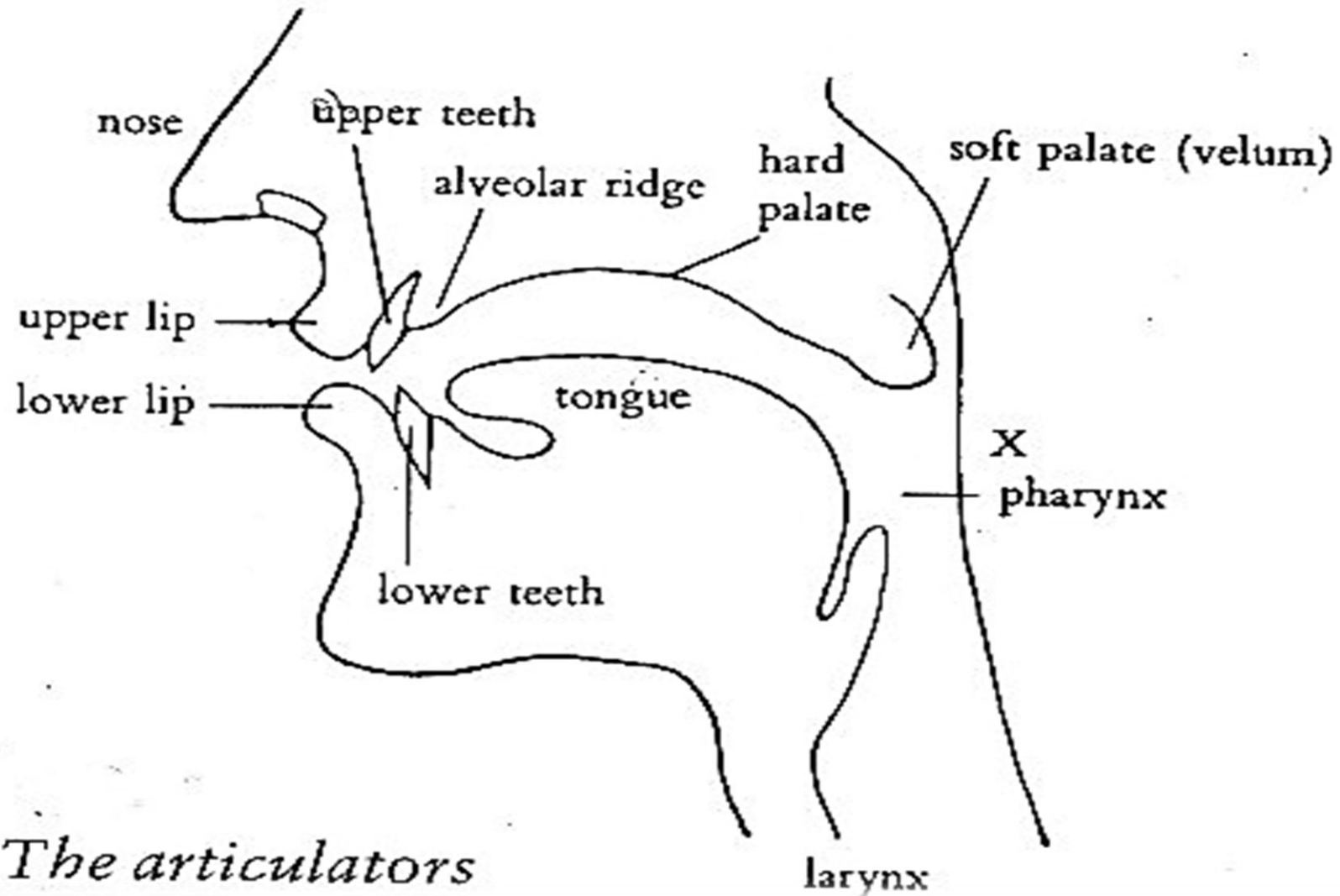


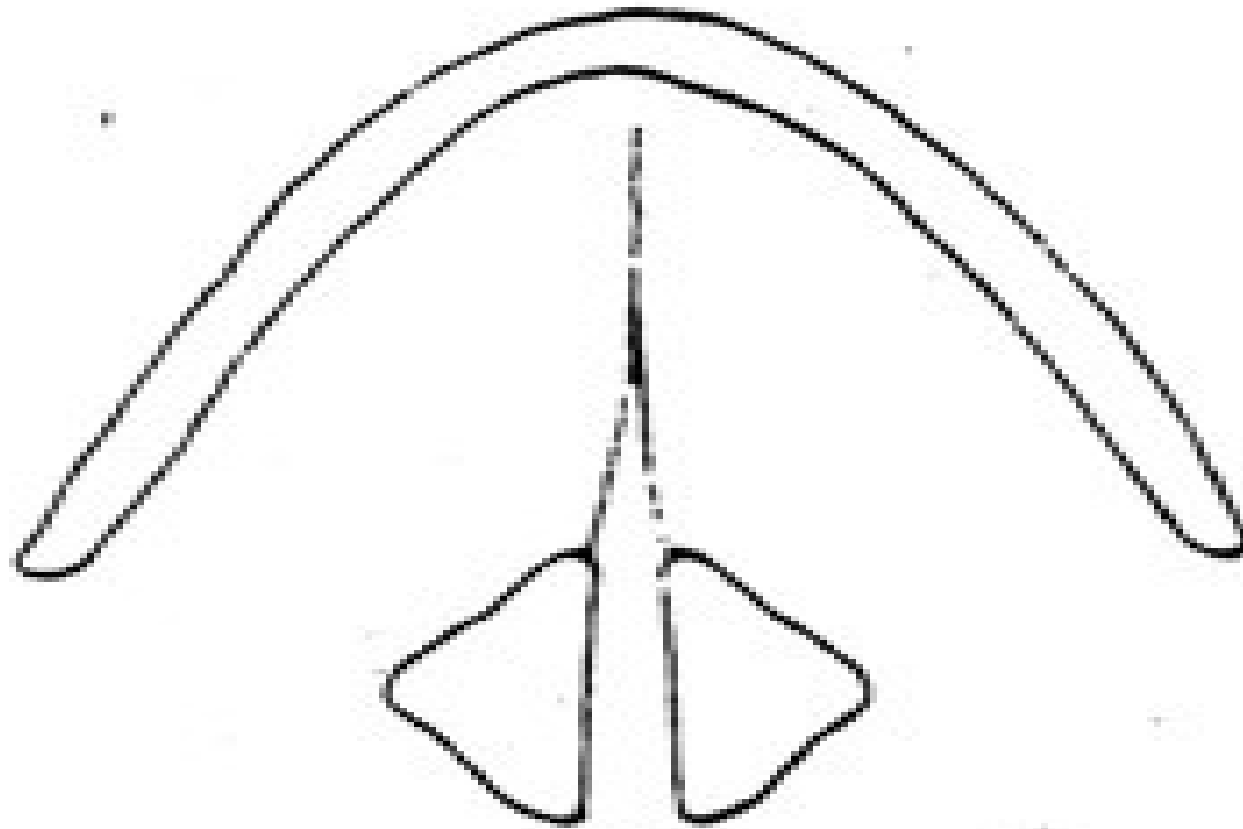
Organs of Speech (Articulators): represent a set of organs which produce the human speech sounds.



Organs of Speech (Articulators)

1. Lips: which are the upper and lower lips.
2. Teeth: which are the upper and lower teeth.
3. Tongue: which is divided into four parts.
 - a. tongue-tip or the tip of the tongue
 - b. tongue-blade or the blade of the tongue
 - c. tongue-front or the front of the tongue
 - d. tongue-back or back of the tongue
4. Alveolar Ridge.
5. Palate: which is divided into two parts:
 - a. hard palate
 - b. soft palate
6. Uvula.
7. Pharynx.
8. Larynx or voice box: which contains the vocal folds

Vocal Folds



