



Place and Manner of Articulation

By: J. Flaitz (published with permission)

Visualization

Linguistics is easy.
Linguistics is fun.
Linguistics is logical.



Essential Question:

What should teachers know about the
Place and Manner of Articulation in
English in order to effectively serve
ELs?



The Consonant System of the English Language

The chewing gum task did more than introduce you to some of the **Organs of Speech Production**.

You also began to learn about **Place and Manner of Articulation**.

Look at the **Figure** in your textbook.

Does the chart account for all possible sounds made in human speech?

Does the chart account for all the sounds in English?

No, only English consonants.

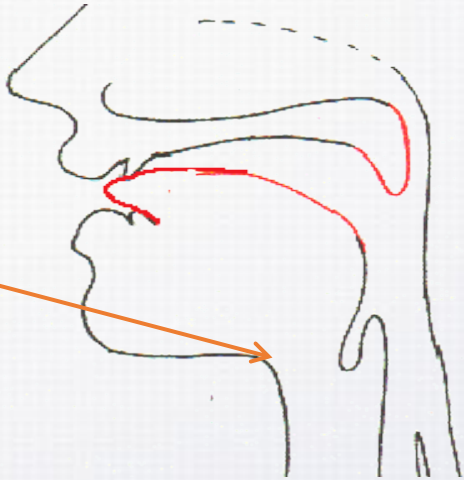
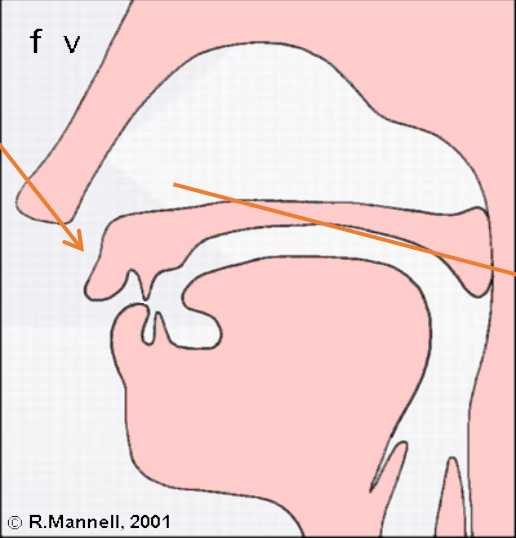
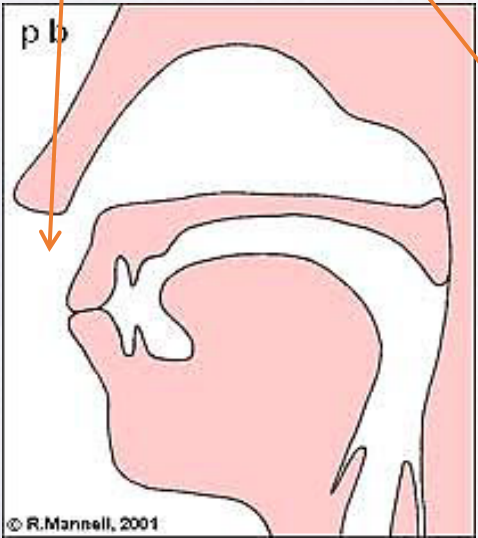
No, only those found in English.

PLACE of Articulation

ESOL
in Higher Ed



Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
p	f	th				

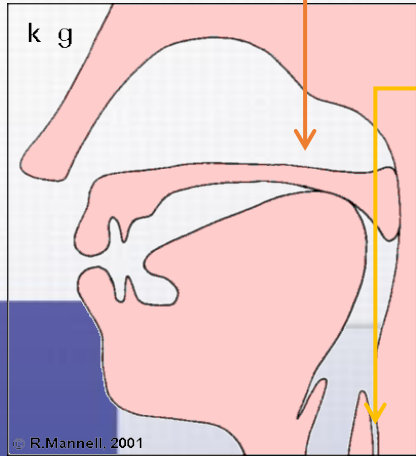
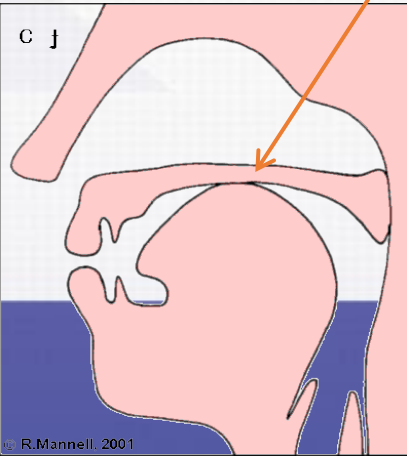
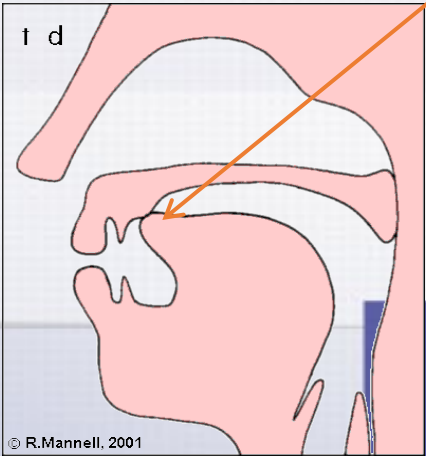


