



Sound Walls

Why Do We Need Them and How Do We Use Them



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MISSISSIPPI
DEPARTMENT OF
EDUCATION

Fall 2021



VISION

To create a world-class educational system that gives students the knowledge and skills to be successful in college and the workforce, and to flourish as parents and citizens



MISSION

To provide leadership through the development of policy and accountability systems so that all students are prepared to compete in the global community



1

ALL Students Proficient and Showing Growth in All Assessed Areas



2

EVERY Student Graduates from High School and is Ready for College and Career



3

EVERY Child Has Access to a High-Quality Early Childhood Program

EVERY School Has Effective Teachers and Leaders

4



EVERY Community Effectively Uses a World-Class Data System to Improve Student Outcomes

5



EVERY School and District is Rated “C” or Higher

6



- Silence your cell phones
- Check and respond to emails during scheduled breaks
- Be an active participant
- Do not hesitate to ask questions



- **Understand** the importance of phonology and how it affects learners
- **Identify** what a sound wall is and why we use them to support student learning
- **Review** the phonemes and their qualities
- **Learn** to plan and prepare for the use of sound walls with strategies and activities



Phonology

The Importance and How It Affects Learners



When children struggle to read, it is most often a deficit within the phonological processing part of the brain.

- Segmenting sounds
- Blending sounds
- Manipulating sounds
- Phonological working memory



If you do not know the phonology of a word, you will have a hard time accessing that word and filing it in your lexicon.

You cannot represent a phoneme if you have no awareness of it.

Phonemes are mental parking spots for a grapheme.

Phonology is the mental Velcro with which we attach graphemes.

Word Walls

What We Are Used To...



Respond to the questions below with your table. Record your responses on a post-it note and add it to an anchor chart near you.

Elect someone from your table to share your thoughts.

- 1. How are word walls currently used at your support schools?**
- 1. How could word walls be better utilized to support student learning?**



A word wall is organized alphabetically using all 26 letters of the alphabet. We generally place sight words, high frequency words, and content/Tier 2 words under each letter based on the first letter of each word.



- As teachers, we know and understand all the different spellings of sounds, and so we place the words under the letter a word begins with because we can locate the words that way. This isn't the case for students. If students do memorize a word, they are able to read and spell only that word. The process does not help students learn to read new, unfamiliar words.
- Working with **word walls is print to speech**. We find the print/letter first and then we match the sound. Our **language is speech to print**. We hear speech sounds before we learn to match the sounds to a particular letter or letter patterns.

Traditional Model

Aa

avion
anestezija
alternator
antika
astronomija
astal

Bb

baba
banja
beba
bina
brada

Cc

carica
carević
cepanica
cigla
crep

Čč

čanak
časa
čamac
česma
čelo

Ćć

ćata
ćebe
ćelav
ćirili

Dd

dan
dar
deda
divan

Dž dž

džak
džarati
džep
džip

Đđ

đak
đurđevak
đizgija
đambur
đevdir

? THINK ABOUT IT

Imagine you are a student learning content AND language. How much would you learn from this traditional word wall?

Synonym-Antonym Model (content-area specific)

Our Math Vocabulary

NOTE: Synonym-Antonym walls are easiest if done by content area (and even within a specific unit or theme). Encourage students to add to the growing word lists.

even 2,4,6,8...
odd 1,3,5,7,9...

total

calculate

add +

subtract -

remove

deduct

take

correct

true $1+1=2$

false $1+1=3$

inaccurate

incorrect

like

equal

equivalent

comparable

same oo

different od

contrasting

beginning

front

initial

first * |||||

last ||||| *

end

final

over

high

above \rightarrow^*

below \rightarrow_*

beneath

under

down

overhead

over \rightarrow^*

under \rightarrow_*

underneath

beneath

down



Content-Specific Model

Aa

addition
12+3=15

addend
3+2=5

Bb

base ten

bar graph

Cc

clock

cone

counting
1,2,3,4,5,...

circle

cylinder

Dd

dinosaur

distance

direction

Ee

Earth

electricity

Ff

fossil fuel

friction

Note:
Content-specific word walls can be done many different ways. Based on space available, you can choose to have a wall for each content area, or you can color-code by are. Use a key if you color-code!

