

Om Yazan
1920

English Language

Phonetics

fəˈnetiks



the sounds of spoken language



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First Class

Definitions:

Phonetics –

the study of the way humans make, transmit and receive speech sounds.

Divided into three main branches:

1. Articulatory phonetics – *the study of the way the vocal organs are used to produce speech sounds.*
2. Acoustic phonetics- *the study of the physical properties of speech sounds.*
3. Auditory phonetics- *the study of the way people perceive speech sounds.*

Phonology

The study of the sound system of languages, and of the general properties displayed by these systems.

(Roach, 1999)

The systems of rules underlying the sound patterns in a language.

(Denham & Lobeck, 2010)

- This involves knowing what sounds are or are not in the language and the rules that govern pronunciation.

Read and analyse the following scripts:

Aiteyu–ah, nemmain wat debladigarmen say, mos Malaysians tok Manglish. Bekoswai? Bekos we all shai oni to spik proper English – afturds people ting we trying to action oni. But Manglish is best–la when you want to simply toktok like fren-fren la.

- You want to toktok osoken, no pobem, we

gifchan you flers la. Simply lern by hart the list of
popular Manglish words and phrases, and very
soon oridi you can go round blarfing like tera oni

Phonological knowledge permits a speaker to

- produce sounds that form meaningful utterances

E.g. /n/ /æ/ /b/ - nab or ban but not bna or nba

- recognise foreign accent

E.g. buffet origami pistachio

- make up new words

E.g. /s/ /e/ /n/ /t/ - sent, tens, nets, nest

- add appropriate phonetic segments to form
plurals and past tenses

E.g. plurals- books roses; past tense- pick~~ed~~ took

know what is or is not a sound in ones' language

E.g. no word in Eng begins with the nasal /ŋ/

Speech Organs and Articulation

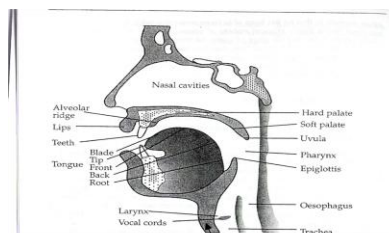
How are speech sounds made?

First, air coming from the lungs passes through the vocal tract, which shapes it into different speech sounds.

The air then exits the vocal tract through the mouth or nose or both.

The process by which air is made to move out of the lungs is called an **egressive pulmonic airstream**. All English sounds are produced in this manner.

HOW IS SPEECH POSSIBLE?

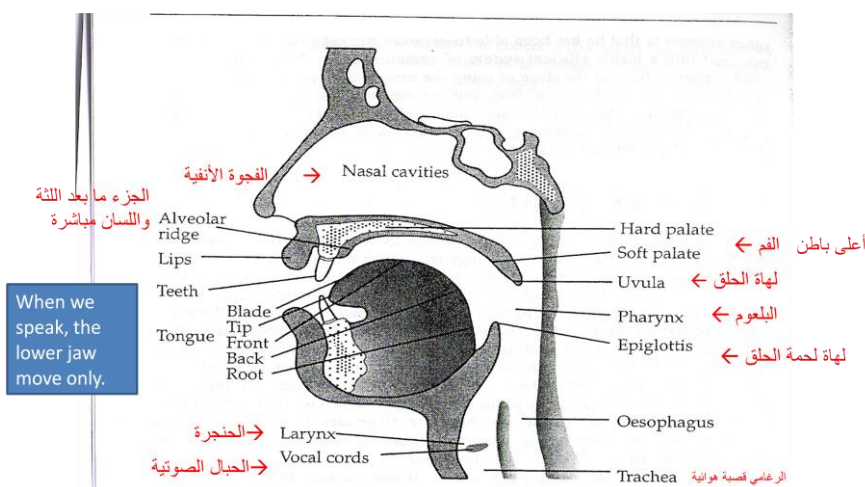


THE AIRSTREAM EXPELLED FROM THE **LUNGS** IS THE MOST COMMON SOURCE OF ENERGY FOR OUR VOCAL ACTIVITY.

IN THE **TRACHEA OR WINDPIPE** IT PASSES THROUGH THE LARYNX, CONTAINING THE VOCAL FOLDS OR **VOCAL CORDS**.

THE FRONT PORTION OF THE **TRACHEA OR WINDPIPE** IS PROMINENT IN THE NECK BELOW THE CHIN AND IS KNOWN AS "**ADAM'S APPLE**".

ANOTHER VIEW



Seven main articulators

1. The pharynx

A tube which begins just above the larynx.

- Top end is divided into two:

a) the back of the mouth

b) beginning of the way thru' the nasal cavity

2. The velum or the soft palate

- The **velum** is raised so that air cannot escape through the nose.
- When the tongue is in contact with the lower side of the velum, **sounds(velar consonants)** such as /k/ and /g/ are produced.

3. The hard palate

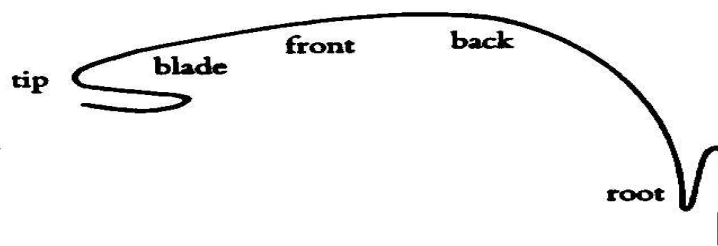
- often called the '*roof of the mouth*'.
- has smooth curved surface.

4. The alveolar ridge

- between the top front teeth and the hard palate.
- surface is covered with little ridges.
- sounds made by the tongue touching this area such as /t/ and /d/ are called **alveolar**.

5. The tongue

- a very important articulator.
- Can be moved into many different places and different shapes.
- Parts of the tongue:



6. The teeth

- consist of upper and lower teeth
- Sounds made with the tongue touching the front teeth such as /t/ and /d/ are called **dental**.

7. The lips can be

- pressed together to produce bilabial sounds, such as /p/ and /b/
- brought into contact with teeth to produce **labiodental** sounds such as /f/ and /v/
- can be rounded to produce lip-shape for vowels like /u:/

The 7 articulators are the main ones but there are 3 others to remember

Larynx

- a very complex and independent articulator.
- the larynx (Adam's apple) vibrates when you

Jaws

- the movement of the jaws (especially the lower one) helps a lot in speaking.

Nose and nasal cavity

- very important part of our vocal apparatus of making sounds, specifically **nasal** sounds such as /m/, /n/, /ŋ/
- produced the voiced sound, /z/.

THE CONCEPT OF "PHONEME"

What are these symbols?

i:	ɪ	ʊ	u:	ɪə	eɪ	ɪ̯	ʌ̯
e	ə	ɜ:	ɔ:	ʊə	ɔɪ	əʊ	
æ	ʌ	ɑ:	ɒ	eə	aɪ	aʊ	
p	b	t	d	tʃ	dʒ	k	g
f	v	θ	ð	s	z	ʃ	ʒ
m	n	ŋ	h	l	r	w	j

They are called phonemic symbols (as opposed to phonetic symbols).

Each one represents a PHONEME, that is, ONE specific SIGNIFICANT speech sound.

i:	ɪ	ʊ	u:	ɪə	eɪ	ɪ̯	ʌ̯
e	ə	ɜ:	ɔ:	ʊə	ɔɪ	əʊ	
æ	ʌ	ɑ:	ɒ	eə	aɪ	aʊ	
p	b	t	d	tʃ	dʒ	k	g
f	v	θ	ð	s	z	ʃ	ʒ
m	n	ŋ	h	l	r	w	j

Significant?

By "significant" we mean that each of these sounds can make a difference in the meaning of a word.