PLACE of Articulation

ESOL
in Higher Ed



Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
			t	sh	k	uh ^h -oh



Review of Consonants

ESOL
in Higher Ed



b	buy	f	five
d	die	θ	thigh
g	guy	s	sigh
p	pie	ʃ	shy
t	tie	h	high
k	kite	v	vie
w	why	ð	thy
j or y	yikes	z	Zion
l	lie	ʒ	vision
r	rye	tʃ	chime
m	my	dʒ	jive
n	nigh		
ŋ	ring		

Which symbol corresponds to the **first sound** of each of the following words?

shrink
wink
jinx
think
chink
sink
fink
mink
yank

Review of Consonants

ESOL
in Higher Ed

Answers:
(click twice)

b	buy	f	five
d	die	θ	thigh
g	guy	s	sigh
p	pie	ʃ	shy
t	tie	h	high
k	kite	v	vie
w	why	ð	thy
j or y	yikes	z	Zion
l	lie	ʒ	vision
r	rye	tʃ	chime
m	my	dʒ	jive
n	nigh		
ŋ	ring		

Which symbol corresponds to the first sound of each of the following words?

ʃ	shrink
w	wink
dʒ	jinx
θ	think
tʃ	chink
s	sink
f	fink
m	mink
j	yank

Review of Consonants

ESOL
in Higher Ed



Which symbol corresponds to the last sound of each of the following words?

bathe
mirage
wish
age
witch
long
is
bath
clique

b	buy	f	five
d	die	θ	thigh
g	guy	s	sigh
p	pie	ʃ	shy
t	tie	h	high
k	kite	v	vie
w	why	ð	thy
j or y	yikes	z	Zion
l	lie	ʒ	vision
r	rye	tʃ	chime
m	my	dʒ	jive
n	nigh		
ŋ	ring		

Review of Consonants

ESOL
in Higher Ed

Answers:

(click twice)

Which symbol corresponds to the last sound of each of the following words?

b	buy	f	five
d	die	θ	thigh
g	guy	s	sigh
p	pie	ʃ	shy
t	tie	h	high
k	kite	v	vie
w	why	ð	thy
j or y	yikes	z	Zion
l	lie	ʒ	vision
r	rye	tʃ	chime
m	my	dʒ	jive
n	nigh		
ŋ	ring		

bathe	ð
mirage	ʒ
wish	ʃ
age	dʒ
witch	tʃ
long	ŋ
is	z
bath	θ
clique	k

MANNER of Articulation



	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	/p/ pole			/t/ two		/k/ cat	
voiced	/b/ bowl			/d/ dew		/g/ gas	

Place your fingertips on your throat. Then make the sound /p/. Do not say the name of the letter.

Without taking your fingertips from your throat, make the sound /b/.

Do the same with /t/ and /d/ as well as /k/ and /g/.

Could you feel your vocal cords vibrating when you said /b/ but NOT when you said /p/, /d/ but not /t/ and /g/ but not /k/?

Most English consonants have a voiced and voiceless articulation. The difference is both in sound AND meaning (ex. *pole* vs. *bowl*).

MANNER of Articulation: **NASAL STOPS**

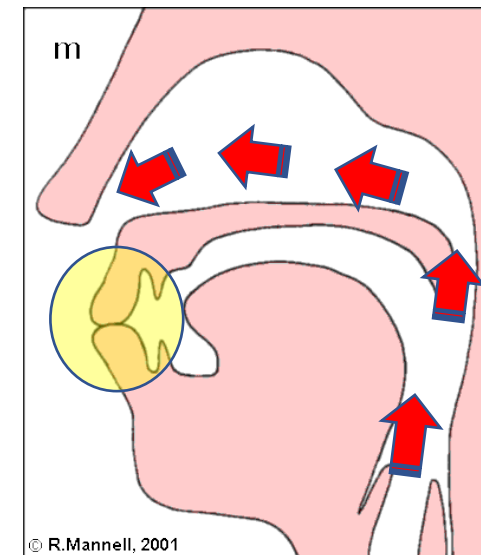


	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	/p/ pole			/t/ two		/k/ cat	
voiced	/b/ bowl			/d/ dew		/g/ gas	
Nasal voiced	/m/ me			/n/ no		/ŋ/ ink	

The three highlighted phonemes in the chart above are **nasals**.

When you make the sound /m/, is the air flow stopped or does it continue?

The airflow **IS stopped** at the **lips** (although it is allowed to continue to flow through the **nasal cavity**), so /m/ and all the nasals are **stops**.



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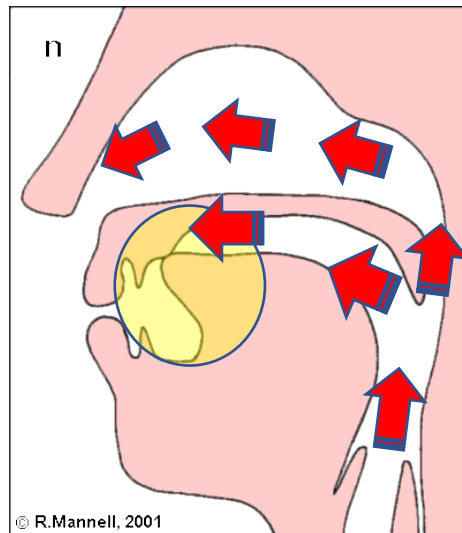
MANNER of Articulation: **NASAL STOPS**

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	/p/ pole			/t/ two		/k/ cat	
voiced	/b/ bowl			/d/ dew		/g/ gas	
Nasal voiced	/m/ me			/n/ no		/ŋ/ ink	

Notice that /n/ and /ŋ/ are also nasal stops.

