

[s] and [z]

DESCRIPTION: Draw attention to the hissing sound and the position of the tongue tip (behind the front upper or lower teeth). For [z], also draw attention to the buzzing voice box.

METAPHORS: [s] is the snake sound or the hissing sound and the sound that begins "sun," "sit," and "Santa." [z] is the bee sound and the sound that begins "zoo," "zero," and "zebra." [s] and [z] are also long sounds (fricative) and tongue tip sounds (alveolar). [z] is made with the voice on (voiced).

TOUCH CUE: None. These sounds are usually acquired too late in development for the touch cue technique to be appropriate.

DEMONSTRATIONS:**Place (Alveolar)**

First Method: Ask the client to feel the bump on the roof of his or her mouth just behind the two front teeth.

Second Method: Place a little peanut butter or a favored food on a Q-tip, touch the Q-tip to the alveolar ridge, and ask the client to remove the food with the tongue tip.

Manner (Fricative)

First Method: Use a strip of paper, a feather, or the hand held in front of the client's mouth while you produce several long voiceless fricatives to draw attention to the "hissing" quality and continuous nature of the sounds. Alternately, tape a small paper flower on the end of a pencil and encourage the client to move the flower in the wind.

Second Method: Run your or the client's finger down the client's arm while making several long voiceless fricatives to demonstrate the "hissing" quality and length of fricatives.

[s] and [z]

The following techniques facilitate [s]. To facilitate [z], follow the same steps but also instruct the client to turn on the voice box.

[s] Up or [s] Down?

Some people produce [s] and [z] with the tongue tip up behind the upper front teeth, others say them with the tongue tip down behind the lower front teeth. Neither one is the "right way." Follow the client's lead in deciding which way to teach [s] and [z]. If the client appears to find it easier to say [s] and [z] with the tongue tip up, teach the sounds that way; if the client appears to find it easier to say [s] and [z] with the tongue tip down, teach the sounds that way.

PHONETIC PLACEMENT

First Method (tongue tip up or down):

1. Place a tongue depressor just behind the client's upper or lower front teeth and ask the client to use his or her tongue tip to hold it there.
2. Next, ask the client to keep his or her tongue still while the clinician carefully removes the tongue depressor.
3. Ask the client to breathe out, resulting in [s].

Second Method (tongue tip up or down):

1. Instruct the client to place the tip of his or her tongue behind either the upper or lower front teeth and then ask the client to pull the tongue away a little bit.
2. Close the client's teeth so the teeth are barely touching.
3. Place a finger in front of the center of the client's mouth, saying "Blow air slowly over your tongue toward my finger." The sound produced by the client when he or she blows out approximates [s].

Third Method (tongue tip up):

1. Make a shelf by placing a tongue depressor against the lower edges of the client's upper teeth.

2. Next, ask the client to place his or her tongue on the shelf. If needed, place a tongue depressor under the client's tongue tip to bring the "elevator up" so that the tongue depressor touches the lower front teeth.
3. Ask the client to breathe out through his or her mouth. The resulting sound approximates [s].

Fourth Method (tongue tip up):

1. Instruct the client to raise his or her tongue so that the sides are firmly in contact with the inner surface of the upper back teeth. An alternate method is to instruct the client to stick out his or her tongue slightly, lower the upper teeth to come into contact with the sides of the tongue, and then pull the tongue inside his or her mouth.
2. Ask the client to groove the tongue slightly along the midline. If needed, ask the client to protrude the tongue and place a clean object such as a drinking straw along the midline of the tongue. Then ask the client to raise the sides of the tongue slightly around the straw.
3. Carefully withdraw the straw.
4. Ask the client to place the tip of his or her tongue about a quarter of an inch behind the upper teeth and then ask the client to bring the teeth together.
5. Instruct the client to blow air along the groove of the tongue toward the lower teeth. If the client has difficulty directing the air along the tongue groove, insert a drinking straw into the client's mouth and instruct the client to blow through the straw, which often results in [s].

Fifth Method (tongue tip down):

1. Instruct the client to brush his or her lower gums with the tongue while attempting to say [s].
2. Ask the client to stop moving his or her tongue and to bring the upper and lower teeth close together, but not touching.
3. Instruct the client to breathe out through the mouth, resulting in [s].