Take the case of "map" and "cap". Phonemes /m/ and /k/ are significant from the moment they can alter the meanings of words.

PHONEMES!!!

A phoneme is the smallest **contrastive** unit in the sound system of a language.

A phoneme is a minimal unit that **serves to distinguish between meanings of words.**

By convention, a phoneme is represented between /slashes/, e.g. /b/, /m/.

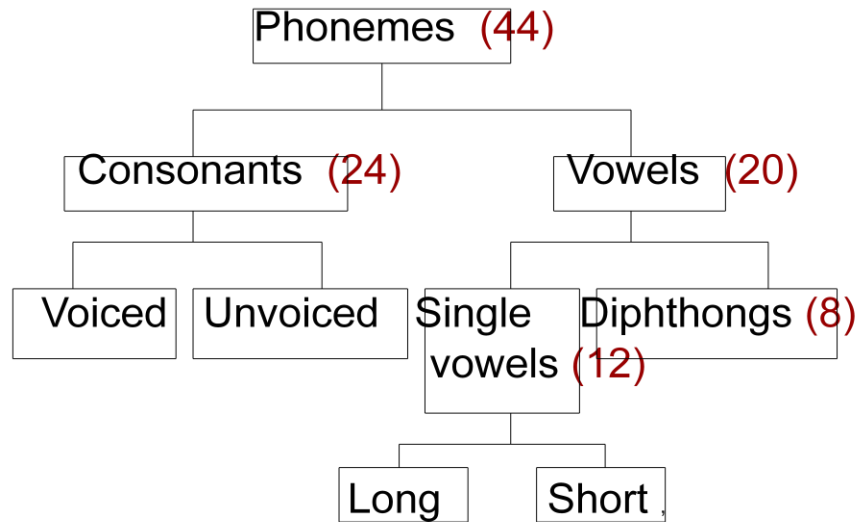
ɪ	I	ʊ	u:	ɪə	eɪ	ɪ:	ʌ
e	ə	ɜ:	ɔ:	ʊə	ɔɪ	əʊ	
æ	ʌ	ɑ:	ɒ	eə	aɪ	aʊ	
p	b	t	d	tʃ	dʒ	k	g
f	v	θ	ð	s	z	ʃ	ʒ
m	n	ŋ	h	l	r	w	j

HOW MANY
PHONEMES ARE
THERE IN THE
ENGLISH
LANGUAGE?

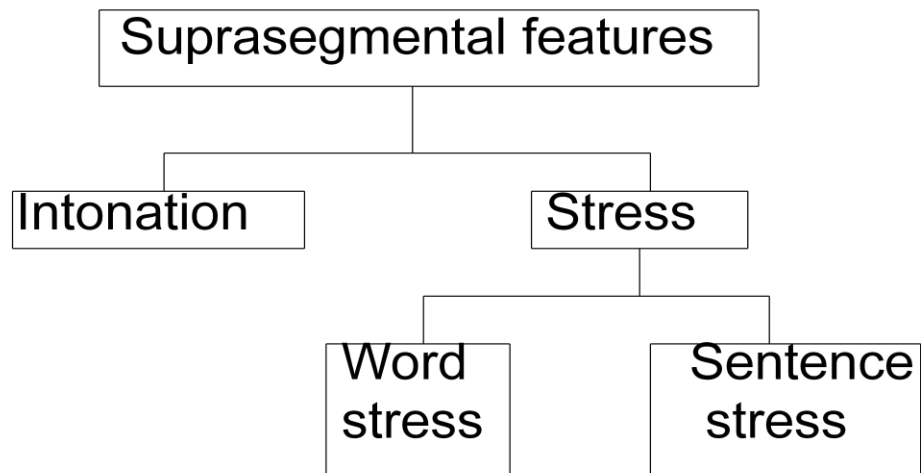
Approx. 40, depending on the dialect.

Approx. 40, depending on the dialect.

Features of Pronunciation



Features of Pronunciation



Phonemes & Letters

Do not necessarily have one to one sound correspondence

- Different letters – one sound
e.g. Letters 'q' 'c' 'k' - /k/ in quick, call, kid
- One letter – different sounds
e.g. 'i' - /ɪ/ in ink, /aɪ/ in hind, /ɜ:/ in irk
- Combination of letters – one sound
e.g. 'wh' /w/ in when, 'ght' /t/ in night,
'gh' /f/ in laugh
- Letters – silent
e.g. bomber, almond, sign

Second Class

SOUNDS OF ENGLISH: Consonants

Consonants

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.

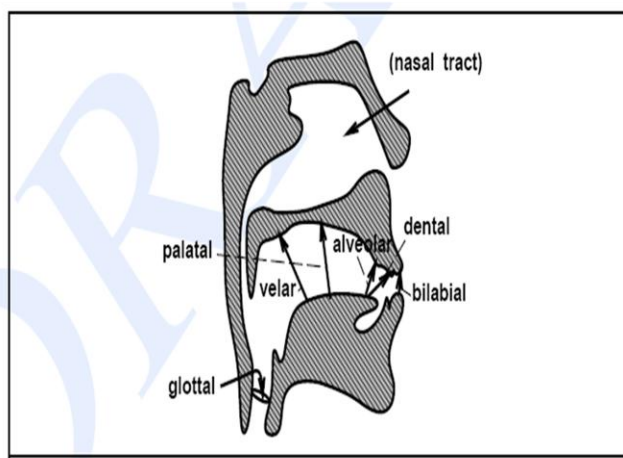
24 consonants in English (including /j/ & /w/)

Place of Articulation

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. It can be anywhere from the lips, upper teeth, gums, or roof of the mouth to the back of the throat.



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

b, p, m

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,

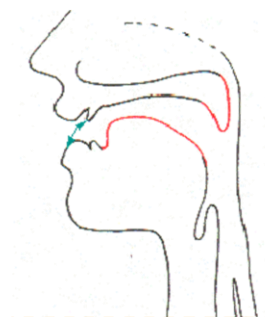
Ex. /m/ my /p/ pen /b/ book



Note: The lower lip moves to the upper lip.

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.
 - produced by constriction between lower lip and upper teeth
 - in English, all labio-dental phonemes are fricatives
- EX: /f/ fan, phone /v/ view, vision



Labio-dental

f, v

3. Dental (/θ/, /ð/):

- **Dental:** Sounds that are made by placing the tongue against the teeth are dentals. The main dentals in English are the [θ] of *thing* or the [ð] 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



Interdental

θ, ð

- Ex: /θ/ teeth, thin → the tip of the tongue touches the upper teeth.
 - /ð/ 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 **coronal** 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



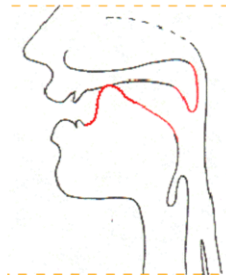
Alveolar

d, t, s, z, n

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



Palatal

š, ž

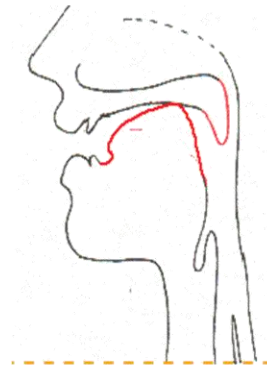
6. Palatal (/y/):

- 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
- “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/):

- **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 [ŋ] (*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

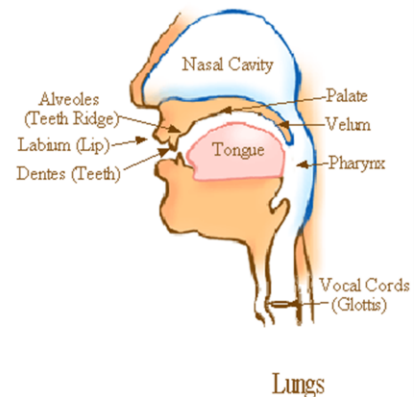


Velar

g, k, ŋ

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 Ha'ka'aina.
- /h/ is the nominal glottal phoneme in English; in reality, the tongue can be in any vowel-like position
- the primary cue for /h/ is formant structure without voicing, an energy dip, and/or an increase in aspiration noise in higher frequencies.



