



## Articulation Norms and Acquisition of Phonological Rules

**Articulation:** Ages at which 90% of children have acquired these sounds. Source – Adapted from Goldman-Fristoe Test of Articulation (GFTA) and Clinical Assessment of Articulation and Phonology (CAAP)

Age	Sounds (phonemes)
2 years	p, m, h
2 ½ years	b, d, n, w
3 years	g, k, t
3 ½ years	f
4 years	ing
5 years	ch, l, s, sh, j, z
5 ½ years	r, v
6 ½ years	Consonant blends
7 years	Th voiced
7 ½ years	Th unvoiced

**Phonological Processes:** Source: Grunwell, P. (1987) Clinical Phonology (2<sup>nd</sup> edition). Baltimore: Williams & Wilkins

Process	Type	Example	Age by which process should be suppressed
Syllable Structure	Weak syllable deletion		By age 3
	Cluster reduction	“bue” for “blue”	By age 3
	Reduplication		By age 3
	Final consonant deletion	“hou” for “house”	Between 3 and 3 ½
Substitution	Stopping	“pentil” for “pencil”	Between 2 ½ and 3
	Fronting	“tup” for “cup”	Between 2 ½ and 3
	Vocalization	“be” for “pea”	By age 3
	Gliding	“wabbit” for “rabbit”	By age 5
Assimilatory	Labial assimilation		By age 3
	Alveolar assimilation		By age 3
	Velar assimilation		By age 3
	Prevocalic voicing		By age 3
	Devoicing		By age 3