SHAPING (tongue tip up or down)

[s] from [z] (Final Consonant Devoicing)**

Method: Instruct the client to say [z] and then to turn off the voice box. For some clients, this is sufficient instruction to result in [s]. (*Note:* To facilitate [z], instruct the client to turn on the voice while saying [s].)

[s] from [θ] (Lisping)***Method:*

1. Instruct the client to protrude his or her tongue between the teeth and to say [θ].
2. As client says [θ], instruct him or her to bring the tongue back into the mouth and behind the upper or lower front teeth, depending on which variety of [s] is being facilitated. An alternate method is to ask the client to scrape his or her tongue tip back along the back of the front teeth. (If needed, the tip of the client's tongue can be pushed inward with a tongue depressor.)
3. Next, ask the client to either raise or lower the tongue tip slightly, depending on which type of [s] is being taught.
4. Ask the client to blow air through the mouth, which typically results in [s]. (*Note:* To facilitate [z], develop from [ð].)

[s] from [l] (Lateralization)***First Method:*

1. Demonstrate air flowing through a straw protruding from the side of the mouth when a lateral [s] is made and air flowing through a straw placed in the front of the mouth when a correct [s] is made.
2. Encourage the client to close his or her teeth and to direct the airflow through a straw placed in front of the mouth. This typically results in [s]. (*Note:* To facilitate [z], develop from lateral [z].)

Second Method:

1. Instruct the client to produce a lateral [s] [l].
2. Draw imaginary circles with a Q-tip where the groove should occur in the center of the tongue to indicate to the client where the air should flow during [s].
3. Next, draw a small circle on a piece of paper and hold it in front of the client's mouth at the point where air should be emitted if the air flows over the top of the tongue.
4. Instruct the client to direct the air through the circle while saying [s]. An alternate method is to instruct the client to use his or her fingers instead of paper. If the client's fingers are used, the sensation of air is felt more keenly if the client's fingers are wet. (*Note:* To facilitate [z], develop from lateral [z].)

[s] from [t] (Stopping)***First Method:*

1. Instruct the client to say [t] in "tea" with strong aspiration. If said quickly and forcefully, [tsi] should result. As an alternative to this procedure, ask the client to say [tsi] instead of "tea."
2. Instruct the client to say [tsi] without the vowel, resulting in [ts].
3. Ask the client to prolong the [s] portion of [ts], resulting in tsss.
4. Ask the client to make [t] silent, resulting in [s].

Second Method:

1. Ask the client to open his or her mouth and to put the tongue in position for [t].
2. Instruct the client to drop his or her tongue slightly and to send the air over the tongue. Place the client's finger in front of the mouth to feel the emission of air. The resulting sound is [s].

[s] from [ʃ]*Method:*

1. Instruct the client to say [ʃ].
2. Ask the client to retract his or her lips into a smile. Often, this results in the tongue moving forward slightly into the position for [s]. If needed, however, instruct the client to move the tongue slightly forward. The resulting sound is [s]. (*Note:* To facilitate [z], develop from [ʒ], or instruct the client to turn on his or her voice box.)

[s] from [d] (Stopping and **Prevocalic Voicing)***Method:*

1. Ask the client to place his or her tongue in position for [d].
2. Instruct the client to release the tongue a little bit and to force the air over the tongue.
3. Ask the client to turn off the voice. The sound that results when the client turns off the voice is [s]. (*Note:* To facilitate [z], develop from [d] or use [s] and instruct the client to turn on his or her voice box.)

[s] from [i]*Method:*

1. Instruct the client to say [i].
2. Ask the client to turn off his or her voice and gradually close the teeth until [s] results (*Note:* To facilitate [z], instruct the client to keep the voice box on.)

[s] from [h]*Method:*

1. Instruct the client to gradually close the teeth while saying [h].
2. Ask the client to raise his or her tongue tip gradually while producing a prolonged [h] until the resulting sound is [s]. (*Note:* To facilitate [z], instruct the client to turn on the voice.)

[s] from [f]*Method:*

1. Instruct the client to lift his or her tongue tip slowly while making a prolonged [f].
2. Ask the client to bring the front teeth close together but not quite touching. If needed, gently pull out the client's lower lip slightly.
3. Ask the client to smile while making the sound, resulting in [s]. (*Note:* To facilitate [z], develop from [v] or use [s] and instruct the client to turn on his or her voice box.)