

# Waves and Sound

Time in minutes:seconds

What is a wave – and what it is not!

<https://www.youtube.com/watch?v=zxc1BNsgteg>

1:32

What is a wave

<https://www.youtube.com/watch?v=CVsdXKO9xIk>

3:38

Types: longitudinal, transverse. Properties: frequency, period, wavelength, amplitude

What is a Sine Wave (Ferris Wheel Example)

<https://www.youtube.com/watch?v=OfuyQV4SN9c>

6:05

recommend stop at 3:57

What is Sound

<https://www.youtube.com/watch?v=ZRZiz81nXo4>

4:21

Shows sine waves as a graph with horizontal axis both as time and also frequency.

Finally adding more sine waves to produce the sound of a cello.

Every Sound is a Sine

<https://www.youtube.com/watch?v=UrBZsUBibtk>

8:18

At time 5:45 it demonstrates how recognisable speech can be produced with just 3 sine waves

How the human ear works

[https://www.youtube.com/watch?v=kpjnvZ\\_3CpQ](https://www.youtube.com/watch?v=kpjnvZ_3CpQ)

4:09

Shows the hearing ranges (frequencies) of some other animals. It doesn't explain about picking out sine waves (Fourier) but the animation shows the cochlea hairs "bending" to a sound wave.