

The Building Blocks of Speech

(how to use the IPA!)



You've likely seen IPA in dictionary entries.

For example, you may recognize the upside down ə, which is an IPA symbol that refers to the second vowel sound you hear in the word 'dictionary.'

orally adv. [La
TATOR]
diction /'dɪkʃ(ə)n/
ciation in speakin
dictio from *dico* *dic*
dictionary /'dɪkʃ
book listing (usu.
explaining the wo
giving correspond
language. 2 refere
the terms of a

Getting you from Point A to Point B

Understand the purpose of the IPA...



Learn how to use it!



MANGO

Imagine you're a phonetician.

Your task is to come up with a way to categorize *all* human speech sounds into just 2 main categories. What would they be?



**After some thought,
you'd likely decide on
consonants & vowels.**

Which, as fate would
have it, is *exactly* how
the IPA is organized.

The building blocks of human speech sounds

Consonants

Speech sounds that are produced *through contact* between vocal articulators (tongue, teeth, lips).

EXAMPLES: **t - s - p - b - k**

Vowels

Speech sounds that are produced by *avoiding contact* between vocal articulators.

EXAMPLES: **a - e - i - o - u**

There are *many* symbols to learn within the IPA.

The Consonant Chart



The Vowel Map



THE INTERNATIONAL PHONETIC ALPHABET (revised to 2015)
© 2015 IPA

CONSONANTS (PULMONIC)																					
	Labiodental		Dental	Alveolar	Postalveolar	Retroflex	Palatal		Velar	Uvular		Pharyngeal	Glottal								
Plosive	p	b		t	d		ʈ	ɕ	ç	k	g	q	ʁ								
Nasal		m	ɱ		n		ɳ	ɲ		ŋ		ɴ									
Trill		ʙ			r							ʀ									
Tap or Flap			ɾ		ɽ																
Fricative	ɸ	β	f	v	θ	ð	s	z	ʃ	ʒ	x	χ	ħ	ʕ	h	ɦ	ʕ	h	ʕ	h	ɦ
Lateral fricative							ɬ	ɮ													
Approximant			ʋ		ɹ		ɻ	ɹ̥	ɹ̥	ɹ̥	ɹ̥	ɹ̥									
Lateral approximant					l		ɭ	ɮ													

Symbols to the right of the table are not used in the IPA because voiceless articulations were judged impossible.

CONSONANTS (NON-PULMONIC)			VOWELS									
	Clicks	Voiced implosives	Ejectives	Close	Close-mid	Open-mid	Open	Front	Central	Back	High	Low
Labial	ɸ	ɓ	ʼ	i	e	ɛ	æ	ɪ	ɨ	ɯ	ɨ	ɘ
Dental		ɗ	ɗʼ	ɪ	ɛ	ɛ	æ	ɪ	ɨ	ɯ	ɨ	ɘ
Postalveolar		ɟ	ɟʼ	ɪ	ɛ	ɛ	æ	ɪ	ɨ	ɯ	ɨ	ɘ

OTHER SYMBOLS

- ʌ Voiceless labial-velar fricative
- ɕ Z Alveolo-palatal fricative
- ʋ Voiced labial-velar approximant
- ɻ Voiced alveolar lateral flap
- ɹ̥ Voiced labial-palatal approximant
- ɻ Simultaneous ʃ and x
- ɦ Voiceless epiglottal fricative
- ʕ Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary.
- ʕ Voiced epiglottal fricative
- ʕ Epiglottal plosive

DIACRITICS Some diacritics may be placed above a symbol with a descender, e.g. ɲ̥

	Voiceless	Breathily voiced	Dental	Voiced	Creaky voiced	Apical	Aspirated	Lingualized	Laminar	More rounded	Labialized	Nasalized	Less rounded	Palatalized	Nasal release	Advanced	Velarized	Lateral release	Retracted	Pharyngealized	No audible release	Centralized	Velarized or pharyngealized	Mid-centralized	Raised	Lowered	Syllabic	Non-syllabic	Rhoticity
	ɲ̥	ɲ̬	ɳ̪	ɳ̺	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰	ɳ̺̰