- **Oral Cavity:** is the passage of air which starts after the pharynx and ends with the lips.
- **Nasal Cavity:** is the passage of air above the palate that starts from the uvula and ends with nostrils.
- **Vocal Tract:** is the air passage that contains both the oral and nasal cavities.

Classification of Consonants

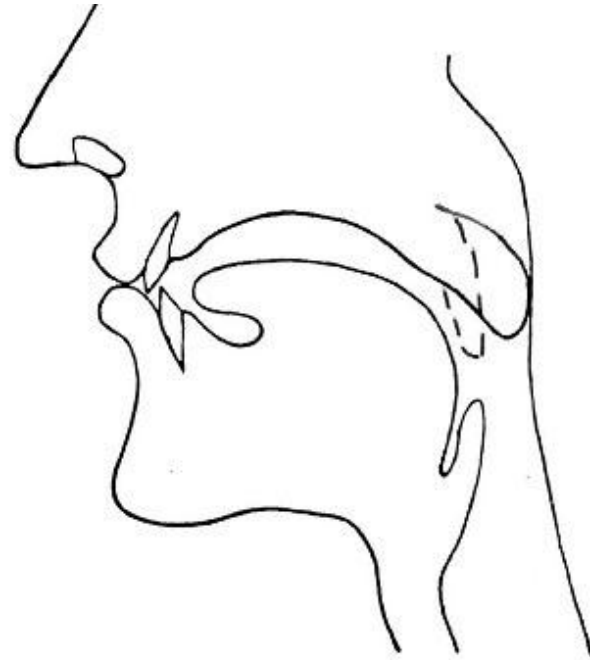
Consonants can be classified according to three parameters:

1. Place of Articulation.
2. Voice.
3. Manner of Articulation.

Place of Articulation

Sounds can be classified according to where in the oral cavity they are articulated.

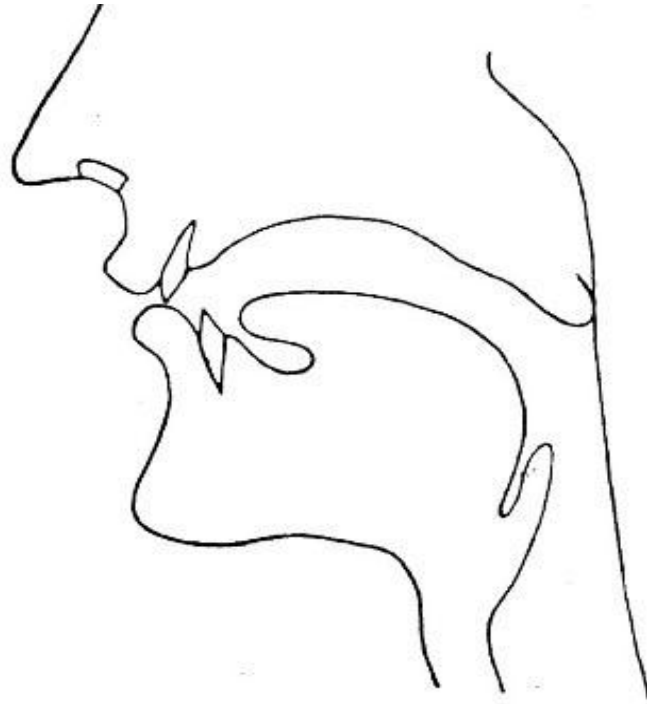
Bi-labial: /p, b, m, w/: Sounds are produced when the lips are brought together.



