English Phonetics

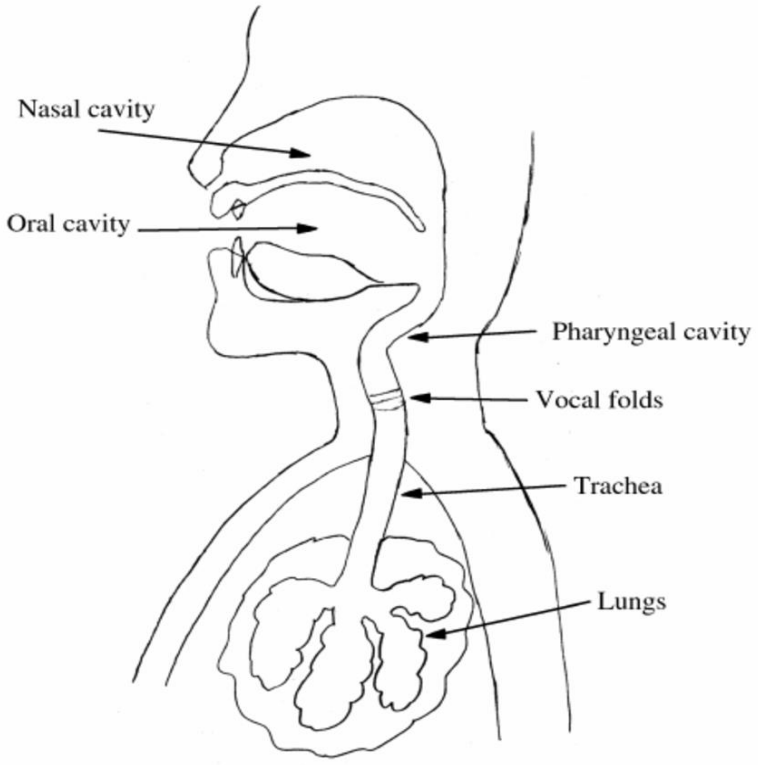
Phonetics

- The study of speech sounds is called 'Phonetics'
- The basic unit of a language is a 'sound' also called as 'phoneme'

