Amplify the sound

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Field:

Acoustics, Physics

Purpose of the experiment:

How can we hear faint sounds?

List of materials:

1. a rubber hose with a length of approx. 1.5-2 m and a diameter of approx.1 cm
2. two funnels, different sizes will be fine
3. a wind-up watch or alarm clock with hands
4. a sticky tape
5. scissors

Completion stages:

1. Put the watch approx. 2 m in front of you.
2. Check if you can hear the ticking.
3. Using the sticky tape, attach the funnels to the ends of the hose.
4. Attach the watch to one of the funnels using the sticky tape.
5. Go as far as you can from the watch/clock holding the other funnel in your hand.
6. Put the funnel to your ear.

Questions to the experiment:

1. What sounds can be heard using the constructed apparatus?
2. To what distance is it possible to send the collected sounds?

Description of the phenomenon:

Interesting facts:

1. By means of a stethoscope, a doctor can hear the sounds that the body makes, in particular the heart and lungs,.
2. The first stethoscope had a form of a wooden funnel-shaped tube with a flat earpiece. The inventor of stethoscope was the French doctor *René Laennec*; he came up with his invention in 1816.
3. Other applications of the stethoscope include examining clockwork mechanisms or mechanisms used in vaults and safes.