Where is the air obstructed in the image

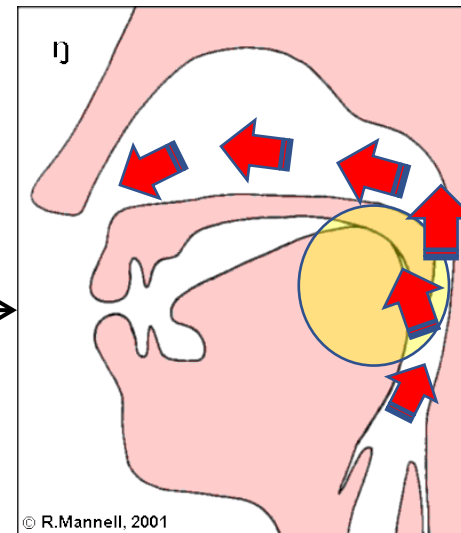
to the left? To the right?



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Which phoneme is a
velar nasal stop?

Which is an
alveolar nasal stop?

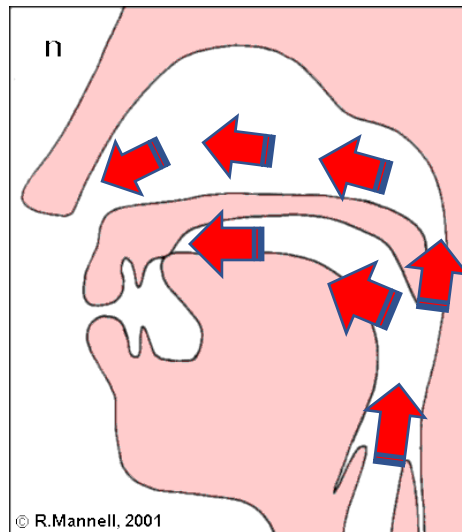


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MANNER of Articulation: **NASAL STOPS**

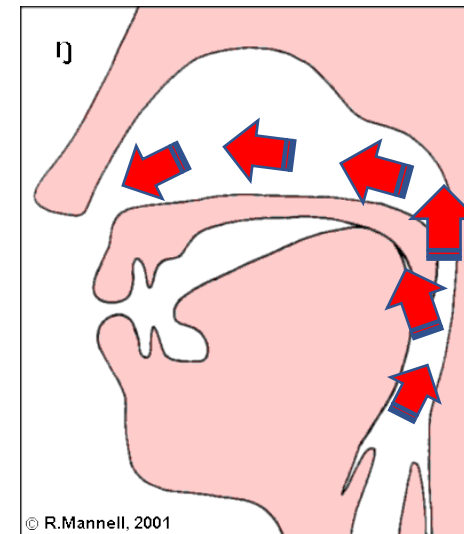
	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	/p/ pole			/t/ two		/k/ cat	
voiced	/b/ bowl			/d/ dew		/g/ gas	
Nasal voiced	/m/ me			/n/ no		/ŋ/ ink	

Do you notice anything else about nasal stops?



They are all voiced.

There are
no voiceless nasals.



MANNER of Articulation: **FRICATIVES**



	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	<i>/p/ pole</i>			<i>/t/ two</i>		<i>/k/ cat</i>	
voiceless	<i>/b/ bowl</i>			<i>/d/ dew</i>		<i>/g/ gas</i>	
Nasal Voiced	<i>/m/ me</i>			<i>/n/ no</i>		<i>/ŋ/ ink</i>	
Fricative voiceless		<i>/f/ fun</i>	<i>/θ/ thick</i>	<i>/s/ so</i>	<i>/ʃ/ shoe</i>		<i>/h/ have</i>
Voiced		<i>/v/ vote</i>	<i>/ð/ the</i>	<i>/z/ zoo</i>	<i>/ʒ/ vision</i>		

MANNER of Articulation: AFFRICATES



	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	/p/ pole			/t/ two		/k/ cat	
voiceless	/b/ bowl			/d/ dew		/g/ gas	
Nasal voiced	/m/ me			/n/ no		/ŋ/ ink	
Fricative voiceless		/f/ fun	/θ/ thick	/s/ so	/ʃ/ shoe		/h/ have
voiced		/v/ vote	/ð/ the	/z/ zoo	/ʒ/ vision		
Affricate voiceless				/tʃ/ watch			
voiced				/dʒ/ joy			

What is the first thing you notice about the affricates?