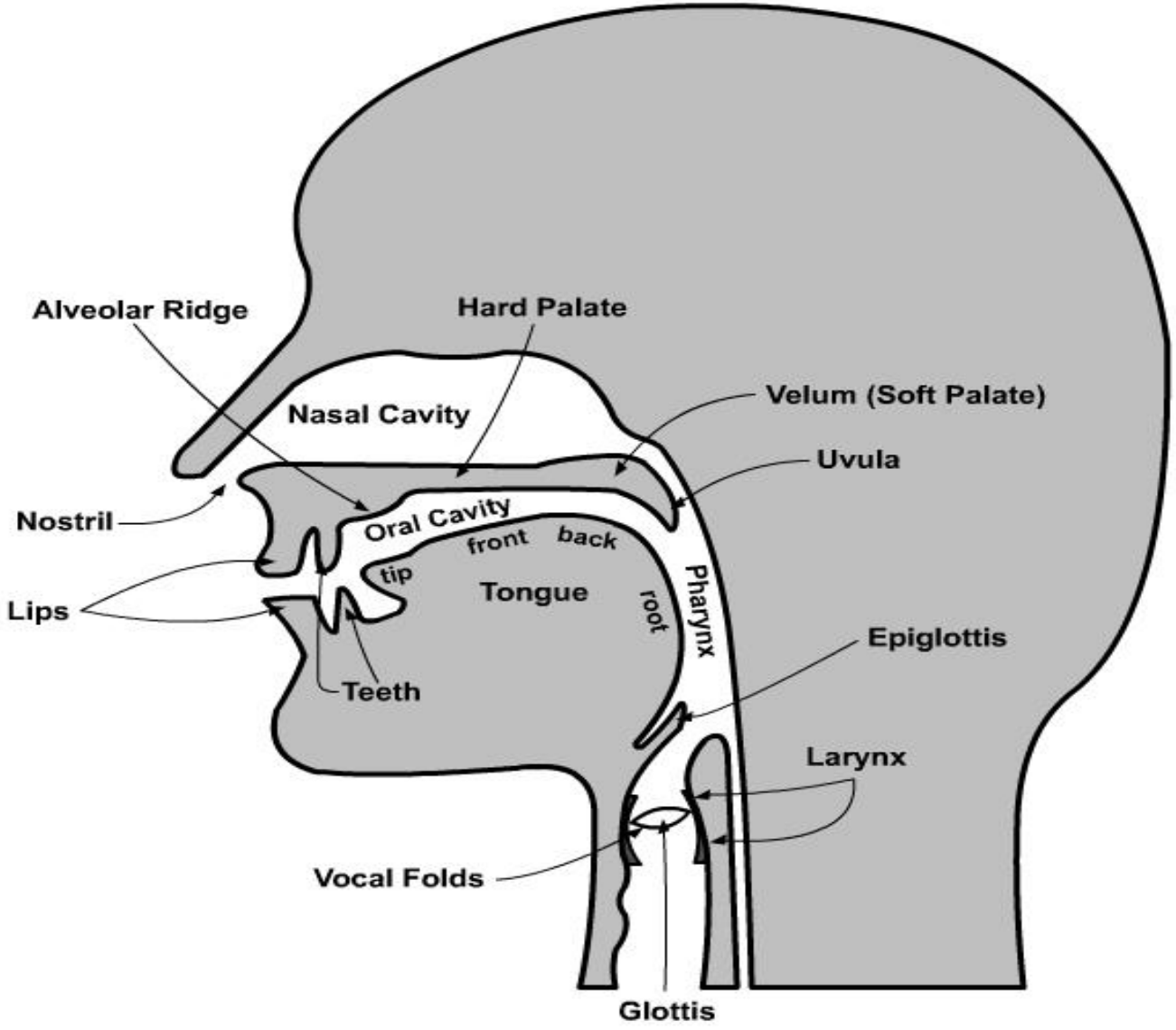
  e.g. /p/ , /m/ , /f/ , /o/ , /i/, etc.
- Speech sounds are of two types – consonants and vowels
  - Consonants: sounds where there is obstruction in the vocal tract.
  - Vowels: sounds where there is no obstruction in the vocal tract.
- English language has forty-four (44) sounds or phonemes
  - Twenty-four (24) consonants
  - Twenty (20) vowels

How speech sounds are produced?

- On exhalation, air from the lungs is pushed out through trachea 'windpipe' till it reaches the larynx.
- Larynx has two folds known as 'vocal folds'. These might to held open to let the airstream pass or they might vibrate.
- Airflow then goes up and passes through oral and/or nasal cavity. Most of the sounds are produced in mouth using tongue, teeth and other parts.



Speech Organs



CONSONANTS

Sounds produced by either a closure or a narrowing that produces audible friction in the vocal tract.

Consonants are classified on the basis of:

- ***Place of articulation***

  depending on the organs or 'articulators' involved in their production. e.g., bilabial, dental, velar, etc.

- ***Manner of articulation***

  depending on how they are produced or what happens to air on passing through the different organs or 'articulators'. e.g., stop, fricative, nasal, etc.

