

[ˈɪŋ.ɡlɪʃ fə.ˈnet.ɪks ˈjuːn.ɪtˈfə:]

φων

**The syllable margins  
in the material world**

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
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English Phonetics: Unit 4:

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[lə de.ka.di di flɔ.ʁe.al ɑ̃ dø.sɑ̃.tʁɑ̃t.tʁwa]

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le décadi 10 floréal an CCXXXIII

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le décadi 10 floréal an CCXXXIII

['tju:z.deɪ ðə 'twɛnt.i.'naɪnθ \_ əv \_ 'eɪ.pɹəl 'twɛnt.i.'twɛnt.i.'faɪv]

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['tʃu:z.deɪ ðə 'twent.i.'naɪnθ \_ əv \_ 'eɪ.pʌɪl 'twent.i.'twent.i.'faɪv]

(Tuesday 29 April 2025)

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# Unit 4

## The syllable margins in the material world

restricting the airflow to produce contoids

Slides for the session of

*Phonetics with Listening Practice (British)*

held on

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(29 April 2025)

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{ English Department | LangSciTech }  
Saarland University

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- which is shorthand for either:



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- or:

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- or something in-between.

## Dedication (1)

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Image source: Obituary for John C. (Ian) Catford    <https://www.legacy.com/obituaries/>

John Cunnison (Ian) CATFORD  
26.03.1917–06.10.2009

## Dedication (2)



Image source: Jacket design by David Rowley, from: Richard Dawkins: The Ancestor's Tale. London:

Weidenfeld and Nicolson, 2004. Image flipped L-R for phonetic reasons.

The animal that we (and mice, and elephants, and whales, ...) were before that asteroid gave us our big chance. Note that we had a dorsal surface above and a ventral surface below. In describing the tongue, we use the same terms: dorsal and ventral. In this picture, where is “anterodorsal”? and where is “posterodorsal”?

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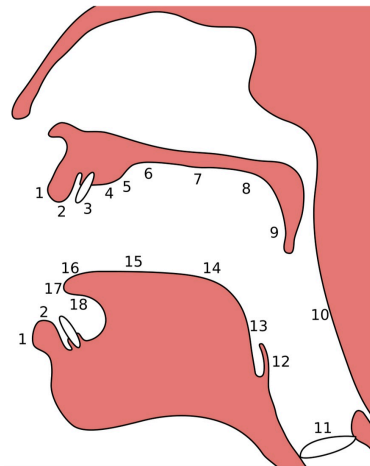


Image: [https://commons.wikimedia.org/wiki/File:Places\\_of\\_articulation.svg](https://commons.wikimedia.org/wiki/File:Places_of_articulation.svg)

Pronounce the adjectives that relate to the places of articulation as indicated.

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- Two possible models of the structure of syllables:

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- Two possible models of the structure of syllables:
  - ① Initial Margin + Nucleus + Final Margin

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- Phonologically: **vowels** (typically occur at Nucleus) vs **consonants** (typically occur at margins).

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- At the levels of **phonetics** and **material reality** the simpler model will do:
  - Initial Margin + Nucleus + Final Margin
- Phonologically: **vowels** (typically occur at Nucleus) vs **consonants** (typically occur at margins).
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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consonant you want

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have mammalian reflexes

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- Two possible models of the structure of syllables:
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φων

The syllable margins  
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Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
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Which English  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
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- / s t r ɛ ŋ θ s /
- [ s̥ t̪ ɹ̥ ɛ ŋ<sup>k</sup> θ s̥ ]

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- Phonetics is the only part of language that interfaces with material reality ...

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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have mammalian reflexes

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do *you* find  
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You can make any  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do *you* find  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
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We are mammals and  
have mammalian reflexes

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

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have mammalian reflexes

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

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  - Only learn as many symbols as you need.
  - You probably already produce way more sounds than you're aware of.

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

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- Why bother to learn to produce all possible consonant sounds?

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes



## Words of warning and encouragement (2)

- Why bother to learn to produce all possible consonant sounds?
  - **Negative stereotypes** that involve (perceived) ethnicity involve (unexamined, misunderstood) sounds: (Chinese; Arabic)

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do *you* find  
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You can make any  
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We are mammals and  
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φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do *you* find  
difficult?

You can make any  
consonant you want

We are mammals and  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do *you* find  
difficult?

You can make any  
consonant you want

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φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
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We are mammals and  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
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We are mammals and  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
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  - **Other first-world Englishes**: (AuE) ['ɹaɪrə] for <writer> *or* <rider>; (Irish) [t̪ʰm] for <thin> vs [tʰm] for <tin>; (Scottish) /r/ realised as [r]; joke-telling(?)

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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consonant you want

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  - **Third-world Englishes** (retroflex [ɳ ʈ ɖ ʂ ʐ ɭ ʎ]) in Indian English).



