Effective Evaluation and Intervention Procedures for Frontal and Lateral Lisp Disorders™

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Course Objectives

- Participants will know the characteristics of the 4 types of lisp disorders.

- Participants will name the two possible tongue placements for /s/ and /z/.

- Participants will list the 22 variations for /s/ and /z/, initial and final /s/ blends.

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- Participants will know at least one technique to elicit tongue placement.

Presentation Overview

- Targeted for all levels of knowledge.

- Evaluation procedure (s).

- Specific treatment strategies.

Course Objectives

- Know how to evaluate and treat the various word positions of the sibilant sounds: (s, z)

- Know how to use co-articulation to elicit correct tongue positioning.

- Be able to write measurable and objective IEP goals.

- Identify 2 placements techniques

- Identify natural tongue positioning for /t/, /n/, /l/ and /d/.

- Know difference between frontal and lateral lisp disorders.

There are 4 Types of Lisp Disorders

- 1). Interdental (frontal) lisp
  - /s/
  - /z/

2). Dentalized Lisp disorder

3). Lateral lisp disorder

4). Palatal lisp disorder

Interdental Lisp Disorder

- /s/: the voiceless th is substituted for /s/ (tongue comes in between the top and bottom front teeth)

- /z/: Voiced /th/ is produced for the /z/.

Dentalized Lisp Disorder

- The tongue rests on, or pushes against, the front teeth, the air-flow is directed forwards, Producing a slightly muffled sound.

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Lateral Lisp Disorder

- 3). Lateral lisps are not found in typical speech development. The tongue position for a lateral lisp is very close to the normal position for /l/ and the sound is made with the air-flow directed over the sides of the tongue.

- Because of the way it sounds, this sort of lisp is sometimes referred to as a 'slushy ess' or a 'slushy lisp'. A lateral lisp often sounds 'wet' or 'spitty'.

Palatal Lisp Disorder

- Not found in typical speech development.

- Mid-section of the tongue comes in contact with the soft palate, produce a 'h' closely followed by a 'y', and prolong it.

Typical Age of Development /s/ and /z/

- Typically developing children dentalised variants of /s/ and /z/ until around 4½ years.

- Lateral lisps are not characteristic of normal development.

- Palatal lisps are not characteristic of normal development

Initial /s/ Clusters Age of Acquisition

sp st sk/ 7;0 7;0
/sm sn/ 7;0 7;0
/sw/ 7;0 7;0
/sl/ 7;0 7;0
/skw/ 7;0 7;0
/spl/ 7;0 7;0
/spr str skr/ 9;0 9;0

Age of Acquisition for Lateral Lisp

- Not developmentally appropriate.

- Begin intervention immediately
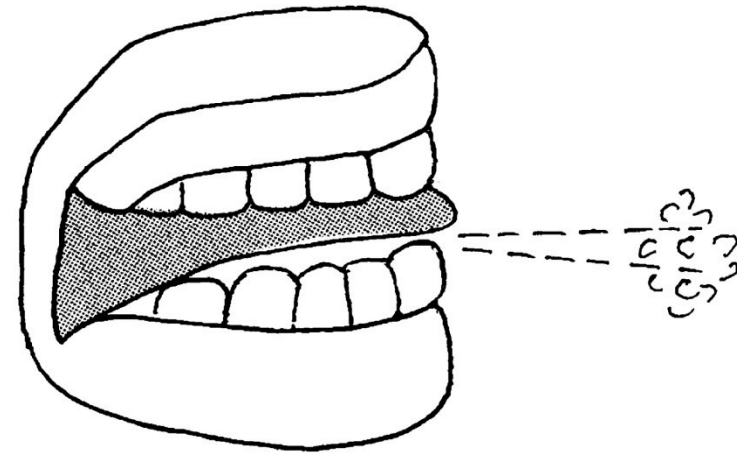- (Jen Taps)

