The main difference between consonants and vowels lies in the type of obstruction of the oral cavity. The articulation of consonants involves an audible obstruction, while the articulation of vowels involves no obstruction, or relatively little obstruction.

The **place of articulation** of vowels is not as specific as it is for consonants. For example, if you produce the following consonantal sounds:

- /ba/ (bilabial plosive), at the **tooth ridge**, touched by the tip of the tongue,
- /da/ (alveolar plosive), at the **velum**, touched by the back of the tongue,
- /ga/ (velar plosive).

The place of articulation of vowels is less precise.

Vowels are first of all described as **front** vowels and **back** vowels.

**Front vowels** are:
- /i:/ as in *sheep*
- /ɪ/ as in *ship*
- /e/ as in *red*
- /æ/ as in *cat*.

Front vowels are called so because it is the front of the tongue that moves from a higher position to a lower position in the front part of the mouth, when the sounds from /i:/ to /æ/ are produced.

**Back vowels** are:
- /u:/ as in *pool*
- /ʊ/ as in *pull*
- /ɔ:/ as in *door*
- /ʌ/ as in *cup*
- /ɒ/ or /ɔ/ as in *got*
- /ɑ:/ as in *car*.
In back vowels, it is the back of the tongue that moves from a higher position to a lower position in the back of the mouth, when producing the sounds from /u:/ to /ɑː:/.

N.B. The vowel sound /ʌ/ is sometimes given as a “central” vowel.

The higher or lower position of the tongue in the front or back part of the mouth is shown in this diagram:

The diagram is usually shown against the image of the oral cavity, to point out the front-back or higher-lower position of the tongue, as in the following picture:

In the front vowel /iː/ the tongue is close to the roof of the mouth (tooth-ridge), while in the front vowel /æ/ the mouth is open, with the tongue low in the mouth.

The same can be said of back vowels. In /uː/ the tongue is close to the roof of the mouth (velum); in /ɑː/ the mouth is open, with the tongue low in the mouth.

We therefore classify /iː/ and /uː/ as close vowels, and /æ/ and /ɑː/ as open vowels. The vowels in-between are called mid-open or mid-closed.
The pronunciation of vowels is accompanied by different positions of the lips. In front vowels the lips are **unrounded**, and even stretched (as in /i:/). In /u:/, /o/, /ɔ:/, /ɔ/ the lips are **rounded**, as shown in the following picture:

![Lips positions](image)

**Front/back, open/close** and **rounded/unrounded** are in fact three specifications that we use in classifying vowels.

Vowels can therefore be described as follows:

- **/i:/-/ɪ/**, **front close unrounded** vowel (*front* because they are articulated with the front of the tongue in the front part of the mouth; *close* because the tongue is in a high position and close to the palate; *unrounded* because the lips are not rounded);
- **/e/**, **front mid-close unrounded** vowel (*mid-close* because the tongue is not as close to the palate as it is for the /i:/ sound);
- **/æ/**, **front open unrounded** vowel (*open* because the tongue is in its lowest position and the mouth is more open than in pronouncing the previous vowels).

- **/u:/-/u/**, **back close rounded** vowel (*back* because it is articulated with the back of the tongue in the back part of the mouth; *rounded* because the lips are rounded while pronouncing it);
- **/ɔ:/-/ɔ/**, **back mid-open rounded** vowel (*mid-open* because the mouth is not as open – and the tongue not as low – as in /ɑ:/);
- **/ɑ:/**, **back open unrounded** vowel (*open* because the mouth is more open as it is in articulating the previous vowels, and the tongue is in its lowest position).

There is also a **central** vowel. It is articulated neither in the back nor in the front of the mouth, but in a central part of it, with the tongue in a rather low position. It is represented as /ə/, and is often called schwa /ʃwa:/.

The schwa sound is the most common vowel in unstressed syllables. (Probably the most common vowel of the English language.)

In fact, most unstressed syllables are pronounced /ə/. Examples (in red, unstressed syllables pronounced /ə/):
Diphthongs too fall in the area of vowel sounds.

A **diphthong** is a combination of two vowel sounds. Each diphthong starts with a “vowel quality” and immediately it glides into another vowel quality. This is shown in the following table:

<table>
<thead>
<tr>
<th>Diphthong</th>
<th>Starting from /e/, /a/, /ɔ/, your tongue moves to:</th>
<th>Diphthong</th>
<th>Starting from /ɪ/, /e/, /ʊ/, your tongue moves to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ei/</td>
<td>/i/</td>
<td>/ai/</td>
<td>/ɛi/</td>
</tr>
<tr>
<td>/eɪ/</td>
<td>/ɛ/</td>
<td>/ɛi/</td>
<td>/ʊ/</td>
</tr>
<tr>
<td>/au/</td>
<td>/u/</td>
<td>/ɔu/</td>
<td>/ə/</td>
</tr>
</tbody>
</table>

Opinions differ as to whether these should be treated as phonemes in their own right, or as a combination of two phonemes.

Practice the diphthongs in the table below by saying aloud the corresponding words on the right-hand side.

```
13  here, near, rear
14  tour, poor, sure
15  care, dare, share
16  play, aim, name
17  boy, boil, soil
18  eyes, buy, ice
19  cow, noun, crown
20  go, boat, own
```