

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

R and S Complete:
Strategies to Build Oral Capability,
Speech Production, and Carryover



Char Boshart, M.A., CCC-SLP
Speech-Language Pathologist

SpeechDynamics.com char@charboshart.com

1

See Appendix 2

Our Agenda & Objectives



- Intro: Speech Production
- Section I: Oral Resting Posture
- Section II: "S" Analysis & Therapy
- Section III: "R" Analysis & Therapy
- Section IV: Solidification & Carryover

©Char Boshart • SpeechDynamics.com

2

Introduction 3

The Most Critical Elements of Speech Production

- **Stabilization**
 - External & Internal
- **Mobilization**
 - Front & Back Vertical

To generate refined, small movements, you've got to have stabilization near the moving part.

©Char Boshart • SpeechDynamics.com

3

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Introduction 4

Speech Sound Productions


Lingual Consonants

Front-Tongue Vertical Consonants:
t, d, s, z, sh, zh, ch, dz, n, and l

- Tongue-sides *stabilize*; Mid-tongue *contracts*
- Front-tongue *moves vertically* (and sustains)

Back-Tongue Vertical Consonants: k, g, ng, r

- Tongue *retracts* and *elevates*
- Tongue back-sides *stabilize*
- Mid-back tongue *raises & lowers*



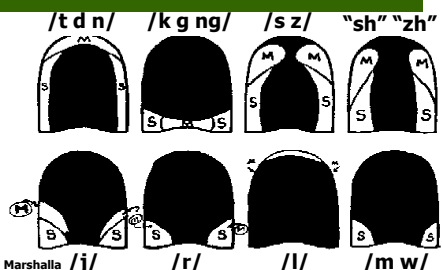
©Char Boshart • SpeechDynamics.com

4

Introduction **External Stabilization** 5

In Speech Palatography:

S=Stabilization M=Mobilization



©Pam Marshalla

©Char Boshart • SpeechDynamics.com

5

6



Section I: Oral Resting Posture




©Char Boshart • SpeechDynamics.com

6

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover


7

ORP: Causes ▪ Characteristics ▪ Consequences



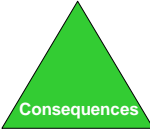
Causes

Habit (thumb, etc.)
Excess. Low Jaw
Oral Respiration
Large Tonsils/Small Phar.
Ling./Lab. Frenum(s)



Oral Resting Posture Characteristics

Lips
Tongue
Jaw
Respiration



Consequences

Speaking
Swallowing
Chewing
(Appearance)

©Char Boshart • SpeechDynamics.com

7


8

Section I Oral Resting Postures = Oral Operating Zone = Carryover

Lips Closed ▪ Tongue Up ▪ Jaw Gently Relaxed!

Desirable RPs Facilitates:

- A Centralized, Pivotal Operating Zone for Economical Movements
- Muscle Tone and Endurance
- Lateral Margin Stabilization/Bracing
 - "Speaking Tongues are Actively Braced" (Gick, 2017)



©Char Boshart • SpeechDynamics.com


8

9

Section I Oral Resting Posture: Analysis

Lip Closure ▪ Tongue Position ▪ Jaw Position

- If lips are closed: Determine tongue position; ask, describe, use Big Mouth ('Ajax' on Amazon.com). May see visible tissue bulge under jaw.
- If lips are open...then tongue is down. Is it forward, or in middle? Can lips close comfortably?



Observe:

- ✓ Jaw
- ✓ Lips
- ✓ Respiration
- ✓ Tongue

Mouth Breathing may be an OBSTACLE!

©Char Boshart • SpeechDynamics.com

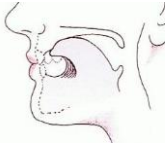

9

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section I 10

Facilitate the Tongue-on-Top Position

- Tongue Pops
- Tongue Pops while Biting
- Palpate Front-Tongue & Alveolar Ridge – Match
- Tickle on Top
- Squeeze-Up Hold



The Key to Carryover, by Char Boshart

©Char Boshart • SpeechDynamics.com

Two-Phase Therapy...



10

Section I 11

1. Timeline Phase

Increase capability over time:
10 secs to 6 mins sustained practice

- Count to “10” (on fingers; do sets)
- Use Twisty-Tie, if necessary
- Involve child in time selections
- Be specific and increase consistently
- Accomplish within a few months; intensive focus
- Alternate undesirable then desirable RP’s
- Use Reminders: Stickers, notes, etc.




©Char Boshart • SpeechDynamics.com

11

Section I 12

2. Association Phase

- Involve child in activity/event selection
- Involve friends, siblings, teachers, parents
- Close the “accountability loop”
- Reminder Devices: stickers, notes, non-verbal reminder, etc.



*Use a Collaborative Approach--
Phone calls,
Emails, Apps!*

©Char Boshart • SpeechDynamics.com

12

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

13



**Section II:
/S/ Analysis
and
Therapy**

©Char Boshart • SpeechDynamics.com


13

Section II

14

The "S"

What are three things that describes the /s/ production?



©Char Boshart • SpeechDynamics.com

14

Section II

15

/s/ Production Movement Pattern

From the desirable tongue resting position:

Jaw *lowers and rotates* forward slightly

- Tongue-sides *stabilize* on top, side teeth
- Mid-tongue *contracts* (tongue bowl)
- Front-tongue *lowers* (moves) vertically
- Front-tongue *sustains in space* as air flows:
1) centrally thru the constricted space of the front-tongue and alveolar ridge, and,
2) thru the approximated front teeth; called "anterior dental approximation"

©Char Boshart • SpeechDynamics.com *The tongue-tip down "S"...*


15

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section II 16

Tongue-Tip Down "S"

- Tongue is up within the dental arch
- Tongue postures forward and stabilizes on front-side teeth
- Tip "bends" downward toward (sometimes against) the back of bottom front teeth
- Friction occurs between the tongue blade, the ridge and back of front teeth



*Going Up?
Down?
Whatever.*


©Char Boshart • SpeechDynamics.com

16

Section II 17

Obstacles & Deterrents

Any Oral-Facial Hard Tissue, Soft Tissue, or Respiratory difference(s) can potentially impact the tongue's Stabilization and/or Mobilization



Note the type, degree of difference, and the potential cause(s)

©Char Boshart • SpeechDynamics.com



17

Section II 18

So what do we need to do?

Comparison: The Frontal "S"

- Whole tongue moves horizontally, at the "horizontal mid-line" of the mouth
- Tongue stabilizes on the cutting edges of top, side teeth (if at all)
- Jaw may accompany (or initiate the forward movement of) the tongue
- Typical Tongue Shape:
 - "Flat" (no tongue-bowl), or
 - "Fat" (narrow/bunched)



©Char Boshart • SpeechDynamics.com


18

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section II *So what do we need to do?* 19

Comparison: The Lateral /s/


- Unilateral or bilateral production?
- Where is stabilization occurring?
- Does the jaw skew to one side? If so, why?



It's a "Stabilization – Mobilization" issue

©Char Boshart • SpeechDynamics.com


19

Section II  20

Therapy Tasks: Organization


The tasks can be used individually or in groups for 5+ year olds, however...

- Keep # of tasks doable: 1 to 3 tasks
- Keep # of reps (3 to 20 reps) and # of sets (1-3 sets) at capability level
- Enlist the child to look for his/her own improvement; Intrinsic Motivation
- Share speech relevancy



©Char Boshart • SpeechDynamics.com

20

Section II  21

Therapy: "Extra Practice"

- The tasks work best when practiced consistently, every day, for 3 to 5 minutes
- Enlist Parent and Teacher Support; at meetings; "Accountability Loop"
- Alternative Speech Practice; Suggestions
- Homework Folder & Tally Sheet; Reinforcement System

See Therapy Suggestions in Appendix

©Char Boshart • SpeechDynamics.com SpeechDynamics.com


21

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section II 22
22 of My Favorite Tools & How to Use Them

“S” Oral Capability-Building Tasks

- Lingual Toning →
- Tongue Bowl →
- Front-Tongue Elevation →
- Side-Tongue/Side-Teeth Awareness →
- Small Tongue-Tip Lifts Without Sound →
- Small Tongue-Tip Lifts With Sound →
- Small Tongue-Tip Lifts + Continuous Airflow →
- Small Tongue-Tip Lifts + Continuous Airflow → + Anterior Dental Approximation + **Shape /s/**



©Char Boshart • SpeechDynamics.com


22

Section II 23

Additional Sound-Stim Techniques

- “S” Verbal and Visual Description
- Phonetic Context
/sp/, /st/, /sn/ - most effective
/sw/, /sl/, /su/, /sm/ - least effective
- Successive Approximations of established sounds:
 - From /t/ (tsoup, tsink, boats)
 - From “sh” (frontal)

Ensure the production is cleanly differentiated!