They are made up of **two sounds**: a stop + a continuant

MANNER of Articulation: GLIDES

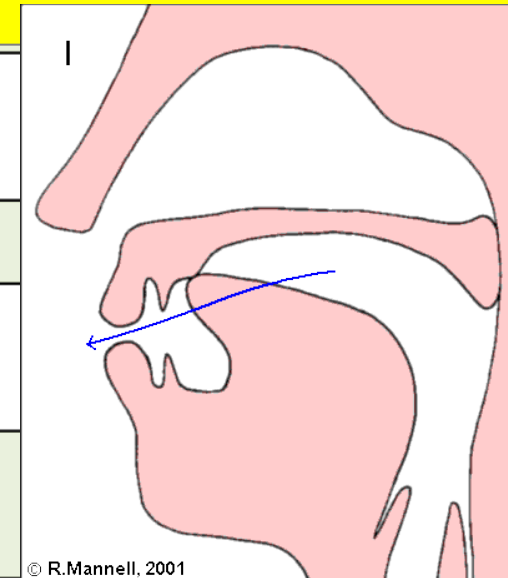


	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	<i>/p/ pole</i>			<i>/t/ two</i>		<i>/k/ cat</i>	
voiceless	<i>/b/ bowl</i>			<i>/d/ dew</i>		<i>/g/ gas</i>	
Nasal voiced	<i>/m/ me</i>			<i>/n/ no</i>		<i>/ŋ/ ink</i>	
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voiced		<i>/v/ vote</i>	<i>/ð/ the</i>	<i>/z/ zoo</i>	<i>/ʒ/ vision</i>		
Affricate voiceless				<i>/tʃ/ watch</i>			
voiced				<i>/dʒ/ joy</i>			
Glide voiced	<i>/w/ why</i>					<i>/j/ yes</i>	

MANNER of Articulation: LIQUIDS



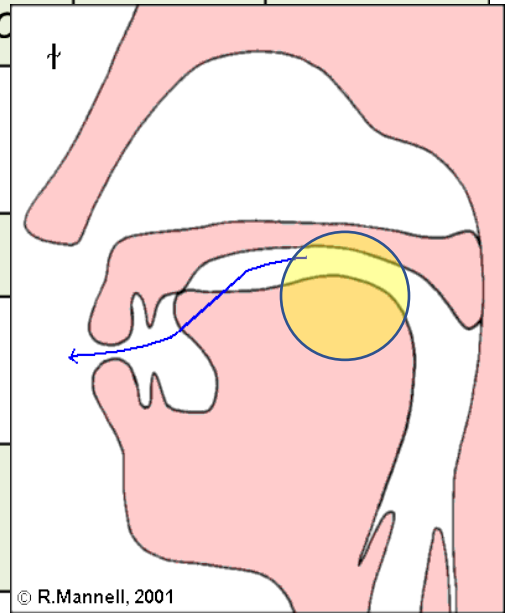
	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	/p/ pole			<p>The liquid /l/ in English has two pronunciations: one “light” and one “dark.” The light version can be heard in words such as “light” and “laugh.” Notice the low position of the root of the tongue in the image below.</p>			
voiceless	/b/ bowl						
Nasal voiced	/m/ me						
Fricative voiceless		/f/ fun	/θ/ thick				
voiced		/v/ vote	/ð/ the				
Affricate voiceless				/tʃ/ watch			
voiced				/dʒ/ joy			
Glide voiced	/w/ why						
Liquid voiced				/l/ love /r/ rot			



MANNER of Articulation: LIQUIDS



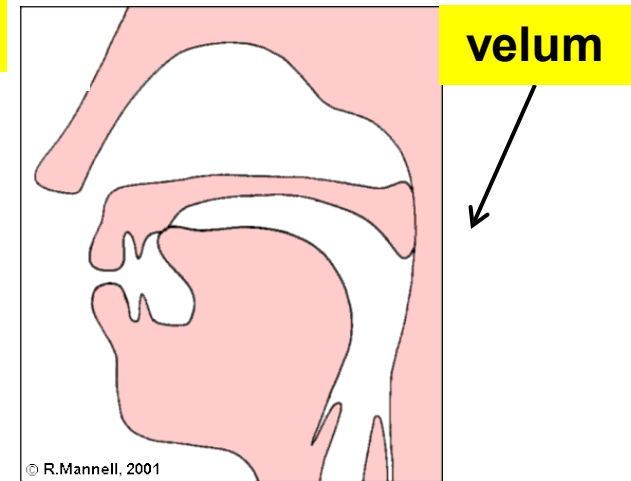
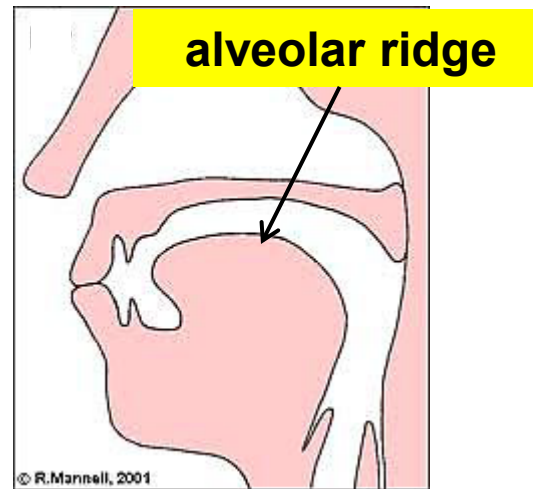
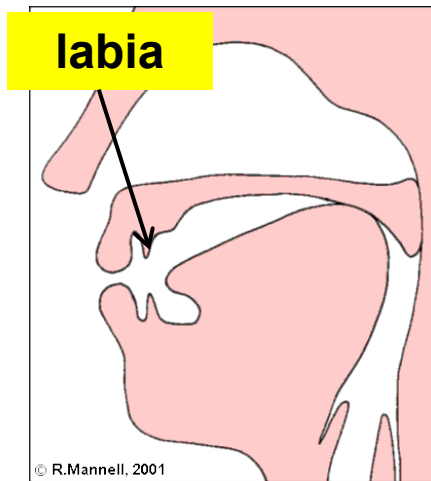
	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	/p/ pole			The English /r/ is similar to the dark // in that the root of the tongue rises to but does not touch the velum, and the tongue is flat and low.			
voiceless	/b/ bowl						
Nasal voiced	/m/ me						
Fricative voiceless		/f/ fun	/θ/ thick				
voiced		/v/ vote	/ð/ the	/z/ zoo	/ʒ/ vision		
Affricate voiceless				/tʃ/ watch			
voiced				/dʒ/ joy			
Glide voiced	/w/ why						
Liquid voiced				// love /r/ rot			



