

Transitioning from Word Walls to Sound Walls



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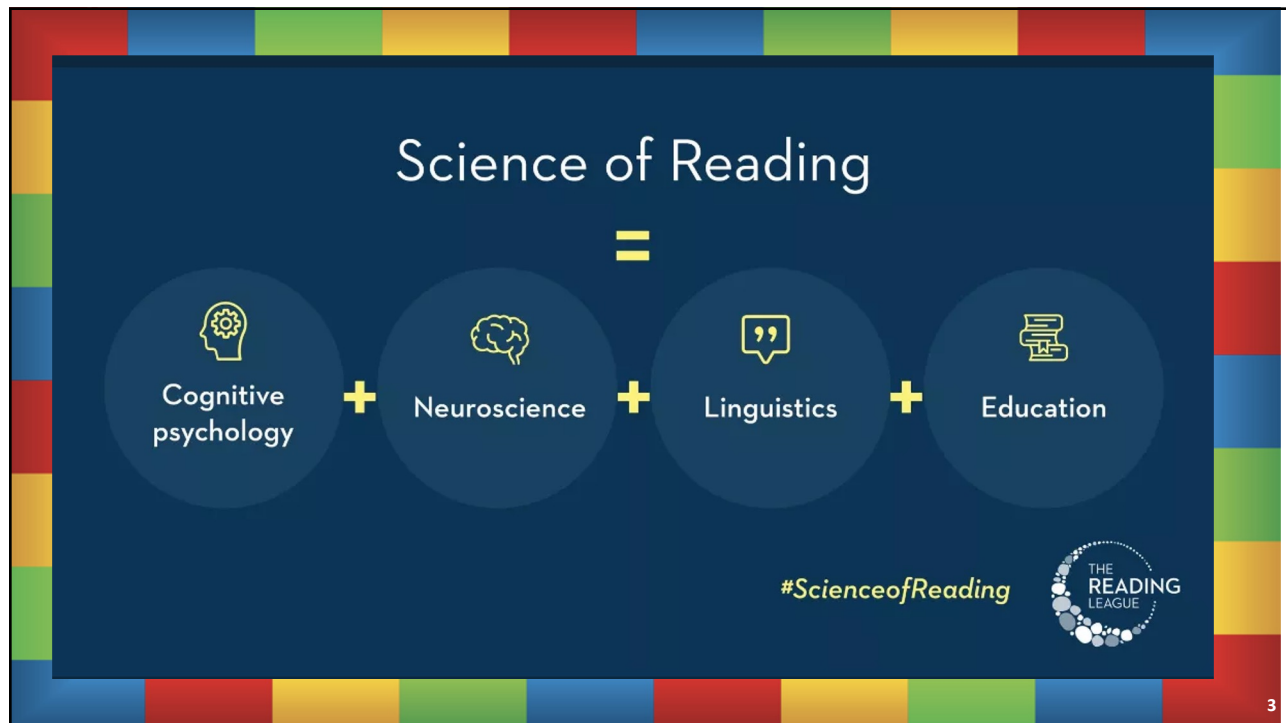
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The Science of Sound Walls

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The Learning to Read Challenge

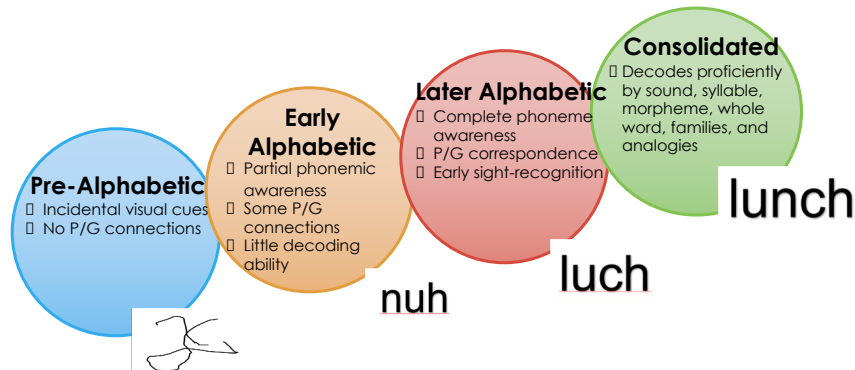
- Learning to read is not natural.
- Our writing system adds another layer of complexity to an already not natural task.
 - 44 Phonemes (speech sounds)
 - 26 Letters
 - 250+ ways of representing speech sound
- Reading is a complex multifaceted skill that requires years of instruction and practice.

