



SPECIAL EDUCATION RESOURCES

Phonological Processes

Phonological processes are patterns of sound errors to simplify speech as typically developing children are learning how to speak. Phonological disorders are when a phonological process is used past the typical age of elimination or when a child uses an atypical phonological process.

Be sure to reference the [Considerations for Speech \(Articulation or Phonological\) Impairment Rubric](#) to determine the educational impact of phonological processes.

SUBSTITUTION	Definition	Example	Age of Elimination
Backing	When alveolar sounds /t/, /d/, and /s/ are substituted with velar or palatal sounds like /k/ and /g/.	“kime” for “time”	Atypical process seen in more severe delays
Affrication	When a nonaffricate is replaced with an affricate /ch/ or /j/.	“jat” for “bat”	3 years
Fronting	When velar or palatal sounds /k/, /g/, and /sh/ are substituted for alveolar sounds /t/, /d/, and /s/.	“tan” for “can”	3.5 years
Stopping	A fricative /f, v, s, z, th, sh/ or affricate /ch/ or /j/ is substituted with a stop /p, b, t, d, k, g/.	“pat” for “fat”	/f, s/ by 3; /v, z/ by 3.5; /sh, ch, j/ by 4.5; /th/ by 5
Gliding	When a liquid /r/ or /l/ is substituted with a glide sound /w/ or /y/.	“wed” for “red”	5-6 years
Deaffrication	An affricate /ch/ or /j/ is replaced with a fricative /f, v, s, z, th, sh/ or a stop /p, b, t, d, k, g/.	“teap” for “cheap”	4 years
Depalatalization	A palatal sound is substituted with a nonpalatal sound.	“tark” for “shark”	5 years
Alveolarization	A nonalveolar sound is substituted with an alveolar sound /t, d, s/.	“top” for “shop”	5 years
Labialization	A nonlabial sound is substituted with a labial sound /m, p, b/.	“bake” for “take”	6 years
Vowelization Vocalization	When /l/ or /er/ sounds are replaced with a vowel.	“teacho” for “teacher”	—

SYLLABLE STRUCTURE	Definition	Example	Age of Elimination
Reduplication	When a complete or incomplete syllable is repeated.	“wawa” for “water”	2.5-3 years
Initial Consonant Deletion	When the first consonant or consonant cluster is left off.	“oy” for “toy”	Atypical process seen in more severe delays
Final Consonant Deletion	When the final consonant or consonant cluster is left off.	“ma” for “mom”	3.3 years
Diminutization	Adding “ee” or consonant + “ee” to a word.	“cupee” for “cup”	—
Cluster Reduction	When all or some of a consonant cluster is deleted or substituted.	“top” for “stop”	3.5-4 years without /s/ 5 years with /s/
Weak Syllable Deletion	The weak syllable of a word is deleted.	“nana” for “banana”	4 years
Epenthesis	When an unstressed vowel, typically the “uh” sound is added between two consonants.	“puhlate” for “plate”	8 years

ASSIMILATION	Definition	Example	Age of Elimination
Denasalization	A nasal consonant /m/ or /n/ changes to a non-nasal consonant	“boze” for “nose”	2.5 years
Assimilation	When a consonant sound starts to sound like another sound in the target word (labial, velar, nasal, or alveolar)	“nan” for “nap”	3 years
Coalescence	Two phonemes are substituted with a different phoneme that has similar features	“fop” for “stop”	—
Final Consonant Devoicing	A voiced consonant, such as /b/ or /d/ at the end of a word is substituted with a voiceless consonant, such as /p/ or /t/	“roat” for “road”	3 years
Prevocalic Voicing	A voiceless consonant at the beginning of a word, such as /k/ or /f/ is replaced with a voiced consonant like /g/ or /v/	“gat” for “cat”	6 years

ATYPICAL PROCESSES	Definition	Example	Age of Elimination
Apicalization	When a labial /m, p, b/ is replaced by a tongue-tip consonant, such as /t/ or /d/	“do” for “boo”	Atypical process seen in more severe delays
Atypical Cluster Reduction	The deletion of the consonant that is usually retained	“lack” for “black”	Atypical process seen in more severe delays
Backing of Stops & Fricatives	When you move front sounds like /t/ and /d/ to the back of the mouth like /k/ and /g/	“gime” for “time”	Atypical process seen in more severe delays
Fricative Replacing Stops	When there is a substitution of a fricative for a stop	“sis” for “sit”	Atypical process seen in more severe delays
Glottal Replacement	The substitution of the glottal stop for another consonant. *Typically seen in children with cleft palate	“ba?” for “bat”	Atypical process seen in more severe delays
Medial Consonant Deletion	The deletion of intervocalic consonants	“spier” for “spider”	Atypical process seen in more severe delays
Migration	When there is movement of a sound from one position in a word to another	“oaps” for “soap”	Atypical process seen in more severe delays
Sound Preference Substitutions	The overuse of one particular sound in place of many others	/f/ sound for stridents, clusters, and other types of sounds	Atypical process seen in more severe delays
Stops Replacing Glides	When there is a substitution of a stop for a glide	“des” for “yes”	Atypical process seen in more severe delays
Initial Consonant Deletion	When a child consistently leaves off consonants from the beginning of words	“ee” for “tree”	Atypical process seen in more severe delays

ATYPICAL VOWEL ERRORS	Definition	Example	Age of Elimination
Backing	When the tongue is retracted for a front vowel	“cat” for “kit”	Atypical process seen in more severe delays
Fronting	When the tongue moves forward for a back vowel	“rock” for “rake”	Atypical process seen in more severe delays

References

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