Phonetics/phonology

- **Phonetics**: study of how sounds are produced, transmitted and perceived = parole (de Saussure)/performance (Chomsky):
  1. **Articulatory: how vocal organs are used to produce sounds;**
  2. Acoustic: how air vibrates when sounds are produced;
  3. Auditory: how sounds are perceived ad decodified from the ear to the brain;
- **Phonology**: study of the sound system of a language = langue (Saussure)/competence (Chomsky):
  1. **Segmental: individual speech sounds and how they combine;**
  2. **Suprasegmental (prosody): stress, rhythm and intonation (or pitch)**

The International phonetic alphabet (sounds of English)

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iː see	ɪ his	ʊ put	uː too
e ten	ə ago	ɜː her	ɔː saw
æ hat	ʌ but	ɑː car	ɒ hot

ɪə ear	eɪ say	
ʊə pure	ɔɪ boy	əʊ so
eə air	aɪ buy	aʊ now

p pen	b book	t tea	d day	tʃ chair	dʒ jam	k key	g go
f four	v very	θ thin	ð that	s sun	z zoo	ʃ she	ʒ vision
m man	n no	ŋ sing	h hat	l look	r red	w want	j yes

VOWELS | long sounds | short sounds | DIPTHONGS

CONSONANTS | voiced consonants | unvoiced consonants

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Consonant sounds: classification

- **Consonant**: obstruction of the air-stream in the pharynx or in the vocal tract;
- Consonant sounds can be classified according to the **VPM** label:
- **V**oicing – are vocal cords used? If vocal cords vibrate, we have voiced sounds, vice versa, we have voiceless sounds (e.g. try to say, for a few seconds, /v/ and /f/ with your hand on your throat. In the first case your throat vibrates because /v/ is a voiced sound. In the second case, your throat doesn't vibrate because /f/ is a voiceless sound);
- **P**lace of articulation (13 in total, but only 9 in English) – where the air is obstructed;
- **M**anner of articulation – nature of the air obstruction (how the air is obstructed and then released)

Voicing	Place of articulation	Manner of articulation
Voiced (=sonore); Voiceless (sorde)	Bilabial (p, b, m); Labio-dental (f, v); (Inter)dental (θ, ð); Alveolar (t, d, s, z, n, l); Postalveolar (r); Palato-alveolar (ʃ, ʒ, tʃ, dʒ); Palatal (j); Velar (k, g, ŋ);	Plosive or stop (p, t, k, b, d, g); Fricative(f, v, θ, ð, s, z, ʃ, ʒ, h); Affricate (tʃ, dʒ); Nasal (m, n, ŋ); Lateral or liquid (l); Approximant or glide (r, j, w)

