Speech Series for Individuals with 22q11.2 Differences

Consonants and Vowels in English

Speech is made when we use our lips, tongue, teeth, palate, and vocal cords to modify the air stream as we breathe out. Articulation refers to the formation of the distinct sounds of speech in the mouth.

Phonemes

A phoneme is the smallest unit of speech sound. It can be a consonant or a vowel.

Consonant Phonemes

Classification based on the place of articulation

Front of the mouth

- Bilabial Lips together:/p/ /b/ /m/
- Labiodental Upper teeth on lower lip:
 If/ Iv/
- Dental Tongue between teeth:
 /th/ /th/ (/th/ as in "there")
- Alveolar/Lingua-dental Tongue on ridge behind upper front teeth:

/t/ /d/ /n/ /s/ /z/

Middle of the mouth

Palatal – Tongue pulled back, touching upper palate:
 /sh/ /zh/ /ch/ /j/ /y/ /r/ (/zh/ as in "measure")

Back of the mouth

- Velar Tongue / back of throat:
 - /k/ /g/ /ng/
- Glottal Glottis (opening between the two vocal cords):
 /h/

Classification based on the manner of articulation

Manner refers to how the air stream is managed.

Another description of sounds is **voicing**, that is whether the vocal cords vibrate or not. Sounds come in pairs. For example, /p/ and /b/ are a pair. The sound /p/ is voiceless (no sound from the vocal cords), while the /b/ is voiced, that is, vibrated by the vocal cords. Other pairs include: /s/ and /z/, /k/ and /g/, /t/ and /d/, /f/ and /v/, /ch/ and /dg/ - with one of each pair with the voice on and the other with the voice off.

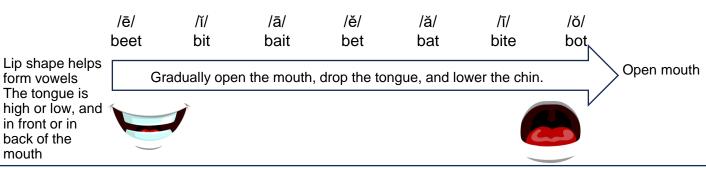
Consonant sounds by manner of production:	Voiced	Unvoiced
Stops – Stops the airflow and then releases it in a quick burst. Also called plosives .	/b/ /d/ /g/	/p/ /t/ /k/
Fricatives – Partially blocks the flow of air out of the mouth through an obstruction. The sound is continuous and produces friction. The /s/ family of sounds (s, z, sh, ch, dg) are also known as sibilant sounds.	/v/ / <u>th</u> / /z/ /zh/	/f/ /th/ /s/ /sh/
Affricates – Stops the air before the sound is released. Friction is produced.	/j/	/ch/
Nasals – Directs the air through the nose instead of the mouth. The sound is voiced and continuous.	/m/ /n/ /ng/	(none)
Liquids – Rolls in the mouth and can alter the vowel sounds before them. The sound is voiced and continuous.	/\/ /r/	(none)
Glides – The tongue shapes the mouth cavity	/y/ /w/	/hw/

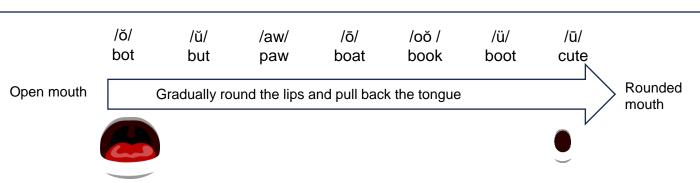
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Consonants and Vowels in English (continued)

Vowel Phonemes

All vowel phonemes are open, continuous, and voiced.





Diphthongs

A vowel sound that is made using two vowels/mouth shapes

/ow/ /oy/ plow coin

R-Controlled Vowels

A vowel sound that is changed by the "r" that follows it.

/ar/ /er/ /or/ car bird fork

Schwa

An unstressed vowel sound that sounds like a short u or a short i.

the

Speech Development

Children with 22q deletion/duplication often have speech sound disorders and may be delayed in reaching their <u>Speech and Developmental Milestones</u>. Speech-language evaluation is a critical component in determining presence and type of speech disorders, and guiding speech therapy.

References / Resources

- Understanding Consonants and Vowel Phonemes in English Colorado Department of Education
- Speech and Developmental Milestones National Institute on Deafness and Other Communication Disorders
- Graphics: Free Mouth Shapes Sets for Adobe Character Animator



The mission of the <u>International 22q11.2 Foundation</u> is to improve the quality of life for individuals affected by chromosome 22q11.2 differences through family and professional partnerships.

This information is brought to you by the Foundation for educational purposes only. It is <u>not</u> intended to be taken as medical advice. If you have concerns, please talk to your healthcare provider.