©Char Boshart • SpeechDynamics.com

23

24




**Section III:
R Analysis
And
Therapy**



24

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section III 25



- > Placement
- > Lingual Tension
- > Resonance Chamber

Two Production Styles:
The Back-Up "R" and The Retroflex "R"


©Char Boshart • SpeechDynamics.com

25

Section III 26

- Placement
- Lingual Tension
- Resonance Chamber

The Back-Up "R"



- Entire tongue bunches and retracts; the back-tongue elevates
- Tongue is relatively tense
- "Back-tongue corners" stabilize (on top in back; same as /k/ stabilization)
- Generates pharyngeal resonance


©Char Boshart • SpeechDynamics.com

26

Section III 27

- Placement
- Lingual Tension
- Resonance Chamber

The Retroflex "R"



- Back-tongue elevates and "back-tongue corners" stabilize
- Mid-tongue contracts, front-tongue retro-flexes
- Tongue is relatively tense
- Generates oral resonance

**Which one do you do? Back-up, or Retroflex?
Which one do you teach?**

©Char Boshart • SpeechDynamics.com

27

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section III Ever have difficulty with the vocalic "R"? Here's why... 28


Keep in Mind... Contextual Differences

As we move into the /r/ position, we do so by producing **Two Motoric Styles**:

- **Pre-Postured /r/:**
Isolation, Initial Position, Blends, and C + Vocalic "r", as in "burr"
- **Transitional Vocalic "R":**
V + "r", as in are, ear, or, etc.

In Therapy, Practice BOTH the Pre-Postured & the Transitional Styles

©Char Boshart • SpeechDynamics.com



28


Section III Some cases elevate the tongue appropriately, but lack tension 29

Comparison: The Distorted "R" Production

- Low midline-positioned tongue
- "Lax" tongue (reduced tension)
- Lip rounding (to create a resonance space), and an
- **Oral Sensory Difference**
In general, how do we analyze sensations within another person?
Auditory Visual Tactile ?

How do we determine this? It's all about...

©Char Boshart • SpeechDynamics.com



29

Section III Dare we assume that everyone perceives sensations the same? 30

STIMULUS – RESPONSE Progressive Palpation Analysis

Stimulus: Firm Press-Release

- "Front to Back"
 - Cheeks (both sides)
 - Tongue
 - Roof of Mouth

Response:

- Hyposensitive
- Normal
- Hypersensitive

Analyze the Level of Intra-Oral Tactile Sensory Perception

©Char Boshart • SpeechDynamics.com




30

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section III 31

Some do not need sensory balancing—their systems perceive intra-oral sensations normally.

Balance Intra-Oral Sensation



- Hyposensitivity:
 - Palpate the posterior region of the tongue; (do firm press-release 3 to 5 times, over a period of 30-60 sec per day)
- Hypersensitivity:
 - Palpate thru the “Progressive Palpation” Sequence for 3-4 weeks

©Char Boshart • SpeechDynamics.com

31


Section III 32

Optional: “Tongue Toning Tasks” and Additional “Tongue Retraction Tasks”

“R” Oral Capability-Building Tasks

Every session, palpate back-tongue, and back-tongue corners with a Dental Floss Handle--MATCH!

- Do RP’s, if needed; Balance Sensation, if needed
- Stimulate tongue-tension, awareness, control
- Generate back-tongue elevation, control
- Generate simultaneous tongue-tension, retraction, & back-tongue corner stabilization
- Stim a good /r/ production



The Easy R, by Char Boshart

Stabilization PLACEMENT Plus TENSION, Plus resonance in the RESONANCE CHAMBER

©Char Boshart • SpeechDynamics.com


32

Section III 33

Retroflex: /l/ to /r/; Dental Floss Handle to curl tongue; keep back-tongue UPI

Additional Sound-Stim Techniques

- Verbal and Visual Description
- From Successive Approximations
/ng/, /a/, /k/, /g/, /i/, /j/
- Squeeze-Up Hold
- Tactile Cues
- Seal sounds, Rooster Sounds, Skid Sounds, Talk Like a Pirate, Growl...!



What other techniques to you use?


©Char Boshart • SpeechDynamics.com

33

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section III 34

Ensure the /r/ is "Clean & Differentiated"



- No significant jaw retraction
- No significant lip rounding
- Make sure they elevate and anchor the back-tongue
- Hold the /r/ position and sound (anchorage and resonance chamber)

©Char Boshart • SpeechDynamics.com

34

35



Section IV: Solidification & Carryover For /s/ and /r/




35

Section IV 36

Solidification

- The process of **Establishing Proprioceptive Movement Memory**
- Use to generate movement refinement
- Do with ALL Speech Sounds
- Do for at least one to two months

It's the GLUE between being able to say the sound and saying it consistently in conversation




©Char Boshart • SpeechDynamics.com

36

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section IV 37

Solidification



- Sustain the sound (close eyes, focus & feel)
- Sustain the sound and segment with an appropriate vowel
 - /s/ = high-front vowels (/ssssi/, /sssst/)
 - /r/ = high-back and the mid-vowel (/rra/, /rrΔ/)
- Shorten the sound + appropriate vowel
 - /s/ = /si/ /si/ /si/ /si/; /sɪ/ /sɪ/ /sɪ/ /sɪ/
 - /r/ = /ra/ /ra/ /ra/ /ra/; /rΔ/ /rΔ/ /rΔ/ /rΔ/
- Do good RP; move into and say target sound


©Char Boshart • SpeechDynamics.com

37

Section IV 38

Practice with Games!

Solidification



- Administer the **“Phonetic Context Probe”**
 - You say, he/she repeats; no stimming
 - Assign only the “1’s”
- Use a Metronome to refine movements and increase agility; start at 60 bpm increase speed to 120 bpm (according to capability)
- Close eyes; focus & feel; Use a mirror to double check or reinforce placement

app: [MetroTimer](#) ▪ [MetronomeOnline.com](#)



©Char Boshart • SpeechDynamics.com

38

Section IV 39

It is assumed that the child has a good, effortful /r/; if not get one!

Carryover



- Administer the appropriate **Deep Screening Probe** to determine the context(s) to practice
- Practice: Increasingly move from a minimal Phonemic Load to a higher Phonemic Load
- Vary the practice: say, 2 or 3 words (rabbit, rabbit, rabbit); say it correctly, then incorrectly

©Char Boshart • SpeechDynamics.com

39

R and S Complete: Strategies to Build Oral Capability, Speech Production, and Carryover

Section IV **What Carryover Tasks do YOU do with your kids?!** **40**

Apps!

Carryover

- Do "Word-for-the-Week" on reminder devise
- Use school work to practice speech sounds
- Do rapid-fire questions; watch videos, discuss
- Read out loud for 2 to 5 minutes each day; sing songs; do audios; create videos
- Choose a conversation partner
- Do weekly Carryover Conversation Group




©Char Boshart • SpeechDynamics.com

'Speech Practice Audios' are Coming Soon!

40

Wrap-Up! **41**

Therapy Sequence



1. Lay the Groundwork: 2 to 4 Weeks (as needed)
Oral Resting Postures: Determine Any OBSTACLES; Compensation Positions?
2. Generate Oral Capacity (do tasks)
3. Evoke a Clean Differentiated Speech-Sound
4. Do Solidification Tasks; Drill & Instill
5. Do Carryover/Generalization Tasks

©Char Boshart • SpeechDynamics.com

41

42

Thank You!

Here's to great success in your therapy!



©Char Boshart • SpeechDynamics.com

42

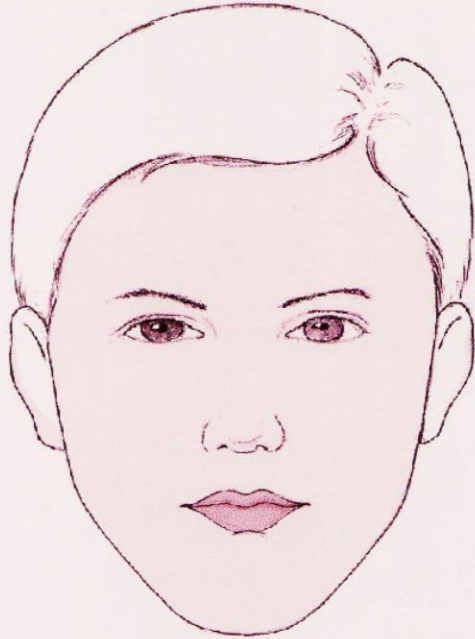
Appendix



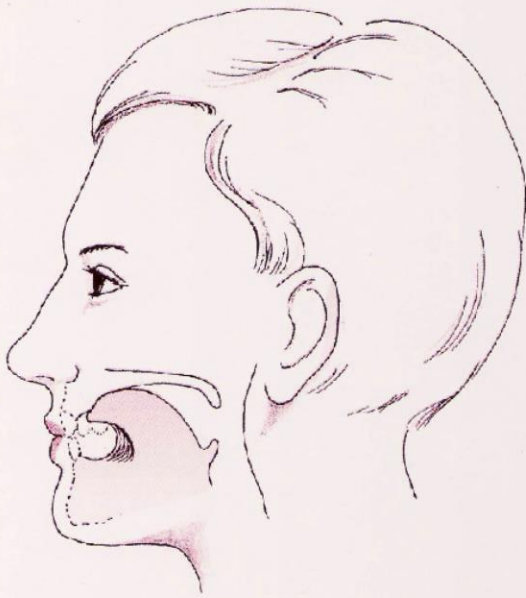
“OK, *fine!* We’ll flip for it! Heads, we do it *my way*; tails, we try Larry’s stupid procedure!”

