



The Sounds of Speech

English Consonants

Adapted from Ling, Daniel (1976) Speech and the Hearing Impaired Child: Theory and Practice

Consonant	1st Formant	2nd Formant	3rd Formant	4th Formant
/p/			1,500–2,000	
/t/			2,500–3,000	
/k/	300–400		2,000–2,500	
/d/	300–400		2,500–3,000	
/b/	300–400		2,000–2,500	
/g/	200–300		1,500–2,500	
/m/	250–350	1,000–1,500	2,500–3,500	
/n/	250–350	1,000–1,500	2,000–3,000	
/ng/ (wing)	250–350			4,500–6,000
/f/				4,000–5,000
/s/				5,000–6,000
/sh/			1,500–2,000	4,500–5,500
/th/ (thin)				6,000
/h/			1,500–2,000	
/v/	300–400			3,500–4,500
/z/	200–300			4,000–5,000
/TH/ (that)	250–400	1000-1,500	2,000-3,000	
/ch/	200–300		1,500–2,000	4,000–5,000
/dg/ (jot)	200–300		2,000–3,000	
/l/	250–400		2,000–3,000	
/r/ (err)	600–800	1,000–1,500	1,800–2,400	

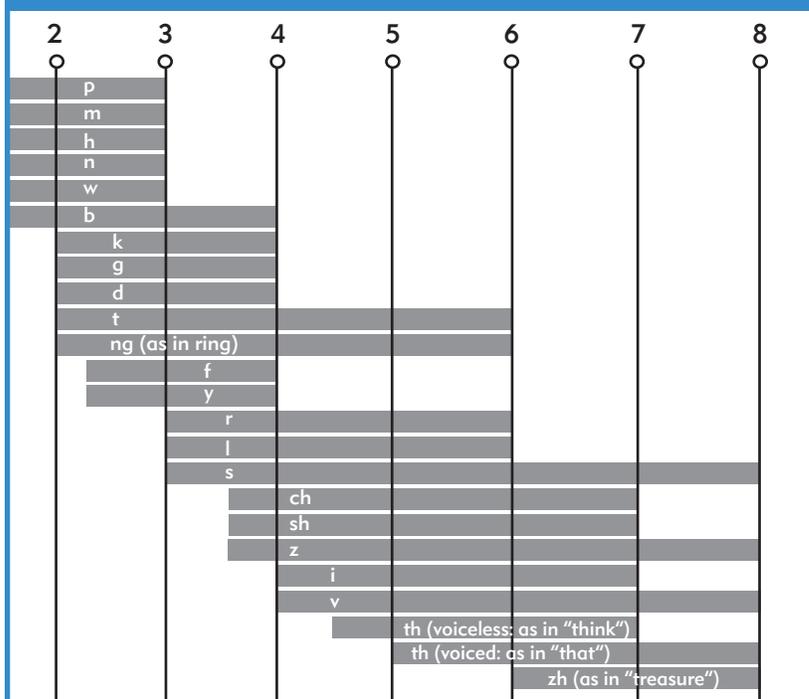
Vowels

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Vowel	Example	1st Formant	2nd Formant
/i/	bee	370	3,200
/ɪ/	bit	530	2,730
/ɛ/	bet	690	2,610
/æ/	bat	1,010	2,320
/ɑ/	box	1,020	1,750
/ə/	bail	600	1,680
/ʊ/	book	540	1,410
/u/	boot	430	1,170
/ʌ/	but	850	1,590
/ɜ/	bird	560	1,820

English Consonants—Age of Acquisition

Adapted from Sanders 1972 and Templin 1957



Tips for using The Sounds of Speech charts and tables

1. These charts and tables with vowel and consonant formant information are designed to assist you during therapy.
2. If the child doesn't have access to the sound(s) auditorily, they cannot be expected to produce and/or imitate them. Review the child's audiogram to determine what sounds they are able to detect.
3. Remember to review the English Consonants—Age of Acquisition table before planning therapy goals for a young child.
4. It is important to note not only the first formant of the target sounds during therapy, but also the subsequent formants as well.

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