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Three-term label Description of English Consonants

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English consonants: Their Description:

Articulation/ Production of a consonant involves some sort of obstruction or constriction in the vocal tract at some specific point or location. Which consonant will be pronounced depends on (1) where in the vocal tract the constriction occurs and (2) how narrow it is. It also depends on (3) if the vocal folds are vibrating and if air is flowing through the nose.

Consonants are described using three major labels:

1. place of articulation
2. manner of articulation
3. voicing

The place of articulation specifies where in the vocal tract the constriction occurs. The voicing label informs if the vocal folds are vibrating or not. The manner of articulation relates to how narrow the constriction is, whether air is flowing through the nose, and whether the tongue is dropped down on one side.

For example, in the case of sound /d/:

Place of articulation = alveolar. (The narrowing of the vocal tract involves the tongue tip and the alveolar ridge.)

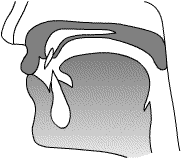
Manner of articulation = oral stop. (The narrowing is complete -- the tongue completely blocks off airflow through the mouth. There is also no airflow through the nose.)

Voicing = voiced. (The vocal folds are vibrating.)

1. **Places of articulation**

The place of articulation of a consonant is the point in vocal tract where the constriction occurs. Such points are:

1. **Bilabial**

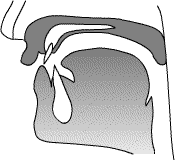
In bilabial consonants, the lower and upper lips touch each other. English [p], [b], and [m] are bilabial stops.

Sound [m] looks the same, but with the velum lowered to allow the air escape through the nasal passages.

The sound [w] involves two constrictions of the vocal tract made simultaneously. One of them is lip rounding, due to which it is a bilabial approximant.

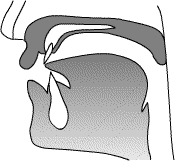
The picture presents the position of the vocal tract during the articulation of [p] or [b].

1. **Labiodental**

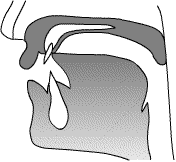
In labiodental consonants, the lower lip approaches or touches the upper teeth. English [f] and [v] are bilabial fricatives.

The picture presents the state of the vocal tract during the articulation of [f] or [v].

1. **Dental**

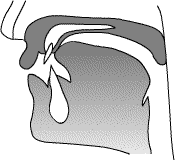
In a dental consonant, the tip or blade of the tongue touches the upper teeth. English [θ] and [ð] are dental fricatives. The tongue tip touches the back of the upper teeth to completely block the airflow.

1. **Alveolar**

In the articulation of alveolar consonants, the tongue tip touches the alveolar ridge, just behind the upper teeth. The English stops [t], [d], and [n] are articulated by completely blocking the airflow at this place of articulation. The fricatives [s], [z] and lateral approximant [l] are also produced at this place of articulation.

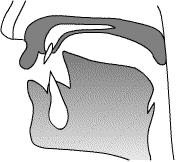
The picture presents the position of the vocal tract in the articulation of plosive [t] or [d].

1. **Postalveolar**

In the articulation of postalveolar consonants, the constriction occurs just behind the alveolar ridge. The constriction is made with either the tip or the blade of the tongue. The English fricatives [ʃ], [ʒ], and affricates [tʃ] and [dʒ] are produced at this place of articulation.

The picture presents the position of the vocal tract in the articulation of fricatives [ʃ], [ʒ] and affricate [tʃ] or [dʒ].

vi. **Retroflex**

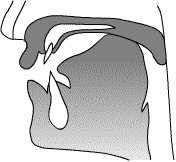
Retroflex is a consonant sound produced with the tip of the tongue curled back toward the hard palate. English [ɹ] is a retroflex approximant- the tongue tip is curled up toward the postalveolar region.

The picture presents the position of the vocal tract in the articulation of retroflex [ɹ].

1. **Palatal**

In the articulation of palatal consonant, the blade of the tongue touches the hard palate. English [j] is a palatal approximant -- the tongue comes near the hard palate, but does not touch it. It is also called ‘semi-vowel’.

1. **Velar**

In the articulation of velar consonants, the back of the tongue touches the soft palate, or velum. English [k], [ɡ], and [ŋ] are stops produced at that point.

The picture presents the position of the vocal tract in the articulation of [k] or [ɡ].

1. **Glottal**

The glottis is the opening between the vocal chords. In the articulation of [h], this opening is narrow enough to create some friction in the airstream passing through the vocal folds. For this reason, [h] is often classified as a glottal fricative.

1. **Manner of Articulation:**

On the basis of ‘manner’ of articulation, English consonants are grouped into the following categories:

1. **Stops or Plosives**: /p/, /t/, /k/, /b/, /d/, /g/

A stop/plosive consonant sound is produced by complete closure of the oral passage followed by sudden release of a burst of air, as in the sound (p) in *pit* or (d) in *dog.*In the consonants /p/ and /b/ the two lips, in /t/ and /d/ the tongue tip touching the alveolar ridge and in /k/ and /g/ the velum completely cut off the airflow at that point so that there is no airflow at all for the duration of the stop and then there is a sudden release of held air.

In [n], there is no airflow through the mouth, but through the nose. We distinguish between nasal stops, like [n] which involves airflow through the nose, and oral stops like [t] and [d] which do not.