Bilabial articulation

[p, b] ([m])

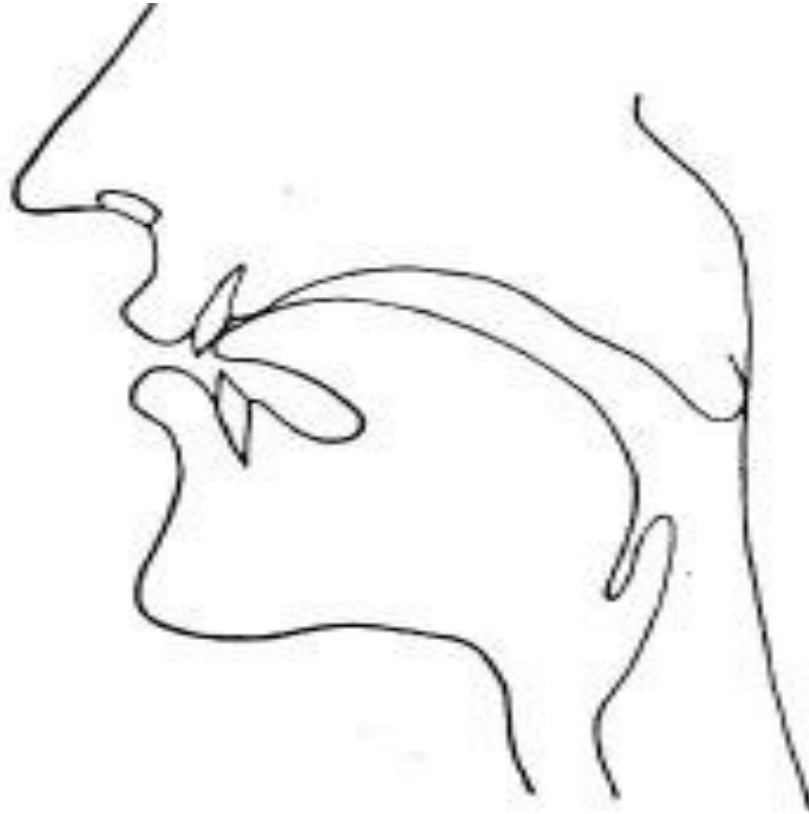
Labio-dental: /f, v/: Sounds are made when the lower lip is raised towards the upper front teeth.



Labiodental fricative

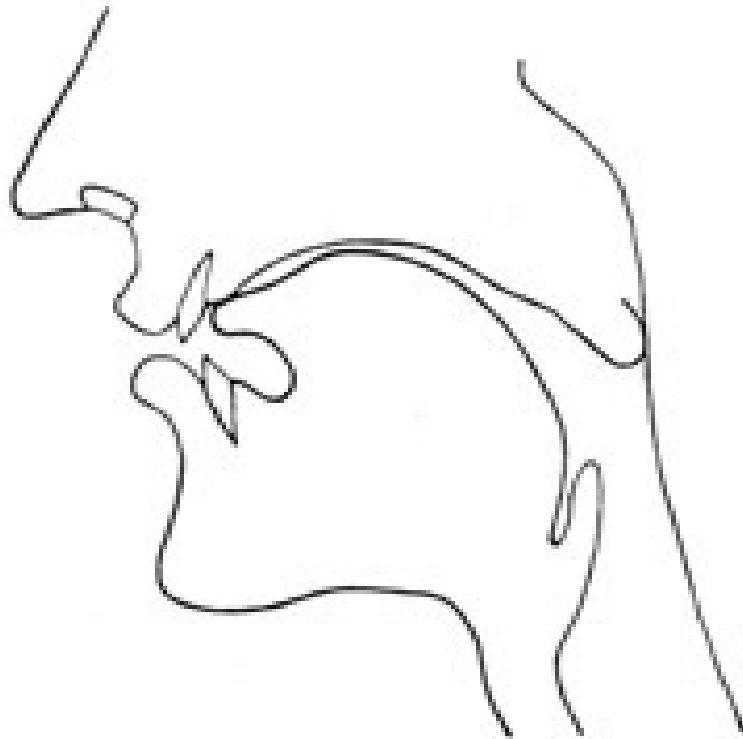
[f, v]

Dental: /θ, ð/: Sounds are produced by touching the upper front teeth with the tip of the tongue.