Two Types of Lisp Disorders

Frontal
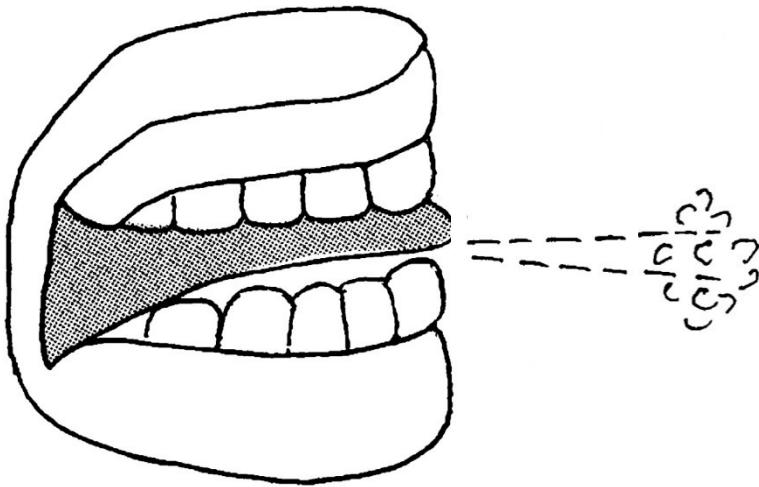
Lateral
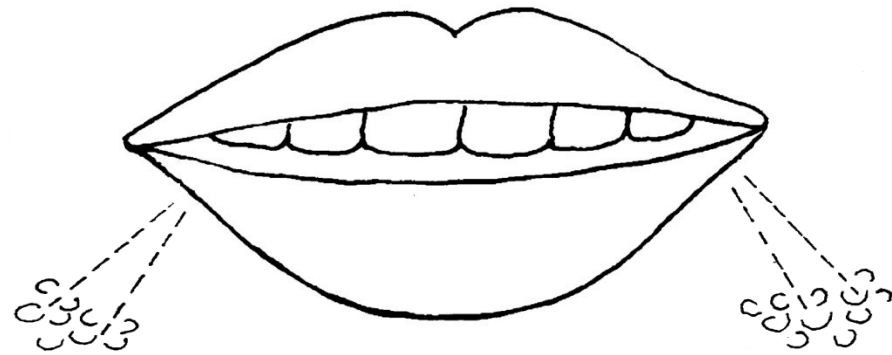
Frontal Lisp

- Most common.
- Also called interdental lisp.
- Trademark sound - /th/.
- Cause: Tongue is protruding too far forward. May actually be visible during speech.
- Goal: To bring tongue tip back.

Frontal Lisp/Phonological Disorders

- In my experience when working on establishing the reduction of initial /s/ clusters, many students front the /s/ phoneme.
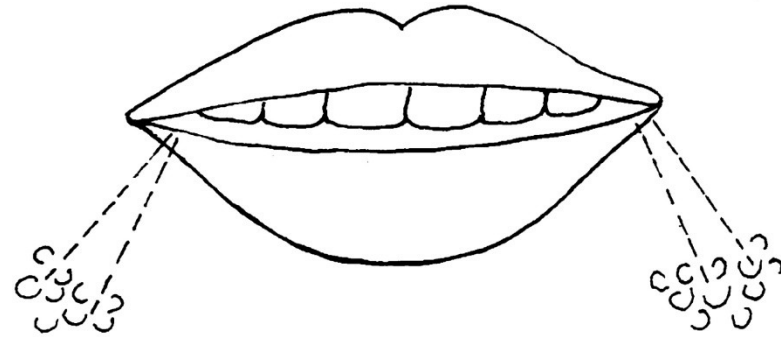
Initial /s/ blends in Phonological Intervention

- Often success with these sounds help predict more complex sounds.

Lateral Lisp

- Less visible, more audible problem.

- Caused by tongue in wrong location (too low) allowing air to escape (primarily from sides of the mouth).

- Sound produced is often "wet" or spitty. Sometimes called a "slushy S."

- Goal: Focus air stream out front of the mouth.

Evaluation and Intervention for Lisp Disorders

- Evaluation and treatment for frontal and lateral lisps are similar.