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Ehri's Phases of Word Reading Development

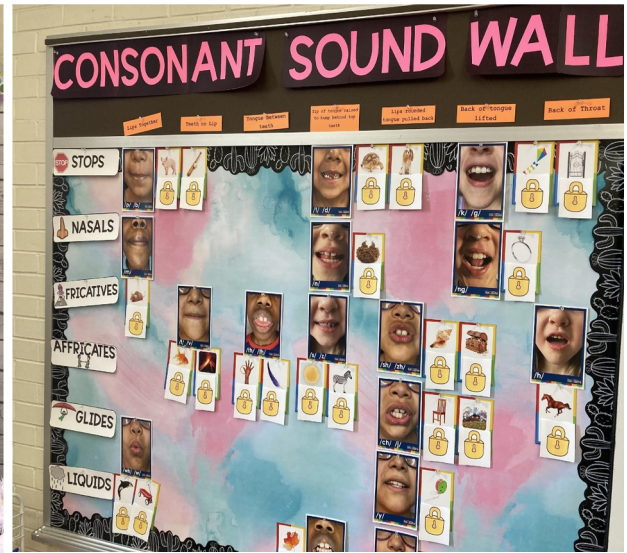
- Sound walls are a tool for moving students from pre-alphabetic to later alphabetic phase.



(Source: Orthographic Mapping in the Acquisition of Sight Word Reading, Spelling Memory, and Vocabulary Learning Ehri, 2014)

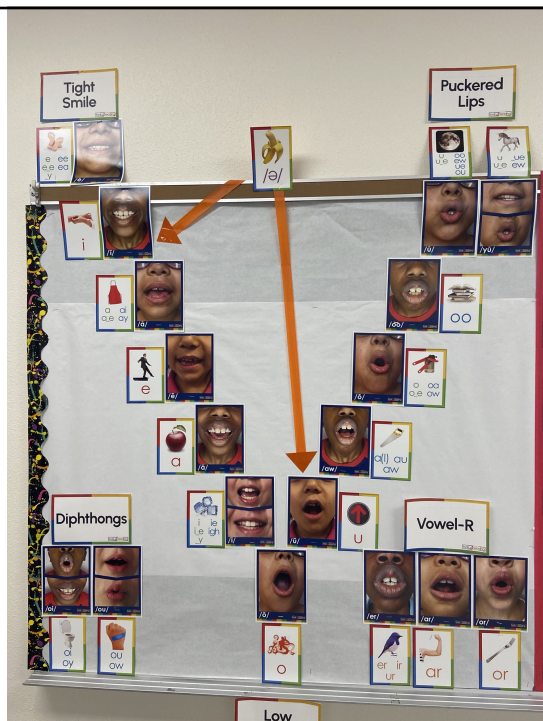
“There is reason to believe that sounds processed by the ear are less central than *articulatory gestures produced by mouth movements* in saying words. According to the motor theory of speech perception (Liberman, 1999), *articulatory gestures rather than acoustic features represent phonemes in the brain*. Also, ease of processing favors gestures. Whereas sounds are ephemeral 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, 2015

Moving from Speech to Print



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Confusing for Developing Readers

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Sound Walls...

- help students perceive and produce all 44 English phonemes.
- make the phoneme-grapheme connection clear.
- can be used as a scaffold when students get confused with their speech, reading, and writing.
- are a resource for English Learners.
- give teachers insight into how their students are processing language.

A Focus on Phonemes

- Spoken word recognition, pronunciation, and interpretation depend on accurately processing phonemes.
- Proficient reading and spelling are strongly associated with the ability to identify, remember, separate, combine, and manipulate phonemes, and to do so rapidly and without effort. THIS IS PHONEMIC PROFICIENCY!

