

Iowa - Nebraska Articulation Norms¹³

Listed below are the recommended ages of acquisition for phonemes and clusters, based generally on the age at which 90% of the children correctly produced the sound.

Phoneme	Age of Acquisition (Females)	Age of Acquisition (Males)	Word-Initial Clusters	Age of Acquisition (Females)	Age of Acquisition (Males)
/m/	3;0	3;0			
/n/	3;6	3;0	/tw kw/	4;0	5;6
/ŋ/	7;0	7;0	/sp st sk/	7;0	7;0
/h-/	3;0	3;0	/sm sn/	7;0	7;0
/w-/	3;0	3;0	/sw/	7;0	7;0
/j-/	4;0	5;0	/sl/	7;0	7;0
/p/	3;0	3;0			
/b/	3;0	3;0	/pl bl kl gl fl/	5;6	6;0
/t/	4;0	3;6	/pr br tr dr kr gr fr/	8;0	8;0
/d/	3;0	3;6	/θr/	9;0	9;0
/k/	3;6	3;6			
/g/	3;6	4;0	/skw/	7;0	7;0
/f-/	3;6	3;6	/spl/	7;0	7;0
/-f/	5;6	5;6			
/v/	5;6	5;6	/spr str skr/	9;0	9;0
/θ/	6;0	8;0			
/ð/	4;6	7;0			
/s/	7;0	7;0			
/z/	7;0	7;0			
/ʃ/	6;0	7;0			
/tʃ/	6;0	7;0			
/dʒ/	6;0	7;0			
/l-/	5;0	6;0			
/-l/	6;0	7;0			
/r-/	8;0	8;0			
/ə/	8;0	8;0			

Note regarding phoneme positions:

/m/ refers to prevocalic and postvocalic positions

/h-/ refers to prevocalic positions

/-f/ refers to postvocalic positions

¹³ Smit, Hand, Freilinger, Bernthal, and Bird (1990). *Journal of Speech and Hearing Disorders*, 55, 779-798.