- Correct production of both frontal and lateral lisps disorders is in the <u>alveolar ridge</u> region/behind bottom front teeth.

- Use student's strengths to elicit misproduced phonemes.

22 Total /s/ and /z/ Variations

- Initial, medial and final /s/ : 3

- Initial, medial and final /z/:   3

- Initial /s/ clusters: 7

- Final /s/ clusters: 9

Categories of /s/ & /z/

- Initial, medial and final /s/ and /z/

- Initial /s/ clusters

- Final /s/ clusters

Initial /s/ Blends

- sp (spin)

- st (stump)

- sl (slim)

- sn (snail)

- sm (small)

- sk (skate)

- sw (swing)

- str (string)

Final /s/ Blend Clusters

- -fs (coughs)

- -sts (forests)

- -ps (cups)

- -sps (wasps)

- -ks (makes)

- -sk (mask)

- -sks (asks)

- -st (fast)
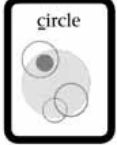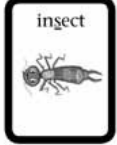
Start With a Comprehensive Evaluation

- Evaluate initial, medial and final /s/ and /z/ + initial /s/ blends to attain a comprehensive understanding of student's ability.

- Establish frontal or lateral lisp disorder.

- Establish natural tongue positioning for /t/.

Student Name_____

Screening Date_____ Date of Birth _____

Examiner_____

Frontal Lisp_____ Lateral Lisp_____

SAY IT RIGHT. The Entire World of S&Z™ Screening Form

/s/	1. **Initial /s/** circle sand soap	2. **Medial /s/** insect lasso recipe	3. **Final /s/** horse tennis race
/z/	4. **Initial /z/** zero zoo xylophone	5. **Medial /z/** jersey newspaper music	6. **Final /z/** cards birds games

Initial Blends

7. **/st/** star store stare	8. **/sl/** sleep slope slide	9. **/sp/** spearmint space spy

10. **/sm/** smoke small smile	11. **/sn/** snack snake snail	12. **/sk/** score skill skate	13. **/sw/** swing swim sweet

Final Blends

14. **/ts/** nuts pots bats	15. **/st/** forest pest artist	16. **/sts/** twists wrists beasts
17. **/ps/** lips clips cups	18. **/sps/** grasps gasps lisps	19. **/fs/** coughs cuffs laughs
20. **/sk/** disk flask desk	21. **/ks/** rocks thanks bikes	22. **/sks/** asks tasks masks

Evaluate all 22 Variations of /s/ and /z/

- To determine natural tongue placement.

Check for Presence of Front teeth

- Top front teeth
- Bottom front teeth
- Essential for placement

- Goal: Keep tongue in the cage (teeth). Acts as a natural barrier for the tongue.

Choosing a Target

- Based upon correctly produced word (s) and word position (s).

Correctly Produced Word List

sun
sat
spot
best
task
busy

Tongue Placement is Key To Success

- /s/ sound in correctly produced words needs to sound crisp before moving onto phrase and sentence level

- Use correctly produced words to reinforce placement

There are 2 Placements for /s/ and /z/

- 1). Alveolar ridge

- 2). Behind bottom front teeth

There are Two Possible Tongue Placements for /s/ and /z/

- Tongue tip up behind top front teeth.

- Tongue tip behind bottom front teeth.

- Middle of the front and bottom teeth can also occur and lead to distortion

Alveolar Ridge Tongue Placement

- /s/ and /z/ can be produced at the alveolar ridge region - (right behind the upper front teeth)

Lower Tongue Placement for Lisp Disorders

- Tongue tip behind lower front teeth.

Which Tongue Position is Better?

- Both are equal and the better one for your student is the placement being naturally used in
    - Correctly produced words

Contrast Two Possible Tongue Placements

- Decide which is more comfortable for student (example: sat vs. hats).

- Method: Take correctly produced words and see where the natural placement is.

Contrast correctly Produced Words with Misproduced Words

- Ask student where tongue placement is for both productions:

- Top
- Middle
- Bottom

Plan Intervention

- Base intervention on results of screening.

