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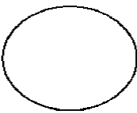
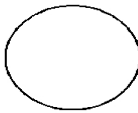
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## Chemistry – Unit 6 Worksheet 4

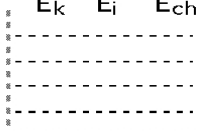
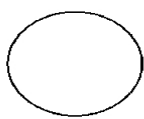
### Representing Chemical Potential Energy in Change

For each of the reactions below, write the balanced chemical equation, including the energy term on the correct side of the equation. Then represent the energy storage and transfer using the bar graphs. Below the bar graph diagram, sketch a standard chemical potential energy curve for the reaction.

1. When you heated calcium carbonate, you decomposed it into calcium oxide and gaseous carbon dioxide.

|                      |   |                      |  |                      |
|----------------------|---|----------------------|--|----------------------|
| Initial              | System  | Intermediate         | System   | Final                |
| $E_k$ $E_i$ $E_{ch}$ |   | $E_k$ $E_i$ $E_{ch}$ |  | $E_k$ $E_i$ $E_{ch}$ |
|                      |  |                      |  |                      |

2. When solid zinc was added to hydrochloric acid, the products were hydrogen gas and an aqueous solution of zinc chloride. You could feel the test tube get hotter.

|                      |   |                      |  |                      |
|----------------------|---|----------------------|--|----------------------|
| Initial              | System  | Intermediate         | System   | Final                |
| $E_k$ $E_i$ $E_{ch}$ |   | $E_k$ $E_i$ $E_{ch}$ |  | $E_k$ $E_i$ $E_{ch}$ |
|                      |  |                      |  |                      |