Place of articulation (active)

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*)
2. Various parts of the front of the tongue:

The tip of the tongue

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 /, / θ /, / s /, / ʃ /, / h /

Voiced: / v /, / ð /, / z /, / ʒ /

3. **Affricates**: total closure of speech organs and air is released with friction

Voiceless: / tʃ / Voiced: / dʒ /

church

judge

4. Nasals

Sounds are produced when air flow through the mouth is completely blocked and released through the nose.

Voiced : / m /, / n /, / ŋ /

There are no voiceless nasals.

5. LIQUIDS

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

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

		Place of Articulation															
Manner 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								ɭ								
	Glide		ɰ	w									j				
State of the Glottis																	
Voiceless									Voiced								

PHONEMES

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'.

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.g.s.: mat met ray lay

/mæt/ /met/ /rei/ /lei/

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

E.g.s.: sue, shoe, chew bib, bit bid big

/su:/ /ʃu:/ /tʃu:/ /bi/ /bit/ /bid/ /big/

ALLOPHONES

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 /p^hɪt/ with /p^h/ indicating aspiration. What about 'tap'?

Allophones occur only in certain positions within a word.

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

Examples:

'either' - /aɪðə/ or /i:ðə/

'ed' endings of the past tense

'tomato' - /təma:təʊ/ or /təməltəʊ/

Third Class

Exercise

CONSONANT DESCRIPTION PRACTICE

Describe the following consonants.

[s]

[d]

[ʒ]

[ʈ]

[m]

[w]

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

Give the consonant that the following descriptions correspond to.

voiced velar nasal

voiceless postalveolar affricate

voiced bilabial stop

voiceless velar stop

voiced alveolar fricative

voiced palatal glide

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

Say whether the following consonants are voiced or voiceless.

[z], [T], [b], [p], [D], [s].

[f], [v], [t], [d], [k], [g], [S] (this is the symbol for the sh of ship)

3. The following pairs of words are distinguished in pronunciation partly or solely

according to whether they contain a voiced (vd) or a voiceless (vl) consonant. Say

which is the crucial consonant in each case, and specify its voicing status.

pin, bin

fail, veil

toll, dole

gin, chin

zoo, sue

wreath, wreathe ("in smiles")

either, ether (a kind of gas)

Aleutian, allusion.

4. Changing the voicing of a single consonant in each of the following results in a different word. Which consonant and which word? (Sometimes there's more than one possibility. Concentrate on the pronunciation, not on the spelling.)

seal
razor
ice
scarce
ankle
dug

bicker

lunge
thigh
Confucian

Do you Remember the Vocal Tract?

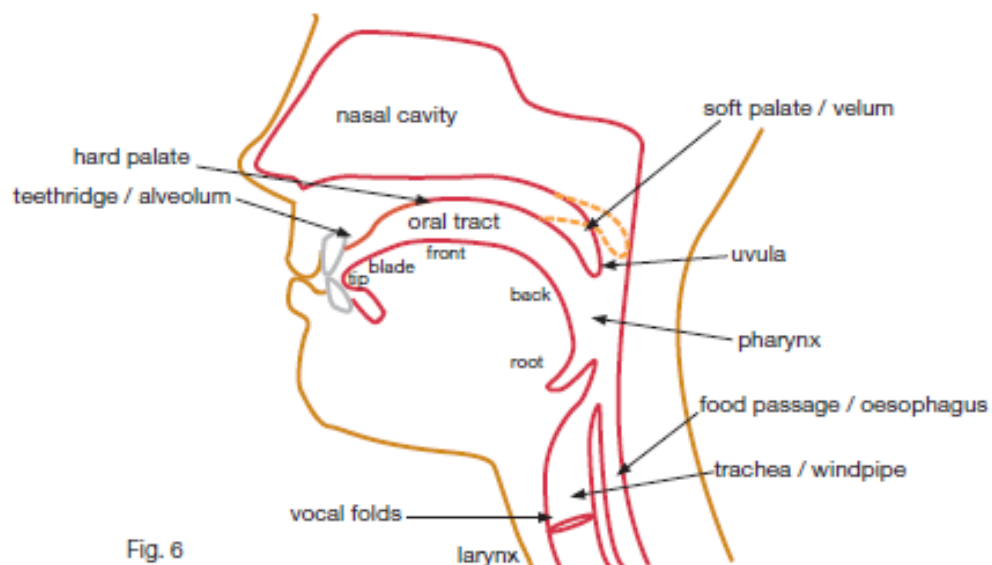
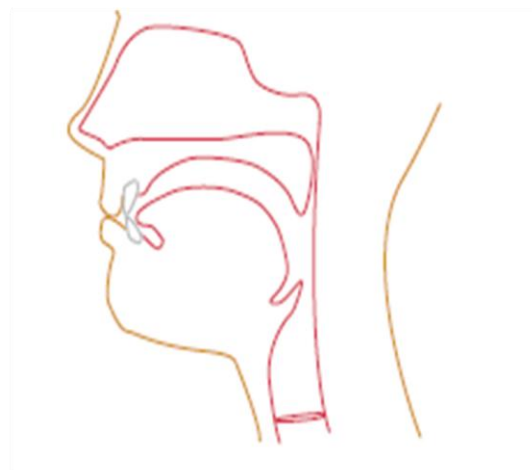


Fig. 6

Exercises

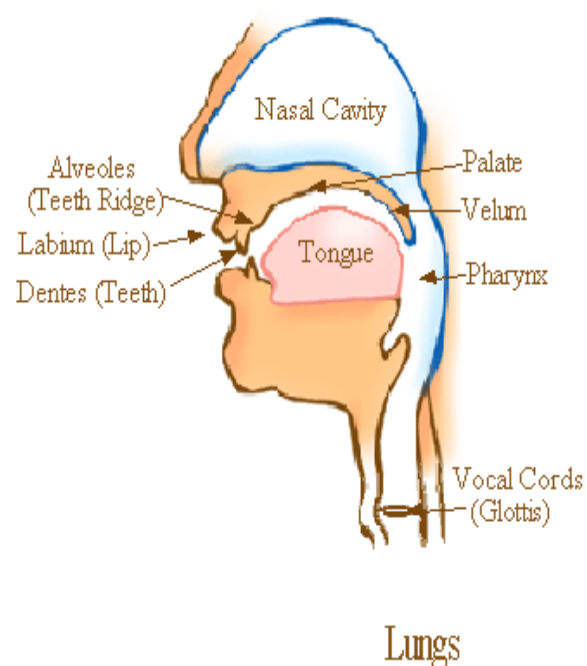
5. Show where the following are situated on this diagram of the upper vocal tract:

1. blade of tongue, 2. front of tongue, 3. velum, 4. pharynx, 5. larynx, uvula, 7. alveolum, 8. root of tongue.



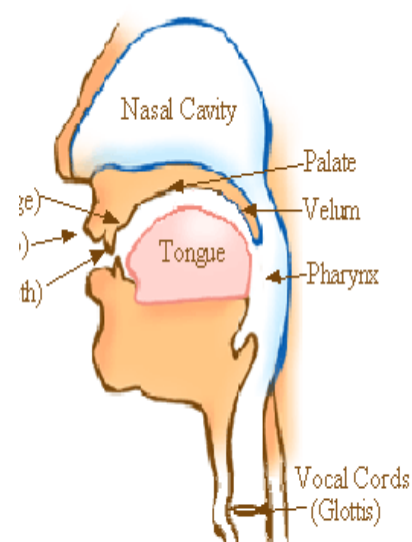
Which of the following parts of the vocal tract are moveable?

lips, tongue, alveolum, pharynx, velum, uvula, nasal cavity.



