Musical Coat Hangers
Contributed by: Questacon - The National Science and Technology Centre

Objective
Discover how sound travels and what materials make better sound conductors.

What You Need
• Wire coat hanger
• Cotton thread (or string)

To Do and Observe
1. Tie a 50 cm (20 in) length of cotton thread on each end of a wire coat hanger. Wrap the other end of each thread around your forefingers. Bend over so the coat hanger can swing freely and bump it against a wall or chair. What do you hear?
2. Try it again, but this time with your forefingers in your ears!
3. Try bumping it against different objects. Bend the coat hanger into various shapes. Does this make any difference to the sound you hear?
What's Going On
When you bump the coat hanger, it shakes or vibrates, making a noise. The noise is louder when your fingers are in your ears because the vibrations travel better through the tight cotton threads than through the air.

Parent/Teacher Tips
Try the experiment again with a plastic coat hanger -- which one conducts the sound better? Next time your child is in the bath, have them put one ear under the water while tapping a spoon on the side of the bath. Notice how much better the tapping noise travels through the water.