

Assessment Speech Sound and Stimulability

Have the patient repeat the single sound, then a word from the sentence, then the sentence.

Correct	Incorrect
m	
n	
ng	

Nasal Sounds – These sounds are not likely to be affected

/m/- My mommy may moo or *Mom 'n Amy are home**.....

/n/- Nell saw a robin in the nest or *Anna knew no one**.....

/ng/- The bell is ringing or *We are hanging on**

Low Pressure Sounds- These sounds are not likely to be

l	
w	
r	
h	

/l/- Lisa gave Julia a lollipop or *Laura will wear a lily.**

/w/- Wilma won the war or *We were away.**

/r/- The farmer plants all year round or *Ray will arrive early.**

/h/- *Hurry ahead Harry.**

High Pressure Sounds- These sounds are likely to be affected

p	
b	
t	
d	
k	
g	
s	
z	
sh	
ch	
f	
v	

/p/- Pippin and Popeye play in the pool or *Puppy will pull a rope.**

/b/- Bobby and Bibi buy a banana or *Buy baby a bib.**

/t/- Take Teddy to town or *Your turtle ate a hat.**

/d/- Daddy mended a door or *Do it today for Daddy.**

/k/- Ken and Karen cook a cake or *A cookie or a cake.**

/g/- Go get the wagon for the girl or *Give Aggie a hug.**

/s/- Sissy sees some suns or *Sissy saw Sally race.* *
/z/- Zorro the Zebra was in the zoo or *Zoey has roses.* *
/sh/- Shy Shelly washes a shoe *She washed a dish.* *
/ch/- Chelsea eats cheeries and cheese. or *Watch a choo choo.* *
/f/- The muffin fell on the family farm or *A fly fell off a leaf.* *
/v/- Never drive the van in the valley or *I love every view.* *

**All italicized sentences are from the Americleft sentences by Judith Trost-Cardamone (2012)*

Step-by-Step Analysis to Determine What Sounds are Stimulable: This Leads to a Determination of What Sounds to Work on in Therapy

1. Write a list of the sounds produced incorrectly. Write the type of errors that are present.
2. Look for these sounds in “Ways to Stimulate Sounds.” Do not give up immediately but keep trying. Don’t just say “good job” or “try again” but say “almost”, “better” or very specific “that was better but I still see air coming out your nose” or “next time remember where your tongue is supposed to be, right behind the teeth (or wherever).”
3. Of the incorrect sounds found in question number one, write only the sounds that were stimulable.
4. From the list of stimulable sounds, write the order of these sounds according to the child’s normal development (using the “Order of Development”).
5. Choose the first sound on this list to work in therapy (do not work with more than 2-3 sounds at a time).
6. Work on discrimination: The adult shows the child the correct placement for the sound (e.g. /p/ is made at the mouth (bilabial plosive)), then shows the child where he/she is incorrectly making the sound (e.g. at the throat (glottal stop)). The adult explains the correct placement of the sound (glottal stop vs. bilabial plosive). Next, the adult alternates between producing the sound with the correct placement and incorrect placement, each time asking the child to identify whether the adult is making the sound with correct placement or not.
7. Once you have chosen the sound that you will teach, teach how to produce the sound in isolation.
8. Once the child can say the sound in isolation, teach how to produce the sound in a syllable.
9. Once it is easy for the child to produce the sound in a syllable, teach how to produce the sound at the beginning of a word.
10. Once the child can say those words, have he/she say them in a sentence.
11. Once he/she can say those words in a sentence, work with that sound in conversation.
12. Once you have completed the steps for the word initial sounds, think of words containing the same sound in the middle position and to steps # 6-9.
13. If that sound also exists at the end of the word, after completing step # 9, repeat steps # 6-9 again.