MANNER of Articulation



	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	/p/ pole			/t/ two		/k/ cat	
voiced	/b/ bowl			/d/ dew		/g/ gas	



Match each pair of phonemes (sounds) with the correct image.

MANNER of Articulation



	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	/p/ pole			/t/ two		/k/ cat	
voiced	/b/ bowl			/d/ dew		/g/ gas	

Place your fingertips on your throat. Then make the sound /p/. Do not say the name of the letter.

Without taking your fingertips from your throat, make the sound /b/.

Do the same with /t/ and /d/ as well as /k/ and /g/.

Could you feel your vocal cords vibrating when you said /b/ but NOT when you said /p/, /d/ but not /t/ and /g/ but not /k/?

Most English consonants have a voiced and voiceless articulation. The difference is both in sound AND meaning (ex. *pole* vs. *bowl*).

MANNER of Articulation: **VOICING**



Go to your textbook to complete the following activity.

- 1. Make a list of rhyming words for each pair of voiced/voiceless consonants.**

example: /p/ /b/ pit, bit
 /f/ /v/ fan, van

- 2. Go back to your completed list and add words in which the contrast occurs at the beginning (initial) and end (final) of each word.**

example: pit, bit rip, rib
 fan, van leaf, leave



MANNER of Articulation: **VOICING**



Study the pairs of words below. Say them aloud.
Identify the minimal pairs.

buy/pie
rush/rouge
tan/van
half/halve

fan/vat
bank/bag
fuss/fuzz
gum/come

catch/glitch
lip/lib
cheap/jeep
veal/feel

sue/zoo
than/thin
red/rent
puck/pug

ANSWERS:

buy/ pie
tan / van
half / halve

fuss / fuzz lip / lib
gum / come

cheap / jeep
veal / feel

sue / zoo
puck / pug

MANNER of Articulation: **STOPS**

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	/p/ pole			/t/ two		/k/ cat	
voiced	/b/ bowl			/d/ dew		/g/ gas	

Manner of articulation

mostly concerns **air flow** from the **lungs** up through the vocal **tract**.

Air can either be briefly **obstructed** or allowed to **continue** to flow.

The **lips** and **tongue** play a major role in stopping air flow.

All 6 phonemes in the chart above are **STOPS**. A sound that is produced when both lips obstruct the air flow is called a **bilabial stop**.

What would we call a sound that is produced when the tongue stops the airflow at the alveolar ridge?

an alveolar stop

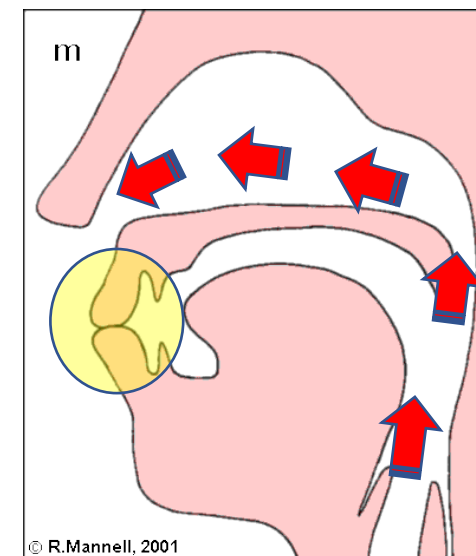
MANNER of Articulation: NASAL STOPS

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	/p/ pole			/t/ two		/k/ cat	
voiced	/b/ bowl			/d/ dew		/g/ gas	
Nasal voiced	/m/ me			/n/ no		/ŋ/ ink	

The 3 highlighted phonemes in the chart above are **nasals**.

When you make the sound /m/, is the air flow stopped or does it continue?

The airflow **IS stopped** at the **lips** (although it is allowed to continue to flow through the **nasal cavity**), so /m/ and all the nasals are **stops**.