Desirable Resting Postures	16
Descriptive Attributes of /s/	17
Therapy Framework and Mindset.	18
“S” Oral Capability-Building Tasks	19
The Phonetic Context Probe	20
“S” Deep Screening Probe	21
“R” Speech Picture	22
“R” Capability Tasks: Non-Sequential	23
The Easy R: “R” Capability Tasks	25
The Easy R: Lesson Example (Lesson #2)	27
“R” Evocation Check Sheet	28
The “R” Deep Screening Probe	29
The Easy R: Practice Example (“Truck”; Blends)	30
Bibliography	31

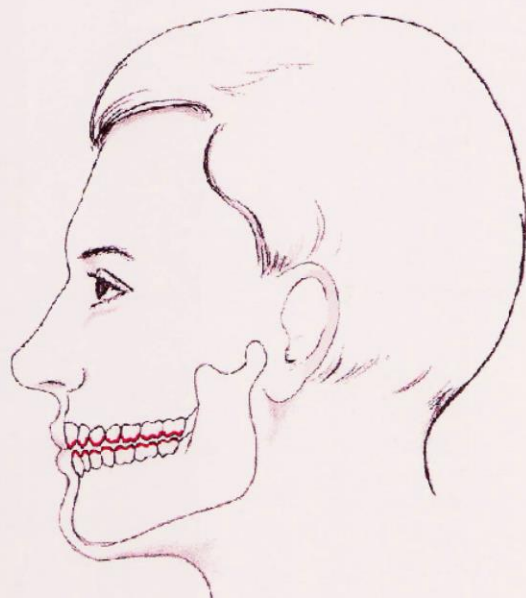
Desirable Resting Postures



1. Closed Lips (front)



2. Tongue Up (side)



3. Jaw Gently Relaxed (side)

DESCRIPTIVE ATTRIBUTES OF /s/

Correct /s/	Frontal /s/	Lateral /s/
1. What is the primary articulator(s)? What is its movement, position and shape?		
<i>Anterior half of tongue is mobile; tip/blade moves down (from resting posture); placement is in close proximity to alveolar ridge.</i>	<i>Whole tongue is mobile; entire tongue moves forward; tip placement in close proximity to anterior teeth and blade/dorsum close to alveolar ridge.</i>	<i>Back of tongue is mobile; either one or both sides & the dorsum lower; close proximity to hard palate and side teeth (molars).</i>
2. Stabilization: (tongue/jaw/cheeks)		
<i>Lateral margins of the mid and back of the tongue anchor to molars and periphery of hard palate; tongue is taut.</i>	<i>Mid and front side of the tongue anchor to the occlusal surfaces of the top teeth in the canine/bicuspid quadrant.</i>	<i>Front tip/blade of tongue anchors to the alveolar ridge; typically lips retract & cheek muscles contract.</i>
3. Jaw: (position/movement)		
<i>Lowers slightly (about 5 mms) rotates slightly anteriorly and up, to approximate incisors, then stabilizes during friction.</i>	<i>Lowered beyond 5 mms in order to accommodate the tongue between top/bottom teeth; rotates forward or laterally with tongue; stabilizes during friction.</i>	<i>Lowers slightly; may rotate laterally to side of tongue/palate stabilization for unilateral production; stabilizes during friction.</i>
4. Internal Articulator Tonicity: (amount of necessary tenseness or laxness)		
<i>Tongue is moderately taut, in a "flat-like" contour; lateral margins of the tongue "push" upward against the hard palate to generate tension and achieve close proximity to ridge and palate; maintains its close position during air friction.</i>	<i>Tongue is moderately or very taut; either in a "flat-like" or narrowed contour (generates its own muscular contraction).</i>	<i>Tongue is moderately taut; lips and cheeks are also taut.</i>
5. Airflow: (stopped/continuous/pushed/controlled)		
<i>Airflow between the tongue palate/alveolar ridge is central continuous, forced and compressed; fricative sound quality is generated primarily in the dorsum area.</i>	<i>Airflow between the tongue/palate/alveolar ridge is central, continuous, forced and compressed; fricative sound quality is generated primarily in the tip/blade area.</i>	<i>Airflow between the sides of the tongue is uni- or bi-lateral, is lateralized, continuous, forced and compressed; fricative sound quality is generated primarily in the dorsum/back area.</i>

Therapy Framework and Mindset

Set a Graduation Date: Both you and the child select a realistic graduation date and post it (on a list or calendar). Frequently review the date and count up the months or days they have to learn, practice, and acquire their new sound. You expect them to improve and graduate. Have a pizza graduation party!

Communicate: Let them know what they need to do to be successful and graduate:

- Listen, learn, and participate during speech class
- Do the speech homework; the activities are sequenced and need to be practiced to be successful
- Bring their folder to speech – they will not be able to buy anything if they don't
- Let them know that their parents and teachers will be involved, too



Generate Leverage: Leverage is emotional buy-in (optional if the child needs “motivating”)

1. Via audio or video; let them see and hear their speech difference
2. Leverage questions: a. What will happen and how will you feel if you don't change your speech?
b. What will happen and how will you feel when you do change your speech?

Therapy Homework Folder and Tally Sheet: Each child has a folder that goes from the speech room to the therapy location. Early on, take their picture and paste on the front. They are more apt to not lose it.

Inside the Folder: (two-hole punch; folding clip on both sides, on top)

- Homework Tally Sheets
- Practice Sheets – Speech Practice CD Lists, other word/sentence lists or pictures,
- Parent communication sheets

Homework Tally Sheets: The Homework Tally Sheet is NCR-2'd. The white sheet goes in their folder; the yellow sheet goes in my notebook (along with their Bank of Mariana sheet).

Reinforcement Program: Design a reinforcement program that the child will work for and one that you can live with. Following is a brief description of the one that I do. Each child is given a “bank account” (see example). To deposit money into their account, they must do their speech homework, bring back their folder with the homework tasks checked/initialed, and demonstrate that they can do the tasks. They get 3 cents (or whatever) per activity practiced. For ex., if they practiced two tasks 7 times in 7 days, they get 3 cents x 14 = 42 cents. Depending on their balance, they can choose to buy something (pens, sharpeners, jewelry, toys, basically Dollar Store items) from one of three small crates. Each crate is labeled with an increasing dollar amount. They can choose to buy something or work additional weeks and build up their account.

Practice Locations:

1. In the Speech Room – Create an area available for them to come to to do their practices. Coordinate with the teacher, e.g., end of recess, end of lunch, during “free-time”, etc. (SLP monitors)
2. In their Classroom – The teacher monitors and signs/initials the Homework Tally Sheet. Give the child and/or the teacher a note to display to remind them to practice. (Practice for 2 to 5 minutes.)
3. At Home – Let the parents/guardians know that you will be sending home a Speech Folder with Homework in it. Enlist their support to remind/monitor homework. Tell them about the “Bank” system.

Support: Teachers, Teachers-Aides, Parents/Guardians/Grandparents at home and/or at school, high-school students, child's friends. Here is the key to success in enlisting—and getting—support:

Communicate ▪ Be Specific & Tangible in Your Requests ▪ Follow-up, and Reinforce Them

Teachers & Teachers-Aides – Give them notes, email them, meet with them. Ask them to: 1) Remind the child about resting postures (signal), 2) Inquire about Speech Homework and what activities they are doing, 3) Do “Sound-Practice”: ask them to listen, remind and reinforce the new sound during out-loud reading, and when talking with the child in/out of class. In turn, ask the teacher about homework that you can reinforce, i.e., have the child practice reading his/her classroom homework assignment(s). (See Teacher Letters in Appendix)

Parents/Guardians/Grandparents at Home -- Bring them into your therapy room for a tour. Call, e-mail, and send home notes (in the Speech Folder), as frequently as possible, e.g., what to do, and the child's progress. Stress “team-effort”. (See the sample Parent Letter in the Appendix.) Write an entry in your school Newsletter about the parent's role in speech development.

Parents/Guardians/Grandparents, and HS Students at School – “Bucket Brigade” is a program on how to recruit, interview, train, organize, and monitor “volunteer speech assistants”.

“S” Oral Capability-Building Tasks

Tongue Toning

1. Tongue Pops – Squeeze your tongue up to the roof of your mouth, push up, and pop it down. Use the pop-on-top position to find the tongue’s position and how to push UP. Make sure it is flat, not curled. To get the tongue closer to the top, just bite on a small tongue depressor (with side teeth) to keep the jaw closed.

2. Tongue-On-Top Push – Place your tongue on the roof of your mouth (in the tongue resting position), and push UP; make your tongue tight; hold for 1 to 5 seconds. Then relax your tongue as you keep it on-top (just release the tension). Repeat.

3. Open-Close Exercise – Place your tongue on the roof of your mouth (in the tongue resting position) and keep it there, and push UP against the roof of your mouth FIRMLY. Now, keep your tongue on top and open your jaw; work to keep your tongue flat on top. You will have to push up hard to keep your tongue on top (try not to let it release and fall down).

Tongue Retraction Tasks (optional)

1. Back-Throat Push – Place your fingers against your throat where you swallow and firmly push up. Pull and lower the back-tongue down into your throat and push against your fingers. The whole tongue should move back and down; feel the tension in your throat. This exercises your tongue’s “pulling-back” muscles.