TONES AND WORD ACCENTS

- ˈ Primary stress
- ˌ Secondary stress
- ː Long
- ˑ Half-long
- ˑ Extra-short
- ˑ Minor (foot) group
- ˑ Major (intonation) group
- ˑ Syllable break
- ˑ Linking (absence of a break)

LEVEL

- ˥ Extra high
- ˥ High
- ˥ Mid
- ˥ Low
- ˥ Extra low
- ˥ Downstep
- ˥ Upstep

CONTOUR

- ˥ or ˩ Rising
- ˥ or ˩ Falling
- ˥ High rising
- ˥ Low rising
- ˥ Extra rising-falling
- ˥ Global rise
- ˥ Global fall

Typeset by: Doulos SIL (intonaire), Doulos SIL, IPA Kiel, IPA LS Unit (symbols)



But there are only 2 main features that you need to get started.

You've likely seen IPA in dictionary entries.

For example, you may recognize the upside down ə, which is an IPA symbol that refers to the second vowel sound in the word 'dictionary.'

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Now, what is the Consonant Chart?

CONSONANTS (PULMONIC) © 2015 IPA

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			ʀ					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

Simply put, it is a table containing consonants that are organized by columns and rows.

How does the Consonant Chart work?

CONSONANTS (PULMONIC) © 2015 IPA

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
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Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			ɾ					ʀ		
Tap or Flap		ⱱ		ɽ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

The columns indicate a consonant's place of articulation, which is the *place* in your mouth where your *articulators* (i.e. teeth, tongue, lips) need to touch to make that sound.

How does the Consonant Chart work?

CONSONANTS (PULMONIC) © 2015 IPA

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
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Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
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For example, ‘bilabial’ means ‘both lips touching.’

It comes from the prefix ‘bi-’ meaning ‘two’ and the root ‘labial’ meaning ‘lips.’ This column includes sounds like ‘**bat**’ – ‘**mat**’ – ‘**pat**.’

How does the Consonant Chart work?

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	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
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Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			ʀ					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

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A cool tip that you might not realize at first. As you move from left to right along the chart, the place of articulation within the mouth moves from the front to the back. For example, bilabials require touching at the lips (the front) while glottals require touching near the throat (the back).

How does the Consonant Chart work?

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Tap or Flap		ⱱ		ɾ		ɽ					
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The rows indicate a consonant's manner of articulation, which means the *manner* or characteristics of the airflow within your vocal tract. Let's look at a few examples to get a better sense for that that actually means.

How does the Consonant Chart work?

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Let's explore plosives. These are sounds that constrict your airflow completely. In layman's terms - it means your mouth is closed. Plosives include short bursts of sound like 'pie' - 'bye' - 'tie.'

How does the Consonant Chart work?

CONSONANTS (PULMONIC) © 2015 IPA

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Lateral approximant				l		ɭ	ʎ	ʟ			

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Let's explore nasals! These consonants are similar to plosives, in that they don't allow the airstream to leave the mouth. But they're different from plosives in that they release the airstream -- through the nose! Thus, the word *nasal*. Examples include sounds like 'meat' and 'neat.'

How does the Consonant Chart work?

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Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

Let's explore fricatives! Most people would describe these as “hissing” sounds. They can go on for as long as you can keep up your airstream, and they include sounds like ‘fan’ - ‘van’ – ‘sues’ - ‘shoes.’

How does the Consonant Chart work?

CONSONANTS (PULMONIC) © 2015 IPA

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill	ʙ			ʀ					ʀ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

What have we learned so far? The IPA's Consonant Chart is a table, made up of a bunch of consonants. The columns indicate the place of articulation for the sound, and the rows indicate the manner of articulation. But there's one more factor left that we haven't mentioned -- and it has to do with the difference between sounds 'fan' and 'van.'

How does the Consonant Chart work?