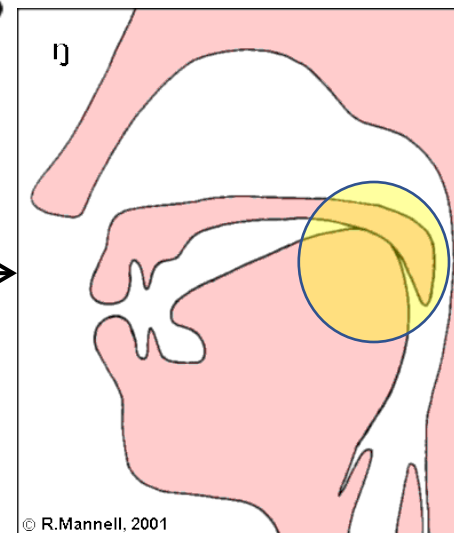
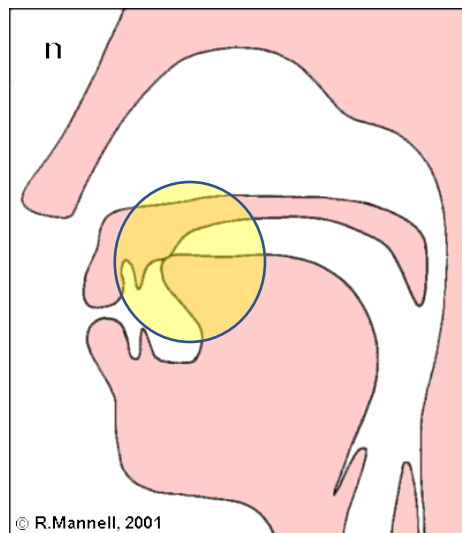
MANNER of Articulation: NASAL STOPS

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	<i>/p/ pole</i>			<i>/t/ two</i>		<i>/k/ cat</i>	
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Nasal voiced	<i>/m/ me</i>			<i>/n/ no</i>		<i>/ŋ/ ink</i>	

Notice that /n/ and /ŋ/ are also nasal stops.

Where is the air obstructed in the image

to the left? To the right?



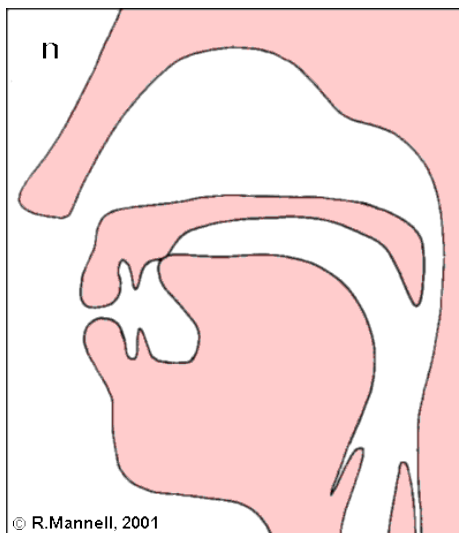
Which phoneme is a
velar nasal stop? →

← Which is an
alveolar nasal stop?

MANNER of Articulation: NASAL STOPS

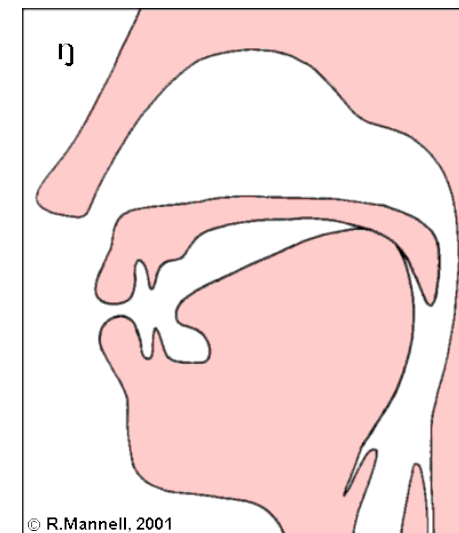
	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiceless	<i>/p/ pole</i>			<i>/t/ two</i>		<i>/k/ cat</i>	
voiced	<i>/b/ bowl</i>			<i>/d/ dew</i>		<i>/g/ gas</i>	
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Do you notice anything else about nasal stops?



They are all voiced.

There are
no voiceless nasals.



MANNER of Articulation: **FRICATIVES**

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	/p/ pole			/t/ two		/k/ cat	
voiceless	/b/ bowl			/d/ dew		/g/ gas	
Nasal Voiced	/m/ me			/n/ no		/ŋ/ ink	
Fricative voiceless							
Voiced							

Place the following phonemes in the correct boxes in the chart above. *Try it first without your textbook.*

/z/ zoo

/θ/ thick

/s/ so

/h/ have

/v/ vote

/f/ fun

/ʒ/ vision

/ð/ the

/ʃ/ shoe

MANNER of Articulation: **FRICATIVES**

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	/p/ pole			/t/ two		/k/ cat	
voiceless	/b/ bowl			/d/ dew		/g/ gas	
Nasal Voiced	/m/ me			/n/ no		/ŋ/ ink	
Fricative voiceless		/f/ fun	/θ/ thick	/s/ so	/ʃ/ shoe		/h/ have
Voiced		/v/ vote	/ð/ the	/z/ zoo	/ʒ/ vision		

Place the following phonemes in the correct boxes in the chart above. *Try it first without your textbook.*