- Consistently <u>focus only on ONE target</u> until mastered.

- Choose appropriate elicitation techniques.

- Use phonetically consistent probe lists.

How can students work together in a group?

- Frontal lisp: Have other students watch for tongue protrusion (visual).

- Lateral lisp: Students listen for sharp vs. slushy speech.

- Tongue placement is same regardless of disorder.

Big /s/

Name: _____   Date: _____

Directions: Instruct the student to color in the "S." This activity provides a tactile and visual stimulation for the student when producing the /s/ sound.
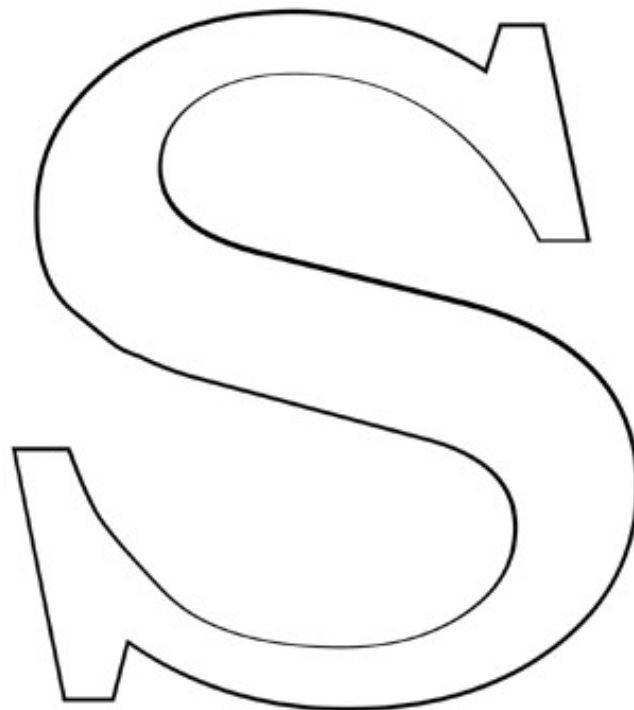
Auditory, Tactile and Visual Cues for /s/ and /z/

- Slide finger down arm during production practice.

- E.g. *snake sound*
    color or trace a large "s"
     use snake cue –wavy motion.

Commonalities About /s/ & /z/

- Cognates. Have same placement and production with the exception of voicing.

- Airflow restricted or released by tongue causes production and common "hissing" sound.

- Different spellings, same production.

Elicitation Techniques (Co-articulation)

- Use the other consonants to facilitate production.

- E.g.   Ta<u>n</u> <u>s</u>ilo   pe<u>ns</u>

         Fee<u>l</u> <u>s</u>ad   rea<u>ds</u>

/n/ final + /s/ Initial = /s/ Medial Words

Ta**n** **s**ilo

Choices of Elicitation Techniques

- Exploded /t/ or /ts/.

- /ts/ final words, phrases and sentences.

- Straw to demonstrate placement (frontal lisp).

- Co-articulation

- Alveolar target exercises.

Intervention for Initial /s/ Clusters

- Jen Taps article-phonology can predict other sounds

- If student had correct placement with one or more initial /s/ clusters

/sp/ Initial Single Words

Name: _____   Date: _____

Directions: Say each word slowly. Make sure to elongate the initial /sp/ sound. Mark the speech/homework block as appropriate for correct pronunciation.

spider

Speech ___   Homework ___

spaceship

Speech ___   Homework ___

spot

Speech ___   Homework ___

spear

Speech ___   Homework ___

spool

Speech ___   Homework ___

spill

Speech ___   Homework ___

Activity: Forest

Name: _____   Date: _____

Directions: Instructor should make up a word list. Instruct the student to repeat the words. If a word is pronounced correctly, the student colors in a tree. If response is incorrect, the instructor colors in a tree.

chest
wrist
pest
beast
east
west
forest
twist
artist
cast
breakfast
last

Final /st/ Production Practice

Teaching Placement for /z/

- Teach /z/ if student can correctly produce on initial screening

- After all other /s/ and /s/ blends have been mastered and it is the last thing

Techniques for Teaching /z/

- Humming Bee breath

- Voiced consonant rule

Humming Bee Breath

- Place hands over the ears
- Close eyes
- Hum and say /z/ listen and feel the vibration from the humming.
- Hum and say /s/. Listen and feel
- Compare how the /s/ and /z/ felt and sounded.