(Source: *Speech to Print*, 2020)

Sound Wall Template

25 consonant phonemes

THE CONSONANT CHART
PLACE IN MOUTH WHERE PHONEME IS PRODUCED

	Lips together	Teeth on lip	Tongue between teeth	Tip of tongue raised to bump behind top teeth	Lips rounded tongue pulled back	Back of tongue lifted	Back of Throat
Stop	Unvoiced /p/	Unvoiced /t/	Unvoiced /k/	Unvoiced /tʃ/	Unvoiced /tʃ/	Unvoiced /k/	Unvoiced /k/
Voiced	Voiced /b/	Voiced /d/	Voiced /g/	Voiced /dʒ/	Voiced /dʒ/	Voiced /g/	Voiced /g/
Nasal	Unvoiced /p̥/	Unvoiced /t̥/	Unvoiced /k̥/	Unvoiced /tʃ̥/	Unvoiced /tʃ̥/	Unvoiced /k̥/	Unvoiced /k̥/
Voiced	Voiced /m/	Voiced /n/	Voiced /ŋ/	Voiced /dʒ̃/	Voiced /dʒ̃/	Voiced /g̃/	Voiced /g̃/
Fricatives	Unvoiced /f/	Unvoiced /θ/	Unvoiced /s/	Unvoiced /ʃ/	Unvoiced /ʃ/	Unvoiced /k̥/	Unvoiced /k̥/
Voiced	Voiced /v/	Voiced /ð/	Voiced /z/	Voiced /ʒ/	Voiced /ʒ/	Voiced /g̃/	Voiced /g̃/
Affricates	Unvoiced /p̥t̥/	Unvoiced /t̥d̥/	Unvoiced /k̥t̥/	Unvoiced /tʃ̥/	Unvoiced /tʃ̥/	Unvoiced /k̥/	Unvoiced /k̥/
Voiced	Voiced /b̥d̥/	Voiced /d̥g̥/	Voiced /g̥t̥/	Voiced /dʒ̃/	Voiced /dʒ̃/	Voiced /g̃/	Voiced /g̃/
Glide	Unvoiced /p̥t̥/	Unvoiced /t̥d̥/	Unvoiced /k̥t̥/	Unvoiced /tʃ̥/	Unvoiced /tʃ̥/	Unvoiced /k̥/	Unvoiced /k̥/
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Liquids	Unvoiced /p̥t̥/	Unvoiced /t̥d̥/	Unvoiced /k̥t̥/	Unvoiced /tʃ̥/	Unvoiced /tʃ̥/	Unvoiced /k̥/	Unvoiced /k̥/
Voiced	Voiced /b̥d̥/	Voiced /d̥g̥/	Unvoiced /k̥t̥/	Unvoiced /tʃ̥/	Unvoiced /tʃ̥/	Unvoiced /k̥/	Unvoiced /k̥/

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18 + 1 vowel phonemes

THE VOWEL VALLEY

Begin with a tight smile /ɪ/.
End with puckered lips /ʊ/ and /y/.

These are arranged by a slight opening of the mouth.
These vowel phonemes are referred to as back rounded vowels.

DIPHTHONGS
The most open sound is /ɒ/, as in the sound we say when the doctor wants to see our tonsils.

VOWEL-R

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Our Speech Sounds – Consonant Phonemes

- **Place of Articulation**
 - Where in the mouth the sound originates
- **Manner of Articulation**
 - What we do with our breath and our vocal cords
 - This is important to explain and review consistently with your students.
 - Do not be afraid to use the terms on the left-hand side of the consonant chart.

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PLACE IN MOUTH WHERE PHONEME IS PRODUCED

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Producing Vowel Phonemes

- 5 vowel letters – 18 vowel phonemes
- Where in the mouth is the sound being produced?



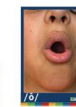
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THE VOWEL VALLEY

Begin with a tight smile /ē/.



These are arranged by a slight opening of the mouth.



End with puckered lips /ū/ and /yū/.

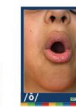
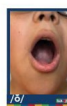


These vowel phonemes are referred to as back rounded vowels.

DIPHTHONGS



The most open sound is /ō/, as in the sound we say when the doctor wants to see our tonsils.



VOWEL-R



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Daily Routine: Implementation

- *Whole Group and/or small group
- *High level of student engagement
- ***Build/Grow** the Sound Wall with your students
- *Align with approved phonics scope and sequence.

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Phonemes First!

