

What is an octave? An octave is a distance measured in pitch or vibration cycles.

If you throw a stone into a lake you will see ripples flowing out in all directions from the point where the rock made contact with the water. In a similar way, when you sound an instrument it sends ripples through the air. These ripples are called sound waves.

These waves vibrate against your ear drum. This vibration is then converted to an electrical signal which travels to your brain and then is interpreted as sound. This is a very basic description of how the process works and you're probably wondering what this has got to do with octaves any way. Hang in there.

If you pluck the 5th string on the guitar you hear a sound that vibrates at 110 cycles per second. That's pretty fast. This note is called *A*.

If you place your finger on the 12th fret of the same string and sound it you will now hear a note that vibrates at 220 cycles per second. This is twice the frequency ratio of the first note. Its name is also *A*.

This note is said to be one octave higher than the first *A* sounded. The next octave would vibrate at 440 cycles per second.

The higher the note sound the faster the vibration.

SCALE	NOTES PER OCTAVE
Pentatonic, Major & Minor	5
Diatonic Major & Modes	7
Harmonic & Melodic Minor	7
Tone Scale	6
Diminished 1/2 & Whole Step	9
Chromatic	12
Triads	3
7th Arpeggios	4