Is It Possible to See Sound?

PHYSICAL SCIENCES

Get curious

Video/ Slide show

You will see a film about sound and talk about this topic.

2 minutes will suffice.

Ask the students what they know about sound: What did you see in the film? What do you think made it possible to observe sound? How does sound reach our ears? What does the volume and pitch of sound depend on? The students come up with their own ideas.

You can also talk about your favorite music: What sounds do we find pleasant and what sounds do we find unpleasant? Did you like this band's music? What kind of music do you like listening to?

Get going

Observing

The students learn what happens when they use their voice.

The students apply the fingers of one hand to their larynx and make some sounds: they can hum, sing, make low or high sounds. They will then be given some cling wrap: they should stretch it, apply it to their mouths and make sounds in the same way.

Movement game

The students imitate a sound wave during a game that shows them how sound travels.

Sound wave propagation involves the thickening (compressing) and thinning of molecules. The students pretend to be the molecules (e.g. air) that play a role in this process.

Experiment

The students make a sound with guitar string.

In pairs the students go up to chairs to which guitar string has been attached and test what kind of sounds different strings produce.

Experiment

The students learn how the volume of a sound can change.

Experiment

The students make a device for watching sound.

Divide the students into groups with several members each. Each group sits at one table. Put the materials they will need in the middle of each table.

Get practicing

Experiment

The students make a simple instrument out of glasses or tumblers.

Ask the students to find in their homes several glasses or tumblers of similar size and appearance, ideally with thin sides, and fill them with different amounts of water. They then test what happens when they strike the glass with a plastic or wooden stick. Their task is to answer the following questions:
What transports the sound in this "instrument"? What changes occur due to different amounts of water in the glass? Why does this happen?
Using this approach, the students can try to play a melody, record it and present it to the class at the next lesson.