CONSONANTS (PULMONIC) © 2015 IPA

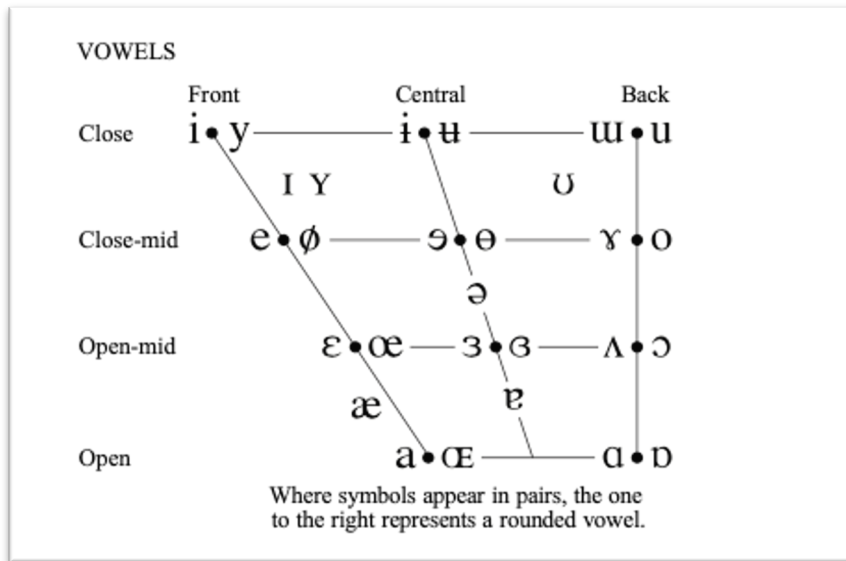
	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
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Trill	ʙ			ɾ					ʀ		
Tap or Flap		ⱱ		ɽ		ɽ					
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Lateral fricative				ɬ ɮ							
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Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

Think about it - what's the difference between 'fan' & 'van'?

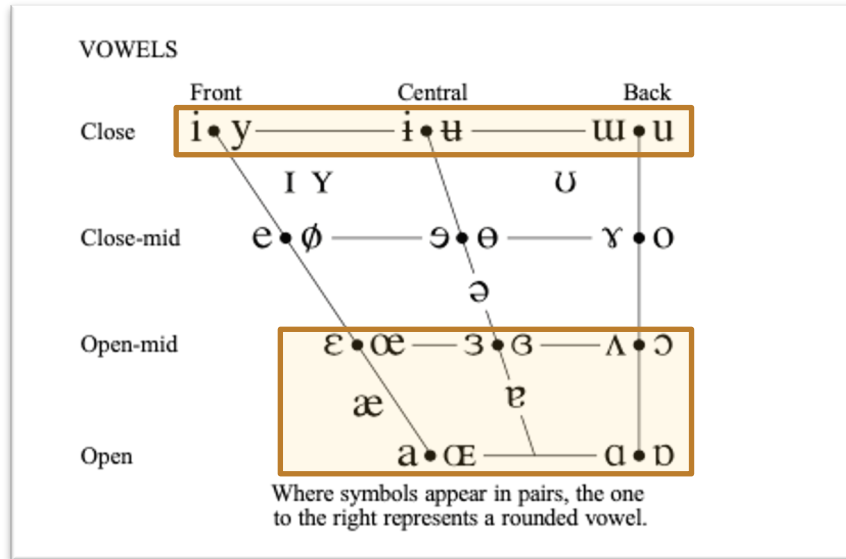
It has everything to do with your vocal cords. For example, to make the [f] sound, your vocal cords don't vibrate. We call this a voiceless consonant. And to make the [v] sound, they *have* to vibrate. We call this a voiced consonant.

Now, how does the Vowel Map work?



