

The dots in the pictures on the right represent air particles. In phase one, there are 10 particles of mass in the hot air balloon.

1. As the balloon goes from phase 1 to phase 2 to phase 3, what is happening to its density?

2. How can you tell that is happening to its density?

3. Draw the air particles in balloon phase 2. There is no specific number of particles that you must draw, but there are definitely wrong answers.

4. How do you know that your diagram for phase 2 is okay?

5. What happened to the volume of the balloon between phases 1 and 2?

6. What happened to the pressure between phases 1 and 2?

7. What evidence does the diagram provide to tell you that the pressure changed in this way?

8. Why did the pressure change?

9. Draw the air particles in balloon phase 3. There is no specific number of particles that you must draw, but there are definitely wrong answers.

10. 4. How do you know that your diagram for phase 3 is okay?