Ways to Stimulate Sounds

/p/: Make the person say "p" this way:

- Can the child discriminate the sound of correct production, e.g., a glottal stop for a “p” vs a bilabial voiceless stop for “p”
- Use drawings and teach what they have to do with their lips to produce this sound.
- Use a mirror to see his lips together.
- Use mirror to see fogging of mirror if air comes through nose. (Only when mirror is cooler than air)
- Have the child feel the air from the mouth with hand.
- Have child move a cotton ball or paper ball on the hand right outside the mouth saying /p/.
- Use / b / to help make the / p / (Quieter).
- Place your fingers on your lips for them to see that your lips have to be together.
- Use "h" softly and have them put their lips together to make /p/ at the beginning of a word and then insert the sound it into the word "hhhhh pa" (Especially for glottal stops)
- Use /m/ to make the /p/. Can close the nostrils so child feels air coming through mouth and gradually let go of the nostrils.

Observations:	<u>Improved?</u>	
	Yes	No

/b/: Make the person say "b" this way:

- Use drawings; teach what they have to do with their lips to produce this sound.
- Use a mirror to see his lips together.
- Use mirror to see fogging of mirror if air comes through nose. (Only when mirror is cooler than air)
- Have the child feel the air from the mouth with hand.
- Put a tissue in front of child’s mouth to see it move when saying /b/.
- Use / p / to help make the / b / (Louder/Stronger).
- Place your fingers on your lips for them to see that your lips have to be together.
- Use "h" softly and have them put their lips together to make /b/ at the beginning of a word and then insert the sound it into the word "hhhhh ba" (especially for glottal stops).
- Use /m/ to make the /b/. The clinician can close the nostrils so the child feels air coming through the mouth and gradually let go of the nostrils (especially for glottal stops).

Observations:	<u>Improved?</u>	
	Yes	No

/t/: Make the person say "t" this way:

- Use drawings and teach what they need to do with their tongue to make this sound: the tongue has to touch the back of their front teeth. Can use a spoon or tongue depressor to “tickle” behind teeth where sound is made.
- Use a mirror to see where tongue goes and that the lips are apart.
- Use mirror to see fogging of mirror if air comes through nose. (Only when mirror is cooler than air)
- Have the child feel the air from the mouth with hand.
- Put a tissue in front of child’s mouth to see it move when saying /t/.
- Use "h" softly and have them put their lips together to make /t/ at the beginning of a word and then insert the sound it into the word "hhhhh ta" (especially for glottal stops).
- Use /n/ to make the /t/.
- Can close the nostrils so child feels air coming through mouth and gradually let go of the nostrils (especially for glottal stops).
- Like the /n/ sound, it is produced the same way (and /n/ will be easier for them because it is nasal), have them pretend to make an “n” when in fact they are saying /t/.
- Use less force for /t/ than for /d/.

Observations:	Improved?	
	Yes	No

/d/: Make the person say "d" this way:

- Use drawings; teach what they need to do with their tongue to make this sound: the tongue has to touch the back of their front teeth.
- Can use a spoon or tongue depressor to “tickle” behind teeth where sound is made.
- Use a mirror to see where tongue goes and that lips are apart.
- Use mirror to see fogging of mirror if air comes through nose. (Only when mirror is cooler than air)
- Use less force for /t/ than for /d/.
- Have the child feel the air from the mouth with hand.
- Put a tissue in front of child’s mouth to see it move when saying /t/.
- Use "h" softly and have them put their lips together to make /t/ at the beginning of a word and then insert the sound it into the word "hhhhh da" (especially for glottal stops).
- Use /n/ to make the /d/. Can close the nostrils so child feels air coming through mouth and gradually let go of the nostrils (especially for glottal stops).
- Like the /n/ sound, it is produced the same way (and /n/ will be easier for them because it is nasal), have them pretend to make an “n” when in fact they are saying /d/ (especially for glottal stops).

Observations:	Improved?	
	Yes	No

/g/: Make a person say "g" this way:

- Use drawings; teach that the back of the tongue has to "jump".
- Have them cough to feel the sound.
- Have them lean their head back while producing the sound.
- Have them gargle while producing the sound and gradually eliminate the water in your mouth.
- Use more force to /g/ than for /k/.
- Have the child feel the air from the mouth with hand.
- Put a tissue in front of child's mouth to see it move when saying /g/.
- Use "h" softly and have them put their lips together to make /g/ at the beginning of a word and then insert the sound it into the word "hhhhh "gee" (especially for glottal stops).
- Use /ng/ to make the /g/. Can close the nostrils so child feels air coming through mouth and gradually let go of the nostrils (especially for glottal stops).
- Like the /ng/ sound, it is produced the same way (and /ng/ will be easier for them because it is nasal), have them pretend to make an "n" when in fact they are saying /g/ (especially for glottal stops).