2. Tongue Out-In – Stick your tongue outside your mouth. It does not have to be tight. Using your back-tongue muscles, pull your tongue back into your mouth (try not to let your front-tongue curl back). Retract the tongue all the way back until your back-tongue touches the soft palate. Keep it straight. Repeat.

Front-Tongue Differentiation → Side Tongue Localization → Movement Refinement

Tasks to Generate and Maintain a Tongue Bowl:

1. Tongue Tapping – To make a “tongue bowl”, tap the middle of the top of your tongue with a small tongue depressor. Tap repeatedly in a firm press-release motion. Keep the tongue inside behind the bottom teeth and make the mid-tongue scoop.

2. Hold Water in Your Tongue Bowl – Using a spray bottle filled with water, spray water on the top of your tongue. Shape your tongue into a tongue bowl to hold the water. Hold for 3 to 5 seconds. Use can also use food (ex. cereal, etc.) in your bowl.

Tasks to Generate Front-Tongue Vertical Movement:

3. Front-Tongue Curl – Open your mouth and let your tongue stay in the middle. Place a small straw (coffee stirrer) crosswise on top of your tongue so you look like you have whiskers. Bite on the straw, and curl your tongue-tip up and around the straw.

4. Front-Tongue Squeeze-Up – Place the Toothette on the front of your tongue near the tip, and bite on the stick. Keep the jaw and the stick still. Lift the front-tongue up and squeeze the sponge. Slowly move the front-tongue up and down. Train your tongue to just move UP – not forward.

Tasks to Call Attention to the Sides of the Tongue and the Sides of the Top, Back Teeth

5. Side Stroke-Match – With a small tongue depressor (or Probe, or Nuk), stroke the sides of your tongue and the insides of your top side teeth and gums. Lift the tongue straight up, and match the two together. Place the sides of your tongue on the top side teeth and gums.

6. Bite-Slide – Gently bite on the sides of your tongue; then as you slowly bite your teeth together, slide the sides of your tongue UP, against the top side teeth. The tongue ends up against the roof of your mouth.

Tasks to Combine all of the above tasks; to Generate Stabilization and Mobilization:

7. Small Tongue-Tip Lifts Without Sound – If necessary, bite on a small tongue depressor, or small straw to stabilize the jaw. Anchor the sides of your tongue on the top side teeth. Now, with very small tiny movements, make your front-tongue gently go up and down. Do repeatedly.

8. Small Tongue-Tip Lifts With Sound – Anchor the sides of your tongue on the top side teeth. Now, with very small, tiny movements, make your front-tongue gently go up and down, but this time, make a small sound--a very tiny “t”. Do repeatedly. Move only the front-tongue—no jaw, or flat tongue movements.

-- Add “sustaining airflow” and “generate anterior dental approximation” to produce the /s/ sound.

-- Add “sustaining airflow” and “cheek compression and lip puckering” to produce the “sh” and “ch” sounds.

The Phonetic Context Probe (PCP)

Goal: To determine which phonetic context combinations are produced with ease. These non-sense productions will be chosen for oral-agility practice.

Instructions:

- Write the target sound in the space provided within the “/ /” next to the vowels.
- Say all of the non-sense combinations; have him/her repeat. Observe the sound of their productions, as well as how the articulators “look” motorically.
- Write a 1, 2, or 3, (1 = motorically easy; 2 = motoric ability emerging; 3 = motorically difficult), on the line of each item. A “1” score indicates that he/she is able to easily produce the combination. The production not only sounds natural, but there are no major hesitations, no excessive jaw or facial movements, and oral movements are refined and precise.
- Use this information to select the most appropriate combinations to use for solidification practice. Have them practice the “1” items first.

Name _____ Age _____ Date _____

Examiner _____ Target Sound _____

_____ / i/	_____ /i /	_____ / i /	_____ /i i/
_____ / I/	_____ /I /	_____ / I /	_____ /I I/
_____ / e/	_____ /e /	_____ / e /	_____ /e e/
_____ / ε/	_____ /ε /	_____ / ε /	_____ /ε ε/
_____ / æ/	_____ /æ /	_____ / æ /	_____ /æ æ/
_____ / a/	_____ /a /	_____ / a /	_____ /a a/
_____ / u/	_____ /u /	_____ / u /	_____ /u u/
_____ / o/	_____ /o /	_____ / o /	_____ /o o/
_____ / ʌ/	_____ /ʌ /	_____ / ʌ /	_____ /ʌ ʌ/

Comments: _____

"S" Deep Screening Probe

I. INITIAL /s/: *Number Correct* _____ /12; *Percentage Correct* _____

- | | | |
|--|--|---|
| <p>1. (front vowels)</p> <p>___ see</p> <p>___ sit</p> <p>___ say</p> <p>___ sat</p> | <p>2. (mid and back vowels)</p> <p>___ sun</p> <p>___ suit</p> <p>___ soak</p> <p>___ sock</p> | <p>3. (multi-syllable)</p> <p>___ secret</p> <p>___ super</p> <p>___ silent</p> <p>___ Saturday</p> |
|--|--|---|

II. MEDIAL /s/: *Number Correct* _____ /8; *Percentage Correct* _____

- | | |
|---|--|
| <p>1. (multi-syllable; V/s/V)</p> <p>___ cassette</p> <p>___ receive</p> <p>___ medicine</p> <p>___ bicycle</p> | <p>2. (multi-syllable; V/s/C)</p> <p>___ awesome</p> <p>___ bracelet</p> <p>___ race-car</p> <p>___ eraser</p> |
|---|--|

III. FINAL /s/: *Number Correct* _____ /12; *Percentage Correct* _____

- | | | |
|--|---|--|
| <p>1. (front vowels)</p> <p>___ piece</p> <p>___ case</p> <p>___ mess</p> <p>___ glass</p> | <p>2. (mid and back vowels)</p> <p>___ Gus</p> <p>___ goose</p> <p>___ dose</p> <p>___ loss</p> | <p>3. (multi-syllable)</p> <p>___ address</p> <p>___ defense</p> <p>___ practice</p> <p>___ difference</p> |
|--|---|--|

IV. BLEND COMBINATIONS

- | | | | |
|--|--|--|--|
| <p>1. /st/, /str/ # _____ /8</p> <p>___ steep</p> <p>___ stay</p> <p>___ stool</p> <p>___ stove</p> <p>___ string</p> <p>___ stripe</p> <p>___ stranger</p> <p>___ strawberry</p> | <p>2. /sm/, /sn/ # _____ /8</p> <p>___ smear</p> <p>___ smell</p> <p>___ smuggle</p> <p>___ smoke</p> <p>___ sneak</p> <p>___ snicker</p> <p>___ snake</p> <p>___ snowman</p> | <p>3. /sp/, /spr/ # _____ /8</p> <p>___ speech</p> <p>___ spill</p> <p>___ spoon</p> <p>___ spoil</p> <p>___ spread</p> <p>___ spring</p> <p>___ inspector</p> <p>___ aspirin</p> | <p>4. /st/, /ks/ # _____ /8</p> <p>___ beast</p> <p>___ lost</p> <p>___ thirst</p> <p>___ biggest</p> <p>___ mix</p> <p>___ taxi</p> <p>___ fireworks</p> <p>___ expect</p> |
|--|--|--|--|

5. /sk/ Correct _____ /12
 (front vowels)

- ___ ski
- ___ skip
- ___ skate
- ___ scat
- (mid & back vowels)
- ___ skunk
- ___ school
- ___ score
- ___ scholar
- (multisyllable)
- ___ scarecrow
- ___ skeleton
- ___ scuba dive
- ___ roller skating

6. /sl/ Correct _____ /12
 (front vowels)

- ___ sleep
- ___ slip
- ___ slate
- ___ slam
- (mid & back vowels)
- ___ slum
- ___ slew
- ___ slope
- ___ sloppy
- (multisyllable)
- ___ cold slaw
- ___ slippery
- ___ slumber party
- ___ deep sleep

RESULTS

I. II. III. Initial, Medial, Final
 Number Correct: _____ /32
 Percentage Correct: _____

IV. Blend Combinations
 Number Correct: _____ /56
 Percentage Correct: _____

TOTAL /s/ PROBE:
 Number Correct: _____ /88
 Percentage Correct: _____

Speech-Pictures!

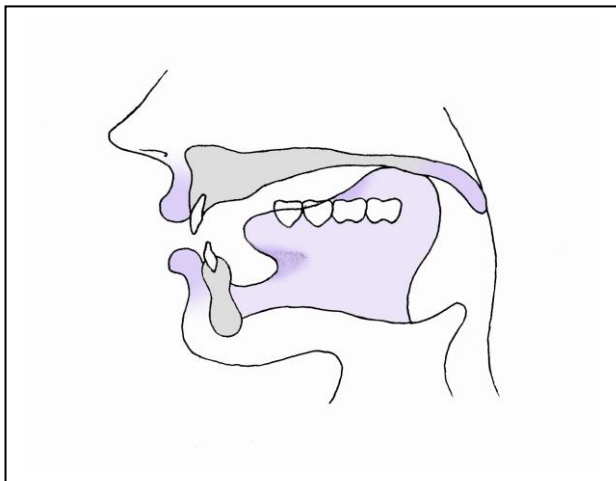
“r”



To make “r”: Place your jaw, lips, and tongue in the good resting position, then move into the sound. Remember, the mouth movements for “r” are small.

