

CHAPTER 4	Launch Lab: Changing Gas Temperature, Pressure, and Volume at the Same Time Answer Key	BLM 4.0.1A
ANSWER KEY		

### Answers to Analysis Questions

1. The water molecules moved faster and faster as the water was heated. At 100 °C they moved into the space above the liquid water as the water boiled.
2. The steam displaced all the air that was in the can.
3. When the can was transferred to the cold water, very little, if any air, was able to enter the can. When the can went into the water, the water sealed the can, preventing any air from entering, and condensed the steam. The can was left with a near vacuum inside. Air pressure exerts a force equal to the weight of 1 kg on every square centimetre of outside surface of the can—a force that easily crushes the can.