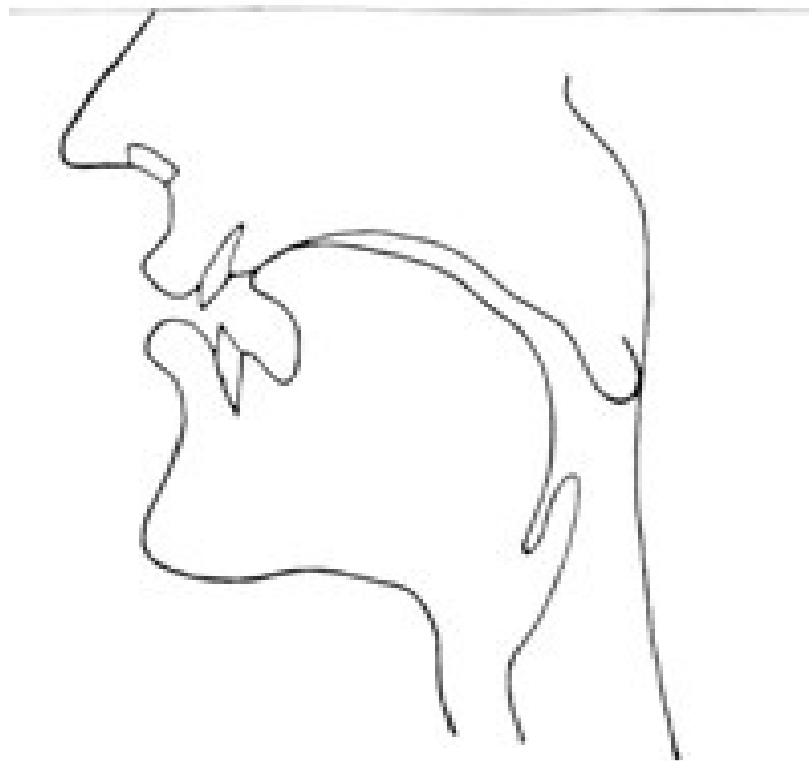
b Dental fricative

Alveolar /t, d, n, s, z, l, r/: Sounds are made by raising the tip of the tongue towards the ridge that is right behind the upper front teeth.



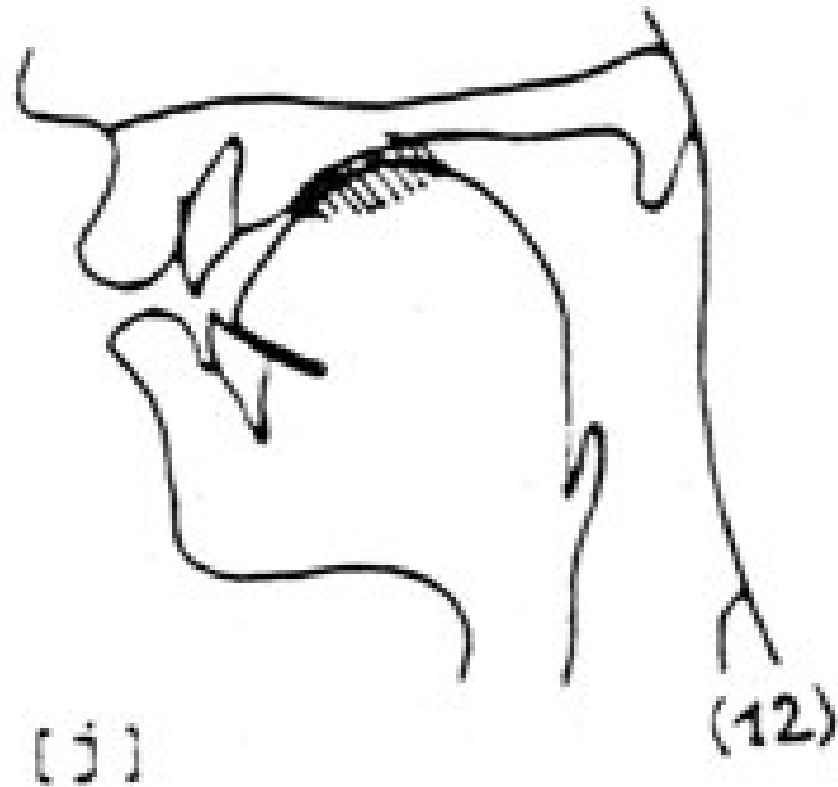
Alveolar articulation

Palatoalveolar /ʃ, ʒ, tʃ, dʒ/: Sounds are made by raising the blade of the tongue towards the part of the palate just behind the alveolar ridge.

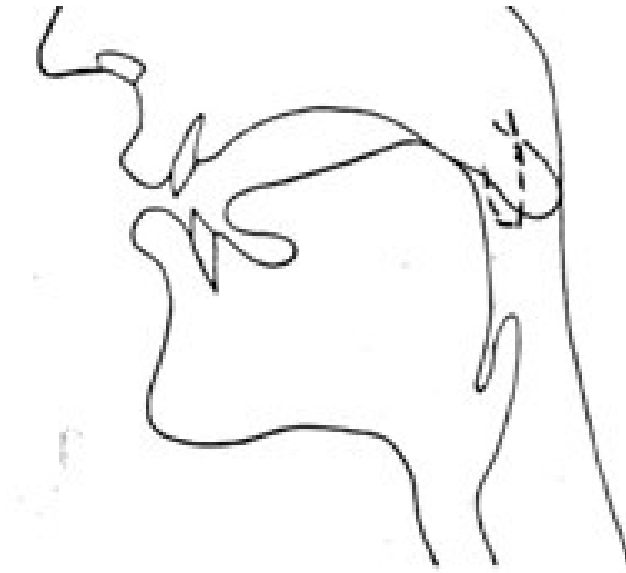


Palato-alveolar fricative

Palatal /j/: Sounds are made by raising the front of the tongue towards the soft palate.