/z/ zoo

/h/ have

/ʒ/ vision

/θ/ thick

/v/ vote

/ð/ the

/s/ so

/f/ fun

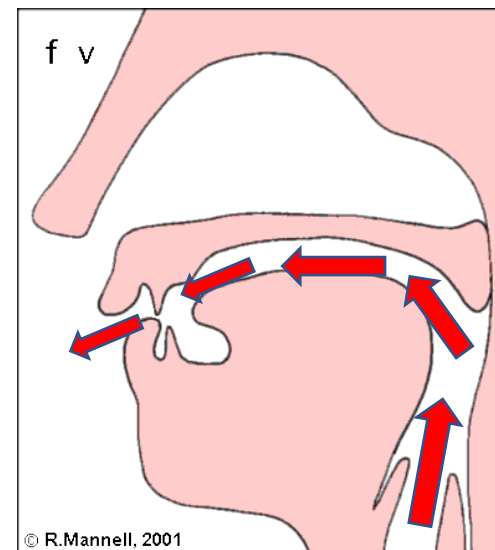
/ʃ/ shoe

MANNER of Articulation: **FRICATIVES**

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	<i>/p/ pole</i>			<i>/t/ two</i>		<i>/k/ cat</i>	
voiceless	<i>/b/ bowl</i>			<i>/d/ dew</i>		<i>/g/ gas</i>	
Nasal Voiced	<i>/m/ me</i>			<i>/n/ no</i>		<i>/ŋ/ ink</i>	
Fricative voiceless		<i>/f/ fun</i>	<i>/θ/ thick</i>	<i>/s/ so</i>	<i>/ʃ/ shoe</i>		<i>/h/ have</i>
Voiced		<i>/v/ vote</i>	<i>/ð/ the</i>	<i>/z/ zoo</i>	<i>/ʒ/ vision</i>		

When producing the interdental fricative /f/, is the air flow stopped or allowed to continue?

It continues, but turbulence is created when the top teeth come into contact with the bottom lip. Notice the sound: f-f-f-f-ricative!

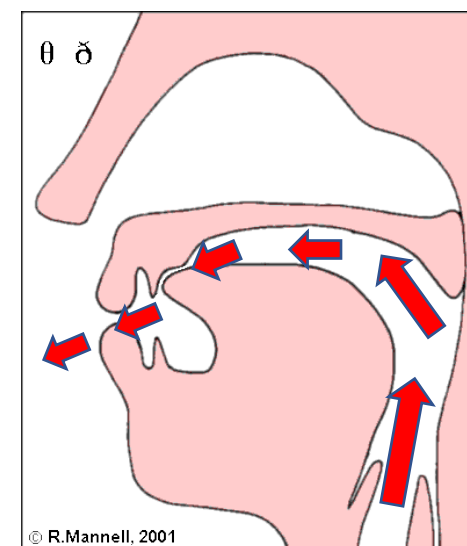


MANNER of Articulation: **FRICATIVES**

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	<i>/p/ pole</i>			<i>/t/ two</i>		<i>/k/ cat</i>	
voiceless	<i>/b/ bowl</i>			<i>/d/ dew</i>		<i>/g/ gas</i>	
Nasal Voiced	<i>/m/ me</i>			<i>/n/ no</i>		<i>/ŋ/ ink</i>	
Fricative voiceless		<i>/f/ fun</i>	<i>/θ/ thick</i>	<i>/s/ so</i>	<i>/ʃ/ shoe</i>		<i>/h/ have</i>
Voiced		<i>/v/ vote</i>	<i>/ð/ the</i>	<i>/z/ zoo</i>	<i>/ʒ/ vision</i>		

All fricatives are characterized by noisy turbulence at the place of articulation.

Notice that some new symbols have been introduced. Practice writing them on a piece of paper.



MANNER of Articulation: AFFRICATES

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	/p/ pole			/t/ two		/k/ cat	
voiceless	/b/ bowl			/d/ dew		/g/ gas	
Nasal voiced	/m/ me			/n/ no		/ŋ/ ink	
Fricative voiceless		/f/ fun	/θ/ thick	/s/ so	/ʃ/ shoe		/h/ have
voiced		/v/ vote	/ð/ the	/z/ zoo	/ʒ/ vision		
Affricate voiceless				/tʃ/ watch			
voiced				/dʒ/ joy			

What is the first thing you notice about the affricates?

They are made up of **two sounds**: a stop + a continuant

MANNER of Articulation: GLIDES

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	<i>/p/ pole</i>			<i>/t/ two</i>		<i>/k/ cat</i>	
voiceless	<i>/b/ bowl</i>			<i>/d/ dew</i>		<i>/g/ gas</i>	
Nasal voiced	<i>/m/ me</i>			<i>/n/ no</i>		<i>/ŋ/ ink</i>	
Fricative voiceless		<i>/f/ fun</i>	<i>/θ/ thick</i>	<i>/s/ so</i>	<i>/ʃ/ shoe</i>		<i>/h/ have</i>
voiced		<i>/v/ vote</i>	<i>/ð/ the</i>	<i>/z/ zoo</i>	<i>/ʒ/ vision</i>		
Affricate voiceless				<i>/tʃ/ watch</i>			
voiced				<i>/dʒ/ joy</i>			
Glide voiced	<i>/w/ why</i>					<i>/j/ yes</i>	

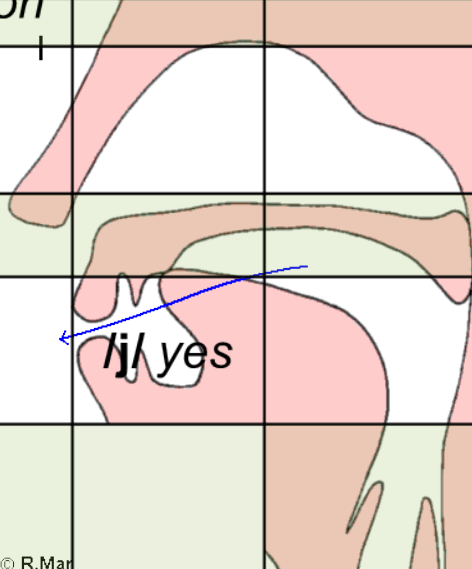
Glides are also called semi-vowels. Can you guess why?