- ***Voice***

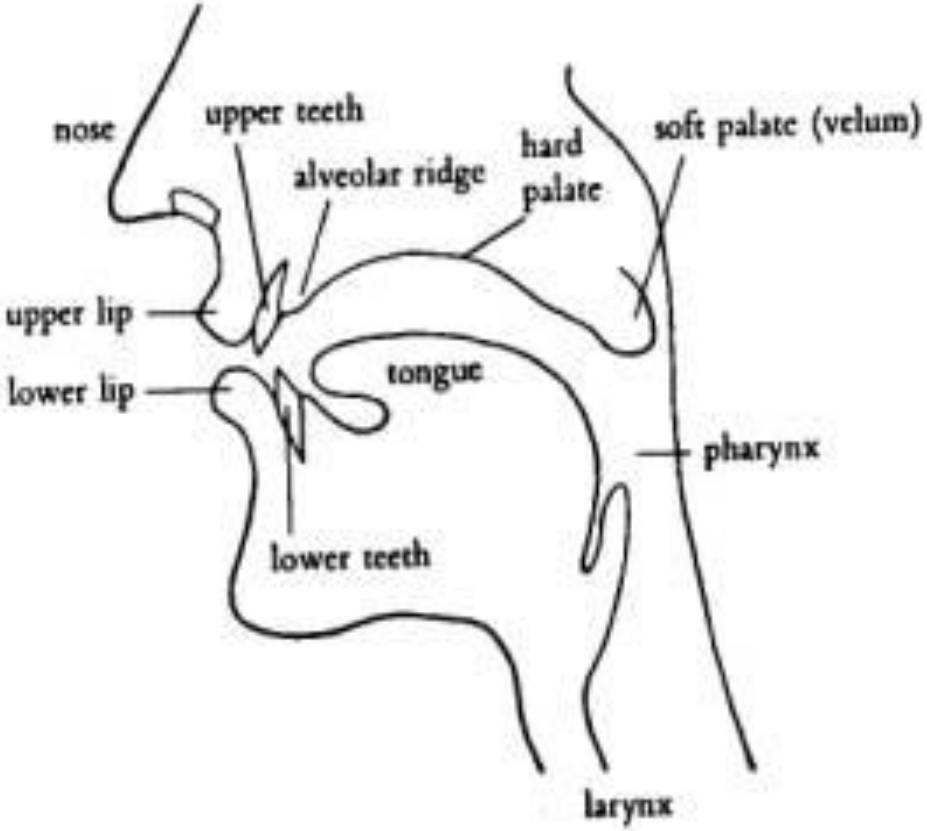
  depending on the status of the larynx i.e., whether vocal folds vibrate or not. e.g., /s/ is voiceless (-V), /z/ is voiced (+V), /m/ is voiced (+V).

Place of Articulation

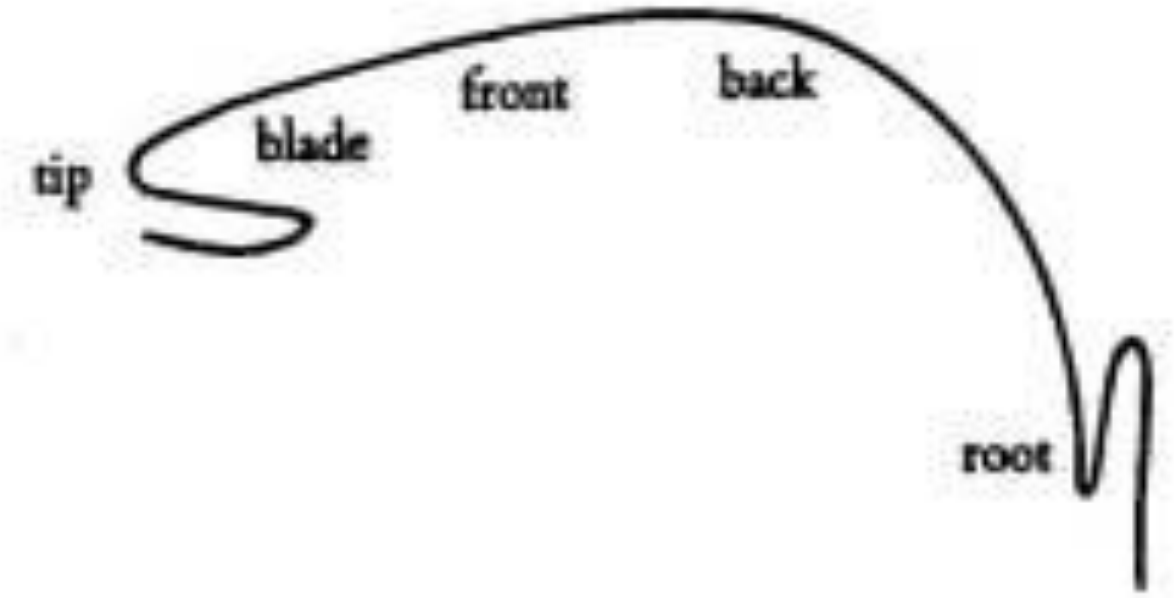
Sounds are classified on the basis of **WHERE** they are articulated in the vocal tract.