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φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

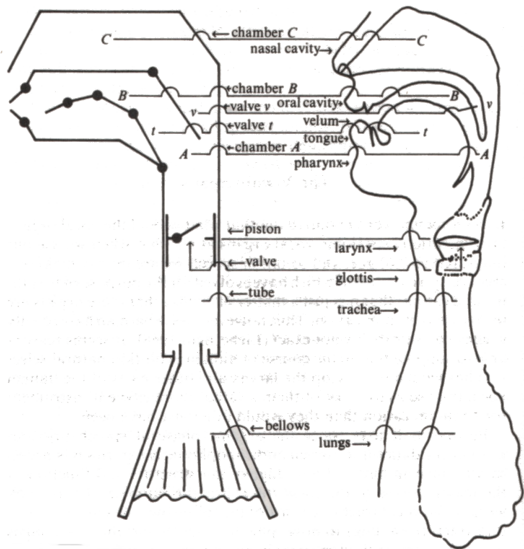
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  - **Allophones**: many phonemes have more than one phonetic realisation, depending on the surrounding sounds and/or the speech style: *thRough*, *veRy*; *aeSthetic*, *calliSthenics*, *StrengthS*
  - **Other first-world Englishes**: (AuE) ['ɹaɪrə] for <writer> *or* <rider>; (Irish) [t̪ʰm] for <thin> vs [tʰm] for <tin>; (Scottish) /r/ realised as [r]; joke-telling(?)
  - **Third-world Englishes** (retroflex [ɳ t̪ɖ ʂ z̪ l̪]) in Indian English).
  - **Non-native beginners** and **speakers with speech defects**: understanding the 'wrong' sounds they're making.

# The human vocal tract (after Catford)



φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

**Figure:** The vocal tract as a machine

(J.C. Catford, *Fundamental Problems of Phonetics*, Bloomington: Indiana University Press, 1977)

## (Pulmonic) Consonants: dimensions of articulation

- Consonants (contoids) can be looked at in terms of their articulation, their acoustics, or their auditory perception

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

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φωv

The syllable margins  
in the material world

Did you do your  
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The syllable in the  
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model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
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φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

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consonants do you find  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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consonant you want

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φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

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  - MANNER of articulation (the “vertical”) dimension

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

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  - MANNER of articulation (the “vertical”) dimension
    - plosive, nasal, trill, tap or flap, fricative, lateral fricative, approximant, lateral approximant (make sure you understand what each of these terms means; note Eckert and Barry’s way of classifying these into “obstruents” and “sonorants” [E&B: 36–39]; and don’t forget to add affricate = plosive+fricative)

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

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- Check out: Glossika Phonics  
<https://www.youtube.com/channel/UCFu0FZ0wFoHK2deKf1daLGA>  
(for the diagrams; some of the pronunciations are strange...)

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

## Which English consonants do *you* find difficult?

p			t			k
b			d			g
					tʃ	
					dʒ	
	f	θ		s	ʃ	h
	v	ð		z	ʒ	
m			n			ŋ
			l		r	
w						j

pit			to			cod
bit			do			god
					chin	
					gin	
	fin	thin		sin	shin	hit
	van	the		zoo	vision	
man			not			sing
			lay		ray	
wet						yet

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do *you* find  
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You can make any  
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## The most important thing to practise:

obstruents	voiceless plosives	p t k
	voiced plosives	b d g
	voiceless affricates	tʃ
	voiced affricates	dʒ
	voiceless fricatives	f θ s ʃ h
	voiced fricatives	v ð z ʒ
sonorants	voiced approximants	w l ɹ j
	voiced nasals	m n ŋ

← turbulent airflow

← smooth airflow

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The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

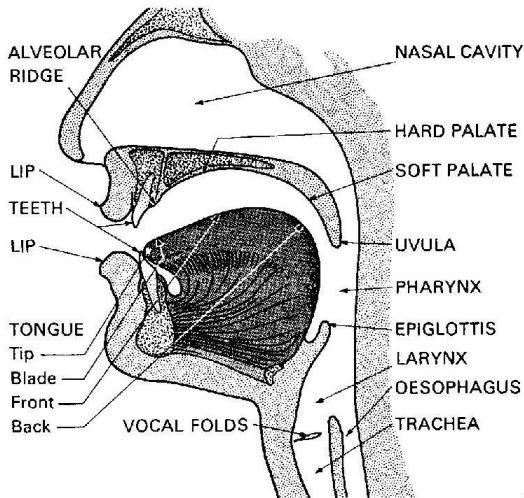
(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
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have mammalian reflexes

## You can make any consonant you want



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The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

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## You can make any consonant you want

### THE INTERNATIONAL PHONETIC ALPHABET (revised to 2005)

CONSONANTS (PULMONIC)

© 2005 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		r						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			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

- Keep your copy of the **IPA chart** handy.
- You have received the **description** of a **consonant** sound to produce (**voicing**, and **place** and **manner** of articulation).
- **Read out** the description aloud.
- **Pronounce** the sound.
- Hint: If the sound seems difficult, move **up and down the column** and **back and forth along the row**, until you have situated it in relation to other possible consonants.