Morphology Word Wall

Greek Roots

Root:
graph
Meaning:
write

Root:
fract
Meaning:
break

Root:
aqua
Meaning:
water

Root:
geo
Meaning:
earth

Root:
cent
Meaning:
hundred

Latin Roots

Root:
mater-
Meaning:
mother

Root:
auto
Meaning:
self

Root:
bio
Meaning:
life

Affixes

Prefixes

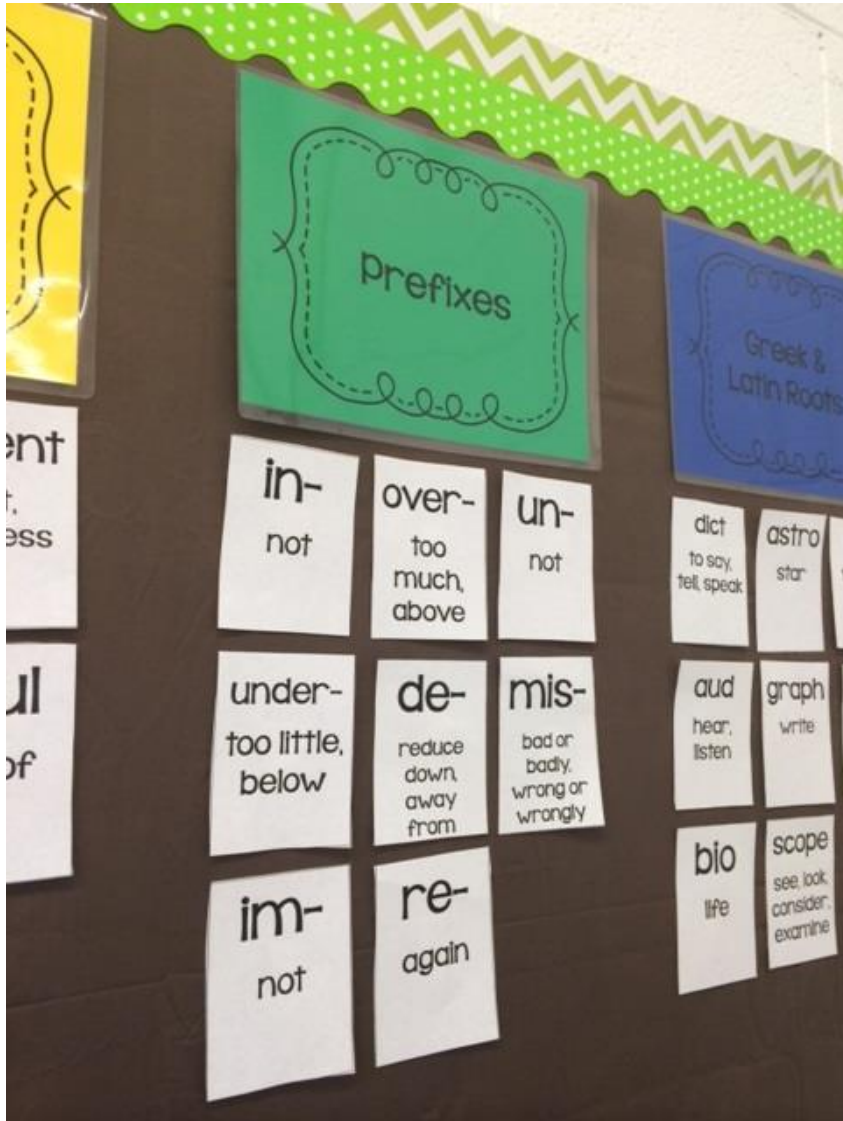
Root:
multi-
Meaning:
many

Root:
tri-
Meaning:
three

Suffixes

Root:
-ful
Meaning:
full of

Root:
-er
Meaning:
more



What Is a Sound Wall?



- A sound wall is set up according to the articulation of speech sounds (arranged by sounds made in the front of your mouth moving to the back of the throat).
- They approach things from a learner's viewpoint rather than a teacher's viewpoint.
- Sound walls help anchor learning to teach letter-sound knowledge using articulatory gestures.
- They attach phonemes to orthographic patterns (this has everything to do with print).



- A sound wall supports students by focusing on the articulation of sounds/phonemes and the various letter or letter patterns that represent the sounds/phonemes in words.
- This is important because when we hear language, we hear words as whole units.

SOUND WALL

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Consonants

Stops

p pig	b ball	t turtle walked	d dog sailed	k kite car black Christmas ghost	g goat ghost
----------	-----------	-----------------------	--------------------	---	--------------------

Liquids

l leaf llama	r rabbit write
--------------------	----------------------

Nasals

m monkey	n nose gnat know pneumonia	ng king
-------------	--	------------

Affricates

ch chair catch	j jellyfish gym edge rigid
----------------------	--

Glides

wh whale	w watermelon	y yo-yo
-------------	-----------------	------------

Fricatives

f fish phone	v volcano love	th thumb father they	s sun floss princess cycle cinder	z zebra nose buzz	sh sheep special chef partial mission	zh treasure Asia beige seizure	h hat
--------------------	----------------------	-------------------------------	--	----------------------------	--	--	----------

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Vowel Valley

ē
we, bee, each,
thief, these,
sandy, seize

ē
igloo
gym

ā
cake
pain
day
steak
table
weight
vein
they

ē
bed
head

ā
apple

ō
bike
my
cried
light
silent

ō
octopus
calm
swamp

ou ow
cow
house

ē
we, bee, each,
thief, these,
sandy, seize

ə
banana
reason
elect
cover
preparation

yū
cube, new,
unicorn, feud,
fuel

ū
glue
tube
tooth
drew
juice
soup

oo
book
put
should

ō
boat
note
toe
snow
go
over

aw
claw
cause
ball
water
ought

ū
up
mother
flood
rough

er
her
bird
fur

ar
car

or
corn

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Delilah Orpi, 2021

VOWEL VALLEY

ALL VOWEL SOUNDS ARE VOICED

Mrs. Winter's Bliss

Bliss, 2021

Sound walls focus on phonemes and articulation:

- Hearing sounds in words
- Articulatory gestures or the "mouth movements"
- Sounds last a short time and disappear as soon as they are heard
- Mouth positions are tangible and can be felt, viewed in a mirror, and analyzed by learners (Ehri, 2014)

With the cards provided, sort the characteristics of word walls and sound walls utilizing the knowledge gained thus far.