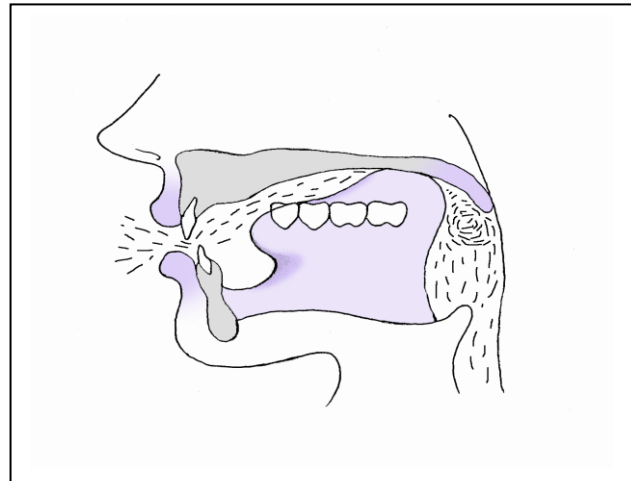
There are two ways to make “r”: 1. The **Back-Up /r/** (throat resonance), and, 2. The **Retroflex /r/** (oral resonance). Which one is best for you?

- **The Jaw:** Lowers a little, and stays still as the tongue moves (for both r’s).
- **The Whole Tongue:** Moves near the back of the mouth. For a Back-Up “r”, the front-tongue stays “bunchy”; for a Retroflex “r”, the front-tongue curls back. Tongue is quite tight.
- **The Back-Sides (corners) of the Tongue:** Anchor in the back, right on or behind the top back teeth (similar to a “k”). The sides stay anchored the whole time for the Back-Up “r” and the Retroflex “r”.
- **Back-Tongue Movement During the Back-Up /r/:** The mid back-tongue snuggles up to the soft palate, holds, and “traps” air behind the tongue (within the throat). Voice is used; the “r” sounds muffled.
- **Back-Tongue and Front-Tongue Movement During the Retroflex /r/:** The mid back-tongue sits high, but allows air to flow into the mouth. The air is then “trapped” within the curled-back front-tongue and the lifted mid back-tongue. Voice is used; this “r” sounds more “forward” than the Back-Up “r”.



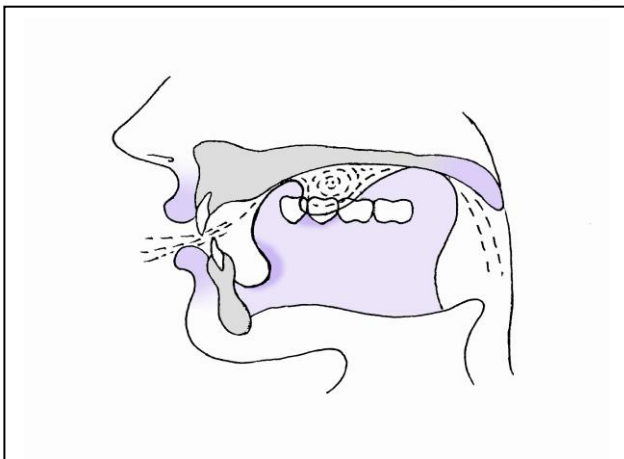
1. Tongue creates its “r Zone”; Side View

Back-Up and Retro-Flex: Tongue moves back into place. The tongue-sides anchor on or behind the back teeth, and establishes the “r” production zone. The tongue is fairly tight.



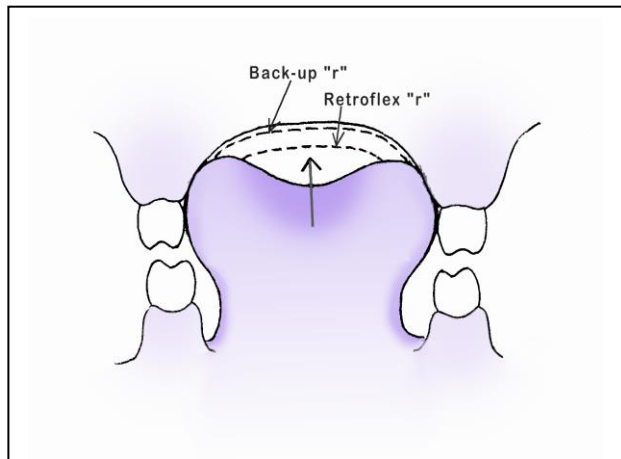
2. The Back-Up “r”: Throat Resonance

The front-tongue pulls back and bunches. The back-tongue anchors on the back-sides and stays. The mid back-tongue lifts and traps the air & sound in the throat.



3. The Retroflex “r”: Oral Resonance

The mid-tongue tightens and dips into a tongue-bowl. The front-tongue curls back and holds and traps the air and sound within the mouth, behind the curled tip. It resonates.



4. Back-Tongue Stabilization & Movement, Back View

For both “r’s”, the tongue-sides hold on to the back sides as the mid-back tongue lifts. For the Back-Up “r” the tongue lifts up close to the top; the Retroflex “r” does not lift as high.

“R” Capability Tasks – (Non-Sequential)

Oral Resting Postures, Oral Sensory Tasks

Oral Resting Postures

Level I, Preparation Phase: (optional) – Do tasks to help close lips and tongue to sit on top

____ Lips Task: _____

____ Tongue Task: _____

Level II, Timeline Phase – specify number of minutes to do good resting postures

____ Task: _____

Level III, Association Phase – specify the association task(s) to do as reminder practice

____ Task: _____

Oral Sensory Tasks; Back-Tongue Localization (Choose one)

____ Far Back-Tongue Touch: With a Toothette, go waaay in the back of your mouth to the back of your tongue. Do firm up-down presses. Do 5 presses, take out the Toothette and swallow; then go back in and do another one, etc.

____ Reps, ____ Sets, ____ Time(s) each day

____ Around-the-Mouth Touch: With a Toothette, do firm press-release (1-2-3) on cheeks, then front-tongue, then mid and back tongue, then top of mouth. ____ Reps, ____ Sets, ____ Time(s) each day

Sequential Capability-Building Activities

Back-Tongue Elevation:

____ a. Back-Tongue Touch & Push (Back-Tongue Elevation): With a tongue depressor, press down firmly on your back-tongue. Push up against the tongue depressor. Do *small* “up-down” motions. Close your eyes and “feel” the back-tongue.

____ Reps, ____ Sets, ____ Time(s) each day

____ b. Back-Tongue Squeeze-Up (Back-Tongue Elevation): Place a Toothette on your back-tongue and bite on the handle with front teeth to keep your jaw still. Lift your back-tongue up and squeeze the sponge; squeeze up and down about 1 per second. Train your tongue to just move UP—not forward, keep your jaw still.

____ Reps, ____ Sets, ____ Time(s) each day

____ c. Back-Tongue Squeeze-Up + HOLD (Back-Tongue Elevation + Simultaneous Tension): Do 3 Back-Tongue Squeeze-Ups, then on the fourth elevation HOLD—keep your tongue up for one count.

____ Reps, ____ Sets, ____ Time(s) each day

____ d. Back-Tongue Squeeze-Ups + Back-Lifts (Independent Back-Tongue Elevation): Do 3 Back-Tongue Squeeze-Ups, then take out the Toothette, and lift your back-tongue up and down 3 times—pretend the Toothette is still in. Make sure your back-tongue is moving way UP and way DOWN. Alternate several times.

____ Reps, ____ Sets, ____ Time(s) each day

Lingual Contraction + Simultaneous Retraction:

____ a. Side-Tongue Stroke (Tongue Awareness; Tongue Tension): With a small tongue depressor, stroke the sides of your tongue, back to front. Close your eyes, notice your tongue. Let your tongue narrow and tighten as you do it.

____ Reps, ____ Sets, ____ Time(s) each day

____ b. Tongue Tighten-Loosen (Tongue Tension Control): Open your mouth and keep your tongue in the middle of your mouth. Tighten your tongue—make it skinny--then relax. It will get wide again. Notice how your tongue feels when it is tight, then when it's loose.

____ Reps, ____ Sets, ____ Time(s) each day

____ c. Tongue Tighten + Pull-Back: (Tighten and Retract): Keeping your tongue inside, tighten it and keep it tight as you SLOWLY move it to the back of your mouth. Keep it straight and parallel with the floor. Relax, then tighten and pull-back again.

____ Reps, ____ Sets, ____ Time(s) each day

____ d. Tighten + Pull-Back and UP (Simultaneous Retraction/Elevation): Keep your tongue in your mouth, tighten it and make it skinny. Now—keeping it tight—PULL it BACK and UP and land your back-tongue on top, behind your back, top teeth.

____ Reps, ____ Sets, ____ Time(s) each day

____ e. Tighten + QUICK Pull-Back & UP; Say Small “Ng” Sounds: Keep your tongue in and tighten it. Keep it tight and QUICKLY Pull it back and UP. Anchor your tongue-sides on the top-sides and make several small “ng” sounds (as in “king”).