Observations:	<u>Improved?</u>	
	Yes	No

/k/ Make the person say "k" this way:

- Use drawings; teach that the back of the tongue has to "jump".
- Have them cough to feel the sound.
- Have them lean their head back while producing the sound.
- Have them gargle while producing the sound and gradually have them eliminate the water in their mouth.
- Use less force to /k/ than for /g/.
- Have the child feel the air from the mouth with hand.
- Put a tissue in front of child's mouth to see it move when saying /k/.
- Use "h" softly and have them put their lips together to make /k/ at the beginning of a word and then insert the sound it into the word "hhhhh kee" (especially for glottal stops).
- Use /ng/ to make the /k/. Can close the nostrils so child feels air coming through mouth and gradually let go of the nostrils (especially for glottal stops).
- Like the /ng/ sound, it is produced the same way (and /ng/ will be easier for them because it is nasal), have them pretend to make an "n" when in fact they are saying /k/ (especially for glottal stops).

Observations:	<u>Improved?</u>	
	Yes	No

/s/: Make the person say "s" this way:

- Use drawings; teach that the tongue has to touch the back of their upper or lower teeth.
- Use tactile cues by running the finger along the child's arm to feel the continuation of air.
- Continue producing /t/ to end up producing an /s/ (i.e. ttsssss). Can use tactile cues by tapping on child's arm when making the tttt but then move to one continuous motion for the ssssss.
- Use hhhhh---ssss (put teeth together while saying hhhhh), or sh-sh-sh---ssss (bring back lips to a smile) or th-th-th (unvoiced) ---sss (pulling back tongue into mouth).
- Try making the "s" with the tongue behind the bottom teeth.
- Use mirror to see fogging of mirror if air comes through nose. (Only when mirror is cooler than air)
- Use less force for /s/ than for /z/.
- Have the child feel the air from the mouth with hand.
- Put a tissue in front of child's mouth to see it move when saying /s/.

Observations:	<u>Improved?</u>	
	Yes	No

/z/: Make the person say "z" this way:

- Use drawings; teach that the tongue has to touch the back of their upper or lower teeth.
- Use tactile cues by running the finger along the child's arm to feel the continuation of air.
- Use hhhhh---zzzz (put teeth together while saying hhhhh), or sh-sh-sh---zzz (bring back lips to a smile) or th-th-th (unvoiced) ---zzz (pulling back tongue into mouth).
- Try making the "z" with the tongue behind the bottom teeth.
- Use mirror to see fogging of mirror if air comes through nose. (Only when mirror is cooler than air)
- Use more force for /z/ than for /s/.
- Put a tissue in front of child's mouth to see it move when saying /z/.

Observations:	<u>Improved?</u>	
	Yes	No

/f/: Make the person say "f" this way:

- Have them gently bite their lower lip and make the "h" sound.
- Have them facilitate the production of sound with a soft "h".
- Use mirror to show placement of teeth on tongue

Observations:	<u>Improved?</u>	
	Yes	No

The Order of Normal Sound Development

Recommended ages of acquisition (years; months) for phonemes and clusters, based generally on 90% levels of acquisition

High Pressure Sounds	Females	Males
/p/	3;0	3;0
/b/	3;0	3;0
/t/	4;0	3;6
/d/	3;0	3;6
/k/	3;6	3;6
/g/	3;6	4;0
/f/ /f-/	3;6	3;6
/-f/	5;6	5;6
/v/	5;6	5;6
/θ/	6;0	8;0
/ð-/	4;6	7;0
/s/	7;0-9;0	7;0-9;0
/z/	7;0-9;0	7;0-9;0
/ʃ/	6;0	7;0
/tʃ/	6;0	7;0
/dʒ/	6;0	7;0

Smit, A. B, Hand, L, Freilinger, J. J., Bernthal, J. E., & Bird, A. (1990). The Iowa Articulation Norms Project and its Nebraska replication. *Journal of Speech and Hearing Disorders*, 55, 779-798.