Word Wall

Sound Wall

Word Wall

- Organized A-Z, alphabetical
- Teacher's point-of-view
- Print- Speech
- Dependent upon teacher support
- Focused on letters
- Focused on one word

Sound Wall

- Organized by speech sounds
- Student's point-of-view
- Speech- Print
- Independent
- Focused on phonemes and articulation
- Focused on transfer of skills to multiple words



Why Should I Use A Sound Wall?





Teach students explicitly to hear the individual phonemes in the words they hear in language.



Assist students in producing the individual phonemes in words.



Support students in recognizing how their mouth looks and feels when producing sounds, it helps connect speech to print.



Organize words by sounds to help young students connect phonology and orthography.



Assist students in anchoring letter-sound knowledge and articulatory gestures.

- Students need an accurate depiction of speech to print.
- Each element can be learned like multiplication tables or chemistry charts.
- Our language is more understandable if it is organized by sound.



- Grouping words by their sounds is an effective strategy for teaching reading and spelling.
- Students learn that one sound can be made using different graphemes, and it helps to teach spelling patterns.
- In 2000, The National Reading Panel found that explicitly teaching phonemes was a critical component of effective reading and spelling instruction.
- "Without awareness of the speech sounds that letters represent, one cannot match letters to sounds and read unfamiliar words."
(Louisa Moats)

- Supports explicit instruction of phonics
- Builds orthographic mapping
- Provides consistent review of sounds
- Gives visual reference for students in the classroom
- Improves spelling and decoding



Sound Production

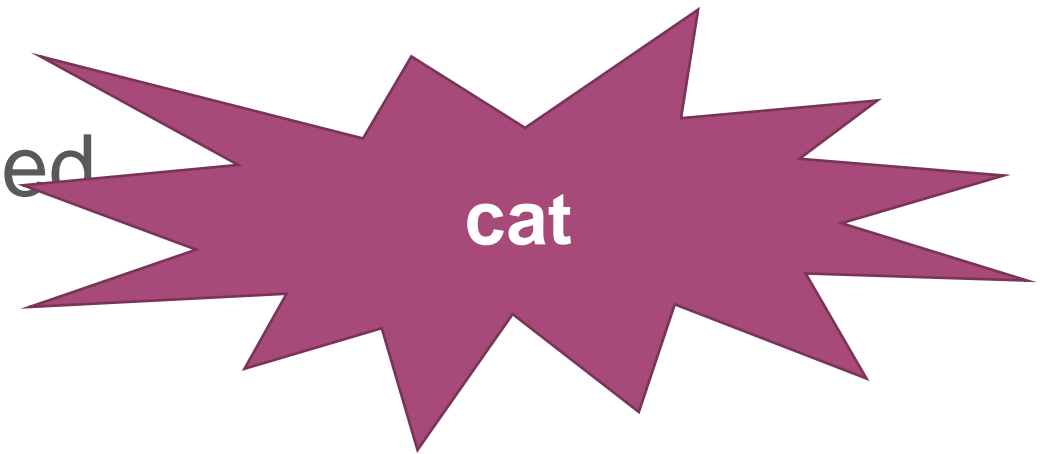
Review of Sounds and Their Qualities



	Lips Together	Teeth on Lip	Tongue between Teeth	Tongue on Ridge behind Teeth	Tongue Pulled Back on Roof of Mouth	Back of Throat	Glottis
Stops Unvoiced Voiced	/p/ /b/			/t/ /d/		/k/ /g/	
Nasals	/m/			/n/		/ŋg/	
Fricatives Unvoiced Voiced		/f/ /v/	/θ/ /ð/	/s/ /z/	/ʃ/ /ʒ/		/h/
Affricates Unvoiced Voiced					/tʃ/ /dʒ/		
Glides Unvoiced Voiced	/wʰ/ /w/				/j/	(/wʰ/) (/w/)	
Liquids				/l/	/r/		

	Lips Together	Teeth on Lip	Tongue between Teeth	Tongue on Ridge behind Teeth	Tongue Pulled Back on Roof of Mouth	Back of Throat	Glottis
Stops							
Unvoiced	/p/			/t/		/k/	
Voiced	/b/			/d/		/g/	

- Made with one burst of sound
- Unvoiced: vocal cords disengaged
- Voiced: vocal cords engaged



	Lips Together	Teeth on Lip	Tongue between Teeth	Tongue on Ridge behind Teeth	Tongue Pulled Back on Roof of Mouth	Back of Throat	Glottis
Nasals	/m/			/n/		/ng/	

- Articulated with air stream directed through the nose





Let's Try It!

