

# String Talkers

## What you need:

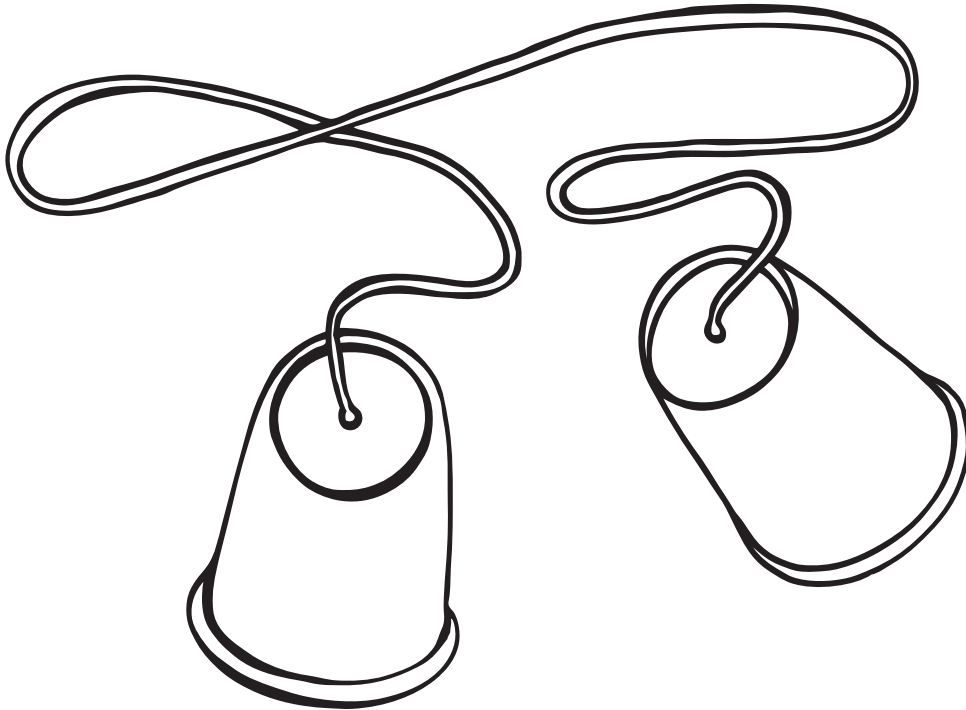
- Two paper cups
- A darning needle
- String (try kite string or fishing line)
- Scissors
- Tape measure
- Two paper clips

## What you do:

1. Cut a piece of string that is 20' long.
2. Use the darning needle to poke a hole in the bottom of each cup.
3. Thread one end of the string through the hole in one of the cups, working from the outside of the cup toward the inside.
4. Pull the end of the string up toward the top of the cup.
5. Tie a paper clip to the end of the string you've been working with.
6. Pull the other end of the string through the hole in the other cup in the same manner.
7. Tie a paper clip to this end of the string.
8. Hold one of the cups, and have a friend hold the other one.
9. Stand far enough away from your friend that the string is pulled taut (be sure the string doesn't touch anything between the cups).
10. Put your cup to your ear, and have your friend talk into his cup.
11. After your friend is finished talking, have him put his cup to his ear. Talk into your cup.

## What's Going On?

When you speak into your cup, you're creating sound waves. These waves are converted into vibrations at the bottom of the cup. The vibrations travel along the string, and they're converted back into sound waves when they reach the other end. This is why your friend can hear what you said!



## Extra Challenge

If you like, try this activity again with an even longer string! Can you make your string talkers work with a 40' string? How about a 60' string? Maybe even longer?