- **Phonetics -2-**
- **SOUNDS OF ENGLISH**: الأصوات في اللغة الإنجليزية

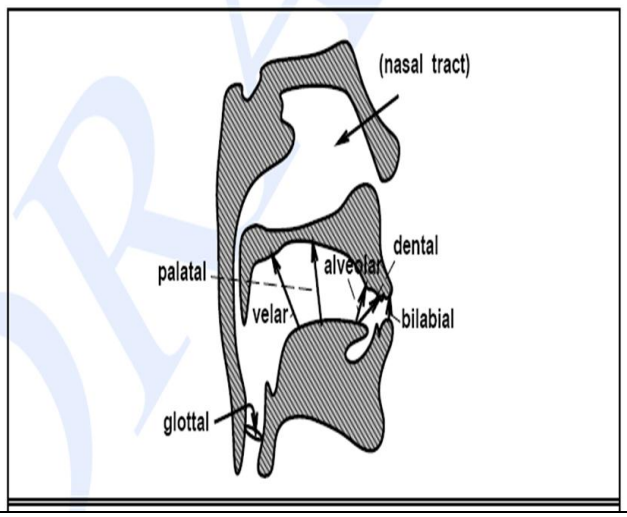
- **Consonants** are sounds produced with some restriction or total closure in the vocal tract as the air from the lungs is pushed through the glottis out the mouth.
- الحروف الساكنة هي الأصوات المنتجة في القناة الصوتية مع بعض القيود أو الإغلاق التام -كما يتم دفع الهواء من الرئتين عن طريق المزمار خارج الفم.
- 24 consonants in English (including /**j**/ & /**w**/)
- **Description: الوصف**

Voicing: Voiced (vibrated) or voiceless (non-vibrated)?

Place of Articulation: اماكن النطق

In **articulatory phonetics**, the place of Articulation (also point of articulation) of a **consonant** is the point of contact where an obstruction occurs in the **vocal tract** between an articulatory gesture, an active **articulator (**typically some part of the tongue), and a passive location (typically some part of the roof of the mouth).
Along with the **manner of articulation** and the **phonation**, this gives the consonant its distinctive sound

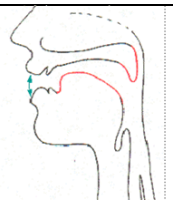
Place of articulation (passive)
The passive place of articulation is the place on the more stationary part of the vocal tract where the articulation occurs.
المكان السلبي للتعبير هو مكان على جزء ثابت أكثر من الجهاز الصوتي حيث يحدث الإفصاح.



It can be anywhere from the lips, upper teeth, gums, or roof of the mouth to the back of the throat.
يمكن أن يكون في أي مكان من على الشفاه، الأسنان العلوية واللثة، أو سقف الفم إلى الجزء الخلفي من الحلق.

1. Bilabial or Labial

Labial: Consonants whose main restriction is formed by the two lips coming together have a bilabial place of articulation. In English these include [p] as in possum, [b] as in bear, and [m] As in marmot.



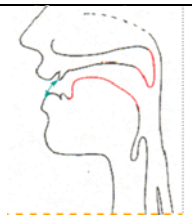
Labial (/p/, /b/, /m/, :

•constriction (or complete closure) at lips
•the only unvoiced labial is /**p**/
•the only nasal labial is /**m**/
•Labial consonants are consonants in which one or both lips are the active articulator.
- The Lower Lip and the Upper Lip press together.
- Sounds like **: b, m, p,**

Ex. /**m**/ my /**p**/ pen /**b**/ book

2. Labio-Dental (/f/, /v/):

•The English labiodental consonants [**v**] and [**f**] are made by pressing the bottom lip against the upper row of teeth and letting the air flow through the space in the upper teeth.
الحروف الساكنة الانجليزية شفوي [V] و [و] تتم عن طريق الضغط على الشفة السفلى ضد الصف العلوي من الأسنان والسماح للتدفق الهواء من خلال المساحة في الأسنان العليا.



produced by constriction between lower lip and upper teeth التي تنتجها انقباض بين الشفة السفلى والأسنان العليا in English, all labio-dental phonemes are fricatives EX: /**f**/ fan, phone /**v**/ view, vision	

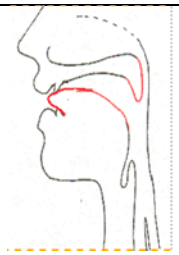
3. Dental (/th/, /dh/):

•**Dental**: Sounds that are made by placing the tongue against the teeth are dentals.

الأصوات التي تتم عن طريق وضع اللسان على الأسنان هي dentals

The main dentals in English are the [**th**] of thing or the [**dh**] of though, which are made by placing the tongue behind the teeth with the tip slightly between the teeth.