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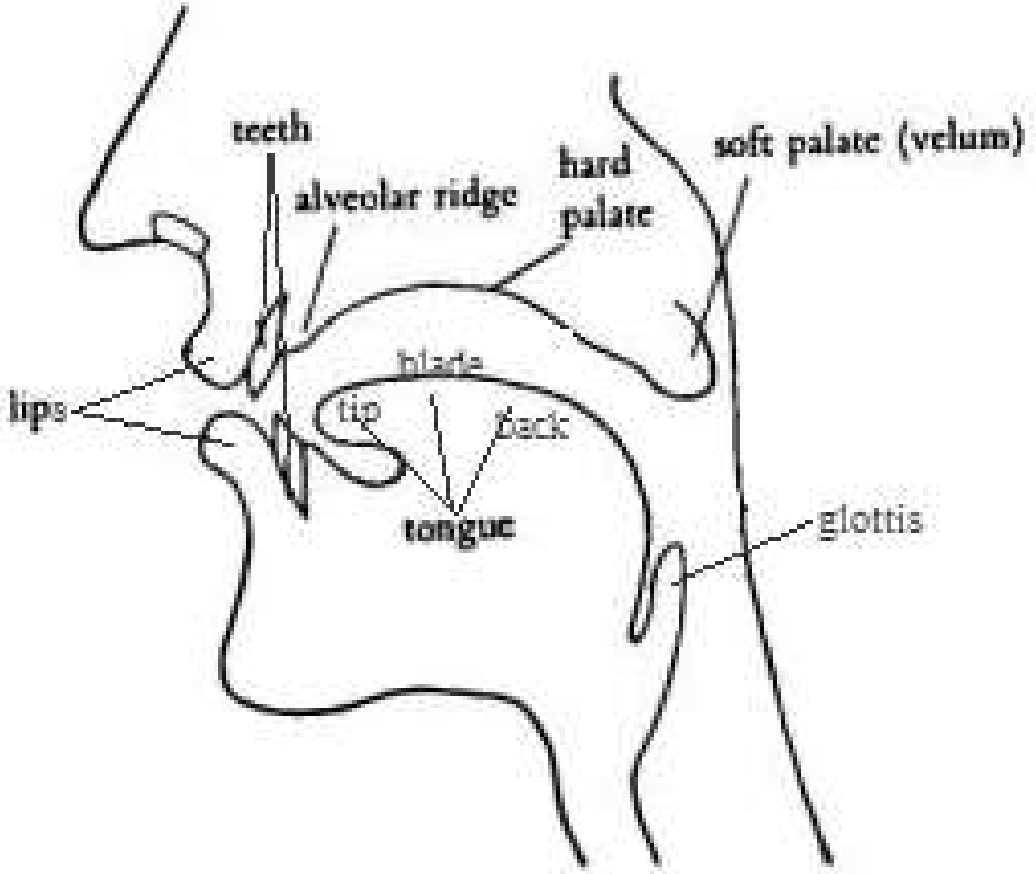
Places of articulation

- **Bilabial**: lips are brought together;
- **Labio-dental**: upper teeth touch;
- **Intradental**: the tip of the tongue is between upper and lower teeth;
- **Alveolar**: tip of the tongue touches the alveolar ridge;
- **Palato-alveolar**: blade of the tongue touches the area between the alveolar ridge and the hard palate;
- **Palatal**: blade of the tongue touches the hard palate;
- **Velar**: back of the tongue touches the soft palate/velum;
- **Glottal**: the air passes through the vocal chords and it is narrowed



Manner of articulation

- **Plosives (or stops)**: Complete closure in the mouth. The air is blocked for a while and then released with a plosion;
- **Fricatives**: Non-complete closure. The obstruction provokes a friction;
- **Affricates**: Combination of plosives and fricatives – initial complete closure and then a release that moves backwards;
- **Nasals**: Complete closure in the mouth but the air goes through the nose;
- **Laterals**: The ait goes through the sides of the tongue;
- **Approximants**: the tongue doesn't touch anywhere, it approaches the roof of the mouth but there's no obstruction

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The consonant table

21 graphemes vs. 24 consonant sounds

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								l ɹ								
Glide	ʍ	w										j				

State of the Glottis

Voiceless=**Fortis** | Voiced=**Lenis**

Consonants

p	pen	/pen/	s	so	/səʊ/
b	bad	/bæd/	z	zoo	/zu:/
t	tea	/ti:/	ʃ	shoe	/ʃu:/
d	did	/dɪd/	ʒ	vision	/ˈvɪʒn/
k	cat	/kæt/	h	hat	/hæt/
g	got	/gɒt/	m	man	/mæn/
tʃ	chain	/tʃeɪn/	n	no	/nəʊ/
dʒ	jam	/dʒæm/	ŋ	sing	/sɪŋ/
f	fall	/fɔ:l/	l	leg	/leg/
v	van	/væn/	r	red	/red/
θ	thin	/θɪn/	j	yes	/jes/
ð	this	/ðɪs/	w	wet	/wet/

