

How does stethoscope transmit sound essay



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A stethoscope is an acoustic medical tool used to hear internals of humans and animals (mainly used to listen to the heart and lungs) . The stethoscope is also used to hear internal sounds of machines. They work by the principle of multiple reflections in sound waves. A stethoscope transmits sound by an acoustic pressure that the chest piece transmits. The chest piece has two sides a bell and diaphragm one the bell is to hear low frequencies and the diaphragm is to hear the high frequencies (in this frequencies cause an acoustic pressure).

An acoustic pressure is a form of energy caused by sound wave transmitted by a static air. Inside the tube there is pressure with molecule with higher molecules which make sound higher. This creates the movement or transmission of sound (from the source to the ear). In the process of the movement of the sound the chest piece first refracts the sound waves of the heart.

The stethoscope that I built had an open space so it didn't need to do any sound wave refraction to transmit sound the sound wave had to only get in. Then inside the chest piece the sound gets reflected causing multiples echoes to blend making a higher sound: reverberation. Then it moves in the inside of the tube to the ear with a higher sound because of the reflection of sounds and the acoustic pressure being transmitted. The early stethoscopes worked the same except they didn't refract sound in the chest piece.