



Curiosity Guide #606

Springs

Accompanies Curious Crew, Season 6, Episode 6 (#606)

Tension Tug of War

Investigation #5

Description

One, two, three, pull!

Materials

- Different kinds of tension springs
- Carabiner clips
- Exercise handles
- Spring scale
- Friends

Procedure

- 1) Attach a carabiner clip on each end of one of the tension springs.
- 2) Hook the exercise handles to each clip.
- 3) Have two friends pull against each other.
- 4) Try a different spring in the center. What do you notice?
- 5) Hang one of the springs from a spring scale. What do you notice?

My Results

Explanation

Tension, or extension, springs are meant to stretch when a force or load is applied to them. As the friends pulled, they were transferring energy into the spring. The energy was being held until the force stopped. At that point, the energy transferred into the motion of going back to the spring's original position.

Tension springs are much stiffer than compression springs are. So, tension springs are usually used to hold things together. The spring scale can be used to measure the weight of an object. As the spring scale is stretched, the force of the object is proportional to the distance the spring moves, which is calibrated on the scale.

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