/ng/

/n/

/n/

/ng/

/ng/

	Lips Together	Teeth on Lip	Tongue between Teeth	Tongue on Ridge behind Teeth	Tongue Pulled Back on Roof of Mouth	Back of Throat	Glottis
Fricatives							
Unvoiced		/f/	/th/	/s/	/sh/		/h/
Voiced		/v/	<u>/th/</u>	/z/	/zh/		

- Hissy sounds
- Audible friction is created when the air is forced through small spaces in the mouth during articulation
- Continuants: can be said until one runs out of breath
- Unvoiced: vocal cords disengaged
- Voiced: vocal cords engaged

	Lips Together	Teeth on Lip	Tongue between Teeth	Tongue on Ridge behind Teeth	Tongue Pulled Back on Roof of Mouth	Back of Throat	Glottis
Affricates							
Unvoiced					/ch/		
Voiced					/j/		

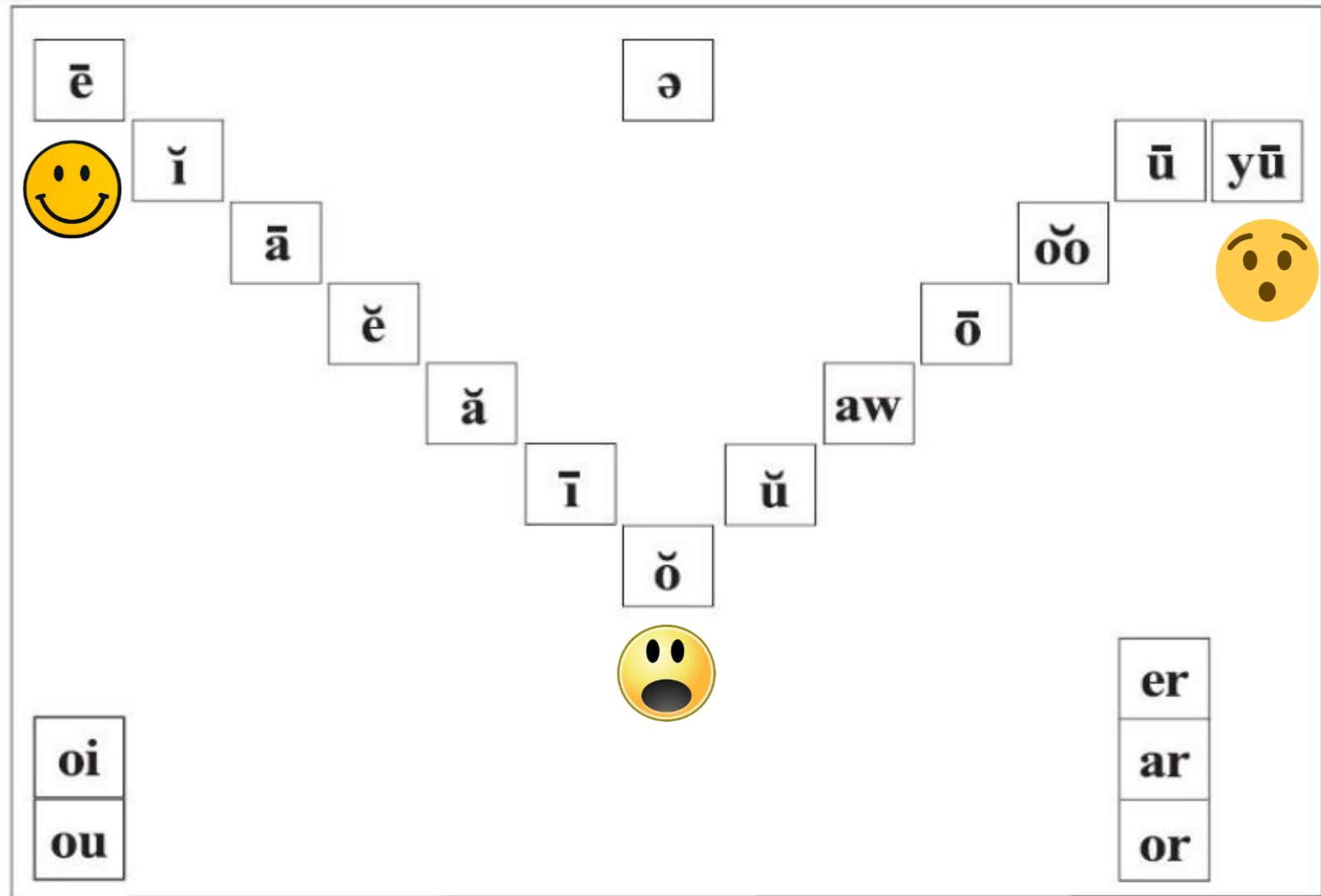
- Combine features of stops and fricatives
- Made with tongue pulled a little farther back and placed on the hard palate on the roof of the mouth
- Different from fricatives because they stop air before releasing it
- Unvoiced: vocal cords disengaged
- Voiced: vocal cords engaged