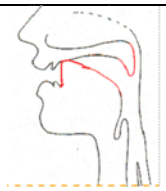
•produced by constriction between tongue tip and upper teeth
(sometimes tongue tip is closer to alveolar ridge)



•in English, all dental phonemes are fricatives
•Ex**: /th**/teeth, thin the tip of the tongue touches the upper teeth.
•**/dh/** then, the, there the blade of the tongue touches the upper teeth.

4. Alveolar (/t/, /d/, /s/, /z/, /n/, /l/):

•**Alveolar:** The alveolar ridge is the portion of the roof of the mouth just behind ALVEOLAR the upper teeth. Most speakers of American English make the phones [s], [z], [t], and [d] by placing the tip of the tongue against the alveolar ridge. The word cooronal is often used to refer to both dental and alveolar.

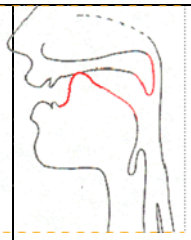


•tongue tip is at or near alveolar ridge
•a large number of English consonants are alveolar
•/l/ before vowel is "light" /l/, after vowel is "dark" /l/.

/**t**/ table
/**d**/ door
/**s**/ see
/**z**/ zoo
/**n**/ nose
/**i**/ eye

5. Palato-Alveolar (/sh/, /zh/, /ch/, /jh/, /r/):

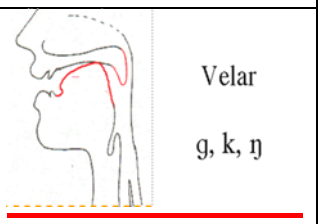
•The palato-alveolar sounds [sh] (shrimp), [**ch**] (china), [**zh**] (Asian), and [**jh**] (jar) are made with the blade of the tongue against this rising back of the alveolar ridge
•tongue is between alveolar ridge and hard palate
•2 fricatives, 2 affricates, 1 retroflex
•retroflex has "depression" midway along tongue
•the palato-alveolar fricatives tend to have strong energy due to weak constriction allowing large airflow

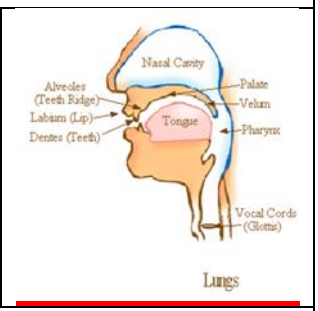


6. Palatal (/y/):حنکی

•**Palatal**: The roof of the mouth (the palate) rises sharply from the back of the alveolar ridge.. The palatal sound [y] of yak is made by placing

the front of the tongue up close to the palate. produced with tongue close to hard palate o “extreme” production of /iy/ Ex. Yard, you, university, student
Note: Unimportant is common with the first two letters of (University), however, they sound differently.

7. Velar (/k/, /g/, /ng/):حلقي	
•**Velar**: The velum or soft palate is a movable muscular flap at the very back of the roof of the mouth. The sounds [**k**] (cuckoo), [**g**] (goose), and [**N**] (kingfisher) are made by pressing the back of the tongue up against the velum. •produced with constriction against velum (soft palate); the back of the tongue touches the velum (the soft palate)	
•only plosives /**k**/ and /**g**/, and nasal /ng/ •Ex. /**k**/ car, cat, kind, key •/**g**/ gas, goal, gear •/**ng**/ playing, driving	

8. Glottal (/h/):	
•**Glottal**: (the glottis is the space between the vocal folds). A glottal stop is a speech sound articulated by a momentary, complete closing of the glottis in the back of the throat. It exists in many languages, as in English and Hawaiian uh-oh, O'ahu, and ka'aina.	
•/**h**/ is the nominal glottal phoneme in English; in	•the primary cue for /**h**/ is formant structure without

reality, the tongue can be in any vowel-like position	Voicing, an energy dip, and/or an increase in aspiration-Noise in higher frequencies.

- **Place of articulation (active) أمكان التعبير**
- The articulatory gesture of the active place of articulation involves the more mobile part of the vocal tract. This is typically some part of the tongue or lips. The following areas are known to be contrastive:

1. The lower lip (labial)الشفة السفلى

2. Various parts of the front of the tongue:

✓ The **tip of the tongue** طرف اللسان
✓ The upper front surface of the tongue just behind the tip, called the **blade** of the tongue

3. The surface of the tongue under the tip

- In **bilabial consonants** both lips move, so the articulatory gesture is bringing together the lips, but by convention the lower lip is said to be active and the upper lip passive.