Nasal stops are often simply called nasals. Oral stops are often called plosives. Oral stops can be either voiced or voiceless. Nasal stops are almost always voiced

1. **Fricatives**: [f], [v], [θ], [ð], [s], [z], [ʃ], and [ʒ]

**In the articulation of** fricatives like /f/ or /v/, the articulators in the mouth seem to block the passage of the airstream, but do not make complete closure, so that air sneaks through the side passage with audible friction.

In the case of stop [t], the tongue tip touches the alveolar ridge and cuts off the airflow. But in [s], the tongue tip approaches the alveolar ridge but doesn't quite touch it. As such, the narrow opening causes friction by the escaping air (the hissing sound of the [s]). In a fricative consonant, the articulators involved in the constriction come close enough to each other to create an audible friction.

1. **Approximants:** [w], [j], [ɹ], and [l]

Approximants are speech sounds that involve the articulators come close to each other but not closer enough to create friction. Therefore, approximants fall between fricatives, which cause narrow opening, and vowels, which produce no friction.

In an approximant, the articulators involved in the constriction are further apart, still they are closer to each other than when the vocal tract is in its neutral position.

1. **Semi Vowels**: /j/, /w/

A semivowel or glide is a sound that is phonetically similar to a vowel but functions as the [syllable](https://en.wikipedia.org/wiki/Syllable) boundary, rather than as the [nucleus](https://en.wikipedia.org/wiki/Syllable_nucleus) of a syllable. [[1]](https://en.wikipedia.org/wiki/Semivowel#cite_note-FOOTNOTELadefogedMaddieson1996322-1) Examples of semivowels in English are the consonants y and w, in yes and west, respectively.

1. **Affricates**: /t ʃ/ , /ʤ/

The English affricates,  'ch or /ʧ/ and ['j sound](https://pronuncian.com/pronounce-j-sound)' /ʤ/ are two-part consonant sounds. They begin by fully stopping the air from leaving the vocal tract (similar to a stop sound), then releasing it through a constricted opening. (similar to a fricative sound).

The International Phonetic Alphabet symbols show that /ʧ/ begins similar to a [/t/](https://pronuncian.com/pronounce-t-sound) and ends up in the position similar to  'sh sound' /ʃ/. The /ʤ/ begins similar to  [/d/](https://pronuncian.com/pronounce-d-sound) and ends up similar to  'zh sound' /ʒ/.

An affricate is a single sound but is composed of a stop and a fricative portions. English [dʒ] is an affricate like [tʃ], but voiced.

1. **Laterals:** /l/

In the articulation of a lateral /l/, the tongue tip touches the alveolar ridge but this doesn't make [l] a stop. Air still flows during the articulation of [l] because the sides of the tongue remain open. Sounds which involve airflow around the side of the tongue are called laterals. [l] is the only lateral in English.

1. **Voicing**

The vocal chords could be brought together so that the air flowing through them from the lungs causes them to vibrate against each other. This process is voicing. Sounds which are made with the vibration in the vocal chords are said to be voiced. Sounds made without vocal chords vibration are said to be voiceless.

There are several pairs of sounds in English which differ only in voicing -- that is, the two sounds have identical place and manner of articulation, but while one has vocal fold vibration and the other doesn't. The sound [θ] as in ‘thigh’ and the sound [ð] as in ‘thy’ are one such pair. The others are:

|  |  |
| --- | --- |
| voiceless | Voiced |
| [p] | [b] |
| [t] | [d] |
| [k] | [ɡ] |
| [f] | [v] |
| [θ] | [ð] |
| [s] | [z] |
| [ʃ] | [ʒ] |
| [tʃ] | [dʒ] |

The other sounds of English do not come in voiced/voiceless pairs. [h] is voiceless, and has no voiced counterpart.

The other English consonants such as [ɹ], [l], [w], [j], [m], [n], and [ŋ] are all voiced.

**Three-term label description of English consonants**:-

|  |  |  |  |
| --- | --- | --- | --- |
| [p] | voiceless | bilabial | Plosive |
| [b] | Voiced | bilabial | Plosive |
| [t] | voiceless | alveolar | Plosive |
| [d] | voiced | alveolar | Plosive |
| [k] | voiceless | velar | Plosive |
| [ɡ] | voiced | velar | Plosive |
| [tʃ] | voiceless | postalveolar | Affricate |
| [dʒ] | voiced | postalveolar | Affricate |
| [m] | voiced | bilabial | Nasal |
| [n] | voiced | alveolar | Nasal |
| [ŋ] | voiced | velar | Nasal |
| [f] | voiceless | labiodental | Fricative |
| [v] | voiced | labiodental | Fricative |
| [θ] | voiceless | dental | Fricative |
| [ð] | voiced | dental | Fricative |
| [s] | voiceless | alveolar | Fricative |
| [z] | voiced | alveolar | Fricative |
| [ʃ] | voiceless | postalveolar | Fricative |
| [ʒ] | voiced | postalveolar | fricative |
| [ɹ] | voiced | retroflex | approximant |
| [j] | voiced | palatal | approximant |
| [w] | voiced | labial + velar | approximant |
| [l] | voiced | alveolar | lateral approximant |
| [h] | voiceless | glottal | fricative |

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