## Speech Sounds



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## Speech Sounds



## Classification of English sounds

English speech sounds:

- Vowels: Speech sounds which are produced with no obstruction of the vocal tract, so no turbulence or a total stopping of the air can be perceived.
- Consonants: Speech sounds which are produced by constricting or obstructing the vocal tract at some place to modulate the flow of air in the vocal tract.



## Consonant Sounds

## Consonants classification

Most English consonants can be classified using three articulatory parameters:
-Voicing:
vibration or lack of vibration of the vocal folds.

- Place of Articulation:
the point at which the air stream is most restricted.
-Manner of Articulation:
What happens to the moving column of air.


## Consonant Sound Chart

Classification of NAE Consonant Phonemes

| Manner of Articulation | Place of Articulation |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Bilabial | Labiodental | Dental | Alveolar | Palatal | Velar | Glottal |
| Stop Voiceless Voiced | $\begin{aligned} & \mathrm{p} \\ & \mathrm{~b} \end{aligned}$ |  |  | $\begin{aligned} & \mathrm{t} \\ & \mathrm{~d} \end{aligned}$ |  | $\mathrm{k}$ |  |
| Fricative Voiceless Voiced |  | $\begin{aligned} & f \\ & v \end{aligned}$ | $\begin{aligned} & \theta \\ & \delta \end{aligned}$ | $\begin{aligned} & \mathrm{S} \\ & \mathrm{z} \end{aligned}$ | $\begin{aligned} & 5 \\ & 3 \end{aligned}$ |  | h |
| Affricate Voiceless Voiced |  |  |  |  | $\begin{aligned} & \mathrm{t} \int \\ & \mathrm{~d} 3 \end{aligned}$ |  |  |
| $\begin{array}{\|l\|} \hline \text { Nasal } \\ \text { Voiced } \end{array}$ | m |  |  | n |  | ワ |  |
| Liquid Voiced |  |  |  | \| | r |  |  |
| $\begin{array}{\|l\|} \hline \text { Glide } \\ \text { Voiced } \end{array}$ | W |  |  |  | y |  |  |

## Consonant sounds

| p | b | t | $\mathrm{d}$ | $\mathrm{f}$ | V | $\theta$ | ð |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { /pin/ } \\ & \text { pin } \end{aligned}$ | /bæd/ <br> bad | $\begin{aligned} & / \text { tun/ } \\ & \text { tin } \end{aligned}$ | $\begin{gathered} / \mathrm{dog} / \\ \mathrm{dog} \end{gathered}$ | /faiv/ <br> five | /Næn/ van | /etn/ <br> thin | / $æ$ / <br> that |
| m | n | $\eta$ |  | tf |  |  | g |
| /mæn man | /nəuz/ nose | /日ŋ/ <br> thing | /ha:f/ <br> half | Ifo:t/ <br> church | /ḑæm/ jam | /kaind/ kind | $\begin{aligned} & \text { Ignn/ } \\ & \text { gun } \end{aligned}$ |
| S | Z |  |  |  | r | W | J |
| $\begin{aligned} & \text { IseV } \\ & \text { say } \end{aligned}$ | $\begin{aligned} & \text { Izu:/ } \\ & \text { zoo } \end{aligned}$ | $\begin{aligned} & \text { /jip/ } \\ & \text { ship } \end{aligned}$ | /meza/ <br> measure | $\begin{gathered} \text { leg/ } \\ \text { leg } \end{gathered}$ | $\begin{aligned} & \text { Irnn/ } \\ & \text { run } \end{aligned}$ | /wa:k work | $\begin{aligned} & \text { ljes/ } \\ & \text { yes } \end{aligned}$ |

## vowels

The articulatory classification of English vowels (position of the tongue)

## Vowels

(according to the horizontal movements of the tongue)


Vowels
(according to the vertical movements of the tongue)


