Chemistry Study Guide

1. Describe the particles in matter as they change from a solid → to a liquid → to a gas:

2. Give three examples of physical changes:

3. Give three examples of chemical changes:

4. Define the following terms:
   - element:
   - compound:
   - mixture:
   - solution:
   - exothermic:
   - endothermic:
5. Look at the phase change graph below and label the following:
   a. Label where the substance is a solid
   b. Label where the substance is a liquid
   c. Label where the substance is a gas
   d. Label where the substance changes phase (2x)

![Energy vs. Temperature for one mole of water graph]

6. Fill in the table for an atom below:

<table>
<thead>
<tr>
<th>What are the particles that make up an atom?</th>
<th>What is its charge</th>
<th>Where is it found in the atom?</th>
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7. What is the law of conservation of mass?

8. CaCo3 → CaO + CO2
   How much CO2 is produced from the decomposition of 45g of CaCO3 if 11g of CaO produced?