

Launch of a Stress Ball (Boyles's Law)

Recommended for Chapter(s): 5

Demo #015

Procedure

1. Compress a stress ball and place it in the launching apparatus.
2. Ask students to predict what will happen when you stomp on the launching device.
3. Stomp on the red part of the launching device bag. You need to do this as quickly as possible in order for the stress ball to launch. It should launch into the audience a few rows.
 - a. Allow whatever student catches the ball to keep the stress ball. You may launch 2 balls into the audience.

Clean Up

1. Return the materials to the cart in the demonstration library room.

Stockroom Notes

1. If there are less than 5 stress balls send Darby an e-mail (feldwinn@chem.ucsb.edu).
2. Return items to demonstration tub.
3. Return tub to the demonstration library.
 - a. The launching device is stored next to the demonstration box.

Discussion

Boyles Law states that if the temperature and number of moles are constant, the volume is inversely proportional to the pressure. When you stomp on the launching device you decrease the volume rapidly. This, in turn, causes a rapid increase of pressure. Eventually the pressure is high enough to launch the ball out into the audience.

Materials for demo 015

1. Launching device
2. Stress balls