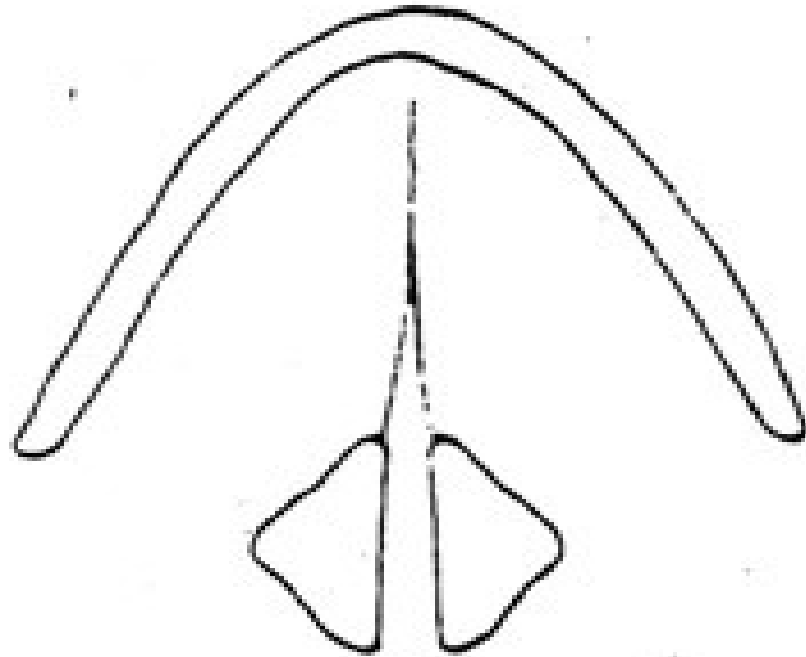


Velar /k, g, ŋ/: Sounds are made by raising the back of the tongue towards the soft palate, called the velum.



Velar articulation

Glottal /h/: Sounds are produced when the air passes through the glottis as it is narrowed.




3. Manner of Articulation:

The manner of articulation has to do with the kind of obstruction the air meets on its way out, after it passes the vocal folds.

- **Plosives:** are sounds in which there is a complete closure in the mouth, so that the air is blocked for a fraction of a second and then released with a small burst of sound, called a plosion (it sounds like a very small explosion).


Plosives are /p, b, t, d, g, k/ •

- **Fricatives:** have a closure which is not quite complete. This means that the air is not blocked at any point, and therefore there is no plosion. On the other hand, the obstruction is big enough for the air to make a noise when it passes through it, because of the friction.
- Fricative are /f, v, θ, ð, s, z, ʃ, ʒ, h/.

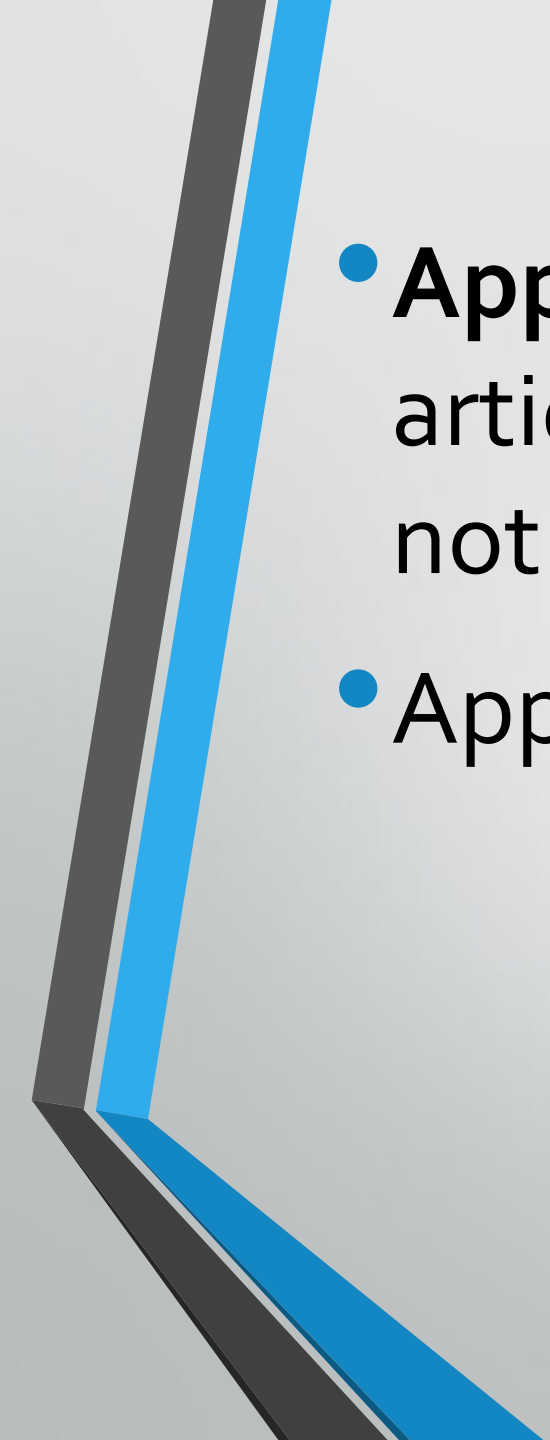


Affricates: An affricate is a combination of a plosive and a fricative. It begins like a plosive, with a complete closure, but instead of a plosion, it has a very slow release, moving backwards to a place where a friction can be heard.