MANNER of Articulation: GLIDES

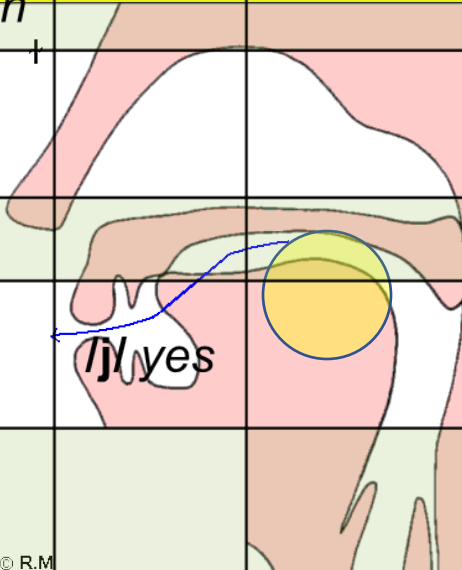
	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	<i>/p/ pole</i>			<i>/t/ two</i>		<i>/k/ cat</i>	
voiceless	<i>/b/ bowl</i>			<i>/d/ dew</i>		<i>/g/ gas</i>	
Nasal voiced	<i>/m/ me</i>			<i>/n/ no</i>		<i>/ŋ/ ink</i>	
Fricative voiceless		<i>/f/ fun</i>	<i>/θ/ thick</i>	<i>/s/ so</i>	<i>/ʃ/ shoe</i>		<i>/h/ have</i>
voiced		<i>/v/ vote</i>	<i>/ð/ the</i>	<i>/z/ zoo</i>	<i>/ʒ/ vision</i>		
Affricate voiceless				<i>/tʃ/ watch</i>			
voiced				<i>/dʒ/ joy</i>			
Glide voiced	<i>/w/ why</i>					<i>/j/ yes</i>	

They have the quality of vowels but function as consonants.

MANNER of Articulation: LIQUIDS

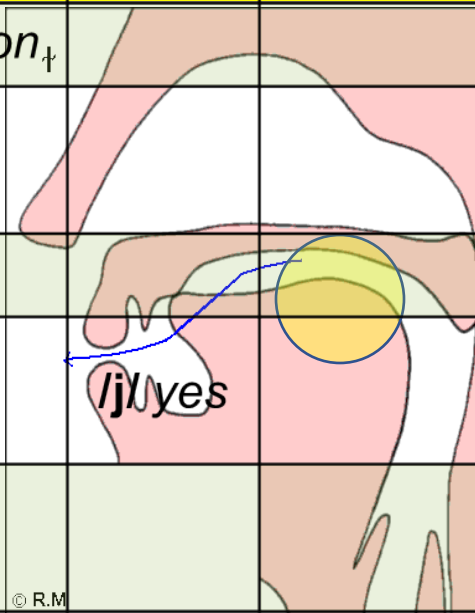
	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	/p/ pole			<p>The liquid /l/ in English has two pronunciations: one “light” and one “dark.” The light version can be heard in words such as “light” and “laugh.” Notice the low position of the root of the tongue in the image below.</p> 			
voiceless	/b/ bowl						
Nasal voiced	/m/ me						
Fricative voiceless		/f/ fun	/θ/ thick				
voiced		/v/ vote	/ð/ the				
Affricate voiceless				/tʃ/ watch			
voiced				/dʒ/ joy			
Glide voiced	/w/ why						
Liquid voiced				/l/ love /r/ rot			

MANNER of Articulation: LIQUIDS

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	/p/ pole			<p>Now say the word “full.” Where is the root of the tongue? The tip of the tongue is in the same place, but the back of the tongue has risen almost to the velum. This is the dark // and is written as /ɣ/.</p> 			
voiceless	/b/ bowl						
Nasal voiced	/m/ me						
Fricative voiceless		/f/ fun	/θ/ thick				
voiced		/v/ vote	/ð/ the				
Affricate voiceless				/tʃ/ watch			
voiced				/dʒ/ joy			
Glide voiced	/w/ why						
Liquid voiced				/l/ love /r/ rot			

MANNER of Articulation: LIQUIDS

	Bilabial	Labio-dental	Inter-dental	Alveolar	Palatal	Velar	Glottal
Stop voiced	/p/ pole			<p>The English /r/ is similar to the dark /l/ in that the root of the tongue rises to but does not touch the velum, and the tongue is flat and low.</p> <p><i>/r/ two</i> <i>/k/ cat</i></p>			
voiceless	/b/ bowl						
Nasal voiced	/m/ me						
Fricative voiceless		/f/ fun	/θ/ thick	/s/ so	/ʃ/ shoe		/h/ have
voiced		/v/ vote	/ð/ the	/z/ zoo	/ʒ/ vision		
Affricate voiceless				/tʃ/ watch			
voiced				/dʒ/ joy			
Glide voiced	/w/ why						
Liquid voiced				/l/ love /r/ rot			



CONGRATULATIONS !

You've earned yourself a
trip to the beach.



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