Sounds are classified on the basis of the 'point of articulation' between two articulators where obstruction takes place

- Bilabials
- Labiodentals
- Dentals
- Alveolars
- Palatals
- Velars
- Glottals



Sub-divisions of tongue



Bilabials

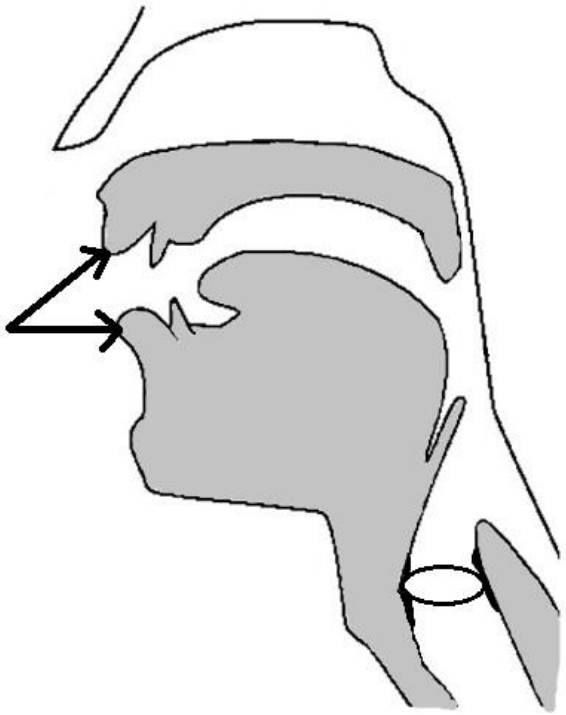
- bi = two, labia = lips
- When both lips, upper as well as lower lip, are involved in production of a sound
- upper lip = passive articulator, lower lip = active articulator
- Examples,

  /p/ in **p**ot

  /b/ in **b**all

  /m/ in **m**ug

  /w/ in **w**ater

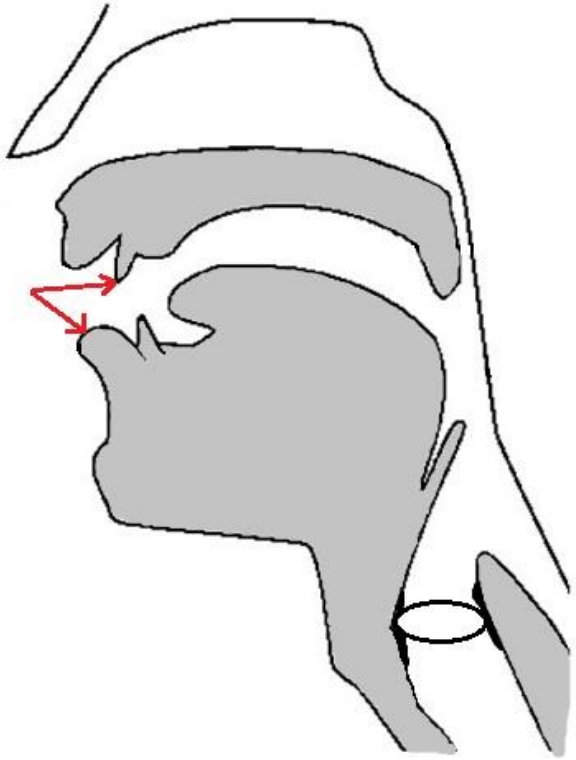


Labiodentals

- labio = lip, dental = teeth
- when lower lip and the upper teeth are involved in production of a sound
- Lower lip = active articulator , upper teeth = passive articulator
- Examples

