

# Gas Systems

## Computer Simulation

### System 1

Investigate the relationship between the volume and temperature of a gas sample at constant pressure and amount.

### System 2

Investigate how the number of gas particles effects the pressure of a gas sample.

### System 3

Compare and interpret pressure vs. volume relationships of gas samples at different temperatures. (You can plot multiple graphs in the plotting window by clicking on the mutiple button.)

### System 4

Investigate the average speed (distance per unit time) of particles in a gas as a function of pressure, volume, amount, or temperature. (You can expose the path traveled by a particle during a time interval by activating the "enable tracking" button in the Control Bar window, and then clicking on a particle.)

### System 5

Investigate the average number of collisions between particles or with the container walls in a gas sample as a function of pressure, volume, amount, or temperature. (You can expose the path traveled by a particle during a time interval by activating the "enable tracking" button in the Control Bar window, and then clicking on a particle.)

### System 6

Investigate any of the above systems using different kinds of particles or combinations of particles.

### System 7

Investigate any other gas system or investigate a modification of any of the above systems.