Say whether the following are TRUE or FALSE. If false, say what the correct statement should be.

- (a) *The pharynx is a cartilaginous structure attached to the trachea.*
- (b) *The alveolum serves to open and close the entrance to the nasal cavity.*
- (c) *The lower front teeth are not involved in speech.*
- (d) *The uvula is the extreme tip of the soft palate.*
- (e) *Larynx is an alternative name for the teethridge.*



Lungs

Give the technical names for the following:

wind-pipe, voice-box, space between the vocal cords, food-pipe, soft palate, teethridge, cavity at the back of the throat.

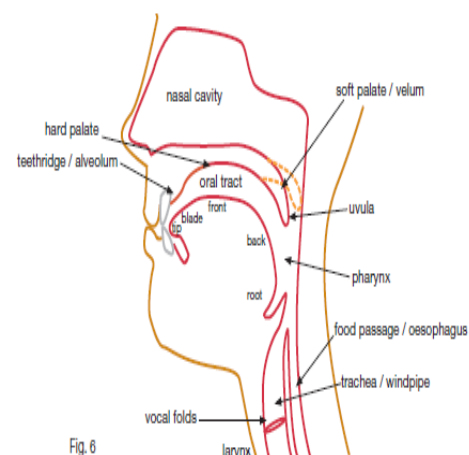


Fig. 6

Resisting the temptation to look at the text again, place the following consonants in the appropriate square in Fig. 28 above (say the sound to yourself if in doubt). Voiceless and voiced pairs go next to one another in the same square (voiceless first).

[k, d, p, g, t, b, d, t]

FIG. 28

bilabial	dental	alveolar	velar

		Place of Articulation															
		Bilabial		Labio dental		Inter dental		Alveolar		Alveo-palatal		Palatal		Velar		Glottal	
Manner of Articulation	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								ɭ								
	Glide	ɹ	w											j			
State of the Glottis																	
Voiceless									Voiced								

Complete the following characterizations by inserting, in each case, two of the following terms: *voiced*, *voiceless*, *bilabial*, *dental*, *alveolar*, *velar*. N.B. voicing comes before place of articulation in such characterizations.

[b] is a _____ consonant

[k] is a _____ consonant

[d] is a _____ consonant

[t] is a _____ consonant.

Give the IPA consonant symbol corresponding to each of the following characterizations:

voiceless alveolar _____

voiced velar _____

voiced dental _____

voiceless bilabial _____

The consonants in each of the following pairs are alike in some respects, but different in others. Specify the resemblances and differences. Example: [p] and [b]. Both are bilabial. Both are stops. [p] is voiceless, [b] is voiced.

[z] and [d]

[s] and [d]

[t] and [k]

[v] and [g]

[b] and [β]

[v] and [β]

[b] and [v]

[s] and [ʃ]

70. Insert these affricates in the appropriate places on the following chart: [tʃ], [dʒ], [ʈ], [ɖ].

bilabial	labio-dental	dental	alveolar	post-alveolar	palatal	velar	uvular	pharyngeal	glottal

Fourth Class

Vowels

You'll recall that consonants are grouped according to certain "dimensions": Place of articulation, manner of articulation, etc. Vowels can also be grouped according to the dimensions along which they vary.

The [Language Construction Kit](#) lists these dimensions as Height, Frontness, Roundedness,

Height

How high is the tongue – i.e., how close to the roof of the mouth? This is usually divided into three positions, quite creatively named "High," "Mid," and "Low." :-) Say "Bee" or "You." That is High. Say "Cat" or "Father." That is Low. Say "Say" or "Show." That is Mid.

Frontness

What part of the tongue is involved; that is, what part is raised or lowered? Is it the part close to the front of the mouth, the back, or the center? These are ever-so-cleverly classified as "Front," "Central," and "Back." Front vowels are heard in "Bee," "Snake," and "Cat." Back vowels are heard in "You," "Show," and "Father." English has only two (some would lump them together and say only one) Mid vowels.

Essentially, it's the same sound but is classified as to whether it's used in a stressed or unstressed syllable. For stressed syllables, the Mid vowel is that which you hear in "Shut **U**p." The same sound, in an unstressed syllable, is the famous "Schwa Sound," which all English vowels very sneakily mutate

into whenever you don't bother to put syllable stress on them. It's the sound of the first syllable in "about," for one example.

Roundedness

In pronouncing these vowels, your tongue can't do it all alone; the position of the lips is also a consideration. Compare "See" and "Sue." Both have High vowels; "See" has a Front vowel and "Sue" a back vowel. What else differentiates them? It's the lip-rounding; for "See" you pull the corners of your mouth back tightly while for "Sue" you round them into a nice little "O"

Hint:

All vowels involve free passage of lung air through the upper vocal tract.

(This is what distinguishes them from consonants, for which, as you began to see in the last chapter, there is always some obstruction above the level of the larynx).

The impediment to the airstream for vowels is located at the glottis, not in the supra-glottal tract: the vocal folds are in close enough contact for vibration to occur. The sound wave that this generates is amplified by the resonance of the cavities above the larynx.

This means that vowels are normally voiced: "normally" because voiceless vowels

are a possibility — they can best be thought of as whispered vowels.

Although the

vocal folds aren't actually vibrating for these, there's still sufficient constriction at the

glottis for the airstream to be impeded and for turbulence (i.e. a sound wave) to be

generated — you can feel this constriction if you say a few vowels in as loud a whisper

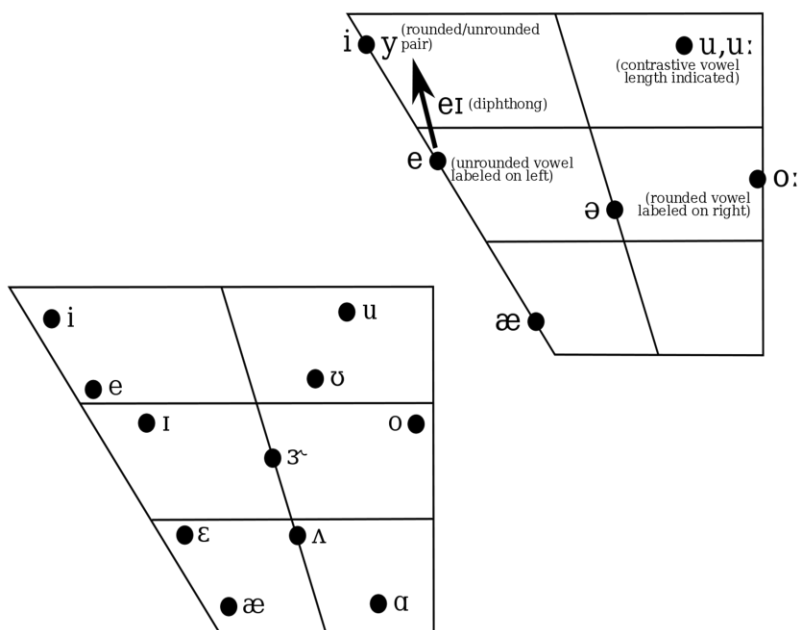
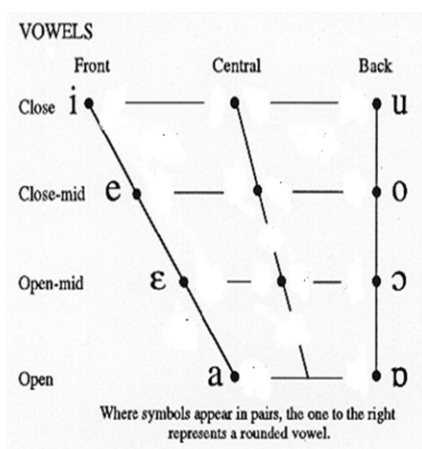
as you can.

