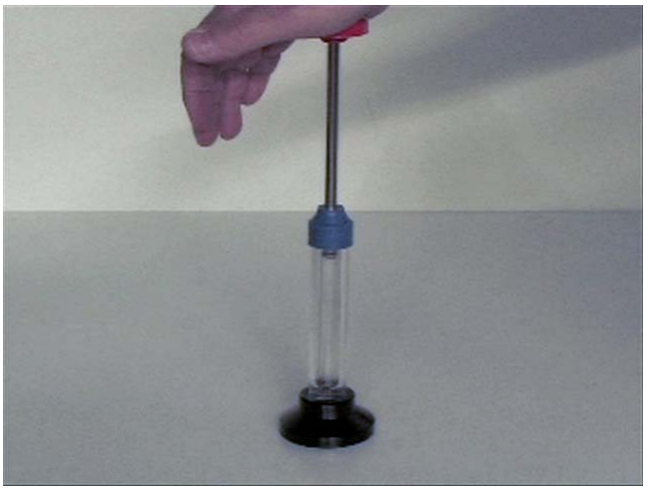
Question #356

This week, a small puff of cotton is inserted into the bottom of plastic tube. At the top of the chamber is plunger which seals the chamber and can be pushed downwards into the plastic tube.



To make the process more clear, below is a video of the action in when the plunger is pushed down very slowly.

Alternate high-res version.

Question: What would happen instead if the plunger were slammed down sharply instead?

- (a) The temperature in the chamber will decrease greatly.
- (b) The temperature in the chamber will decrease but slightly.
- (c) The temperature in the chamber will remain the same.
- (d) The temperature in the chamber will increase but slightly.
- (e) The temperature in the chamber will increase greatly.

More importantly: *How will you be able to tell?* For example, you might be able to feel the cotton warmer after compressing it, or perhaps it will feel cooler or become slightly damp due to condensation of the water vapor in the air inside the tube.

Click here for Answer #356 after November 9, 2009.

Question of the Week

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For questions and comments regarding the *Question of the Week* contact Dr. Richard E. Berg by e-mail or using phone number or regular mail address given on the Lecture-Demonstration Home Page.