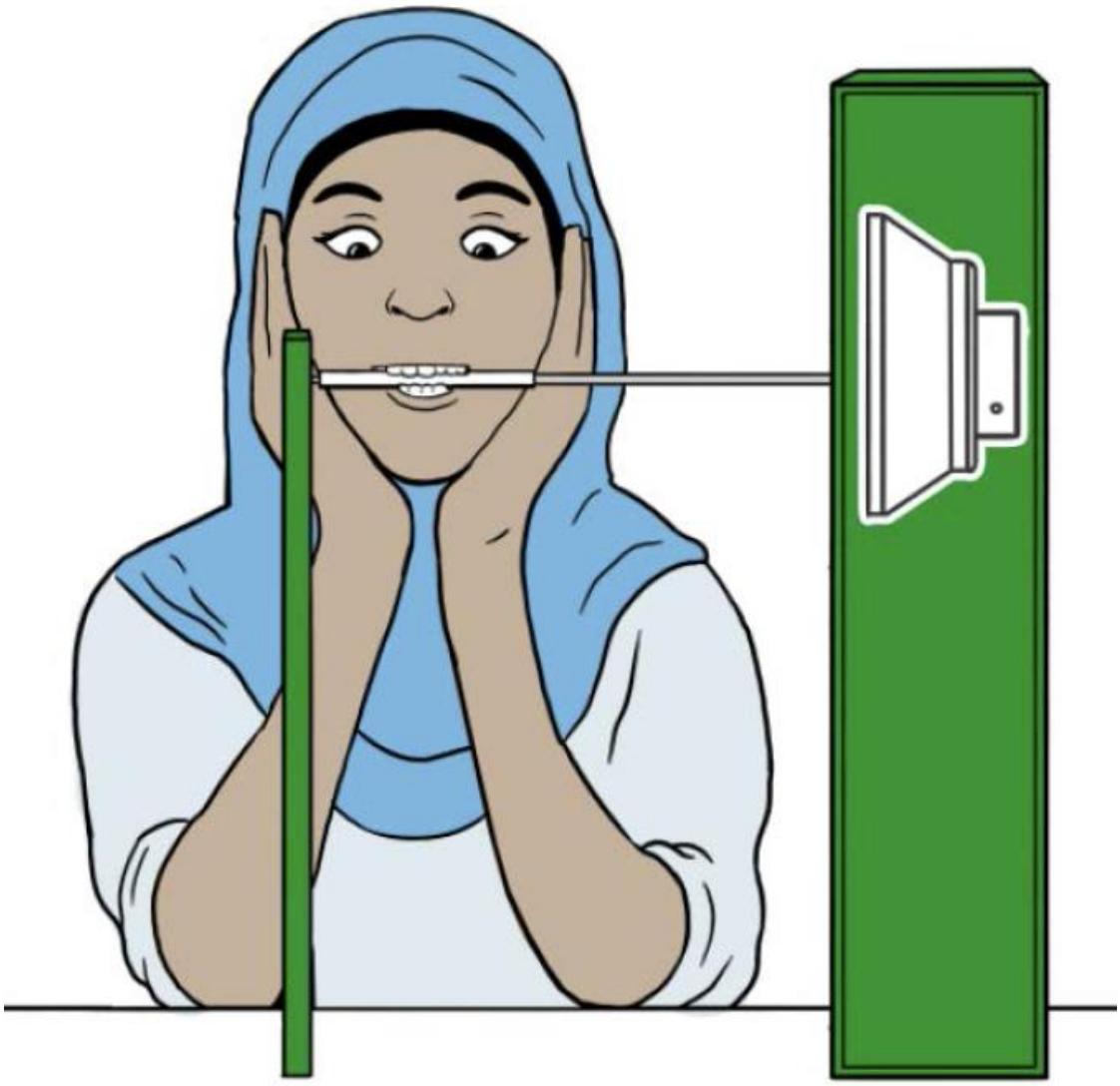
Can you hear through your teeth?

SOUND BITE



(Type)	Ages	Topic	Time
Science background	7-14	Sound	<10 mins
	Skills used		
	Observations - Curiosity		

Overview for adults

Sound Bite is a music player connected to two metal rods rather than a speaker system. Music is played within the exhibit which is too quiet to hear, but by biting on a metal rod (through a disposable straw) the sound is transmitted through your jaw bone straight into your ears.

What's the science?

Sound needs to travel through a medium, such as air, water or a solid. Normally we hear sounds when they travel through the air. The sound waves travel into our ears and cause the bones in our inner ear to vibrate. These vibrations send signals to our brain that we hear as sounds. When you use Sound Bite if you bite down on the metal rod you hear music playing through your teeth. This works because a speaker is attached to the rods and is playing music. When you bite the rod the sound waves travel through the rod and through your teeth and skull to the bones of your ears.

Science in your world

Hearing aids use bone conduction to help people who can't hear very well. The part of the hearing aid on the outside of your head detects sounds around you and then transmits it to another part attached to your skull. It means you can hear sounds without them having to go through the parts of your ears that aren't working.

Things to think and talk about …

- Where do you think the sound is coming from and how does it reach your ears?
- Why can't you hear the sound when you aren't biting the rod?

Things to investigate …

- Can you still hear the sound if you take your fingers out of your ears? Why do you think that is?
- Try speaking with your fingers in your ears. Can you feel the sound travelling through your bones?

Museum links

Check out the Sound lab room in our Wonderlab to discover more about sound and how it travels.

Did you know…?

Have you noticed that you sound weird in recordings? That's because you hear your own voice through your bones as well as your ears. It sounds deeper to you than it does to everyone else.