____ Reps, ____ Sets, ____ Time(s) each day

Additional Supplemental Tasks

Back-Tongue Elevation Tasks

- ____ 1. **Big Back-Lifts** (Simultaneous Tension/Elevation): Open your mouth; keep your tongue in the middle (not forward). Now lift the back-tongue WAY UP, then lower it WAY DOWN. Close your eyes; think about your back-tongue. Do several.
____ Reps, ____ Sets, ____ Time(s) each day
- ____ 2. **Small "k" Sounds** (Stabilization/Mobilization): Find your back-tongue corner Stabilization (behind your top, back teeth); anchor and HOLD. Hold on, and move the mid-tongue for little, small "k" sounds. Whisper your "k's".
____ Reps, ____ Sets, ____ Time(s) each day

Tongue Retraction Tasks

- ____ 1. **Back-Throat Push** (Pulls back-tongue back; exercises throat muscles): Place your fingers against your throat where you swallow, and push up. Pull and lower the back-tongue down into your throat; push down against your fingers. The whole tongue moves back and down. Feel the tension in your throat.
____ Reps, ____ Sets, ____ Time(s) each day
- ____ 2. **Tongue Out-In:** (Pulls tongue back without jaw movement): Stick your tongue outside your mouth; it does not have to be tight. Using your back-tongue muscles, pull your tongue back into your mouth (try not to let your front-tongue curl back). Retract the tongue all the way back until your back-tongue touches the soft palate. Keep it straight.
____ Reps, ____ Sets, ____ Time(s) each day

Tongue Toning/Endurance

- ____ 1. **Tongue Push-Up Pops:** Squeeze your tongue up to the roof of your mouth, **push up**, and pop it down. Use the pop-on-top position to find the tongue's position and how to push UP. Make sure it is flat, not curled. To get the tongue closer to the top, just bite on a small tongue depressor (with side teeth) to keep the jaw closed.
____ Reps, ____ Sets, ____ Time(s) each day
- ____ 2. **Tongue-On-Top Push:** Place your tongue on the roof of your mouth (in the tongue resting position), and push UP; feel your tongue tighten. Hold for a count (between 1 to 5 seconds), and relax your tongue in its on-top position (just release the tension). Repeat.
____ Reps, ____ Sets, ____ Time(s) each day
- ____ 3. **Open-Close Exercise:** With your mouth just open slightly, place your tongue on the roof of your mouth (in the tongue resting position) and keep it there, and push UP. Now open your jaw, but keep your tongue flat on top. You will have to push up hard to keep your tongue on top (try not to let it release and fall down).
____ Reps, ____ Sets, ____ Time(s) each day

Retroflex /r/

If an alternate method of producing /r/ is needed, generate a "Retroflex /r/" (back-tongue up, front tongue curled up, resonance created within the area of the curled-up tongue). After completing the above exercise sequence:

- ____ 1. **Tongue Taps:** Take a small tongue depressor, and tap and press-release the center of your tongue. Tighten the middle of your tongue to help curl the front-tongue.
____ Reps, ____ Sets, ____ Time(s) each day
- ____ 2. **Dental Floss Curl-Up:** Or, with a large dental floss handle, place the dental floss across the top of the tongue (about a half-inch back), and gently pull down, to help the tongue-tip curl up.
____ Reps, ____ Sets, ____ Time(s) each day
- ____ 3. **Front-Tongue Curl:** Open your mouth; keep the tongue in the middle. Place a small straw (coffee stirrer) crosswise on top of your tongue so you look like you have whiskers. Bite on the straw, and curl your tongue-tip up and around the straw.
____ Reps, ____ Sets, ____ Time(s) each day

“R” Capability Tasks

Oral Resting Postures, Oral Sensory Tasks

Oral Resting Postures

Level I, Preparation Phase: (optional) – Do tasks to help close lips and tongue to sit on top

____ Lips Task: _____

____ Tongue Task: _____

Level II, Timeline Phase – specify number of minutes to do good resting postures

____ Task: _____

Level III, Association Phase – specify the association task(s) to do as reminder practice

____ Task: _____

Oral Sensory Tasks; Back-Tongue Localization (Choose one)

____ Far Back-Tongue Touch: With a Toothette, go waaay in the back of your mouth to the back of your tongue. Do firm up-down presses. Do 5 presses, take out the Toothette and swallow; then go back in and do another one, etc.

____ Reps, ____ Sets, ____ Time(s) each day

____ Around-the-Mouth Touch: With a Toothette, do firm press-release (1-2-3) on cheeks, then front-tongue, then mid and back tongue, then top of mouth. ____ Reps, ____ Sets, ____ Time(s) each day

Sequential Capability-Building Activities

____ 1. Side-Tongue Stroke (Tongue Awareness ; Tongue Tension): With a small tongue depressor, stroke the sides of your tongue, back to front. Close your eyes, notice your tongue. Let your tongue narrow and tighten as you do it.

____ Reps, ____ Sets, ____ Time(s) each day

____ 2. Back-Tongue Touch & Push With a tongue depressor, press down firmly on your back-tongue. Push your back-tongue up against the tongue depressor. Do *small* “up-down” motions. Close your eyes and “feel” the back-tongue. ____ Reps,

____ Sets, ____ Time(s) each day

____ 3. Tongue Tighten-Loosen (Tongue Tension Control): Open your mouth and keep your tongue in the middle of your mouth. Tighten your tongue—make it skinny--then relax. It will get wide again. Notice how your tongue feels when it is tight, then when it's loose.

____ Reps, ____ Sets, ____ Time(s) each day

____ 4. Back-Tongue Squeeze-Up (Back-Tongue Elevation): Place a Toothette on your back-tongue and bite on the handle with front teeth to keep your jaw still. Lift your back-tongue up and squeeze the sponge; squeeze up and down about 1 per second. Train your tongue to just move UP—not forward, keep your jaw still.

____ Reps, ____ Sets, ____ Time(s) each day

____ 5. Tongue Tighten + Pull-Back: Keeping your tongue inside, tighten it and keep it tight as you SLOWLY move it to the back of your mouth. Keep it straight and parallel with the floor. Relax, then tighten and pull-back again.

____ Reps, ____ Sets, ____ Time(s) each day

____ 6. Back-Tongue Squeeze-Up + HOLD (Back-Tongue Elevation + Simultaneous Tension): Do 3 Back-Tongue Squeeze-Ups, then on the fourth elevation HOLD—keep your tongue up for one count.

____ Reps, ____ Sets, ____ Time(s) each day

____ 7. Tighten + Pull-Back and UP (Simultaneous Retraction/Elevation): Keep your tongue in your mouth, tighten it and make it skinny. Now—keeping it tight—PULL it BACK and UP and land your back-tongue on top, behind your back, top teeth.

____ Reps, ____ Sets, ____ Time(s) each day

____ 8. Back-Tongue Squeeze-Ups + Back-Lifts (Independent Back-Tongue Elevation): Do 3 Back-Tongue Squeeze-Ups, then take out the Toothette, and lift your back-tongue up and down 3 times—pretend the Toothette is still in. Make sure your back-tongue is moving way UP and way DOWN. Alternate several times.

____ Reps, ____ Sets, ____ Time(s) each day

____ 9. Tighten + QUICK Pull-Back & UP; Say Small “Ng” Sounds: Keep your tongue in and tighten it. Keep it tight and QUICKLY Pull it back and UP. Anchor your tongue-sides on the top-sides and make several small “ng” sounds (as in “**king**”).

____ Reps, ____ Sets, ____ Time(s) each day

Additional Supplemental Tasks

Back-Tongue Elevation Tasks

- ___ 8. **Big Back-Lifts** (Simultaneous Tension/Elevation): Open your mouth; keep your tongue in the middle (not forward). Now lift the back-tongue WAY UP, then lower it WAY DOWN. Close your eyes; think about your back-tongue. Do several.
 ___ Reps, ___ Sets, ___ Time(s) each day
- ___ 9. **Small "k" Sounds** (Stabilization/Mobilization): Find your back-tongue corner Stabilization (behind your top, back teeth); anchor and HOLD. Hold on, and move the mid-tongue for little, small "k" sounds. Whisper your "k's".
 ___ Reps, ___ Sets, ___ Time(s) each day

Tongue Retraction Tasks

- ___ 1. **Back-Throat Push** (Pulls back-tongue back; exercises throat muscles): Place your fingers against your throat where you swallow, and push up. Pull and lower the back-tongue down into your throat; push down against your fingers. The whole tongue moves back and down. Feel the tension in your throat.
 ___ Reps, ___ Sets, ___ Time(s) each day
- ___ 2. **Tongue Out-In**: Stick your tongue outside your mouth; it does not have to be tight. Using your back-tongue muscles, pull your tongue back into your mouth (try not to let your front-tongue curl back). Retract the tongue all the way back until your back-tongue touches the soft palate. Keep it straight.
 ___ Reps, ___ Sets, ___ Time(s) each day

Tongue Toning/Endurance

- ___ 1. **Tongue Push-Up Pops**: Squeeze your tongue up to the roof of your mouth, **push up**, and pop it down. Use the pop-on-top position to find the tongue's position and how to push UP. Make sure it is flat, not curled. To get the tongue closer to the top, just bite on a small tongue depressor (with side teeth) to keep the jaw closed.
 ___ Reps, ___ Sets, ___ Time(s) each day
- ___ 2. **Tongue-On-Top Push**: Place your tongue on the roof of your mouth (in the tongue resting position), and push UP; feel your tongue tighten. Hold for a count (between 1 to 5 seconds), and relax your tongue in its on-top position (just release the tension). Repeat.
 ___ Reps, ___ Sets, ___ Time(s) each day
- ___ 3. **Open-Close Exercise**: With your mouth just open slightly, place your tongue on the roof of your mouth (in the tongue resting position) and keep it there, and push UP. Now open your jaw, but keep your tongue flat on top. You will have to push up hard to keep your tongue on top (try not to let it release and fall down).
 ___ Reps, ___ Sets, ___ Time(s) each day

