How does it work?

- Most materials - including air and string - are made of tiny particles called **molecules**.
- When you hit the spoon against a hard object, the spoon starts to **vibrate** - which makes the air molecules near the spoon bump into one another.
- As these molecules bump into other molecules, the sound spreads out - and after a fraction of a second some of these molecules bump into your **eardrum** - producing tiny vibrations - which you hear as a **quiet** sound.
- The vibrations from the spoon also travel along the piece of string. When you press the string against your ear, your ear feels the vibrations in the string.
- Since the molecules in the string are much closer together than the molecules in air, the vibrations that have travelled through the string are much bigger than those that have travelled through the air - so the sound is much louder.

Fun Facts: Using Sound to Get Rid of Moles

If your Dad gets mad because some moles have been digging holes in his lawn, you can impress him by using science to chase the moles away.

- Push a metal pipe down one of the mole holes. You need to leave about 30cm of the pipe sticking up above the ground.
- Get an old baked bean can and turn it upside down so that it fits over the top of the pipe.
- When the wind blows, the can clangs and bangs against the metal pipe, making a ringing sound which travels right down the mole hole.
- The moles soon get fed up with the horrible noise - so they go somewhere else - and dig up someone else's garden.