Voiced Consonant Rule

- In English when there is a voiced consonant preceding the final "s" the /s/ is pronounced as a /z/.

Voiced Consonants Pronounced as /z/	
Tom's	runs
bills	Buzz's
badges	legs
spurs	Bob's
gloves	cars

Non-Voiced Consonants Pronounced as /s/	
Rick's	banks
maps	shirts
Matt's	clinics
links	rats
fluffs	laughs

Voiced Consonant Rule:

When a word ends in a:

/b/, /d/, /g/, /m/, /n/, /r/, /v/ & /z/

the final /s/ is pronounced as a /z/.

For Example:

com<u>bs</u>	ca<u>ns</u>
fol<u>ds</u>	ca<u>rs</u>
le<u>gs</u>	slea<u>ves</u>
ha<u>ms</u>	bree<u>zes</u>

Contextual Pronunciation

As a noun or adjective it's [s]:

use
diffuse
device
spouse
misuse
house
advice
abuse
excuse
close

As a verb it's [z]:

use
diffuse
devise
espouse
misuse
house
advise
abuse
excuse
close

Elicitation Techniques (Co-articulation)

- Use the other consonants to facilitate production.

- E.g.   Ta<u>n</u> <u>s</u>ilo   pe<u>ns</u>

     Fee<u>l</u> <u>s</u>ad   rea<u>ds</u>

/n/ final + /s/ Initial = /s/ Medial Words

Ta**n** **s**ilo

Choices of Elicitation Techniques for /s/

- Exploded /t/ or /ts/.

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- Alveolar target exercises.

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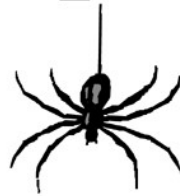- If student had correct placement with one or more initial /s/ clusters