/sh/ Consonant Phoneme/sh/
Keyword: *shell*

SPECIAL NOTES FOR THE TEACHER
Sound features:

- The sound is produced in the middle of the mouth.
- The roof of the mouth is known as the palate. It's a bony, hard structure that is the front part of the roof of the mouth. If you take the tip of your tongue, and run it over the hard palate, you can feel wrinkles across its surface.
 - Remember that the alveolar ridge is the bump that's behind the upper front teeth.
- Palatal: When saying the /sh/, the air gets blocked by the tongue around the hard palate.
- Unvoiced: The /sh/ as in *shell* is produced without activating your voice box, the vocal cords are not vibrating.
- Continuant: The /sh/ can be made until you run out of breath.

TIPS TO APPLY

- Work with words orally and not in written form.
- Have students look in a mirror while producing the /sh/ and also have them feel that there is **no** vibration when they place their fingers lightly on their throat.
- Students whose native language is either Spanish or Cantonese have never heard nor produced a /sh/. Therefore, provide as many opportunities for students to hear the /sh/ in words: such as *shell, shop, shark, shirt, shovel, shake, shy, shelf*.
 - Students whose native language is either Vietnamese, Hmong, or Korean have the /sh/ as part of their phonology, but the symbol that represents the /sh/ cannot transfer to English.
- Be careful. Students can confuse the articulation of the /sh/ as in *shell* with the /zh/ as in the medial sound in *measure* or the initial sound in *genre*.
 - These two sounds look the same when producing them, but the only difference is that the /sh/ is an unvoiced sound (no activation of the voice box), while the /zh/ is a voiced sound (activation of the voice box).
 - Because the /sh/ and /zh/ sound and look the same, make sure to have students contrast the /zh/ voiced sound with the /sh/ unvoiced by saying the two sounds with their hands over their ears. The voiced /zh/ will cause a resonating in the ears, and the /sh/ will be quiet.



FOR THE NATIVE SPANISH SPEAKER

- The /sh/ does not exist in Spanish phonology.
- Provide as many opportunities for students to hear and produce the /sh/ in words, such as *shift, shoe, shallow, shook, push, fish, flush, harsh, crush, cushion, machine, ocean, Washington*.

INSTRUCTIONAL SEQUENCE

LDQ: Today, we will be learning about the /sh/ as in *shell*. Here is how we make this sound, watch me. I'm going to bring my top and bottom teeth close together and shape my lips in a wide circle, so that I can see my front teeth.

WEDO: Let's try it together. Make certain students have correct placement and are looking in the mirror.

LDQ: Now, I'm going to gently force some air through this very tight spot where my teeth meet. If I place my hand in front of my mouth, I will barely feel the air coming from my mouth. But, I can sure hear it. Keep blowing until you run out of air. But, do NOT turn on your voice box.

- Fun Fact: You can share with your students that the /sh/ sound is like the sound and gesture (placing your finger in front of your lips) that you make when you want someone to be quiet.

WEDO: Let's try it together. Make certain students have correct placement, are looking in the mirror, and are not activating their voice box.




YOU DO: Now, you show me how to make the sound.

- What happened with your lips?
- What happened with your voice box?
- Is the airflow stopping or continuing?

Now, tell me where the /sh/ is in these words, is it at the beginning, at the end, or in the middle of the word? Say one word at a time waiting for students to respond before saying the next word.

- shark, shovel, show, shape, cashier, marshmallow, cashew, mushroom, brush, fish, dish, wash*

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Instructional Sequence
is found in the Kid Lips™
Instructional Guide

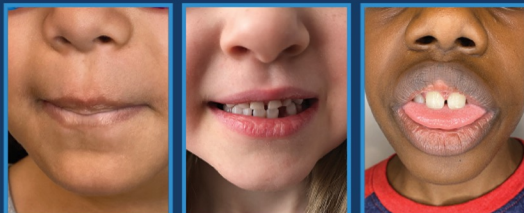
PHONOLOGICAL AWARENESS

PHONEME FOCUS
Our focus sound for today is /sh/. /sh/ is a consonant sound. The keyword picture for /sh/ is shell. Say shell.
What is the first sound you hear in shell? Yes, /sh/.