MANNER OF ARTICULATION – PLOSIVES

Consonants are sounds which involve full or partial blocking of airflow. In English, the consonants are **p, b, t, d, ch, j, k, g, f, v, th, dh, s, z, sh, zh, m, n, ng, l, r, w, and y.** They are classified in a number of different ways, depending on the vocal tract details we just discussed.
1. Stops, also known as plosives. The air is blocked for a moment, then

released. In English, they are p, b, t, d, k, and g.
a. Bilabial plosives: **p (unvoiced) and b (voiced)**
b. Alveolar plosives: **t (unvoiced) and d (voiced)**
c. Velar plosives: **k (unvoiced) and g (voiced)**
Aspiration – the blowing out of air for the voiceless plosives. We use both in English (pit vs poo), but it isn't a distinction that separates one meaning from another.

FRICATIVES AND AFFRICATES

2. Fricatives: involve a slightly resisted flow of air. In English, these include f, v, th, dh, s, z, sh, zh, and h.
a. Labiodental fricatives: f (unvoiced) and v (voiced)
b. Dental fricatives: th (as in thin -- unvoiced) and dh (as in the -- voiced)
c. Alveolar fricatives: s (unvoiced) and z (voiced)
d. Palatal fricatives: **sh (unvoiced) and zh (like the s in vision -- voiced)**
e. Glottal fricative: h (unvoiced)
Voiceless: / f /, / ɵ /, / s /, / ʃ/, /h/
Voiced: / v /, / ð /, / z /, / ʒ /
3. Affricates: total closure of speech organs and air is released with friction
Voiceless: / ʧ / Voiced: / ʤ /
church judge

- **4. Nasals**

Sounds are produced when air flow through the mouth is completely blocked and released through the nose.
يتم إنتاج الأصوات عندما يسد تدفق الهواء تماما عن طريق الفم ويفرج عنه عن طريق الأنف.
Voiced : / m / , / n / , / ŋ /
There are no voiceless nasals.

- **5. LIQUIDS**

5. **Liquids** are sounds with very little air resistance. In English, we have l and r, which are both alveolar, but differ in the shape of the tongue. For l, we touch the tip to the ridge of the teeth and let the air go around both sides. For the **r**, we almost block the air on both sides and let it through at the top. Note that there are many variations of l and r in other languages and even within English itself! Both **/ l / and / r / are voiced.**
red , led

- **6. APPROXIMANTS – GLIDES**

6. **Semivowels** are sounds that are, as the name implies, very nearly vowels. In English, we have w and y, which you can see are a lot like vowels such as **oo and ee**, but with the lips almost closed for w (a bilabial) and the tongue almost touching the palate for y (a palatal). They are also called glides, since they normally "glide" into or out of vowel positions (as in woo, yeah, ow, and oy).
Examples: **/ w / and / j /Both sounds are voiced.**
wed yet

IPA Chart

Manner of Articulation \ Place of Articulation	Bilabial		Labio dental		Inter dental		Alveolar		Alveo-palatal		Palatal		Velar		Glottal	
Stop	p	b					t	d					k	g	ʔ	
Fricative			f	v	θ	ð	s	z	ʃ	ʒ					h	
Affricate									tʃ	dʒ						
Nasal		m						n						ŋ		
Lateral Approximant								l								
Retroflex Approximant								ɹ								
Glide	ʍ	w										j				

State of the Glottis: Voiceless | Voiced

PHONEMES	**ALLOPHONES**
Phoneme: smallest significant unit of sound. Contrast**:/ p / and / b /** 'pin' and 'bin' are phonologically similar except for the first phoneme. The same applies to / s / and /ʃ/, 'sip' and 'ship'.	**Allophone**: a variant of a phoneme Example: the **/p/** in 'pil' is different though similar sound in 'spil'. The difference is in the aspiration /p/ in 'pit' can be transcribed /phɪ t/ with /ph/ indicating aspiration. What about 'tap'? Allophones occur only in certain positions within a word.

PHONEMES

Minimal pairs- two different words which are identical in every way except for one sound segment that occurs in the same place in the string.

E.gs.: mat met ray lay

/mæt/ /met/ /reɪ/ /leɪ/

If more than two words in a string, they are **called minimal sets.**

E.gs.: sue, shoe, chew bib, bit bid big

/su:/ /ʃu:/ /tʃu:/ /bɪb//bɪt//bɪd/ /bɪg/

- **ALLOPHONES**

COMPLEMENTARY DISTRIBUTION

Complementary distribution: When two or more sounds do not occur in the same sound environment.

E.g.: /l/ at the end of a syllable –

/bʊl/ and /l/ at the beginning of a syllable - /let/

• ALLOPHONES
FREE VARIATION

Free variation - When a word is pronounced in two different ways – using two different phonemes but has no effect on the meaning

عندما تنطق كلمة واحدة بطريقتين مختلفتين - يستخدا اثنين من الفونيمات المختلفة ولكن ليس له أي تأثير على معنى

Examples:

'either' - /aIðə/ or / i:ðə /

'ed' endings of the past tense

'tomato' - /təma:təʊ/ or /təmeItəʊ/