■ Affricates are / tʃ, dʒ/.

- 
- **Nasals:** are pronounced with a complete closure in the mouth, but as the velum is lowered the air can escape through the nasal cavity.
 - Nasals are /m, n, ŋ/.

- **Laterals:** are sounds where the air escapes around the sides of the tongue. There is only one lateral in English which is /l/. There are two types of /l/ in English: "light" or "clear" /l/ and "dark" /l/. The light /l/ is pronounced when /l/ is followed by a vowel as in "lead", while the dark /l/ is pronounced when /l/ is preceded by a vowel as in "deal".

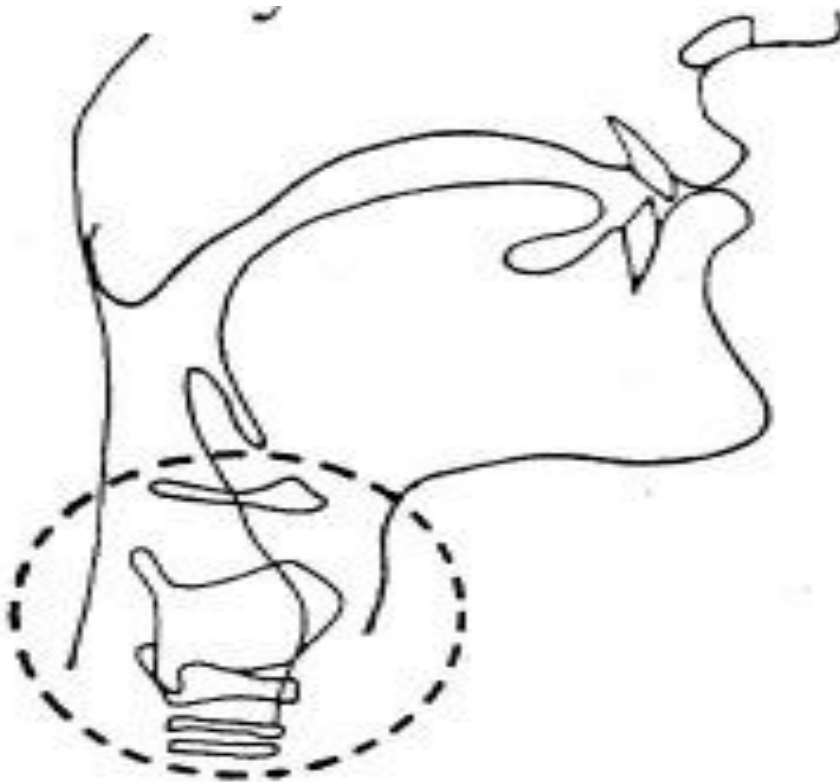
- 
- **Approximants:** are pronounced when the articulators approach each other so there is not enough obstruction to create a friction.
 - Approximants are /w, r, j/.

Place	Bilabial	Labiodental	Dental	Alveolar	Palatoalveolar	Palatal	Velar	Glottal
Manner								
Plosive	p b			t d			k g	
Fricative		f v	θ ð	s z	ʃ ʒ			h
Affricate					tʃ dʒ			
Nasal	m			n			ŋ	
Lateral				l				
Approximant	w			r		j		

VOICE

Voice means the vibration of the vocal cords.

Vocal Cords: are two thick flaps of muscle in the larynx.



THE CONDITIONS OF THE VOCAL CORDS

- There are four phases of the vocal folds:
- Wide apart: The vocal folds are wide apart for normal breathing and usually during voiceless consonants.
- Narrow glottis: If the air passes through the glottis, the result is the fricative /h/.
- Position for vocal folds vibration: When the edges of the vocal folds are touching each other, air passing through the glottis will usually cause vibration.
- Vocal folds tightly closed: The vocal folds can firmly be pressed together so that air cannot pass between them. This happens in pronouncing the glottal stop /ʔ/.