Retroflex /r/

If an alternate method of producing /r/ is needed, generate a "Retroflex /r/" (back-tongue up, front tongue curled up, resonance created within the area of the curled-up tongue). After completing the above exercise sequence:

- ___ 1. **Tongue Taps**: Take a small tongue depressor, and tap and press-release the center of your tongue. Tighten the middle of your tongue to help curl the front-tongue.
 ___ Reps, ___ Sets, ___ Time(s) each day
- ___ 2. **Dental Floss Curl-Up**: Or, with a large dental floss handle, place the dental floss across the top of the tongue (about a half-inch back), and gently pull down, to help the tongue-tip curl up.
 ___ Reps, ___ Sets, ___ Time(s) each day
- ___ 3. **Front-Tongue Curl**: Open your mouth; keep the tongue in the middle. Place a small straw (coffee stirrer) crosswise on top of your tongue so you look like you have whiskers. Bite on the straw, and curl your tongue-tip up and around the straw.
 ___ Reps, ___ Sets, ___ Time(s) each day



Name _____

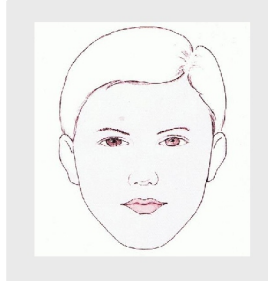
R-Lesson #2

Dates Assigned:

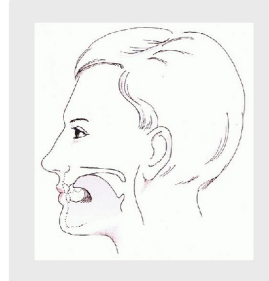
_____, _____,
_____, _____,
_____, _____,

Wherever the lips, tongue, and jaw REST is where they WORK!

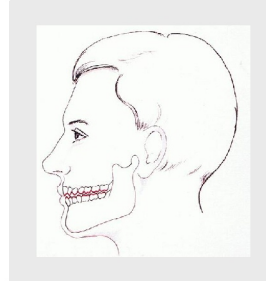
1. Mouth Resting Posture: Get your lips, tongue and jaw in place--and HOLD!
How long can you keep your LIPS CLOSED, TONGUE UP, and JAW GENTLY RELAXED? Every day you do it, the easier it gets!



Lips closed



Tongue up



Jaw gently relaxed

Do: ___ seconds/minutes, ___ sets, ___ time(s) each day

M	T	W	Th	F	S	Su
---	---	---	----	---	---	----

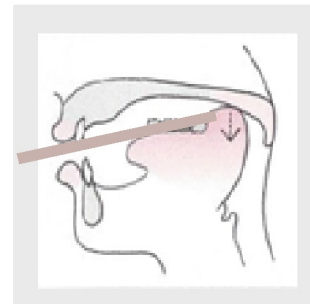
Put an "X" on each day you complete the task.

2. Back-Tongue Touch & Push

Open your mouth. With a tongue depressor, press down firmly on your back-tongue. Push your back-tongue UP against the tongue depressor. Do *small* "up-down" motions. Close your eyes and "feel".

Do: ___ reps, ___ sets, ___ time(s) each day

M	T	W	Th	F	S	Su
---	---	---	----	---	---	----

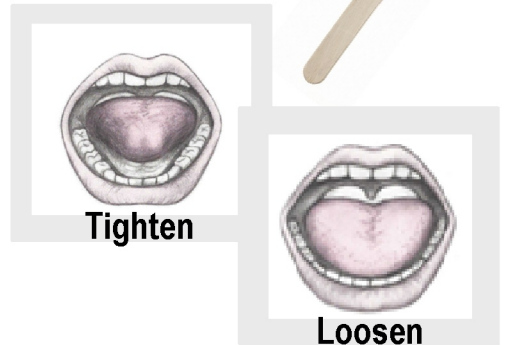


3. Tongue Tighten-Loosen

Open your mouth and keep your tongue in the middle of your mouth. Tighten your tongue—make it skinny--then wide and relaxed. Notice how your tongue feels when it is tight, then when it's loose. Learn to control the tension.

Do: ___ reps, ___ sets, ___ time(s) each day

M	T	W	Th	F	S	Su
---	---	---	----	---	---	----



4. Other: _____

Do: ___ reps, ___ sets, ___ time(s) each day

M	T	W	Th	F	S	Su
---	---	---	----	---	---	----

Little by little does the trick!



"R" Evocation Check Sheet

The Back-Up /r/

Verbal and Visual Description

- Move the whole tongue back and UP; make it bunchy and tight.
- Anchor the back-tongue corners to the top back-sides (on the retromolar pads).
- The mid back-tongue elevates and almost touches the soft palate.
- Keep lips still.
- Add phonation; "trap" the air in the pharynx/throat. It should sound rather muffled.

Capability Tasks to Trigger an /r/

- _____ Tighten + QUICK Pull-Back & UP; say "Ng"
 _____ Back-Tongue Squeeze-Up + Back-Lifts + /r/
 _____ Back-Tongue Squeeze-Up + HOLD

External Tactile Cues: Do the following to cues to help the back-tongue find its way UP

- _____ Touch the throat area to make sure the tongue is elevating
 _____ Touch the crown of the head (top, back) to cue the tongue to lift up
 _____ Stroke the sides of the face from front to back and up (lips up to area in front of ears)

Successive Approximations from Established Sounds

- _____ /ng/ → /r/
 _____ /k/ → /r/
 _____ /g/ → /r/
 _____ /i/ → /r/
 _____ /a/ → /r/
 _____ /l/ → /r/ (/l/ to /r/ Rock)

Other Techniques

- | | |
|---------------------------------|-------|
| _____ Seal Sounds | _____ |
| _____ Rooster Sounds | _____ |
| _____ Skid Sounds | _____ |
| _____ Talk-Like-a-Pirate Sounds | _____ |
| _____ Growl Sounds | _____ |
| _____ Gravity | _____ |

The Retroflex /r/

Verbal and Visual Description

- Move the whole tongue back and UP; curl the front-tongue back. Do not let it touch the top.
- Anchor the back-tongue corners to the top back-sides (on the retromolar pads).
- The mid back-tongue elevates and almost touches the soft palate.
- Keep lips still. Add phonation; "trap" the air in the front tongue that's curled and lifted back tongue.

- _____ Tap the mid-tongue; tighten the mid-tongue to make a tongue bowl.
 _____ Curl the front-tongue with a dental floss handle. Place the floss across the blade and curl the tip.
 _____ Place a coffee stirrer across the blade, bite on the end of the stirrer and curl the tip up around it.
 _____ Do the /l/ to /r/ slide: curl the tongue back; start on the ridge and stroke back on the hard palate.

"R" Deep Screening Probe

I. PREVOCALIC CONSONANTAL /r/: Number Correct _____/36

1. (front vowels; /i/ /ɪ/ /e/)	(front & mid vowels /ɛ/ /æ/ /ʌ/)	(back vowels /u/ /o/ /ɑ/)
___ reek	___ wreck	___ root
___ read	___ red	___ rude
___ reach	___ rest	___ roost
___ reason	___ rescue	___ Rudy
___ rig	___ rag	___ rope
___ rich	___ wrap	___ rose
___ wrist	___ rats	___ roast
___ ribbon	___ rabbit	___ romance
___ rake	___ rug	___ rock
___ race	___ rough	___ Ross
___ raisin	___ rust	___ rocks
___ raincoat	___ running	___ robin

II. CONSONANTAL /r/ CLUSTERS: Number Correct _____/24

2. /br/	/tr/	/dr/	/gr/
___ break	___ truck	___ drink	___ Greek
___ bread	___ train	___ drum	___ great
___ bride	___ track	___ drive	___ grass
/kr/	/fr/	/shr/	/thr/
___ creek	___ freak	___ shrink	___ three
___ crust	___ froze	___ shrub	___ throw
___ crown	___ from	___ shred	___ thread

III. STRESSED VOCALIC /ɜː/: # Correct _____ 8 **IV. UNSTRESSED VOCALIC /ə/: # Cor. _____ 4**

3. C/ɜː/, C/ɜː/C	4. C/ɜː/V, CV/ɜː/V	5. C/ə/
___ her	___ hurry	___ never
___ bird	___ pirate	___ father
___ surf	___ spirit	___ sister
___ person	___ furious	___ inspector

V. VOWEL OR DIPHTHONG + STRESSED /ɜː/: (Postvocalic): # Correct _____/24

6. /aɜː/	7. /ɛɜː/	8. /iɜː/	9. /aɪɜː/
___ car	___ air	___ deer	___ tire
___ park	___ care	___ beard	___ higher
___ start	___ stair	___ steer	___ inspire
___ party	___ compare	___ cashier	___ fireman