EARLY	LATER	CONSOLIDATED
<p>Shells come from the ocean. Many shells are homes for ocean animals. What sound do you hear at the beginning of shell? Yes, /sh/. For our activity today we are going to shake up some words by changing some of the phonemes, or sounds, in the word.</p> <p>I DO: Watch me: The word is shell; /sh/ -ell. Change -ell to -ack. The word is shack. I will call out a word, you echo. We will use our fists to represent the onset and rime of the word. I will tell you which part of the word to shake up, then we will say the new word. Ready?</p> <ul style="list-style-type: none"> Shack; /sh/ -ack. Change -ack to -ake. The word is? Yes, shake. Shame; /sh/ -ame. Change -ame to ark. The word is? Yes, shark. Sharp; /sh/ -arp. Change -arp to ë. The word is? Yes, she. Short; /sh/ -ort. Change -ort to out. The word is? Yes, shout. Dish; /d/ -ish. Change /d/ to /t/. The word is? Yes, fish. 	<p>Let's segment and blend words with /sh/. I will say a word; you echo. We will segment then blend the phonemes in the word. Next we will identify the position of /sh/.</p> <ul style="list-style-type: none"> Shell; /sh/ /ë/ /l/ shell. Where's the /sh/? Yes, initial position. Splash; /s/ /p/ /l/ /ä/ /sh/ splash. Where's the /sh/? Yes, final position. Crush; /c/ /r/ /ü/ /sh/ crush. Where's the /sh/? Yes, final position. Shelf; /sh/ /ë/ /l/ /f/ shelf. Where's the /sh/? Yes, initial position. Cashier; /k/ /ä/ /sh/ /ë/ /r/ cashier. Where's the /sh/? Yes, medial position. Leash; /l/ /ë/ /sh/ leash. Where's the /sh/? Yes, final position. 	<p>Let's manipulate sounds in words with /sh/. I will say a word; you echo. Then we will manipulate the sounds to make new words. Listen carefully.</p> <ul style="list-style-type: none"> Say park. Switch /p/ to /sh/ and the word is _____. Yes, shark. Where's the /sh/? Yes, initial position. Say ape. Add /sh/ to the beginning and the word is _____. Yes, shape. Say ache. Add /sh/ to the beginning and the word is _____. Yes, shake. Say aim. Add /sh/ to the beginning and the word is _____. Yes, shame. Say Lee. Add /sh/ to the end and the word is _____. Yes, leash. Say shoulder. Delete /sh/ and the word is _____. Yes, older. Say shower. Delete /sh/ and the word is _____. Yes, hour. Say shout. Delete /sh/ and the word is _____. Yes, out.

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Sound Questions for Consonants



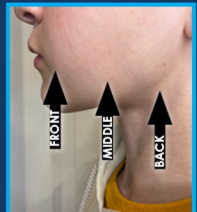
What is blocking the air flow?
Lips? Teeth? Tongue?



Is my voice box on or off?



Is the air flow continuous?
Does the air flow stop?
Does the air go through my nose?







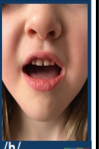









Is the sound made in the front / middle / back of my mouth?


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Fricatives

First Phoneme
Unvoiced

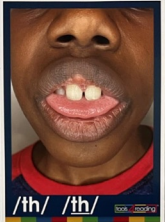
Second Phoneme
Voiced

	Teeth on Lip	Tongue Between Teeth	Tip of Tongue Raise to Bump Behind Top Teeth	Lips Rounded: Tongue Pulled Back	Back of Throat
					
	/f/ /v/	/th/ /th/	/s/ /z/	/sh/ /zh/	/h/
	 f  v	 th  th	 s  z	 sh  zh	 h

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Adding Words to the Sound Wall




