

## Manner of Articulation

stop consonant completely cuts off the airflow through the mouth. In the consonants [t], [d], and [n], the tongue tip touches the alveolar ridge and cuts off the airflow at that point. In [t] and [d], this means that there is no airflow at all for the duration of the stop. In [n], there is no airflow through the mouth, but there is still airflow through the nose. We distinguish between

- **nasal stops**, like [n], which involve 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. (It is physically possible to produce a voiceless nasal stop, but English, like most languages, does not use such sounds.)

### Fricatives

In the stop [t], the tongue tip touches the alveolar ridge and cuts off the airflow. In [s], the tongue tip approaches the alveolar ridge but doesn't quite touch it. There is still enough of an opening for airflow to continue, but the opening is narrow enough that it causes the escaping air to become turbulent (hence the hissing sound of the [s]). In a **fricative** consonant, the articulators involved in the constriction approach get close enough to each other to create a turbulent airstream. The fricatives of English are [f], [v], [θ], [ð], [s], [z], [ʃ], and [ʒ].

### Approximants

In an approximant, the articulators involved in the constriction are further apart still than they are for a fricative. The articulators are still closer to each other than when the vocal tract is in its neutral position, but they are not even close enough to cause the air passing between them to become turbulent. The approximants of English are [w], [j], [ɹ], and [l].

### Affricates

An affricate is a single sound composed of a stop portion and a fricative portion. In English [tʃ], the airflow is first interrupted by a stop which is very similar to [t] (though made a bit further back). But instead of finishing the articulation quickly and moving directly into the next sound, the tongue pulls away from the stop slowly, so that there is a period of time immediately after the stop where the constriction is narrow enough to cause a turbulent airstream. In [tʃ], the period of turbulent airstream following the stop portion is the same as the fricative [ʃ]. English [dʒ] is an affricate like [tʃ], but voiced.

## Laterals

Pay attention to what you are doing with your tongue when you say the first consonant of [lif] *leaf*. Your tongue tip is touching your alveolar ridge (or perhaps your upper teeth), but this doesn't make [l] a stop. Air is still flowing during an [l] because the side of your tongue has dropped down and left an opening. (Some people drop down the right side of their tongue during an [l]; others drop down the left; a few drop down both sides.) Sounds which involve airflow around the side of the tongue are called **laterals**. Sounds which are not lateral are called **central**.

[l] is the only lateral in English. The other sounds of English, like most of the sounds of the world's languages, are central.

More specifically, [l] is a lateral approximant. The opening left at the side of the tongue is wide enough that the air flowing through does not become turbulent.

## Summary of English consonants

[p]	voiceless bilabial	plosive
[b]	voiced bilabial	plosive
[t]	voiceless alveolar	plosive
[d]	voiced alveolar	plosive
[k]	voiceless velar	plosive
[g]	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