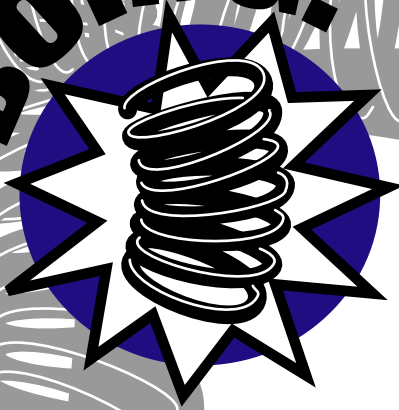


BOING!



Scavenging for Springs

What are springs and why are they important? Springs store or absorb energy. To store energy, they may be compressed--that is, squeezed together very tightly--and then released when the energy is needed. "Jack-in-the-box" toys, pogo sticks, and trumpets use compressed springs to operate.

Springs can also be stretched or wound and then released to make something move. Wind-up clocks, trampolines, and staplers all work when a spring is stretched. Whether a spring has been stretched or pushed together, it usually does its work as it is returning to its original shape. The clock winds, the person bounces, the trumpet plays a different note, and the staple closes on the paper as the spring returns to its resting position.

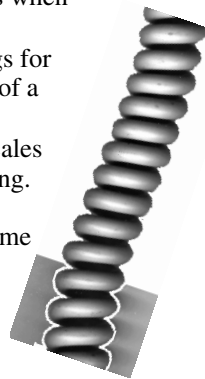
Springs are used in many ways:

- Automotive engineers use springs when they design car engines.
- Mattress designers analyze springs for their comfort and support as part of a bed.
- Field ornithologists use spring scales to weigh the birds they are studying.

What springs can you find in your home or school?

What you'll need:

- paper
- colored pencils or pens
- a stapler, clicker ball point pen, or flashlight



Try it!

- First, picture a spring in your mind. Now, picture something which is a springy material. What do these things have in common?
- Now, use your body and make yourself springy. Your legs and arms can act like springs
- Next, go to your bedroom, sit down on your bed and bounce gently. Do you know what is inside a bed? Use your paper and pencils to draw the inside of a bed.
- Find the stapler, clicker ballpoint pen or flashlight. Each of these tools works because it has a spring inside. **With your parent's permission**, take one of these tools apart to find the spring. What does the spring look like? What happens if you pull it? What if you push on it? Could the tool work without the spring? What function does the spring perform?
- Now gather your paper and pens. You're going on a scavenger hunt!
- Try to find anything around your house that is a spring. Remember, a spring is something that bounces back after you push on it or pull it. It can be coiled, but it doesn't have to be. It might be storing energy or helping something else to move. **Helpful hints:** Do you have a spray bottle? Check out the lever. Do you have any clothespins with metal on them? What about a wind-up toy? You may have to look inside of some things to find the springs. **Be sure that you have permission from a parent to take things apart.**
- Use your paper and pencils to record all of the springs and springy materials that you find. You can draw them or write about them.



Children's Discovery Museum



- Save all of your papers. Scientists usually record their observations in a notebook or journal. If you put all of your notes about springs together, they can become the start of your Explorer's Field Journal.



Spring into *The San Jose Mercury News*

1. How many different meanings for the word "spring" can you think of? A spring is a coil, a movement, a season, a bubbling fountain. It's fun to play with springy words as well as with coiled springs. Look through *The San Jose Mercury News* to see how many different words you can find which mean the same thing as the word spring. Cut out the words and put them in your Explorer's Field Journal.
2. Try to find a mattress advertisement in *The San Jose Mercury News*. What kinds of words and pictures do advertisers use to try to sell their products? Choose a machine that uses a spring and create an advertisement for it. Use words and pictures to sell your product.

Find out more....

Check out these books and Internet sites:
The Way Things Work by David MacAulay.
Houghton-Mifflin, 1988.
www.teachingtools.com features lots of activities to do with Slinkies™.