

Study guide for Unit 2

Are all molecules in motion?

What is the difference in the motion between a solid, liquid, and gas? What causes that difference?

What does temperature do to the motion of a solid, liquid, and gas?

What does temperature actually measure?

What is the difference between heat and temperature?

Why does a change in temperature cause substances to expand or contract?

How did Celsius make his thermometer?

Explain diffusion of a liquid and a gas. Why is there no diffusion in a solid?

How does this change how the substances can diffuse in a gas and a liquid?

What causes pressure?

What is standard pressure? How was it chosen?

How does a barometer measure pressure? A manometer?

What are the different units for pressure, and what conversions factors can be used to switch between the different units?

Why was the Kelvin scale invented? How is it the same as the Celsius scale? How is it different? What is true about the particles at zero Kelvin?

What is the relationship between pressure and volume keeping everything else constant? Explain using the kinetic molecular theory. Draw two particle diagrams of a gas at two different pressures to show this relationship.

What is the relationship between pressure and number of particles keeping everything else constant? Explain using the kinetic molecular theory. Draw two particle diagrams of a gas at two different pressures to show this relationship.

What is the relationship between pressure and temperature keeping everything else constant? Explain using the kinetic molecular theory. Draw two particle diagrams of a gas at two different pressures to show this relationship.

What is the relationship between number of particles and volume keeping everything else constant? Explain using the kinetic molecular theory. Draw two particle diagrams of a gas at two different volumes to show this relationship.

What is the relationship between temperature and volume keeping everything else constant? Explain using the kinetic molecular theory. Draw two particle diagrams of a gas at two different volumes to show this relationship.

What is the relationship between number of particles and temperature keeping everything else constant? Explain using the kinetic molecular theory. Draw two particle diagrams of a gas at two different temperatures to show this relationship.