

Articulatory Features

Consonants:

Manners of Articulation	Places of Articulation							
	-labial-		--dental--		(alveo-)palatal	velar	uvular	glottal
	(bi)labial	labiodental	interdental	alveolar				
OBSTRUENTS	Stops: voiceless							
		p		t		k		ʔ
	voiced							
		b		d		g		
	Affricates: voiceless							
		pf		tθ	c (or ts)	č (or tʃ)	kx	
	voiced							
		bv		dʒ	z (or dz)	ʝ (or dʒ)	gɣ	
	Fricatives: voiceless							
		ɸ	f	θ	s	š (or ʃ)	x	h
voiced								
	β	v	ð	z	ž (or ʒ)	ɣ		
Nasals: (voiced)								
	m		n	ɲ (or ɳ)	ŋ			
Liquids: (voiced)								
			l	r		R		
Glides: (voiced)								
	w			y (or j)	(w)	(h)		
					(also here)	(also here)		

SONORANTS

Vowels: (always voiced in English)

	front	central	back
high: tense	i	ɨ	u
lax	ɪ		ʊ
mid: tense	e	ə	o
lax	ɛ		ɔ
low	æ	ʌ	a

(i, U, o, and ɔ are rounded)

Diacritics:

- After a symbol : = long ʰ = aspirated
- Below a symbol ◌ = voiceless ◌̩ = syllabic (vowel-like)
- Above a vowel ~ = nasalized ˘ = switch front & back
- Before a symbol ' = stress on following syllable

Examples: [i̥] is a front version of the back vowel [u]

[ɨ̥] is a voiceless [ɨ] (as in Welsh words with [ɨ])

The Vocal Tract

1. bilabial
2. labiodental
3. interdental
4. dental
5. alveolar
6. palatal
7. velar
8. uvular
9. pharyngeal
10. glottal