	Lips Together	Teeth on Lip	Tongue between Teeth	Tongue on Ridge behind Teeth	Tongue Pulled Back on Roof of Mouth	Back of Throat	Glottis
Glides							
Unvoiced	/wh/					(/wh/)	
Voiced	/w/				/y/	(/w/)	

- Have vowel-like qualities and combine with vowels readily
- Always followed by a vowel phoneme that literally glides right into that vowel

	Lips Together	Teeth on Lip	Tongue between Teeth	Tongue on Ridge behind Teeth	Tongue Pulled Back on Roof of Mouth	Back of Throat	Glottis
Liquids				/l/	/r/		

- . Slippery consonants to describe, imitate, produce in isolation, or separate from vowels that precede them
- . float in the mouth
- . influence vowels that come before them
- . pronunciation changes somewhat according to the sounds that surround them



English Vowel Phonemes by Order of Articulation

The diagram shows English vowel phonemes arranged in a valley shape. Each vowel is in a box with example words listed below it:

- ē**: sea, these, sea, eat, key, happy, chair, either
- ī**: sit, spin
- ā**: mass, can, play, great, baby, night, yet, this
- ē**: bed, breath
- ax**: cat
- ī**: time, sit, try, light, life
- ō**: fox, woman, water
- ā**: about, large, great, definition, drop
- ū**: cup, hour, food, laugh
- aw**: law, aware, call, water, thought
- ō**: note, boat, fan, alone, open, oh
- ū**: two, blue, cheer, suit, soup
- yū**: cute, few, universe, food
- er**: her, far, ear
- ar**: car
- or**: poor
- oi**: oil, boy
- ou**: out, cow

Choose **ONE** of the **THREE** choices below to share out your aha moment.

1. Add a sticky note to an anchor chart near you with an aha moment.
2. Add an additional comment to an already existing one.
3. Use an exclamation mark to show that you agree with something stated or you find it interesting.

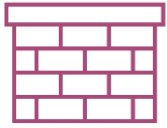
Ex. I really loved how it is set up in a v-shape to represent how the chin moves throughout each pronunciation.



Sound Wall

Plan and Preparation





Identify a space for the sound wall.



Determine the materials needed to build the sound wall.



Choose how the sound wall will be organized and displayed.



Devise a plan for revealing new sounds.



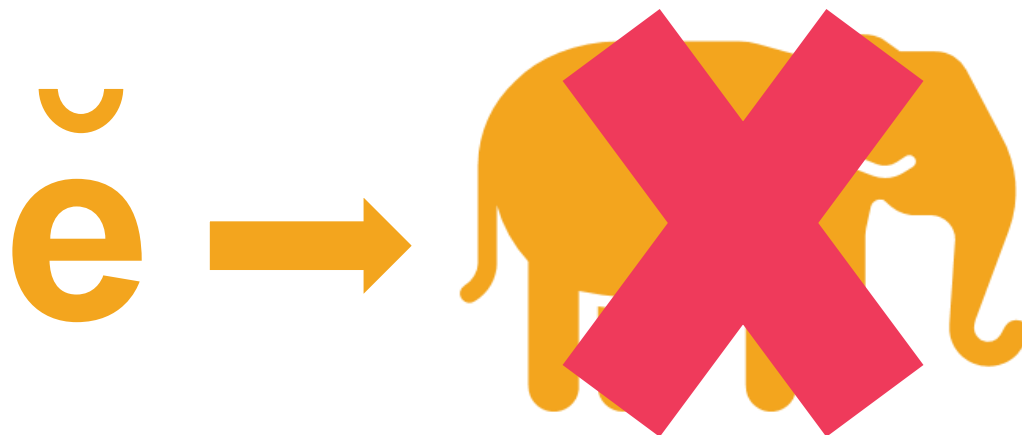
Establish a time during the day to interact with the sound wall.

Questions to Consider:

- ✓ Is the location easily accessible for both my students and me?
- ✓ Will this location be readily available for daily teaching?
- ✓ Do I have a large enough space to place both a consonant and vowel wall in my class?
- ✓ What materials can I use to incorporate a smaller sound wall in my room?
- ✓ Will I have to rearrange materials already on the wall to accommodate this space?

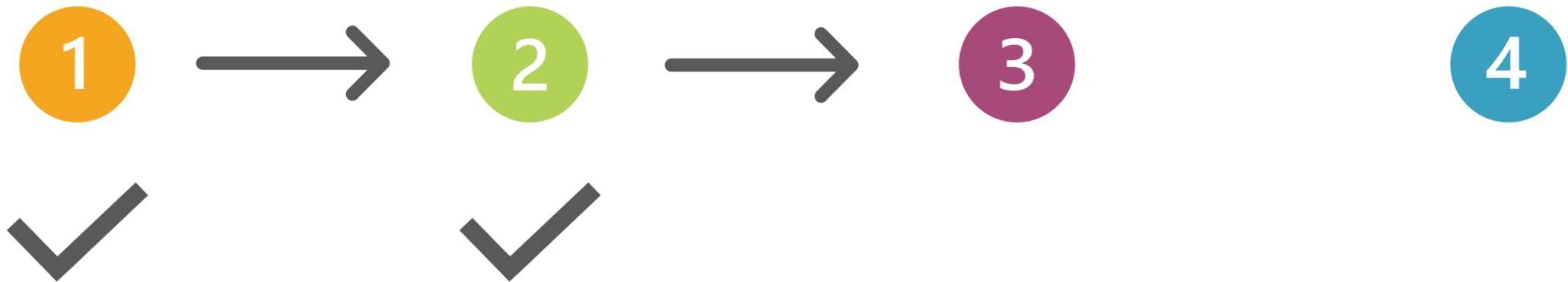
Questions to Consider:

- ✓ Do I have cards with keywords for consonants and vowels?
- ✓ How will I lay out my consonant sound wall? Clusters?
Horizontal line?
- ✓ Do I want to include pictures to help students?



Questions to Consider:

- ✓ Do I have a program with an explicit, systematic scope and sequence?
- ✓ Am I going to cluster the consonant sounds?
- ✓ Does my plan include a *v* shape for the vowel sounds?



VOWEL VALLEY

The chart displays the following vowel sounds and examples:

- /ē/**: bee, e_e_e, ee, ee_ea, _y_ey, _ie_
- /ē/**: asleep, a
- /ē/**: event, e
- /ē/**: president, i
- /i/**: sit, i
- /ā/**: a_a_e, _ay ai_
- /ē/**: Ee, e
- /ā/**: Aa, a
- /ī/**: i_e_y, igh, ie
- /ō/**: Oo, o
- /ē/**: Ni, _i
- /ē/**: Time, i_e
- /ē/**: Pie, _ie
- /ē/**: Cry, _y
- /ē/**: Light, igh
- /e/**: banana, /ə/
- /ōo/**: oo, ui, u_e, ew, ue, ou
- /ō/**: oo
- /aw/**: aw, au, al
- /ū/**: Uu, u
- /aw/**: launch, au, go, done, o_e
- /aw/**: Fawn, aw, snow, ow, _oe
- /aw/**: walk, al, toe, _oe
- /ū/**: book, oo
- /ū/**: could, oul, pull, _u_
- /ū/**: moon, oo
- /ū/**: chew, ew, blue, ue
- /ū/**: fube, u_e
- /ū/**: moon, oo
- /ū/**: unicorn, u
- /ū/**: few, oo, ew
- /er/**: er, ir, ur
- /er/**: germ, er, bird, ir, surf, ur
- /ar/**: ar
- /ar/**: ar, cart, ar
- /or/**: or
- /or/**: or, horn, or

ALL VOWEL SOUNDS ARE VOICED

Mrs. Winter's Bliss

Bliss, 2021

STOPS

AFFRICATES

NASALS

FRICATIVES

GLIDES

LIQUIDS

2 SOUNDS

Mrs. Winter's Bliss

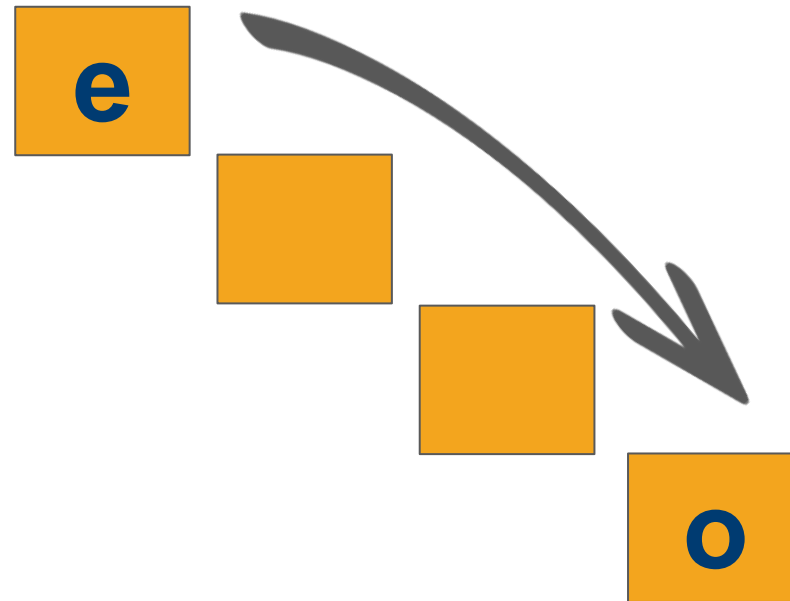
The chart is organized into seven main sections, each with a title and a small photo of a person's mouth demonstrating the sound:

- STOPS:**
 - /p/ /b/:** Examples: p, b
 - /t/ /d/:** Examples: t, d
 - /k/ /g/:** Examples: c, k, ck, g
- AFFRICATES:**
 - /ch/ /j/:** Examples: ch, tch, j, ge, dge
- NASALS:**
 - /m/ /n/ /ng/:** Examples: m, mb, mn, n, gn, kn, ing, _n_
- FRICATIVES:**
 - /s/ /z/:** Examples: s, ce, ss, ci, cy, z, s, zz
 - /th/ /th/:** Examples: th, th
 - /sh/ /zh/:** Examples: sh, ci, ti, ge, s, si
 - /f/ /v/:** Examples: f, ph, ff, v, ve
 - /h/:** Example: h_
- GLIDES:**
 - /y/:** Example: y_
 - /wh/ /w/:** Examples: wh, wh_, w, w_
- LIQUIDS:**
 - /r/:** Examples: r, wr
 - /l/:** Examples: l, ll
- 2 SOUNDS:**
 - /x/ /qu/:** Examples: _x, qu, qu_

Bliss, 2021

Questions to Consider:

- ✓ Will I place cards on the wall prior to teaching the sounds?
- ✓ Should I turn untaught sounds over until explicitly taught?
- ✓ If sounds are not yet covered explicitly, will they be visible to students the whole time?



1. Introduce one sound at a time.
2. Do not introduce similar sounds in sequence.
3. Display only the sounds you have taught.
4. Add words with the different spellings of that sound, but only the spelling patterns students have learned.
5. Use the sound wall for quick daily review.
6. Show students how they can use the sound wall as reference for reading and writing.



What
are my
lips
doing?



What
are my
teeth
doing?



What is
my
tongue
doing?



What is
my
voice
doing?



How is
the air
flowing?

- ✓ Have I thought about when I will introduce new sounds?
- ✓ How will I introduce the sounds using the sound wall?
- ✓ Will the students place the sound on the sound wall or will I?
- ✓ What will my plan be to review the sounds on the sound wall?
Will this be sporadically during the day, a part of your literacy block, or a part of a morning routine?

Daily Review for Sound Walls














- Point to all the sounds on the consonant chart and ask students to repeat them after you.
- Point to all the sounds on the vowel chart as you say them and ask children to repeat each sound.
- Determine the differences in sounds, if applicable.
- Use the sounds to determine spelling choices that have been introduced.
- Ask questions.

Consonant Sound Wall







STOPS




/p/  /b/  /t/  /d/  /k/  /g/ 

NASALS

/m/  /n/  /ng/ 

FRICATIVES



/s/  /z/  /th/  /th/  /sh/  /zh/ 

/f/  /v/  /h/ 

AFFRICATES

/ch/  /j/ 

LIQUIDS

/r/  /l/ 

GLIDES

/wh/  /w/  /y/ 



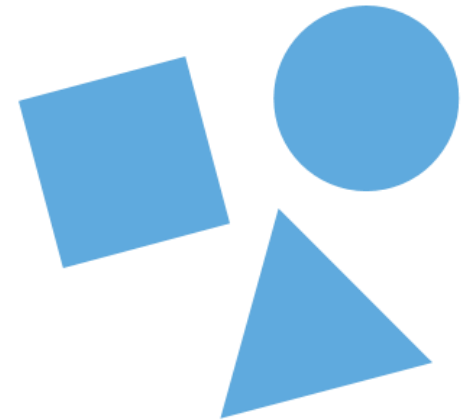
Respond to the questions below with your table. Be prepared to share your thoughts.