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

## You can make any consonant you want

- Use **voicing** as well as **place** and **manner** of articulation to describe the consonant sounds indicated by the framed graphemes or by the framed IPA symbols:

φ ω ν

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
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have mammalian reflexes

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
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consonants do you find  
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- < th is na ti on has enou gh f i sh to feed itself >

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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- Use **voicing** as well as **place** and **manner** of articulation to describe the consonant sounds indicated by the framed graphemes or by the framed IPA symbols:

- < this nation has enough fish to feed itself >

- [ m m eməɹi ə v ɔ:l wɪmɪn ɹeɪ p t m ɔ:l w ɔ:z ]

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

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consonants do you find  
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  - < this nation has enough fish to feed itself >
  - [ m m eməɪ ə v ɔ:l wɪmɪn ɹeɪ p t m ɔ:l w ɔ:z ]
- Read Eckert and Barry pp 36–39 on manner of articulation and on the voiceless/voiced opposition  
http:  
[//spence.saar.de/phonetics/unit05\\_20251/B\\_\\_Handout/](http://spence.saar.de/phonetics/unit05_20251/B__Handout/)

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

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consonants do you find  
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- < this nation has enough fish to feed itself >

- [ m m eməri ə v ɔ:l wɪmɪn ɹeɪ p t m ɔ:l w ɔ:z ]

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- We'll follow Eckert and Barry in talking about **fortis** consonants (stronger, like **[p]**) and **lenis** consonants (weaker, like **[b]**)

## What are the *other* parts of the tongue doing?

- I was (almost) today years old when I learnt / learned that:

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

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  - The reason why the Chinese don't mind whether you pronounce 北京 <Beijing> as /beɪ.dʒɪŋ/ or /beɪ.ʒɪŋ/ is that both are wrong. Leaving aside the voiced/voiceless problem,

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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have mammalian reflexes

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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    - /beɪ.dʒɪŋ/ gets the MANNER of articulation right: [affricate]
    - /beɪ.ʒɪŋ/ gets the PLACE of articulation (almost) right: [palatoalveolar].
    - Actually, it's [alveolopalatal] – the tip of the tongue is pointing downward and is touching the oral surface of the bottom front teeth at the gum line.

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

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consonants do you find  
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    - For I tried to pronounce 习近平 <Xí Jìnpíng> [ɕɪ tɕɪnʌ.pʰɪŋ] as a slightly fronted variant of [çɪ tɕɪnʌ.pʰɪŋ], and my Chinese teacher Chen Lansun was never completely satisfied; the place of articulation was wrong – (pre-) palatal [ç], not palatoalveolar [ɕ].

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

## What are the *other* parts of the tongue doing?

- I was (almost) today years old when I learnt / learned that:
  - The reason why the Chinese don't mind whether you pronounce 北京 <Beijing> as /beɪ.dʒɪŋ/ or /beɪ.ʒɪŋ/ is that both are wrong. Leaving aside the voiced/voiceless problem,
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    - If I had used the older, English-specific Wade-Giles transliteration system <Hsi Chin-P'ing>, I would have got the initial consonant of the articulation of the family name 习 exactly right.

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
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- And a student in winter semester 2024/2025 I learnt that
  - English [ɹ] is produced with the blade of the tongue placed close to the roof of the mouth just behind the alveolar ridge; but the *sides* of the tongue are **raised**, and are in contact with the oral surface of the **upper back teeth** at the gum line.

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes

# What is this baby hominid doing?



φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

We are mammals and  
have mammalian reflexes



# We are mammals and have mammalian reflexes

- One of the first things a mammal does ...

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
consonant you want

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have mammalian reflexes

# We are mammals and have mammalian reflexes

- One of the first things a mammal does ...
- ... after trying out its lungs ...

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do *you* find  
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# We are mammals and have mammalian reflexes

- One of the first things a mammal does ...
- ... after trying out its lungs ...
- ... is ...

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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# We are mammals and have mammalian reflexes

- One of the first things a mammal does ...
- ... after trying out its lungs ...
- ... is ...
- ... to suck!

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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- (If it doesn't, it dies.)

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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- For / u / the oral cavity is long and thin, the lips are rounded, the back of the tongue is up, and the front of the tongue is down

φωv

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

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have mammalian reflexes

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φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
difficult?

You can make any  
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have mammalian reflexes

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- 'Neither / u / nor / i /' is / ə /.
- What is 'both / u / and / i /'?

φων

The syllable margins  
in the material world

Did you do your  
homework?

The syllable in the  
material world: which  
model?

Words of warning and  
encouragement

How we make sounds

(Pulmonic) Consonants:  
dimensions of  
articulation

Which English  
consonants do you find  
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consonant you want

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have mammalian reflexes