  /f/ in **f**eet

  /v/ in **v**an

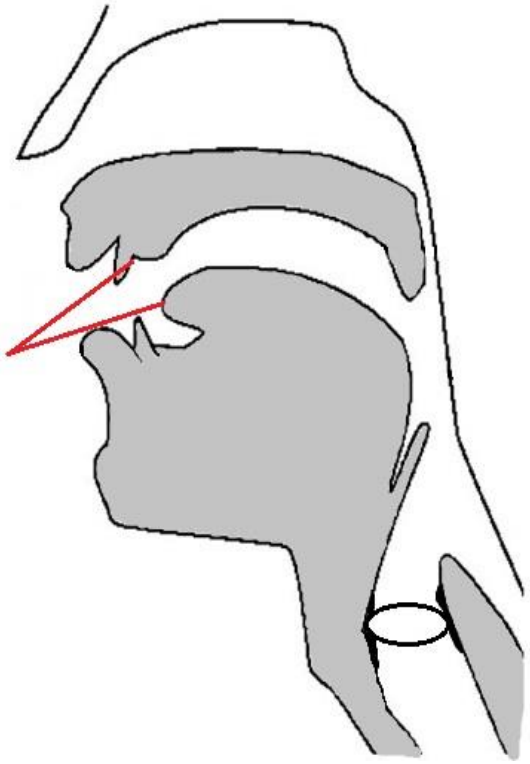


Dentals

- Sounds produced when the tip of the tongue and the upper front teeth are involved
- tongue = active articulator , upper teeth = passive articulator
- Examples

  /θ/ in **th**in

  /ð/ in **th**ere



Alveolars

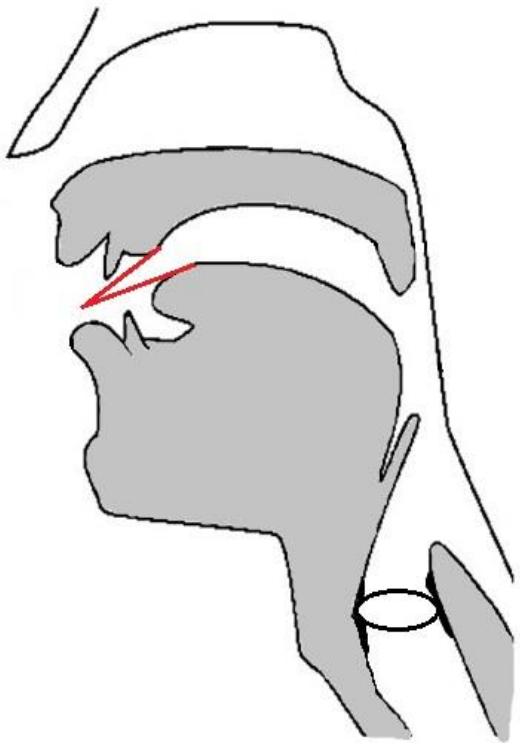
- Sounds produced when the blade of the tongue and the alveolar ridge are involved
- Alveolar ridge - rough bony ridge behind the upper teeth
- blade of tongue = active articulator , alveolar ridge = passive articulator
- Examples

