



# Echo Tube

## Bouncing sound



*How do sound waves create an echo?*



**Clap your hands  
inside the tube**

*Do you hear just one echo?*

*Does it sound the same as your original clap?*



Clapping makes a fan-shaped disturbance in the air. The farther the sound is from the center of the fan, the sooner it will hit the side of the tube and bounce at an angle to the other side, hit, and bounce back. The more bounces, the longer it takes to reach the end and return.

Only the sound from the center makes it from one end to the other in a straight line, making the reflected sound a higher pitch. What started as one sharp sound reflects back as a succession of sounds – an **echo**.

