

MAKING A STRING TELEPHONE

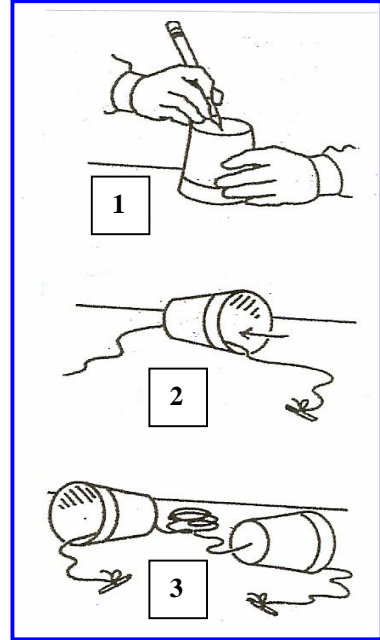
Illustrated by Laurel Aiello

What You Need

toothpick 2 paper cups string, about 25 feet long

Making the Telephone

1. Use a pencil point. Make a hole in the center of both cups. (Picture 1)
2. Carefully break a toothpick in half. The pieces have to be a little shorter than the distance across the bottom of the cup. (Picture 2)
3. Use a length of string about 25 feet long. Tie one end to one half of the toothpick.
4. Place the other end of the string into a cup and through the hole. Pull the string until the toothpick is flat against the bottom of the cup. (Picture 2)
5. Pull the free end of the string through the hole in the other cup, starting from the outside. Pull the string through the cup.
6. Tie the string to the other half of the toothpick. (Picture 3)
7. Pull the string until the second toothpick is flat against the bottom of the cup.



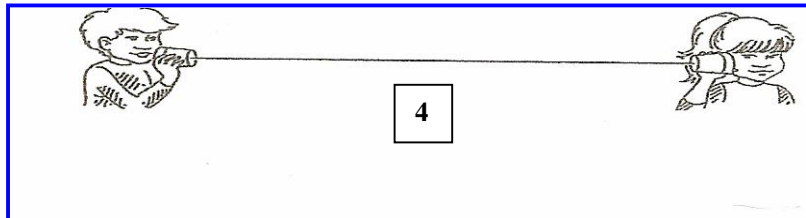
Using Your Telephone

Stretch out the string and make sure nothing is touching it. One person talks quietly into the cup. The second person listens by placing the cup over their ear. (Picture 4)

How It Works

When you talk into the cup, sound vibrations travel through the air into the cup. The cup vibrates.

These vibrations travel from the bottom of the cup and then along the string. The sound vibrations reach the bottom of the other cup. Now this cup vibrates. The vibrations travel from the cup, through the air, and then to your ear.



More Fun

1. How long can the string be and still have the phones work?
2. Which works better, paper cups, styrofoam cups, plastic cups, paper cups with handles, or doesn't it make any difference which is used.
3. **With adult help**, try tin cans. With a hammer and nail, make a hole in each can. Use small nails instead of toothpicks.