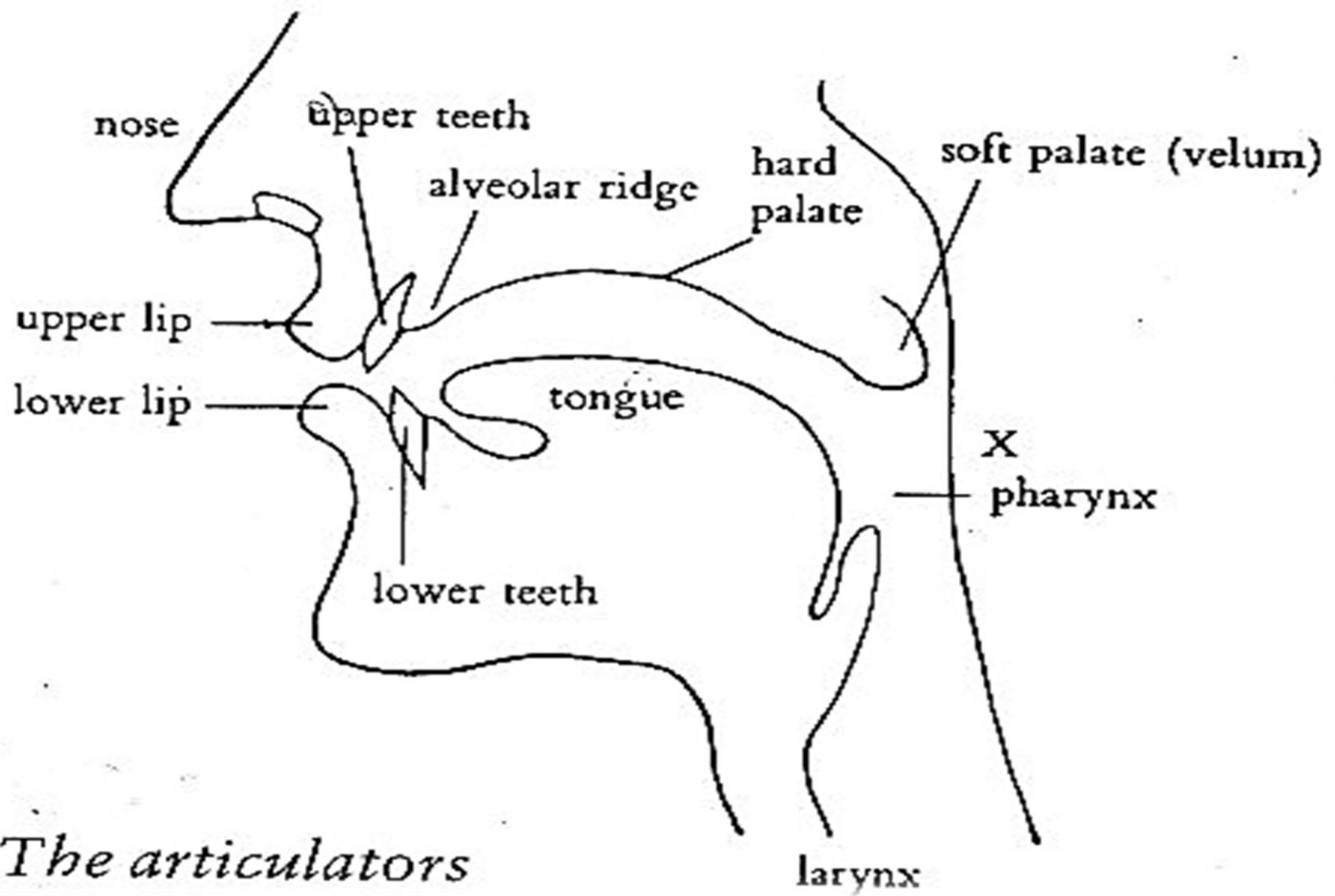
Voiced Sounds: are the sounds pronounced with the vibration of the vocal cords.

Voiceless Sounds: are the sounds pronounced with no vibration of the vocal cords.

/b, m, w, v, ð, d, n, z, l, r, ʒ, dʒ, j, g, ŋ/ ○

/p, f, θ, t, s, ʃ, tʃ, k, h/ ○





The articulators

VOWELS

THE DIFFERENCE BETWEEN CONSONANTS AND VOWELS IS THAT VOWELS ARE PRONOUNCED WITH NO OBSTRUCTION TO THE FLOW OF AIR AS IT PASSES FROM THE LARYNX TO THE LIPS.

ENGLISH VOWELS

Simple (Pure) Vowels

A simple vowel is pronounced as one movement. ◎

◎ Long Vowels: /i: - ɑ: - ɔ: - u: - ɜ:/

◎ Short Vowels: /ɪ - e - æ - ʌ - ɒ - ʊ - ə/

COMPLEX VOWELS

A complex vowel is a unit that contains two simple vowels with two movements.

/eɪ – aɪ – ɔɪ – əʊ – aʊ – ɪə – eə – ʊə/ ●

CLASSIFICATION OF VOWELS

1. Tongue Position

Front

Central

Back

2. Tongue Height

High

Mid-High

Mid-Low

Low

(Close)

(Half-Close)

(Half-Open)

(Open)

3. Length

Long

Short

4. Lips Rounding

Unrounded

Neutral

Rounded

The English Vowel Chart

Unrounded

Close
(High)

Half Close
(Mid-high)

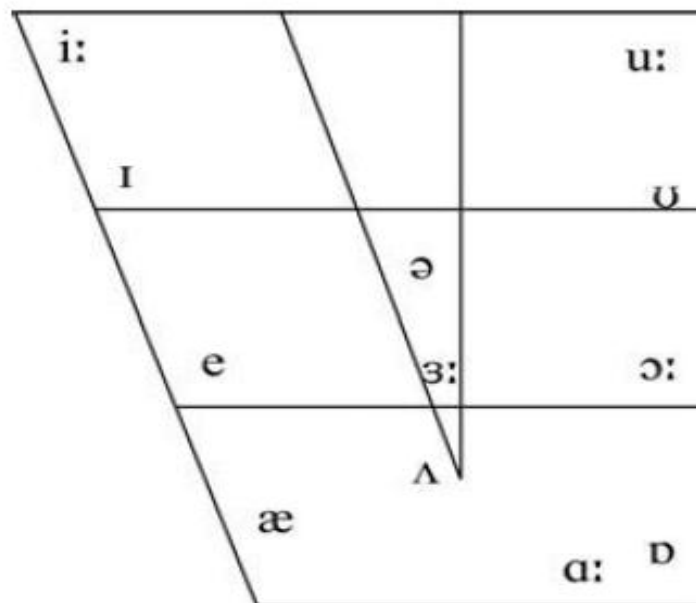
Half Open
(Mid-Low)

