Central approximants have vowel-like formants, but with a shorter duration and lower amplitude:

[j] ≈ [i]	low F1, high F2, high F3
[w] ≈ [u]	low F1, low F2, low F3
[r] ≈ [ɝ]	low F1, low F2, very low F3

Diffuse fricatives have turbulent airflow scattered as it hits an obstruction (the outside air for [f], and the teeth for [θ]), causing mostly uniform white noise over a wide range of frequencies; there is very little obvious acoustic difference between diffuse fricatives [f] and [θ].

Compact (sibilant) fricatives have turbulent airflow focused through a narrow channel, causing high frequency ($\geq$ 2000 Hz) white noise dependent on length of the channel. Compact fricatives have a higher amplitude than diffuse fricatives:

[s]	short channel	higher frequencies ($>$ 3000 Hz)
[ʃ]	long channel	lower frequencies (2000–3000 Hz)

Oral stops have a closure followed by a transient release burst; the closure is silent for voiceless stops; for voiced stops, the closure has low amplitude and low frequency periodic vibration (a.k.a. 'voicing bar') for some or all of the closure.

The duration of a stop closure can depend on place of articulation: with a closure farther back in mouth like for [k g] air pressure behind the closure builds faster, so it's harder to maintain the closure than for a stop further along in the vocal tract, like [p] and [b].

The release burst resonates through the remaining tube and can acquire some formants. A longer remaining tube (e.g. for [k g]) creates lower formants than a shorter tube (e.g. for [t d]). There are typically no formants for [p b] since there is no 'remaining' tube for the bilabial burst to resonant in.

From Perturbation Theory, all stop constrictions above the pharynx are predicted to cause F1 of neighboring vowels to be lower closer to the stop closure. Additionally, bilabial stop constriction causes all other formants of neighboring vowels to also be lower closer to the stop closure.

For velar stop constriction, F2 of neighboring vowels is higher closer to the stop closure, while F3 is lower, creating the so-called 'velar pinch' as F2 and F3 approach each other (and sometimes merge).

An alveolar stop constriction generally causes F3 of neighboring vowels to be higher or steady closer the stop closure and F2 of neighboring vowels to approach 1750 Hz closer to the stop closure.

Voiceless stops in certain positions have **aspiration**, which is a period of voicelessness after the stop release. Aspiration looks like white noise overlaying faint formants for the following sound.

An **affricate** has essentially the same properties as a stop followed by a fricative, except the total duration is about the same as a stop by itself (i.e., affricate duration is shorter than duration of a true stop followed by a true fricative).

A **lateral approximant** has vowel-like formants that are usually [ə]-like, but can be more [u]-like, with a low F2 if velarized, plus an anti-formant around 1900 Hz caused by 4.5 cm side tube.

Nasal stops have faint vowel-like formants, generated by a 22 cm tube from glottis to nostrils: ≈ 300 Hz, 1100 Hz, 1900 Hz. Nasals may have formant transitions similar to oral stops, but not always. In addition, they have anti-formants from a side tube whose length depends on place of articulation:

[m]	8 cm side tube	anti-formant ≈ 1100 Hz
[n]	5.5 cm side tube	anti-formant ≈ 1600 Hz