/th/ /th/

thin
thick
bath
broth



 th
 th


that
these
the
them



/sh/ /zh/

ship
shack
she
show
wish
wishes

 sh
 /zh/

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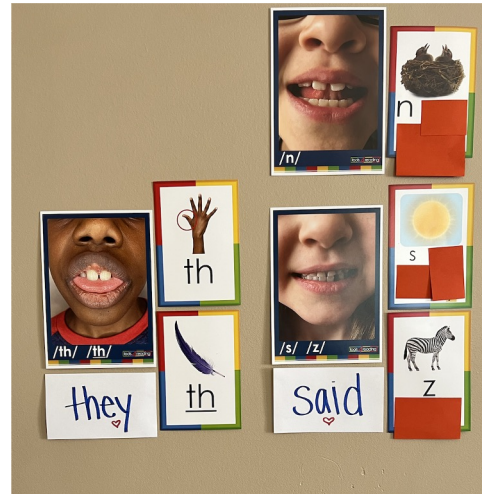
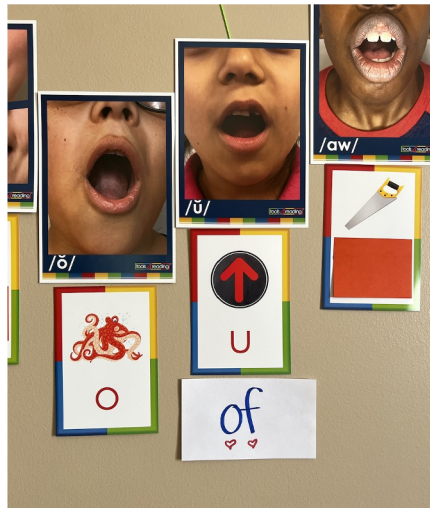


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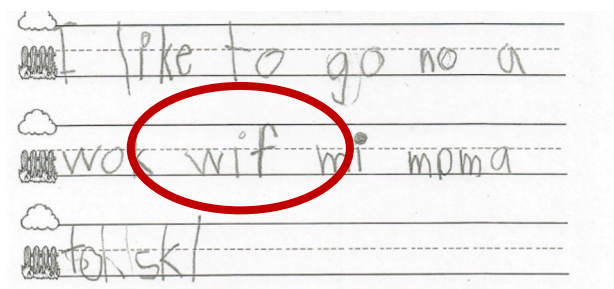
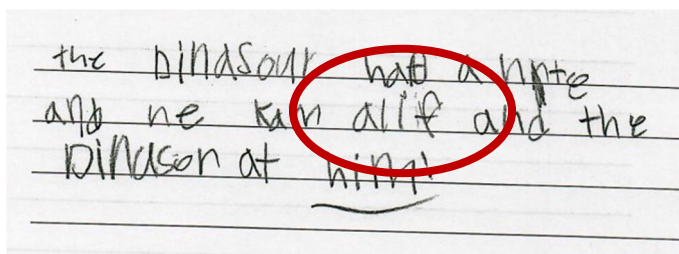
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Words on a Sound Wall



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Strengthening Decoding and Encoding Skills



THE CONSONANT CHART
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	Lips together	Teeth on lip	Tongue between teeth	To of tongue raised to bump behind top teeth	Lips rounded tongue pulled back	Back of tongue raised	Back of Throat
Stop							
Unvoiced							
Voiced							
Nasal							
Unvoiced							
Voiced							
Glides							
Unvoiced							
Voiced							
Liquids							
Unvoiced							
Voiced							

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If you could be a bug, which one would you choose?
Why would you want to be that bug?

I would be a chirachulu
because I could be creepy
I could shoot webs
I could live in a cave
I could live in the dark

I like to jump on
the chraplen

THE CONSONANT CHART
PLACE IN MOUTH WHERE PHONEME IS PRODUCED

	Lips together	Teeth on tip	Tongue between teeth	Tip of tongue raised to bump behind top teeth	Lips rounded tongue pulled back	Back of tongue lifted	Back of Throat
Stop							
Unvoiced							
Voiced							
Nasal							
Unvoiced							
Voiced							
Fricatives							
Unvoiced							
Voiced							
Affricates							
Unvoiced							
Voiced							
Glides							
Unvoiced							
Voiced							
Liquids							
Unvoiced							
Voiced							

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This weekend I played
video games.

The boy was on his way to see the dinosaur in the museum when...

he saw something it was big and tall
and it said hi that's a creep. He
stayed out the boy yelled AAAAAA!!!!
it was a dinosaur. The Dinosaur
the Dinosaur said hi kid the Dinosaur was
sloping the boy ran he went home and he
went to his room and there was the dinosaur
it was a creepy dinosaur the boy ran to the
rain forest the boy was with the boys. Mom
was looking for the boy the Dinosaur wanted
to eat the boy but the mom found the boy she
hited the Dinosaur with her shoe the
Dinosaur said AAAAAA!!!! that here

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Voiced							
Glides							
Unvoiced							
Voiced							
Liquids							
Unvoiced							
Voiced							


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