  /s/ in **s**un, /z/ in **z**ip

  /t/ in **t**able, /d/ in **d**og

  /n/ in **n**ote, /l/ in **l**and

  /r/ in **r**ose



Palatals

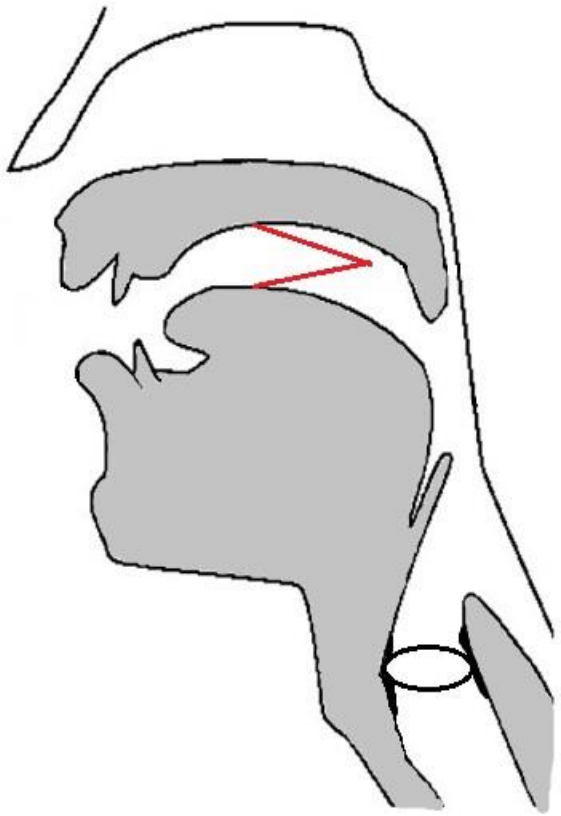
- Sounds produced with the front part of the tongue and the hard palate
- Hard palate - hard part of the roof of the mouth behind the alveolar ridge
- Front part of tongue = active articulator, hard palate = passive articulator
- Examples

  /ʃ/ in **sh**ower

  /ʧ/ in **ch**air

  /ʤ/ in **j**oke

  /ʒ/ in mea**s**ure



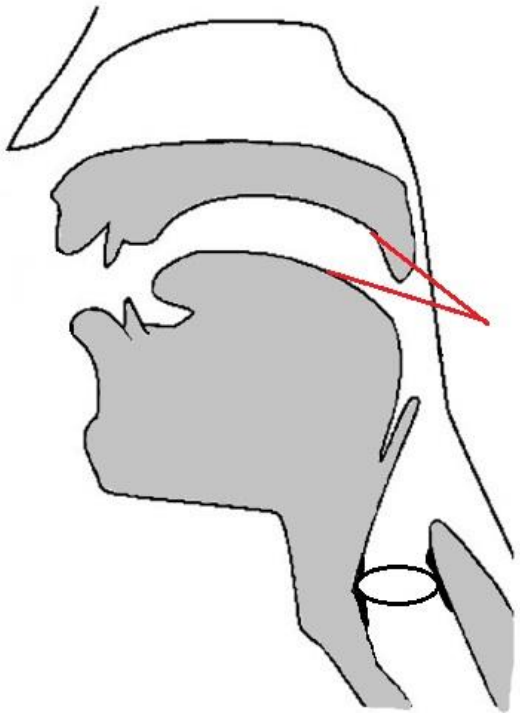
Velars

- Sounds produced with back of the tongue against the velum or the soft palate.
- Velum is the soft area behind hard palate
- Back of the tongue = active articulator, velum = passive articulator
- Examples