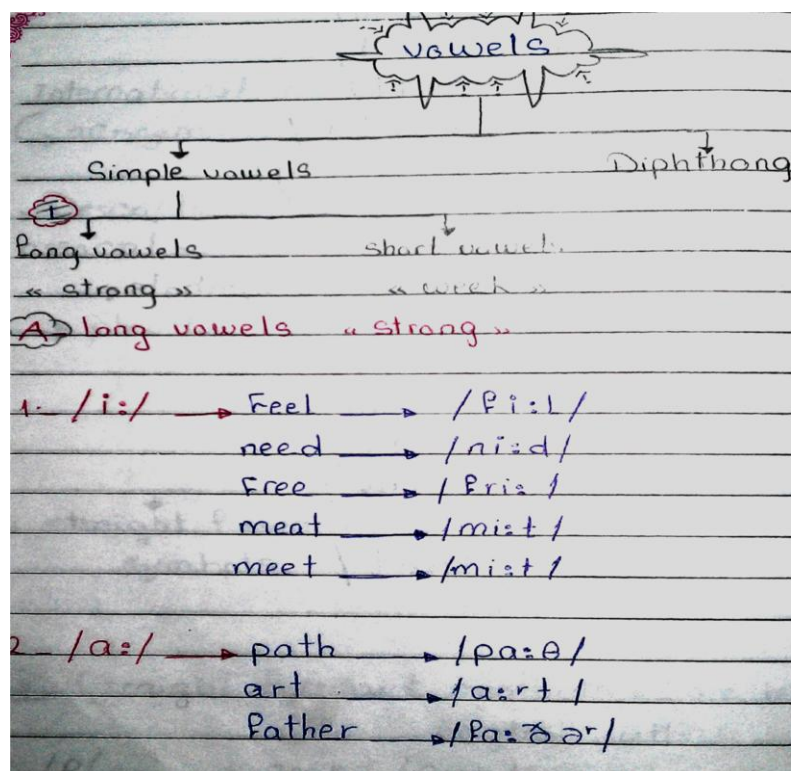
VOWELS

They are sounds in which there is no obstruction to the flow of air as it passes from the larynx to the lips

They are classified on the basis of a close-open and front- back diagram.

Vowel chart





Classifying vowels is in large part a matter of specifying tongue positions. Here is the diagram for *heed* (i-type vowel). The surface of the tongue is high in the mouth — close to the hard palate, but not close enough for the airflow to be impeded, which would turn the vowel into a consonant.

Fig. 7



[i] is said to be a high vowel.

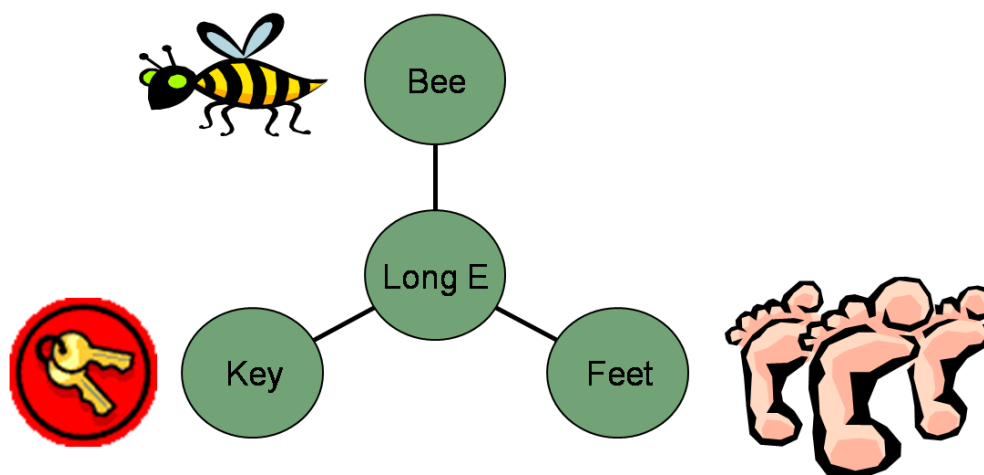
For *had*, the tongue is low in the mouth — almost flat; the mouth is much more open inside than for *heed*.

Fig. 8



[a] is said to be a low vowel.

Long E Sound



3	/ɔ:/	all	→	/ɔ:l/
		Pour	→	/pɔ:/
		walk	→	/wɔ:k/
		bought	→	/bɔ:t/
4	/u:/	refuse	→	/rɛfju:z/
		soup	→	/su:p/
		pool	→	/pu:l/
5	/ɜ:/	girl	→	/gɜ:l/
		bird	→	/bɜ:d/
		earth	→	/ɜ:θ/

Now the [u] of *who'd* is also a high vowel. What makes it different in quality from [i]?

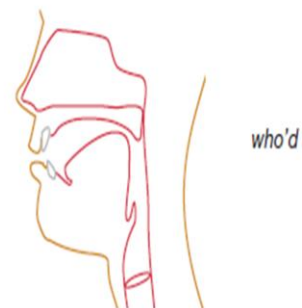


Fig. 9

B. short vowels				
1	/ɪ/	hit	→	/hɪt/
		This	→	/ðɪs/
		exam	→	/ɪgzæm/
2	/e/	nest	→	/nest/
		enter	→	/entə/

Fig. 10

[i] high + front	[u] high + back
[a] low + front	

3	/æ/	cat	→ /kæt/
		hat	→ /hæt/
		and	→ /ænd/
4	/ʌ/	but	→ /bʌt/
		gun	→ /ɡʌn/
		duck	→ /dʌk/

5	/ɒ/	dog	→ /dɒg/
		shop	→ /ʃɒp/
		strong	→ /strɒŋ/
6	/ʊ/	put	→ /pʊt/
		look	→ /lʊk/
		books	→ /bʊks/
		box	→ /bɒks/

7 - /ə/	→	aplay	→	/əpleɪ/
		again	→	/əgeɪn/
		asleep	→	/əslɪːp/
		apartment	→	/əpɑːtmənt/



