

CHAPTER 3	Modelling Gases in the Roller Rink	BLM 3.1.3
ASSESSMENT		

A roller skating rink contains a large group of roller skaters moving and shaking to the music. Use the roller rink as a model to explain interactions between gas molecules.

1. The behaviour of gases is affected by temperature, pressure, number of molecules, and volume. Which of these variables corresponds with...
  - (a) the number of skaters?
  - (b) the number of collisions between skaters and the rink walls?
  - (c) the size of the roller skating rink?
  - (d) the beat of the music?
2. Explain what happens in the macroscopic world of the roller skaters, and then in the microscopic world of molecular interactions, when...
  - (a) the size of the roller rink decreases
  - (b) the number of roller skaters decrease
  - (c) the beat of the music increases
3. Create another change in the roller rink conditions and describe what would happen at both the macroscopic level and then at the microscopic level.
4. Name two limitations that this roller rink model has as a model for gases.
5. Create another “real” world model of gases like the roller rink model.