  /k/ in **k**ite

  /g/ in **g**irl

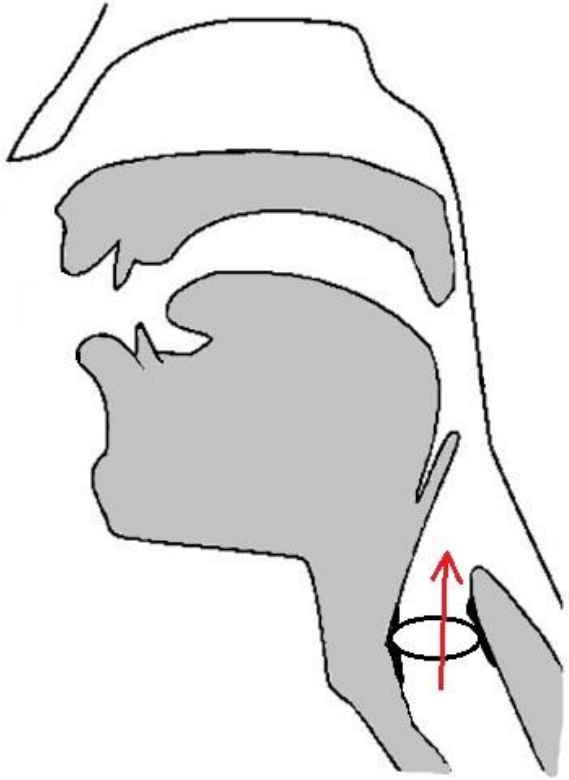
  /ŋ/ in ki**ng**



Glottals

- Only one sound produced without the active involvement of the tongue and the other mouth parts.
- In this sound the space between vocal folds, called as ‘glottis’ is open and air passes undisturbed.
- A voiceless glottal /h/ is produced

  /h/ in **h**ome



Manner of Articulation

Sounds are classified on the basis of **HOW** they are articulated in the vocal tract.

Sounds are classified in accordance to how air stream is modified by different organs involved in the production of the sound.

- Stops
- Fricatives
- Affricates
- Nasals
- Liquids
- Glides

Stops

- These sounds are produced by completely stopping the airstream for a brief time and then released abruptly
- Also called as ‘plosives’
- Stops include
  - /p/, /b/, /k/, /g/, /t/, /d/

Fricatives

- Sounds produced when airstream passes through a narrow passage resulting in a hissing sound
- A type of a friction is produced
- Sounds include
  - /f/, /v/, /ʃ/, /ʒ/, /z/, /θ/, /ð/

Affricates

- First, airstream is stopped briefly and then released with a friction
- These sounds are combination of stops and fricatives
- They begin as stops and end as fricatives
- Sounds include
  - /θ/ and /ð/

Nasals

- These sounds are produced when air does not escape through the oral cavity (mouth) but through the nasal cavity (nose)
- Velum lowers to stop the airflow through the mouth unlike other consonants where velum is raised to allow airstream to pass through the mouth
- Sounds include
  - /m/, /n/, /ŋ/

Liquids

- These sounds are produced when tongue blocks the air partially
- /l/ is a lateral liquid
- This sound is produced when airstream passes around the sides of the tongue when the tip of the tongue blocks the air by touching the middle of the alveolar ridge
- /r/ is produced when the tip of the tongue is raised and curls back near the alveolar ridge

Glides

- Glide = move
- These sounds are produced with the tongue in motion from one position to another
- Especially, from/to the position of a vowel.
- they are also called as semi-vowels or semi-consonants
- They are similar to vowels (in articulation) but behave like consonants (i.e., never occur at the nucleus of the syllable)
- Sounds include
  - /w/ in **w**e
  - /j/ in **y**es

Voice

Sounds are classified in accordance to the status of the glottis

- Larynx has two folds called as ‘vocal cords’ or ‘vocal folds’
- The v-shaped space between these folds is called ‘glottis’
- When the airflow from the trachea passes through the glottis undisturbed, a voiceless sound is produced(-V)
- When this airstream is modified by the vibration of the vocal folds, a voiced sound is produced (+V)

Voiceless (-V)	Voiced(+V)
/p/	/b/
/f/	/v/
/t/	/d/
/s/	/z/

Consonant Chart

	Bilabial		Labiodental		Dental		Alveolar		Palatal		Velar		Glottal	
	-V	+V	-V	+V	-V	+V	-V	+V	-V	+V	-V	+V	-V	+V
Stops	p	b					t	d			k	g		
Fricatives			f	v	/θ/	/ð/	s	z	ʃ	ʒ				
Affricates									ʧ	ʤ				
Nasals		m						n				ŋ		
Liquids								l,r						
Glides		w								j			h	

For English Pronunciation Drills

https://www.speechactive.com/english-consonants-ipa-international-phonetic-alphabet/
https://audio-class.ru/english-phonetics.php
http://www.antimoon.com/how/pronunc-soundsipa.htm

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