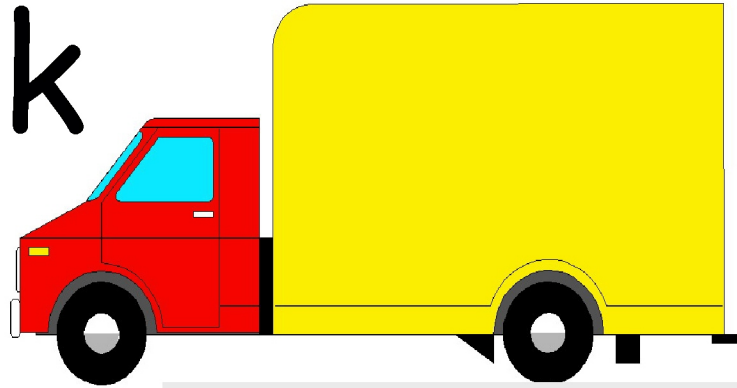
10. /oɜː/	11. /uɜː/
___ core	___ cure
___ board	___ pure
___ storm	___ secure
___ morning	___ insure

RESULTS

TOTAL NUMBER CORRECT: _____/ 96
 TOTAL PERCENTAGE CORRECT: _____

Name: _____

Truck



WORDS

- ___ truck
- ___ drop
- ___ grade
- ___ grow
- ___ crust
- ___ cream
- ___ brown
- ___ prize
- ___ frog
- ___ three

Assignment: Date _____

Activity: _____

___ reps, ___ sets, ___ time(s) each day

M	T	W	Th	F	S	Su
---	---	---	----	---	---	----

PHRASES

- ___ in the truck
- ___ drop the note
- ___ a good grade
- ___ grow in the sun
- ___ eat the crust
- ___ ice cream
- ___ the brown dog
- ___ prize of the month
- ___ frog in his pocket
- ___ three cents

Assignment: Date _____

Activity: _____

___ reps, ___ sets, ___ time(s) each day

M	T	W	Th	F	S	Su
---	---	---	----	---	---	----

Assignment: Date _____

Activity: _____

___ reps, ___ sets, ___ time(s) each day

M	T	W	Th	F	S	Su
---	---	---	----	---	---	----

SENTENCES

- ___ John put the food in the truck.
- ___ Drop the note in the box.
- ___ The pansies can grow in the sun.
- ___ Eat the crust, it's good.
- ___ Ice cream is tasty.
- ___ The brown dog sat up to be fed.
- ___ Jan got the prize of the month.
- ___ He hid the frog in his pocket.
- ___ Jose found three cents.

Assignment: Date _____

Activity: _____

___ reps, ___ sets, ___ time(s) each day

M	T	W	Th	F	S	Su
---	---	---	----	---	---	----

Bibliography

- Adler-Bock, M., Bernhardt, B. M., Gick, B., & Bacsfalvi, P. (2007). The use of ultrasound in remediation of North American English /r/ in 2 Adolescents. *American Journal of Speech-Language Pathology*, 16(2), 128-139.
- Bahr, D.C. (2001). *Oral motor assessment and treatment: Ages and Stages*, Boston, MA: Allyn & Bacon.
- Bahr, D. C. (2003). Typical versus atypical oral motor function in the pediatric population: Beyond the checklist. *Perspectives on Swallowing and Swallowing Disorders (Dysphagia) American Speech-Language-Hearing Association Division 13*, 12(1), 4-12.
- Beckman, D., Neal, C., Phirsichbaum, J., Stratton, L., Taylor, V., & Ratusnik, D. (2004). Range of movement and strength in oral motor therapy: A retrospective study. *Florida Journal of Communication Disorders*, 21, 7-14.
- Boshart, C. *Oral Motor Analysis and Remediation Techniques* (1995). Speech Dynamics, Inc.
- Boshart, C. *The Key to Carryover: Change Oral Postures to Fortify Speech Production* (2016). Speech Dynamics, Inc.
- Boyce, SE, Combs, S, and Rivera-Campos, A. (2011). Acoustic and articulatory characteristics of clinically resistant /r/. *Journal Acoustical Society of America*, 129, 2625.
- Brown, JC. Techniques for correcting /r/ misarticulations (1975). *Language, Speech, and Hearing Services in Schools*, ASHA, Vol. 6, 86-91.
- Clark, H. M., Robin, D. A., McCullagh, G., & Schmidt, R. A. (2001). Motor control in children and adults during a non-speech oral task. *Journal of Speech, Language, and Hearing Research*, 44, 1015-1025.
- Clark, Schwartz, Blakeley. The removable r-appliance as a practical device to facilitate concise production of /r/. *AJSLP*, 29, May 1992.
- Curtis, J.F., and Hardy, J.C., A phonetic study of misarticulations of /r/. *JSHR*, 1959, 2. page 244.
- Fletcher, Samuel. *Articulation: A Physiological Approach*, 1992; Singular Publishing Group.
- Flipsen, P., Jr., Hammer, J. B., & Yost, K. M. (2005). Measuring severity of involvement in speech delay: Segmental and whole-word measures. *American Journal of Speech-Language Pathology*, 14(4). 298-312.
- Gibbon, F., Stewart, F., Hardcastle, W. J., & Crampin, L. (1999). Widening access to eletropalatography for children with persistent sound system disorders. *American Journal of Speech-Language Pathology*, 8, 319-334.
- Gick, B. and Allen, B., Roewer-Desperes, F., Stavness, I. (2017). Speaking Tongues are actively braced. *Journal of Speech, Language, and Hearing Research*, 60, 494-506.
- Green, J. R., Moore, C. A., & Reilly, K. J. (2002). The physiologic development of speech motor control: Lip and jaw coordination. *Journal of Speech, Language, and Hearing Research*, 43, 239-255.
- Hanson, Marvin. *Articulation*, 1983; W.B. Saunders Co.

- Hertrich, I., & Ackermann, H. (2000). Lip-jaw and tongue-jaw coordination during rate-controlled syllable repetitions. *Journal of the Acoustical Society of America*, 107, 2236-2247.
- Hoffman, Sager, and Daniloff. Perception and production of misarticulated /r/. *JSHD*, 1983, 48, page 210.
- Kent, R. D. Contextual facilitation of correct sound production. *Lang. Sp and Hear in Schools*, 1982, page 66.
- Kent, R. D. (2000). Research on speech motor control and its disorders: A review and prospective. *Journal of Communication Disorders*, 33, 391-428.
- Kier, WM, & Smith, KK. Tongue, tentacles and trunks: the biomechanics of movement in muscular-hydrostats. *Zoological Journal of the Linnean Society*, April, 1985; p. 307-324.
- Klein, HB, McAllister Byun, T, Davidson, L, Grigos, MI. (Aug. 2013). A multidimensional investigation of children's /r/ productions: perceptual, ultrasound, and acoustic measures. *American Journal of Speech-Language Pathology*, ASHA. Vol. 22, 540-563.
- Marshalla, P. (2004). *Oral-Motor techniques in articulation & phonological therapy*. Mill Creek, WA: Marshalla Speech and Language.
- Marshalla, P. (2004). *Successful R Therapy*. Kirkland, WA. Marshalla Speech and Language.
- Meyer, P. G. (2000). Tongue, lip, and jaw differentiation and its relationship to orofacial myofunctional treatment. *International Journal of Orofacial Myology*, 26, 44-52.
- Ong, D., & Stone, M. (1998). Three-dimensional vocal tract shapes in /r/ and /l/: A study of MRI, ultrasound, electropalatography, and acoustics. *Phonoscope*, 1,1-13.
- Robin, D. A. (1992). Developmental apraxia of speech: Just another motor problem. *American Journal of Speech-Language Pathology*, 1, 19-22.
- Robin, D.A., Somoki, Luschei. Measurement of Tongue Strength and Endurance in Normal and Articulation Disordered Subjects, in Moore, Yorkston, Beakelman, *Dysarthria and Apraxia of Speech*, 1991, Brooks Pubs.
- Ruscello, D.M. A motor skill learning treatment program for sound system disorders, May, 1993. *Sem Sp Lang*, 14: 106-118.
- Ruscello, D.M. The importance of word position in articulation therapy. *Lang Sp Hear Serv in Schs*, 1975.
- Shriberg, L. A response evocation program for /r/. *JSHD*, 1975, 40, p. 92.
- Shuster, Ruscello, Smith. Eoking /r/ using visual feedback. *AJSLP*, 29, May, 1992.
- Silverman, FH and Paulus, PG. (1989). Peer Reactions to Teenagers Who Substitute /w/ for /r/. *Language, Speech, and Hearing Services in Schools*, ASHA.
- Sousa, DA. (2006). *How the Brain Learns*, Third Edition. Corwin Press, Thousand Oaks, CA.
- Verrastro, A. P., Stefani, F. M., Rodrigues, C. R., & Wanderly, M. T. (2006). Occlusal and orofacial myofunctional evaluation in children with primary dentition, anterior open bite and pacifier sucking habit. *International Journal of Orofacial Myology*, 32, 7-21.
- Williams, P., & Stackhouse, J. (2000). Rate, accuracy, and consistency: Diadochokinetic performance of young normally developing children. *Clinical Linguistics and Phonetics*, 14, 267-293.