

## The science of sound

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### Assignment 1: Soundwalk

A soundwalk is an activity to increase awareness of the sounds around us.

This exercise should be done in pairs. Find a friend and go for a walk. One of you needs to be blindfolded or walk with closed eyes, and the other one should be the guide.

The blindfolded person needs to list all the sounds heard during the walk.

Can you recognize the direction of the sounds? Do you hear any Doppler effect?

### Assignment 2: Frequency of a string

If you have a musical instrument such as a guitar pick it up and pluck a string. Alternative ask a friend to stretch a thin rubber band. Listen to the frequency of the stretched string.

Now make the length of the string half of the original one, for example by damping it in the middle.

How does the frequency change?

What about when it is  $1/3$ ?

### Assignment 3: Reverberation

Each space has its own reverb. Can you list different spaces around you and describe their reverb?

How is the acoustics in your classroom? What about of your living room? Of your favourite museum?

Of a concert hall? What about a stadium?