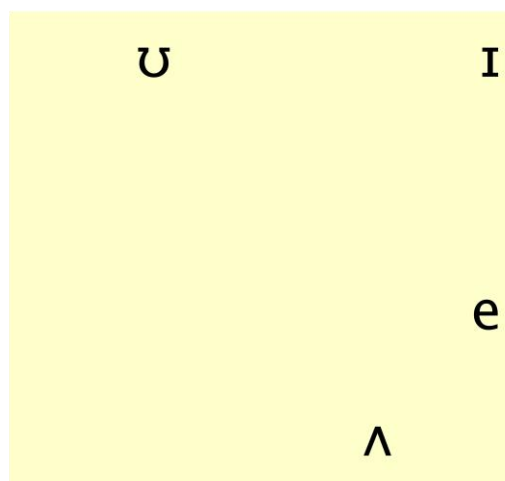
kit



dress



trap



U

I

e

ʌ

ɒ

æ



foot



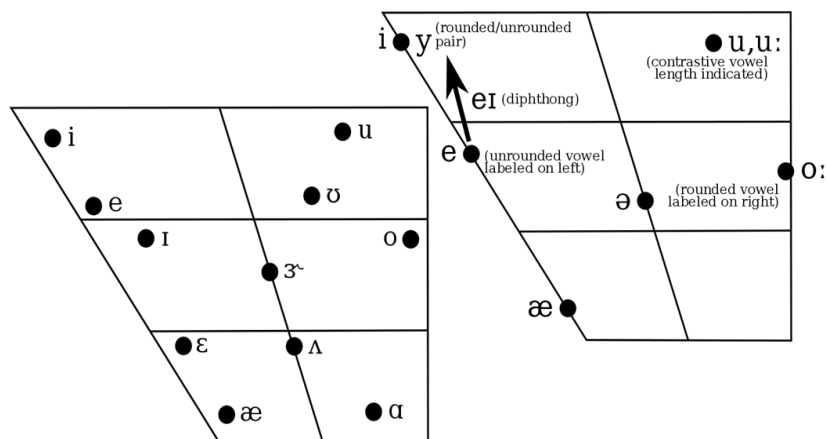
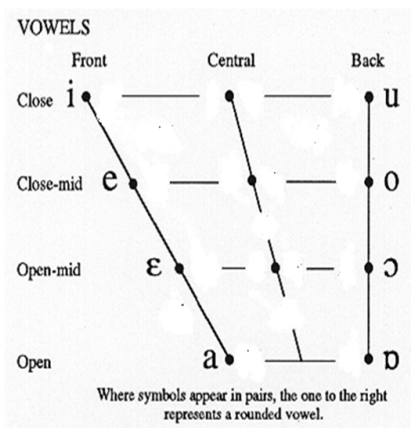
strut



lot

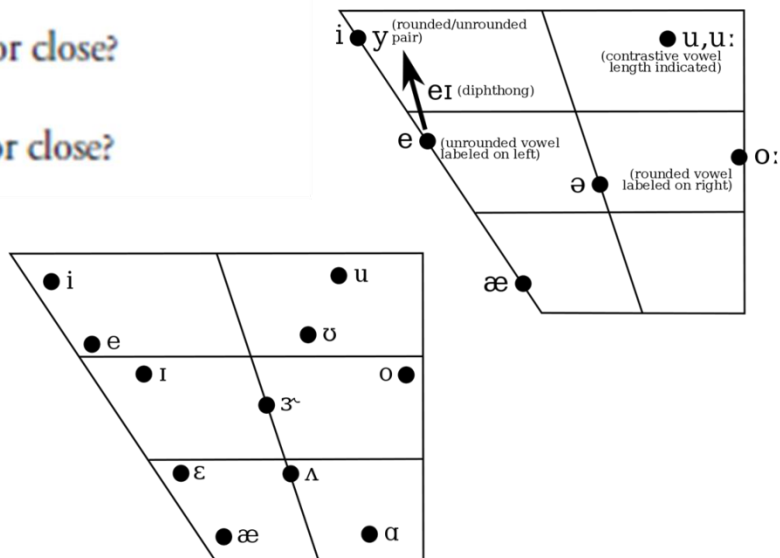
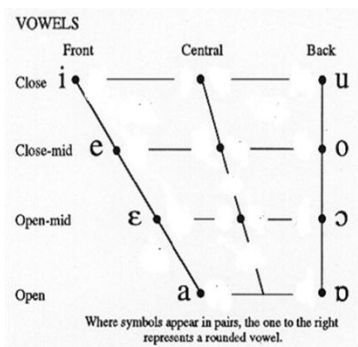
Again without looking at the text, say whether the following statements are true or false. Correct any that are false.

- [a] is a high back vowel.
- [i] is a high front vowel.
- [u] is a low back vowel.
- [a] is a low front vowel.



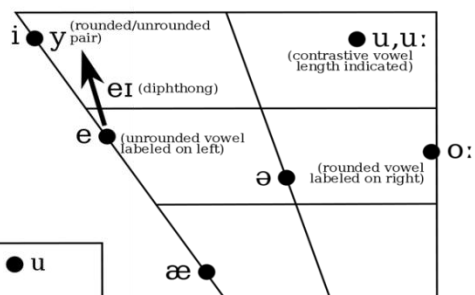
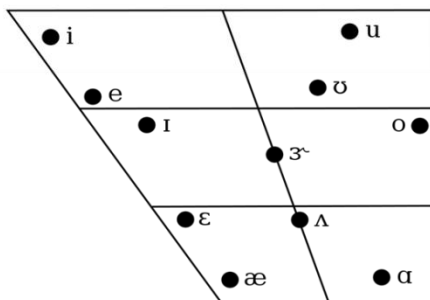
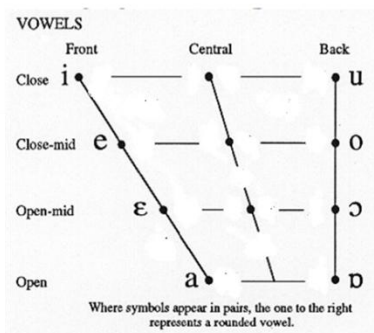
Practise using the alternative terminology:

- Which is [i], open or close?
- Which is [u], open or close?
- Which is [a], open or close?



Match the articulatory terms in the first column with the descriptions in the second column

- a. low "surface of tongue raised towards hard palate"
- b. open "tongue advanced"
- c. front "tongue retracted"
- d. high "narrow oral cavity"



Fifth Class

Phonetics

The Study of the way Humans make, Transmit, and Receive Sounds

Phonology -

the study of sound systems of languages

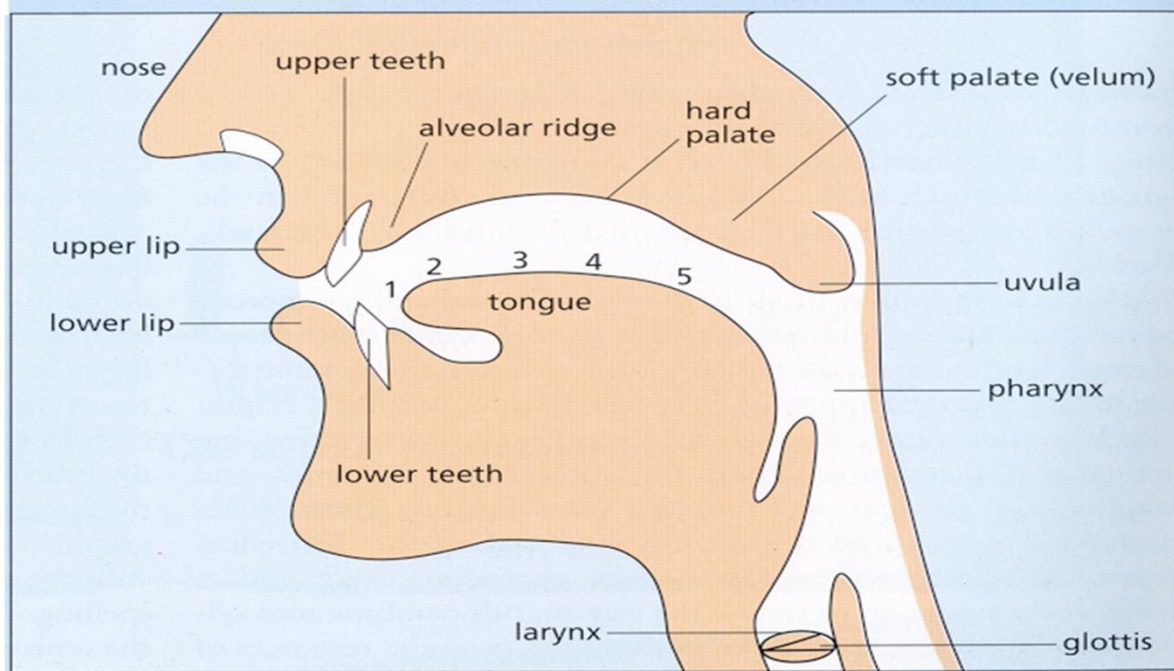
Phoneme –

A phonological segment that can be phonetically predicted by a rule – /b/ in *bit* and /p/ in *pit*.