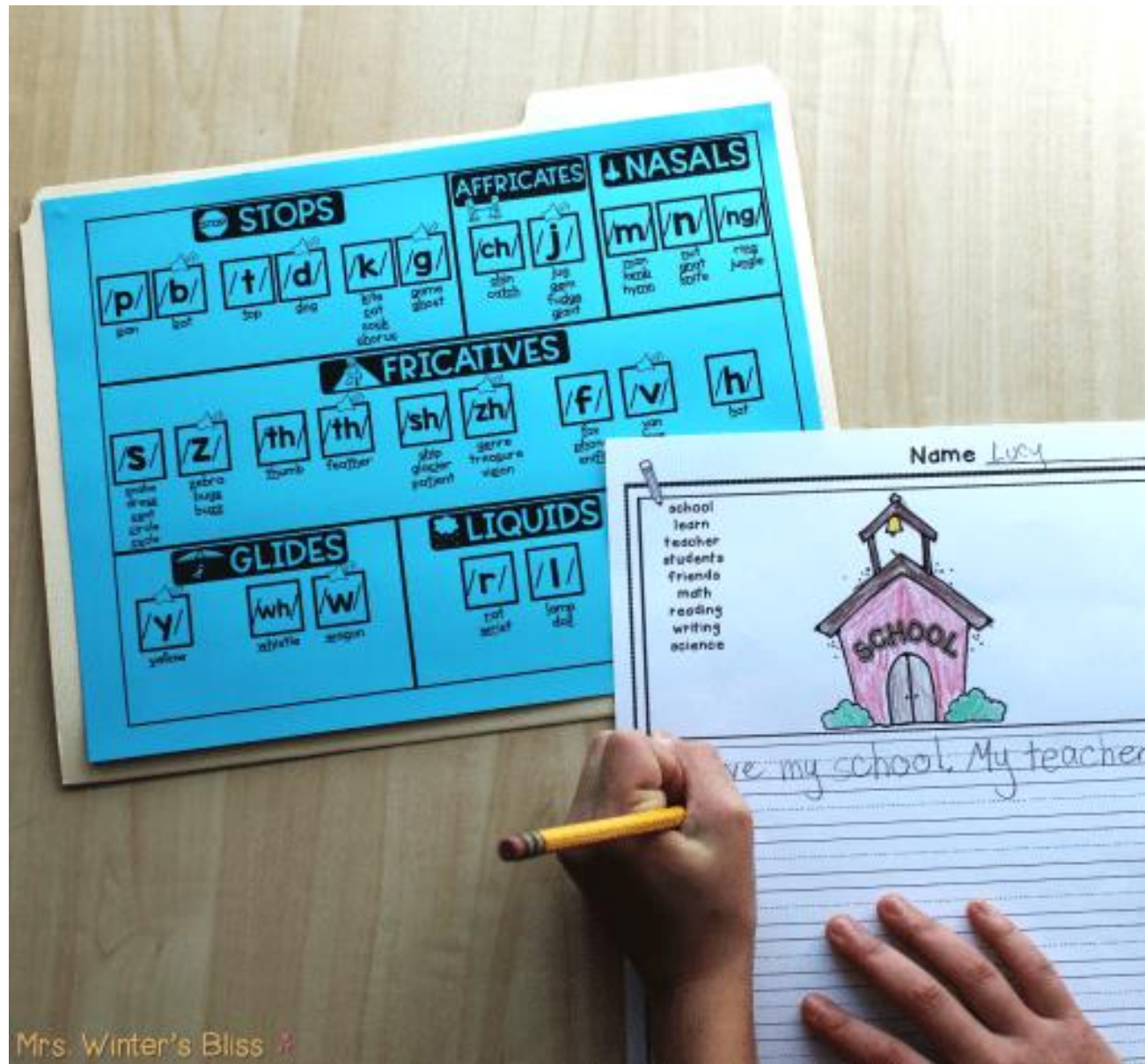


1. How are the students actively engaged during the sound wall review?
1. What is an additional way to engage students with sound walls?

Using a Sound Wall

Implementation Strategies and Activities





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Winters, C., 2021



- Students imitate the sounds and/or look in a mirror to answer questions about the sound wall.

Which sound is made with the lips—/p/ or /k/?

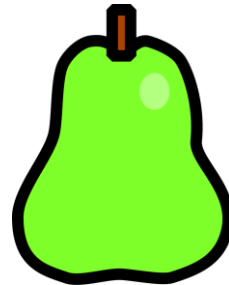
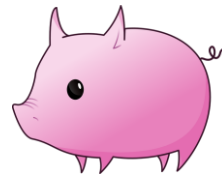
Which sound is made with the mouth wide open—/ō/ or /w/?

Which sound is made with the tongue between the teeth—/f/ or /th/?



- Engage students in picture sorts with confusing sounds.

/p/

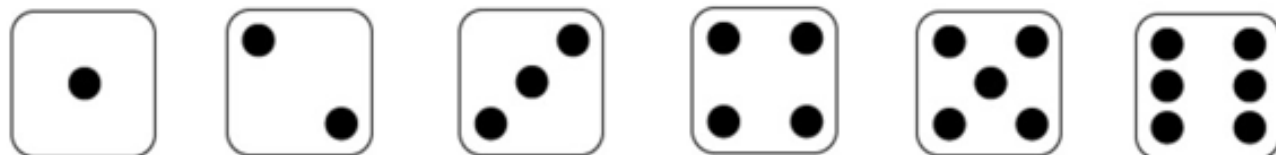


/b/



Dahlgren, M.E., 2020

ROLL A SOUND



/b/	/ă/	/f/	/v/	/ī/	/p/
		frog			
		phone			
		puff			

- Students roll the die or number generator and spell words containing the sound rolled.



- Turn out the lights.
- Repeat the poem “Flashlight, flashlight, oh so bright. Shine a sound with your light.”
- Shine the flashlight on a sound from the sound wall.
- Have the students state the sound, spellings, and the attributes.



When students ask how to spell a word...



- Ask them to segment the sounds in the word and ask them to find the sound they are struggling with on the sound wall.
- Example: When a student asks how to spell "*meet*," ask them to find the /ē/ and look at the choices for spelling that sound.

When students struggle to read a word...



- Point to the spelling on the sound wall and ask them what they know about that spelling.
- Example: If a student stumbles on the word “*night*” while reading, point out the *igh* and direct them to the long *i* card on the sound wall. What do we know about this spelling *igh* and the sound it represents?

Reflection





Do not be afraid to begin!



Make it a learning experience for everyone.



Keep the focus on the phonemes rather than the graphemes.

Take a few minutes to personally reflect on the new knowledge you have gained from today's presentation.



- What is something new you learned about sound walls?
- What is one takeaway from today's presentation that will support you in your coaching practices?



Resources



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Statewide public awareness campaign promotes literacy, particularly among PreK-3 students

Campaign aims to equip parents and community members with information and resources to help children become strong readers

Visit strongreadersms.com for more information!





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