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The vowel chart

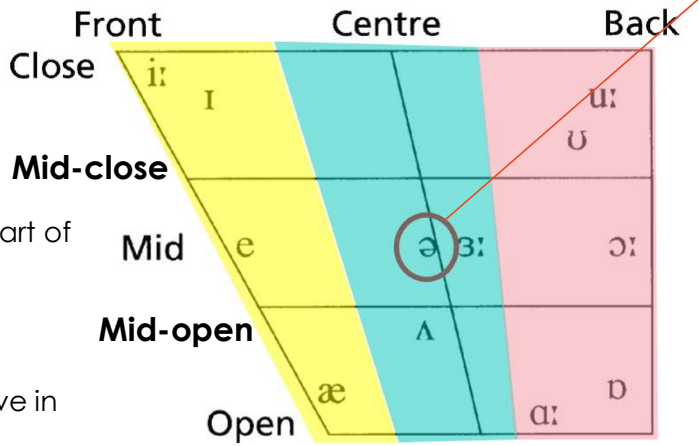
https://www.tolearnenglish.com/exercises/exercise-english-2/exercise-english-20336.php

https://agendaweb.org/phonetic-intermediate

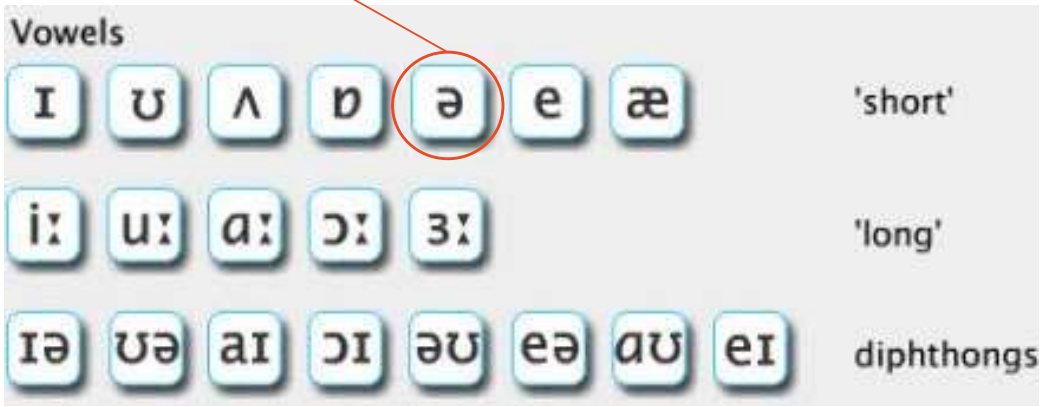
5 graphemes (a, e, i, o ,u, + 2 semi-vowels: w, y) vs. 20 vowel sounds (12 monophthongs [7 short and 5 long] + 8 diphthongs)

1. Closeness/openness (tongue height) – distance between the tongue and the palate:
   - Close,
   - Mid-close
   - In the middle,
   - Mid-open
   - Open
2. Frontness/backness – which part of the tongue is raised highest?
   - front,
   - centre,
   - Back
3. Shape of the lips (not distinctive in English)

Vowel quadrilateral (by D. Jones)



The **shwa** sound is the sound that occurs in unstressed syllables in English (that's the reason why it is the most widespread sound in the English language). Some linguists call it '**neutral vowel**' or '**reduced vowel**'.



https://www.youtube.com/watch?v=72M770xTvaU

https://www.youtube.com/watch?v=d1HZPx8DuDw

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Rhoticity: rhotic vs. non-rhotic accents

Rhotic accents	Non-rhotic accents
CanEng	AfEng
IndEng	AusEng
IrEng	EngEng
South-western EngEng	NZEng
ScotEng	SAfEng
Northern USEng (apart from Boston area of New England and New York)	Southern USEng
	WEng
	WInEng in the Caribbean

- Distinction coined by Wells;
- Rhotic (r-pronouncing/r-full) accents: /r/ sound is pronunced whenever is ortographically present (e.g. American English arm → /a:rm/);
- Non-rhotic (non-r-pronouncing/r-less) accents: /r/ is pronounced only in two positions:

1. Syllable-initial (e.g. Rome);
2. Intervocalically (e.g. Area);

e.g. So, In British English 'arm' is pronounced /a:m/ becasue the letter 'r' is neither at the beginning of the syllable, nor between two vowel sounds