The Organs of Speech and Articulation

THE ORGANS OF ARTICULATION

The diagram shows the anatomical location of the vocal organs involved in the description of English vowels and consonants. It is not a complete representation of all the vocal organs – the lungs, for example, are not shown.



Languages are made up of vowels and consonants sounds
English consists of 44 sounds (20 vowels and 24 consonants)

Vowels

Most vowel sounds are modified by the shape of the lips.
(rounded / spread / neutral)

Sounds are made by vibrating the vocal cords (voicing)

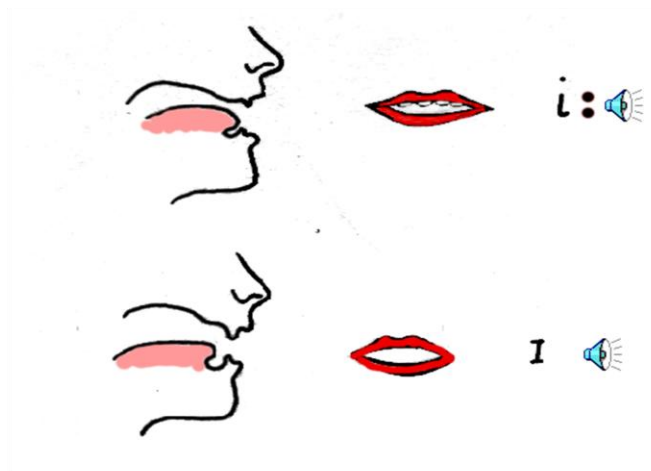
Vowels can be

single sounds – monophthongs or pure vowels

Double sounds - Diphthongs

Triple sounds - Triphthongs

Pure vowels usually come in pairs consisting of long and short sounds

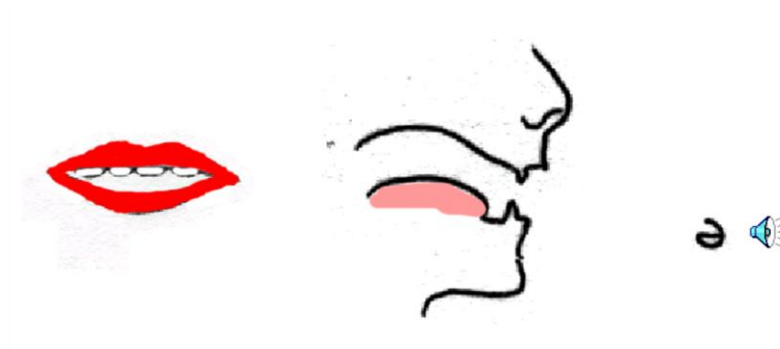


This is found in the word **tea**. The lips are **spread** and the sound is **long**

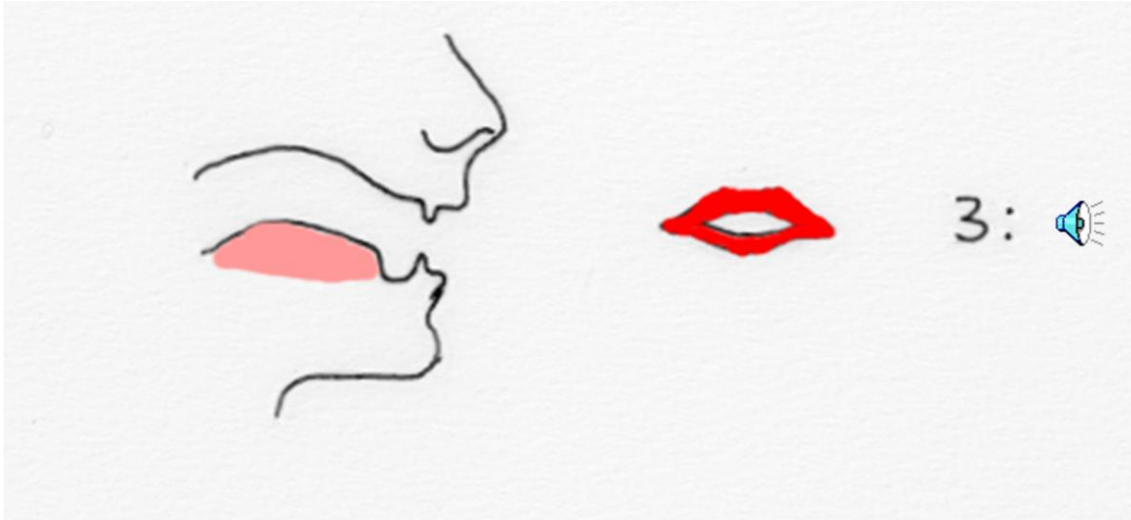
This is found in the word **hip**. The lips are **slightly spread** and the sound is **short**

The tongue tip is raised slightly at the front towards the alveolar. In the longer sound the tongue is raised higher.

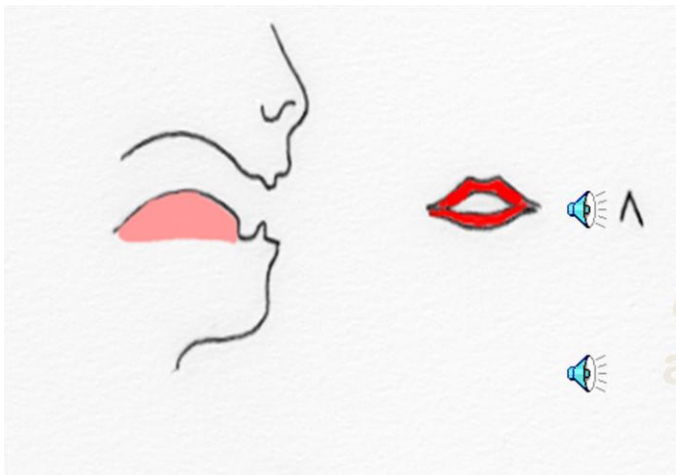
The most common sound in English – the Schwa



This sound is made by relaxing the mouth and keeping your lips in a **neutral** position and making a **short** sound. It is found in words like **paper**, **over**, **about**, and common in weak verbs in spoken English.



This sound is the **long** form of the schwa sound. It is found in words like th*ir*teen and b*ir*d. The mouth is relaxed and lips are **neutral**.



This is the short sound – *u*p, *cu*t & *bu*tter

This is the **long** sound – *car*, *fas*t & *dar*k

The centre of the tongue is raised towards the soft plate, the lips are **neutral**.



u: 

The **long** sound –
you, too & blue



ʊ 

The **short** sound –
Good, would & wood

The lips are **rounded** and the centre and back of the tongue is raised towards the soft plate. For the **longer** sound the tongue is raised higher and the lips are **more rounded**.