Open
(Low)

Front

Central

Back



Rounded

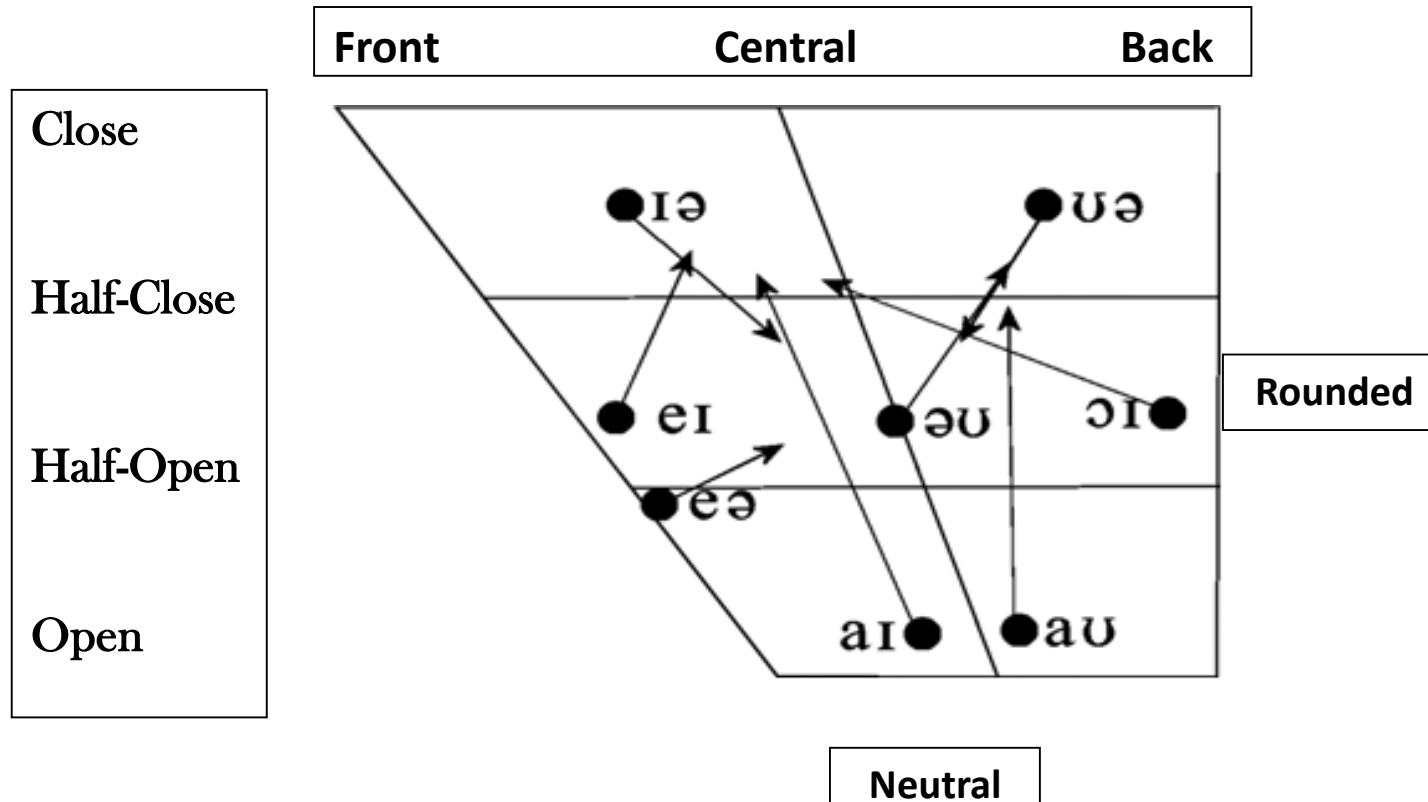
Neutral

COMPLEX VOWELS

Complex vowels can also be classified according to the vowel chart.

They consist of two groups:

1. Closing Vowels: /eɪ - aɪ - ɔɪ - əʊ - aʊ/. (The tongue moves to the closing area)
2. Centering Vowels: /ɪə - eə - uə/. (The tongue moves to the central area)



TRIPHTHONGS

- ◉ A triphthong is a glide from one vowel to another and then to a third, all produced rapidly and without interruption.

eɪ + ə = eɪə as in “layer” /leɪə/ - “player” /pleɪə/

aɪ + ə = aɪə as in “fire” /faɪə/ - “liar” /laɪə/

ɔɪ + ə = ɔɪə as in “loyal” /ləɪə/ - “royal” /rɔɪə/

əʊ + ə = əʊə as in “lower” /ləʊə/ - “mower” /məʊə/

aʊ + ə = aʊə as in “power” /paʊə/ - “hour” /aʊə/

