A Microscopic View of Boyle's Law Using *Atomic Microscope 3-D*

(Reinforcement Activity)

Get a computer and TV projection monitor and show *Atomic Microscope 3-D*, a computer simulation of Boyle's Law (www.starkdesign.com). This simulation enables students to get a 'microscopic' view of what is happening within the syringe as you increase or decrease the volume. Alternatively, you can use *Virtual Molecular Dynamics Laboratory* free from the Boston University Center for Polymer Studies, http://polymer.bu.edu/vmdl/ .

- Note that the amount of air within the container does not change when the volume is increased or decreased, as some of students may have predicted would happen with the syringe.
- Have the class consider what is limiting about this model of air pressure. Hopefully some students will note that the designers only focused on the air pressure within the container and did not model the outside air pressure. Thus it is a linear model.