ɔ: 

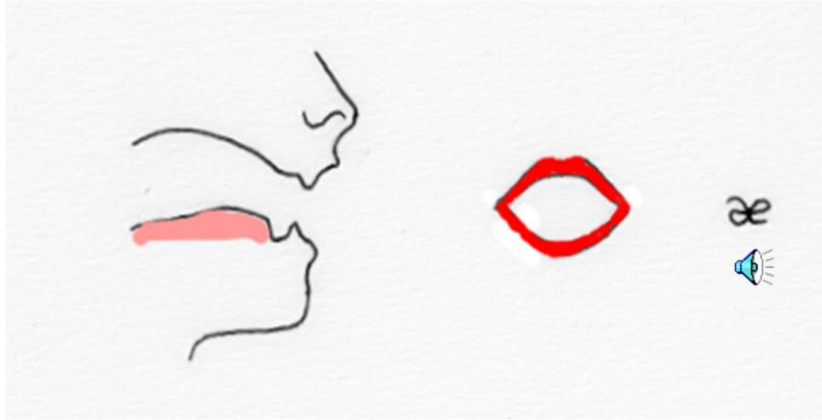
+ D 

Made with **rounded** lips and tongue slightly
raised at the back

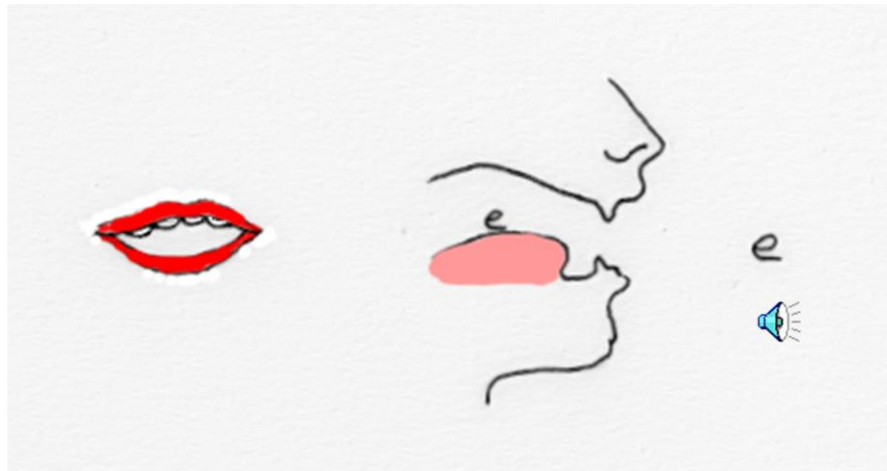
The **long** sound– *door, four & more*

The **short** sound – *hot, clock and what.*

Two of the vowels do not have long sounds



This sound is made with the mouth **spread** wide open. It is found in – *cat*, *man*, *apple* & *ran*



The sound of 'e' is found in – *wet*, *left*, *when* & *tell*. Like the sound for 'a' it is a short sound that has no long version.

The vowel sounds we have just reviewed make up the rest of the diphthongs etc. that come next.

Diphthongs, Triphthongs & Glides

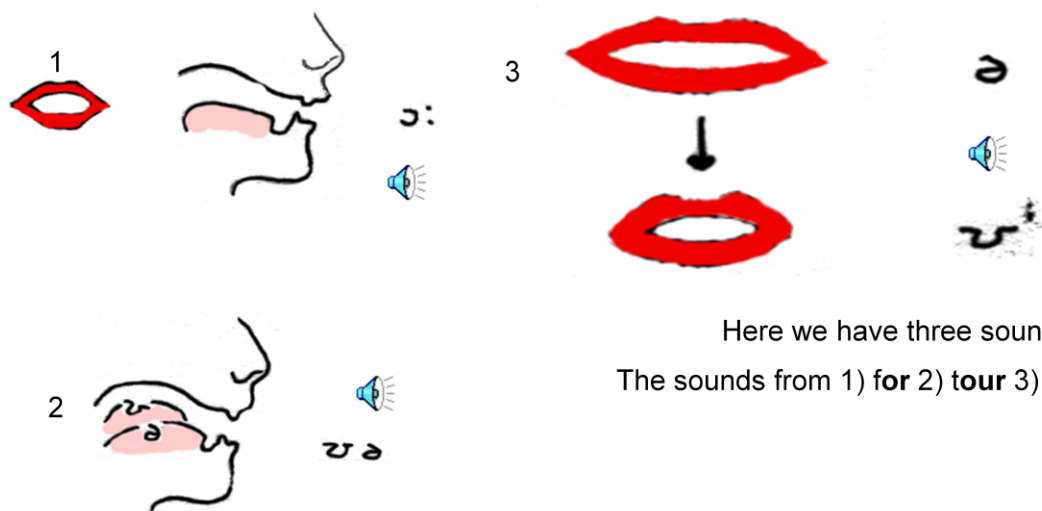
Diphthongs are combinations of two sounds-

English has 8 diphthongs

Triphthongs are combinations of three sounds-

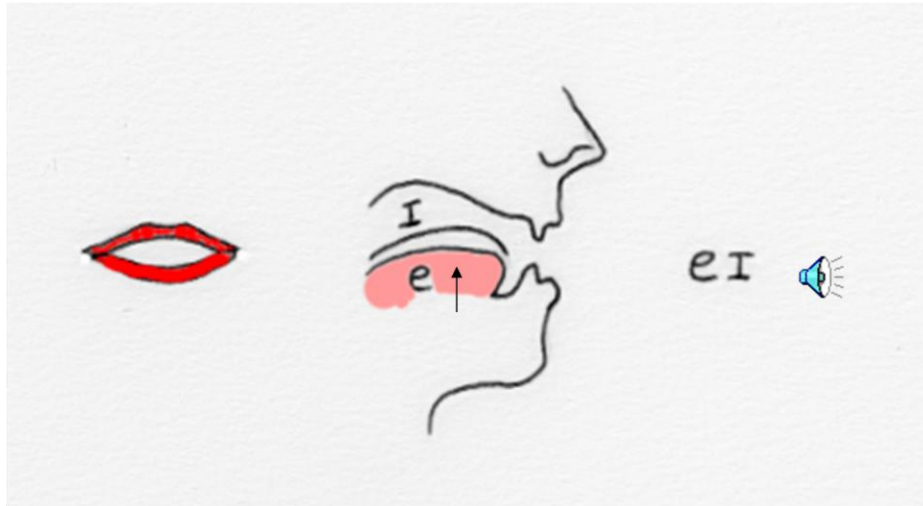
English has 1 triphthong (a diphthong + a schwa sound)

Glides are sounds made when the tongue moves from one position to another.

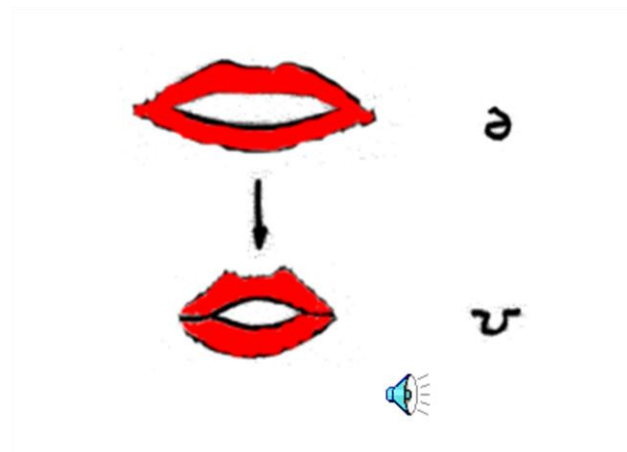


Two of these sounds are diphthongs, combinations of vowels.

Diphthongs are made by sliding the tongue for one position to another - this is known as a glide.



This diphthong is found in – *hay*, *date*,
scrape & *vein*.



Here two more pure vowels are combined to make a sound. This sound is like saying the letter 'O'. It begins with a *er* (schwa) and moves towards the '*oo*' sound found in *good*.

To make / aʊ / add a short / ʊ / after the long / æ / sound.



Words like *cow*, *down*, *ground* and *town* all contain this sound.

(The *a:* is also used to make this diphthong)

Diphthongs are combinations of pure vowels.

a: + ɪ = 'aɪ' - *tie*, *buy*, *height* & *night*



e + ɪ = 'eɪ' - *way*, *paid* & *gate*



ɔ: + ɪ = 'ɔɪ' - *boy*, *coin* & *coy*



e + ə = e ə - *where*, *hair* & *care*



ɪ + ə = ɪ ə - *here*, *hear* & *beer*



Review all 8 sounds and try the exercises on the worksheets

* عند رؤية هذا الرمز الرجاء مراجعة الشرائح والمحاضرات المسجلة للاستماع الى الصوت.