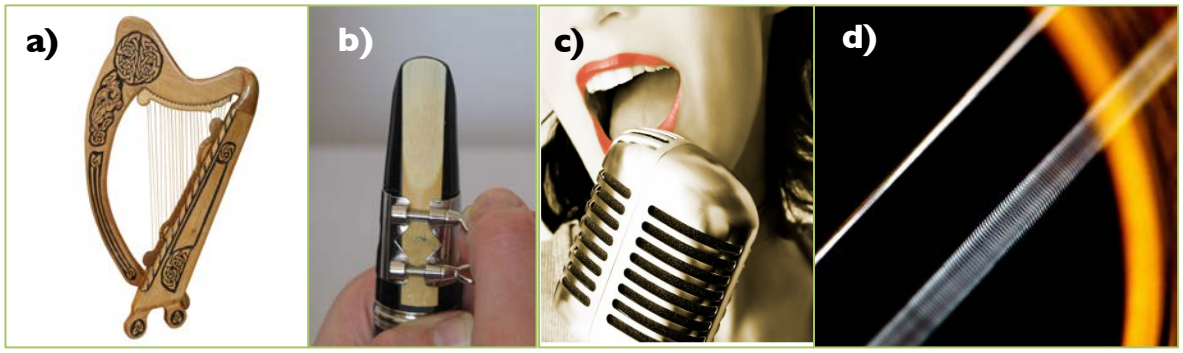
Name:

Rockin' and Rollin'

Music & Energy Transfer

Below are three examples of musical sources. Can you describe where the source of sound energy?



a) _____

b) _____

c) _____

d) _____

Let's Build a Roll Can!

Materials:

- Can Opener
- Coffee Can
- Nail
- Ruler
- 2 Plastic Coffee Can lids
- Scissors
- Long Rubber Band
- Piece of String
- Bolt

Instructions:

1. Remove both ends of the coffee can to get rid of sharp edges. Punch 2 holes about 7.5cm apart in the centre area of each coffee can lid.

2. Cut the rubber band and lace it through the 2 holes on one of the lids. Place this lid on the end of the can.

3. Cross the ends of the rubber band to form an X inside the can. Tie the bold to the centre of this X using the string.

4. Thread the elastic through the 2nd lid, placing it on the other end of the can, and tie a knot on the outside of the can.

Source: Potter, Jane. Science in Seconds For Kids. New York: John Wiley & Sons, Inc., 1995. Print.

Name:

Follow-Up!

1. Roll the can away from you; What happens when the can rolls?

2. What types of energy are involved here?

3. Are there internal or external forces at work?

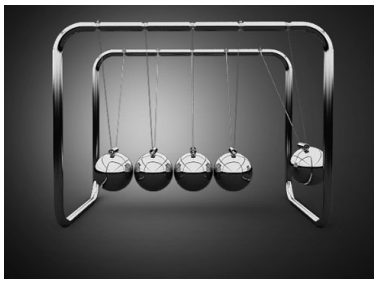
4. Why did the can roll back to its starting position?

Power Your Own Device!

The Chukka is a music player that requires the user to move different parts of it to make it work. The decice consists of several freely moveable bead tied with a cable, allowing them to hit together or to swing like a pendulum when the user manipulates them. Fiddling with your mp3 player actually powers it! Can you think of other handheld devices that use energy transfer to generate electrical energy?

Newton's Cradle

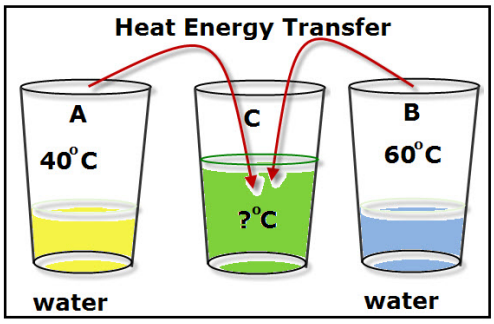
We've all seen Newton's Cradle before, but have you ever thought about how it works in terms of energy? Describe the energy transfer that you would see in a working Newton's Cradle:



Heat Transfer of Energy

When heat energy is transferred between substances, the energy moves from the hotter substance to the colder one.

What do you predict the final temperature of the green glass to be? Can you make an exact prediction? Try it!



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