

Sequence n° 4: sound waves

ACTIVITY 1 : Describing sound waves

■ Acquiring vocabulary:

Here are twelve words used when we talk about sound waves.

Pitch – Vibration – Frequency – Medium - Hertz – Period – Wavelength – Speed – Ultrasound – Loudness – Speaker – Infrasound

The table below contains definitions. Insert the correct word next to each definition.

Word	Definition
	The unit of frequency of a sound
	Sound which is too low-pitched to be heard
	A backward and forward movement
	The number of vibrations of a sound each second
	How fast a sound travels
	The solid, liquid or gas through which a sound travels
	Distance between two identical parts – from a compression to the next compression, or from a rarefaction to the next rarefaction.
	How loud a sound is
	Sound which is too high-pitched to be heard
	A device that converts electrical impulses into sound
	The time for one complete vibration of a sound
	How high or low a sound is

Complete the following sentences by writing one of the words from the table above in each of the empty spaces:

- a) In the vacuum of space, there are no (or very, very few) particles to vibrate, so sound cannot travel through this
- b) At sea level, at a temperature of 21 degrees Celsius and under normal atmospheric conditions, the of sound is 344 m/s.
- c) can be produced by dolphins to help navigate their way in the water.
- d) A note vibrating at 256 will be caused by sound waves vibrating at 256 times a second.
- e) Hitting a drum harder will increase the of the sound it produces.
- f) One way that sounds are organized into music is by their highness or lowness, which is known as
- g) To hear sound from smartphones, stereos, home theater systems, and TVs, you need a

Activity summary

What you must remember:

- vocabulary used to describe a sound wave
- the properties and characteristics of sound waves

Skills linked to the curriculum:

Compétences	Capacités à maîtriser
<ul style="list-style-type: none"> - ANA 	<ul style="list-style-type: none"> - Analyser la propagation d'une perturbation dans un milieu - Modéliser une onde acoustique par la propagation d'une vibration mécanique et d'une surpression. - Comparer la célérité du son dans différents milieux, citer des ordres de grandeur des valeurs de célérité dans un gaz, un liquide ou un solide. - Savoir expliciter les différentes grandeurs physiques intervenant dans le modèle d'une onde progressive sinusoïdale
<ul style="list-style-type: none"> - COM 	<ul style="list-style-type: none"> - Restituer ses connaissances à l'oral