door" "chi" for "see"	3 yrs. old
<b>Deaffrication</b>	When an affricate (ch, j) is substituted with a stop or fricative (p, b, t, d, k, g, h, f, v, sh, s, z, th).	"dog" for "jog" "sips" for "chips"	4 yrs. old
<b>Alveolarization</b>	When a sound made with the lips or teeth (p, b, m, w, f, v, th) is substituted with an alveolar sound (t, d, n, l, s, z).	"new" for "moo" "sick" for "thick"	5 yrs. old
<b>Depalatalization</b>	When a palatal sound (y, ch, j, sh, zsh) is substituted with an alveolar stop or fricative (t, d, s, z).	"fit" for "fish" "sip" for "chip"	5 yrs. old
<b>Gliding</b>	When the r sound becomes a /w/, and /l/ becomes a /w/ or y sound.	"wabbit" for "rabbit" "yeyo" for "yello"	5 yrs. old
<b>Vowelization</b>	When the /l/ or the er sounds are replaced with a vowel.	"appo" for "apple" "papuh" for "paper"	5 yrs. old
<b>Labialization</b>	When a tongue tip sound (t, d, n, l, s, z, th) is substituted with a labial sound (p, b, m, w, f, v).	"pie" for "tie" "fumb" for "thumb"	t, d, n, l, s, z = 4 yrs. th = 6 yrs. old
ASSIMILATION	Definition	Example	Age of elimination
<b>Denasalization</b>	When a nasal sound (m, n, ng) is substituted with a nonnasal sound (b, d, g).	"boo" for "moo" "doze" for "nose"	2.5 yrs old
<b>Reduplication</b>	When a complete or incomplete syllable is repeated.	"baba" for "bottle" "wawa" for "water"	3 yrs. old
<b>Assimilation</b>	When a consonant sound starts to sound like another sound in the word.	"bub" for "bus" "yay" for "neigh"	3 yrs. old
<b>Voicing</b>	When a voiceless consonant in the beginning of a word or syllable (like k, f) is substituted with a voiced sound (like g, v).	"gomb" for "comb" "vood" for "food"	3 yrs. old
<b>Devoicing</b>	When a voiced consonant at the end of a word (like d, g) is substituted with a voiceless consonant (like t, k).	"mat" for "mad" "pick" for "pig"	3 yrs. old
<b>Coalescence</b>	When two phonemes are substituted with a different phoneme that still has similar features.	"foon" for "spoon" "sour" for "flour"	6 yrs. old
SYLLABLE STRUCTURE	Definition	Example	Age of elimination
<b>Initial Consonant Deletion</b>	When the initial consonant in a word is left off.	"unny" for "bunny" "oat" for "goat"	Usually seen in more severe phonological delays
<b>Final Consonant Deletion</b>	When the final consonant in a word is left off.	"toe" for "toad" "duh" for "duck"	3 yrs. old
<b>Weak Syllable Deletion</b>	When the weak syllable in a word is left off.	"nana" for "banana" "jamas" for "pajamas"	4 yrs. old
<b>Cluster Reduction</b>	When a consonant cluster is reduced to a single consonant.	"pane" for "plane" "top" for "stop"	without /s/ = 4 yrs. old with /s/ = 5 yrs. old
<b>Epenthesis</b>	When a sound is added between two consonants, typically the "uh" sound.	"bu-lue" for "blue" "du-ream" for "dream"	8 yrs. old

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