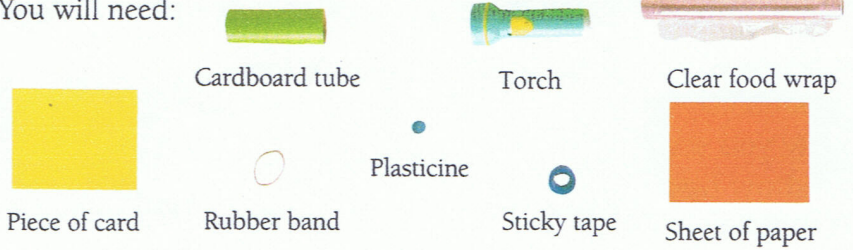


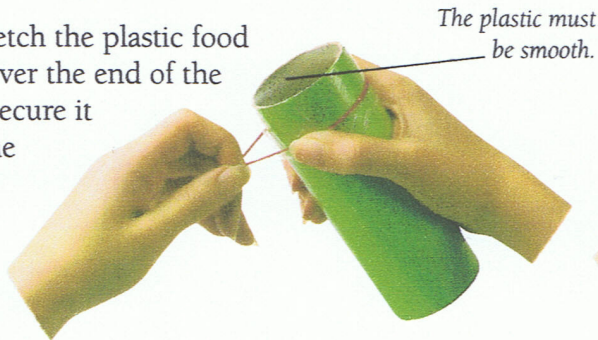
# 56 See how your ears work

When a sound enters your ears, it is changed into a signal. This travels to your brain, and you hear the sound. You can build a model ear to see how your ears do this.

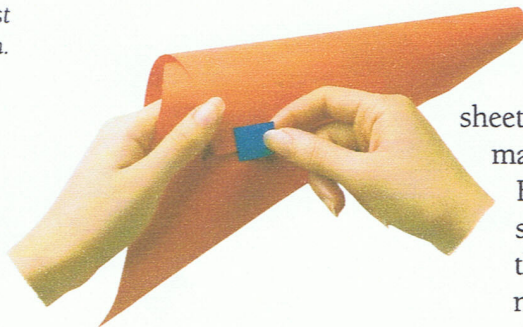
You will need:



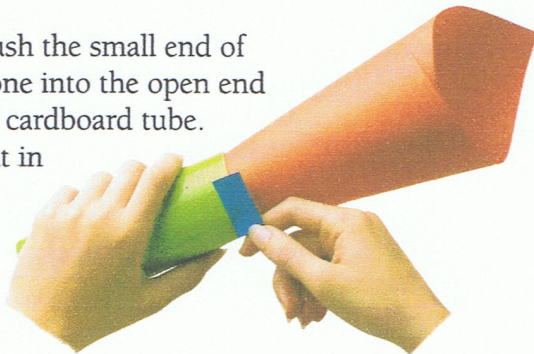
**1** Stretch the plastic food wrap over the end of the tube. Secure it with the rubber band.



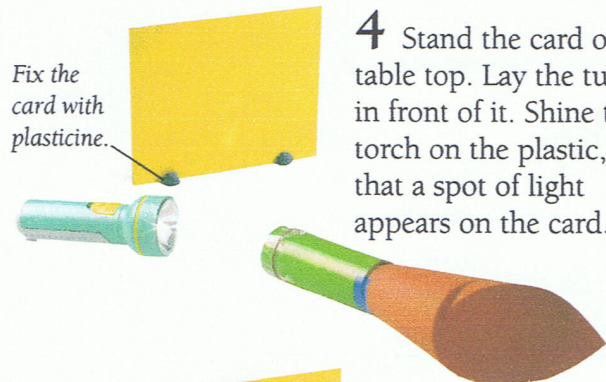
**2** Roll the sheet of paper to make a cone. Fasten it with sticky tape so that it does not unroll.



**3** Push the small end of the cone into the open end of the cardboard tube. Tape it in place.

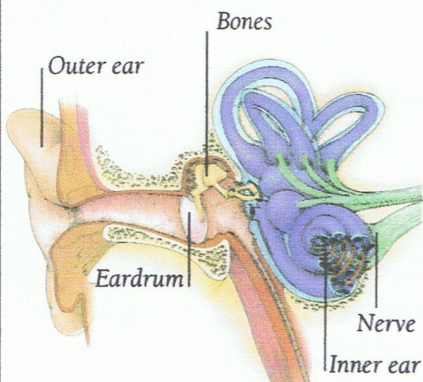


**4** Stand the card on a table top. Lay the tube in front of it. Shine the torch on the plastic, so that a spot of light appears on the card.



## Inside the ear

As sounds enter the ear, the eardrum vibrates. This in turn makes tiny bones vibrate and the vibration passes to the inner ear, which then sends signals to the brain, along the ear's nerve.



*The light is reflected from the plastic. As the plastic vibrates, the spot of light shakes.*

*The plastic is like the eardrum at the end of your ear canal. Sounds make the eardrum vibrate, causing signals to go to your brain.*

*The outer ear (the cone) directs sound into the ear canal (the tube).*

**5** Shout or sing loudly into the cone. The spot of light shakes very fast!

