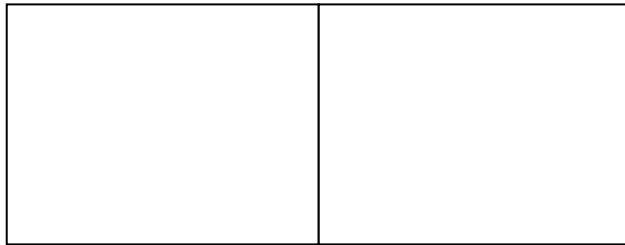


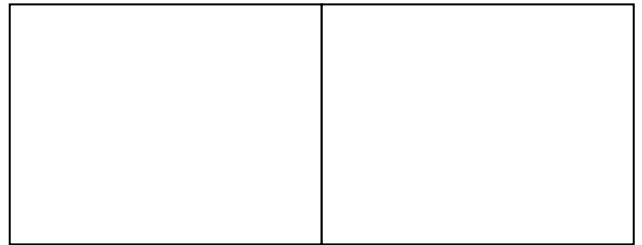
Unit 1 Worksheet 1: Mass and Change

1. In part 2, when you pulled the steel wool apart, you found that the mass was unchanged. In part 3, when you heated the steel wool, you found that the mass changed. Explain.

Draw diagrams (at the particle level) of the steel wool before and after the change.



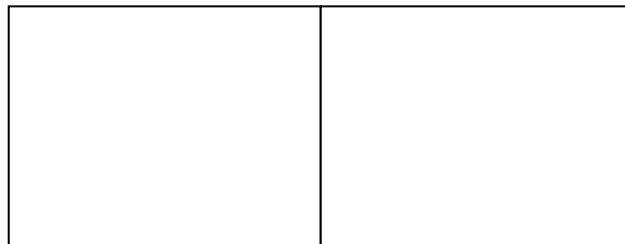
Steel wool-pulled apart
before after



Steel wool-heated
before after

2. In part 1, the ice melted and the volume of water is smaller than that of the ice. How does the mass of the water compare to the mass of the ice?

Draw diagrams (at the particle level) of the ice and water. Use small circles to represent the H_2O particles.

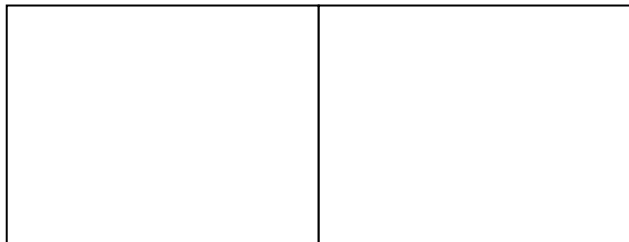


ice

water

3. In part 5, when the sugar dissolved in the water, you found that the mass remained unchanged. When the Alka-Seltzer in part 6 dissolved in the water, the mass of the system changed. Explain.

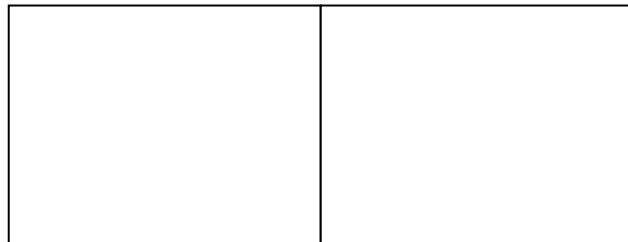
Draw diagrams (at the particle level) of each of the materials before and after it was dissolved.



before

after

Sugar and water



before

after

Alka-seltzer and water

4. What happened when you mixed the two solutions together in part 4? What do we call a substance like what you produced in this part and why do you call it that?

5. State the Law of Conservation of Mass in your own words.

6. Why was it hard to determine whether your mass changed or not in some of the parts?