

Consonants of English. You should get familiar with these (not memorize) so you have a general idea of where and how consonants are produced.

letter	example	place of articulation	manner of articulation	voicing
b	Billy	labial	stop	y
p	part	labial	stop	
m	man	labial	stop	y
w	went	labial	stop	y
v	very	labial-dental	fricative	y
f	five	labio-dental	fricative	
th-voiced	that	interdental	stop	y
th-not voiced	think	interdental	stop	
d	Doris	alveolar ridge	stop	y
t	ten	alveolar ridge	stop	
n	next	alveolar ridge	stop	y
l	let	alveolar ridge or velar	stop	
s	send, city	alveolar ridge	fricative	
z	zoo, rose, knows	alveolar ridge	fricative	y
r	rest	alveolar ridge		y
r	riNG	alveolar ridge	stop	y
sh	SHip	palatal	fricative	
ch	children	palatal	affricate	
*dz-v	pleaSure, viSion	palatal	fricative	y
*dz	Jury, eDGe, aGe	palatal	affricate	
y	you	palatal		
g	gold	velar	stop	
k	cold	velar	stop	
h	home	velar	fricative	
hw	when	velar		

Please note that of the sounds above, these stops are articulated (have a puff of air):

p, t, k

The corresponding sounds:

b, d, g

are not articulated.

Terms: (McArthur's unscientific definitions)

Consonants momentarily obstruct the air flow. There are three ways of doing this: stops, fricatives, and affricates. A stop completely stops the air. A fricative restricts the air flow but never stops it. An affricate is a stop + a fricative, so first stops, then restricts. The examples below should make you aware of each of these types of sounds. Stops, fricatives, and affricates all refer to the *manner of articulation*.

The place of articulation is just that, where in the mouth the sound is made. So bilabials on the two lips, alveolars above the top teeth, velars in the back of the mouth.

Please note that letters are just signs, and the English alphabet does not always faithfully represent the sounds of English. For example “f” can be represented by “f”, “ph;” and “s” can be pronounced “z,” like in “spends.” So, for some sounds like the mid-consonant in “measures” or the sound of “j” in “edge,” many sound phonetic systems will use symbols such as “dz.”

Again, the idea behind the chart is to get a general idea of consonants so you can make reference to consonants in Chinese.

Consonants of Mandarin

Not everybody in this class has studied Mandarin, so we will not be detailed about Mandarin pronunciation, but you do need to know “the big picture.”

Mandarin uses characters, but the sounds of Mandarin are also written in “Pinyin,” which is the official Romanization system of Mandarin in the People’s Republic of China. The sounds of Mandarin are very systematic and can easily be written as letters in a chart:

b, p, m, f
d, t, n, l
g, k, h
ji, qi, xi
zhi, chi, shi, ri
zi, ci, si

Of these consonants, the first three rows are similar to the sounds of English. The last three rows of the last three rows, the sounds ji, qi, xi are similar to English, “dz, ch, sh.”

But zhi, chi, shi, ri, and zi, ci, si are unique to Mandarin. Mandarin does not have a “th” sound. In theory, Mandarin has no “v,” but if you listen to television Mandarin, most actors do have a slight “v”, as in “vei?” for “hello?”

If Mandarin is compared to English, Mandarin b, d, and k are not voiced. So the only difference between b~p, d~t, g~k is that for each pair, the first is unarticulated, the second articulated. The unarticulated~ articulated contrast is important for Mandarin. The rows of consonants that English does not have show the same contrast:

unarticulated~ articulated

ji~qi

zhi~chi

zi~ci

You can see a chart below for Mandarin showing the place and manner of articulation for all consonants:

Mandarin

Pinyin letter	example	place of articulation	manner of articulation	aspirated
b	Beijing	labial	stop	
p	Putao(poo tow)	labial	stop	y
m	Yao Ming	labial	stop	
f	Doufu (tofu)	labio dental	fricative	
d	Doufu (tofu)	alveolar ridge	stop	
t	Taiguo (Thailand)	alveolar ridge	stop	y
g	gou (dog)	velar	stop	
k	kafei (coffee)	velar	stop	y
h	hao (good)	velar	fricative	
z	x	apical	affricate	
c	x	apical	affricate	y
s	x	apical	fricative	
ji	~ jee = chicken	palatal	affricate	
qi	Tai-chee	palatal	affricate	y
xi	~ shee = west	palatal	fricative	
zh	x	retroflex	affricate	
ch	x	retroflex	affricate	y
sh	x	retroflex	fricative	
ri	x	retroflex	fricative (voiced)	

In Mandarin and other dialects, a complete syllable is the formula:

Initial + final +tone

An initial basically is a consonant. Some Mandarin syllables like “a” are only a vowel. In that case the “initial” is nothing or the null set.

A final in Mandarin is either a vowel, or vowel plus –n, or vowel plus ng. So the only possible endings for a syllable in Mandarin are vowel, n, or ng.

All Chinese languages (or dialects) share the initial + final + tone formula. Important differences are:

The so-called Southern dialects (Cantonese, Min, Hakka) besides vowel, n, and ng, can also end in p, t, k, m.

Wu dialects (Shanghainese) can end in glottal stop.

Shanghai dialect is the only Chinese language that has voiced initial consonants. So Shanghai dialect has:

voiced	unvoiced-unarticulated	unvoiced-articulated
b	b	p
d	d	t
g	g	k

This is the same as the consonant series for Middle Chinese. That indicates that Shanghai dialect has retained the voiced stops from Middle Chinese, but all other Chinese languages have lost them.

Conversely, the Southern dialects share generally share the final p, t, k, m of Middle Chinese, while Northern Chinese has lost these final consonants. In Shanghai dialect, the final p, t, k, m has become glottal stop (not found in other Chinese languages).

The retroflex series of zhi, chi, shi, ri, is unique to Northern Chinese dialects. That is why many southern speakers have a southern accent when they speak Mandarin; they substitute zi, ci, si, for zhi, chi, shi.

If you compare many of the “zhi” sounds of Mandarin to sounds in Cantonese, Min, or Hakka, you will find that often in dialects the sounds begin with “d.” For example Mandarin “zhuozi =table” in Taiwanese is “doe-ah,” the measure word “zhang” is “diu,” and so on.

* Mandarin has two so-called semi-consonants, w and y.