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spider

Speech ___ Homework ___

spaceship

Speech ___ Homework ___

spot

Speech ___ Homework ___

spear

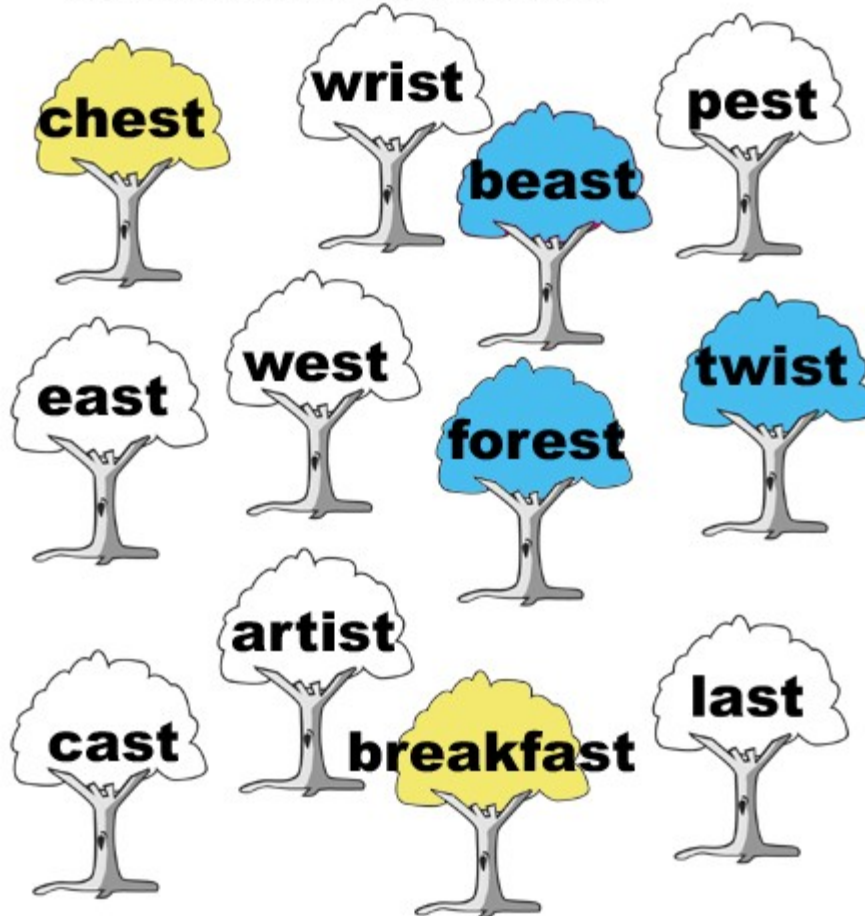Speech ___ Homework ___

spool

Speech ___ Homework ___

spill

Speech ___ Homework ___

Activity: Forest

Name: _____ **Date:** _____

Directions: Instructor should make up a word list. Instruct the student to repeat the words. If a word is pronounced correctly, the student colors in a tree. If response is incorrect, the instructor colors in a tree.

chest · wrist · beast · pest · east · west · forest · twist · artist · cast · breakfast · last

Final /st/ Production Practice

Sometimes the /z/ is devoiced after remediating /s/
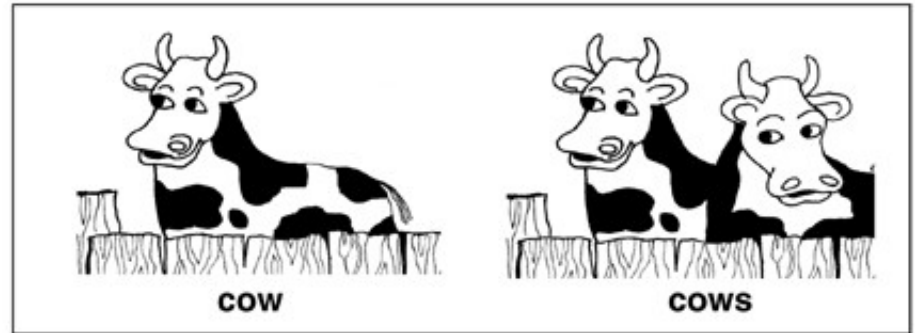
/s/ and /z/ Activity: Plural Endings

Name: _____ Date: _____

Directions: Pluralize each word by adding **s** or **es** to each word. Read each target word and answer aloud. Note the differences between /s/ and /z/ plural endings.

COW

COWS

Example:

1. bag _____bags_____
2. sled _____
3. map _____
4. box _____
5. zebra _____
6. laugh _____
7. duck _____
8. bird _____

9. car _____
10. glove _____
11. leg _____
12. hat _____
13. dress _____
14. shirt _____
15. shoe _____
16. pot _____

Vowel Ending Rule:

All vowels are voiced. When a word ends in an /s/ and the preceding sound is a vowel, the plural /s/ is pronounced as a /z/.

For Example:

bees   sews

does   lays

Cognates /s/ and /z/

voiced   *(bus)*
vs.
voiceless   *(buzz)*

Send Home Productive Homework

1. Practice natural tongue position by sending home correctly produced words.

2. Letter to parent explaining
   1. Tongue position for their child
   2. Practice only correctly produced words.

Challenges to Success

- Wrong tongue position.

- Tongue thrust.

- Dental Issues (Missing top front teeth).

- Thumb sucking continues.

How do you know when to dismiss a student?

- When students are able to say all /s/ and /z/ variations with at least 80% mastery at the sentence level.

- When students, parents, and teachers report it is no longer a problem.

- When articulation needs can be addressed at home or in the classroom.

Questions?

references

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- Smit, Hand, Freilinger, Bernthal, and Bird (1990). Journal of Speech and Hearing Disorders, 55, 779-798