The main thing you should know is that the **vowel chart is organized by the location of the tongue in the mouth.**

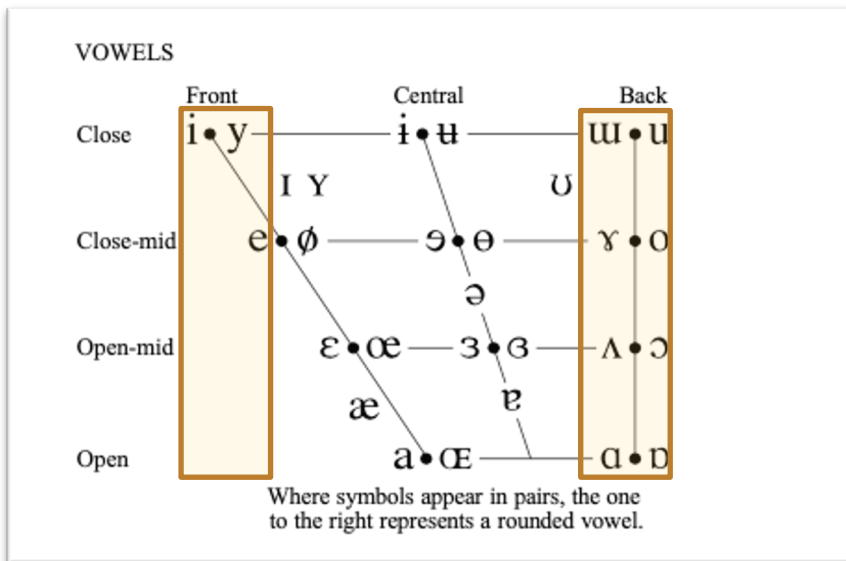
How the Vowel Map works



The higher up a vowel is on the map, the higher your tongue needs to be in your mouth to make that vowel sound.

For example, /i/ and /u/ require the tongue to be higher up in the mouth than, say /ɛ/ and /æ/.

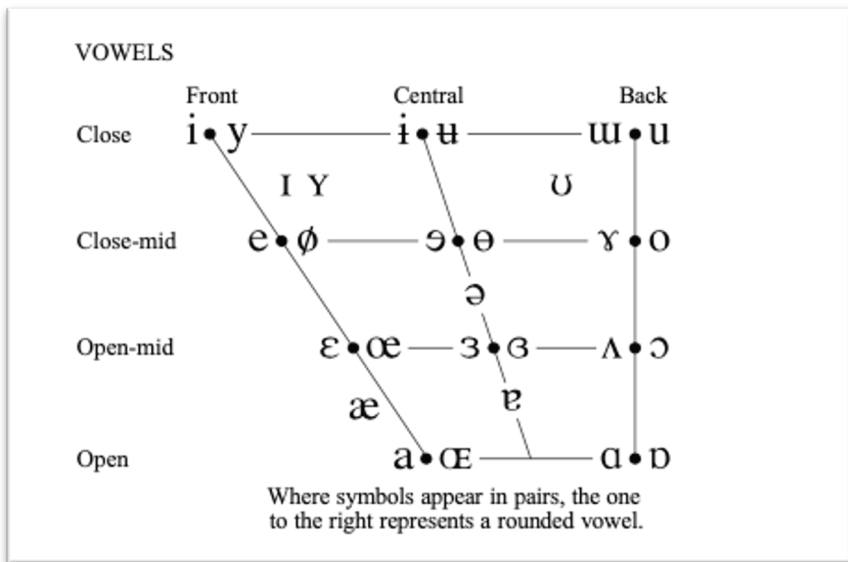
How the Vowel Map works



The further to the right the vowel is on the map, the further back your tongue needs to be in your mouth to produce that vowel sound.

For example, vowels like [i] and [e] require your tongue to be further at the front of your mouth, compared to vowels like [u] and [o].

Fun fact...



Not all languages have the same organization -- or even number -- of vowels within the Vowel Map.

After all, every language has its own way of dividing up the possible sounds of human speech. This goes for consonants as well as vowels.

To review...

1. Consonants and vowels are the building blocks of human speech sounds.
2. While the IPA includes many symbols for you to learn, the 2 most important features to start with are the Consonant Chart and the Vowel Map.
3. Once you know how to use those 2 features of the IPA, you'll be reading and writing basic IPA in no time!

If you'd like some fun (and FREE!) materials...

Check out the goodies
we've curated for you here,
which allow you to explore
more about phonetics!





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