

Exothermic and Endothermic Reactions: Worksheet

1. Fill In The Missing Words

Exothermic reactions

Exothermic reactions are reactions when energy is _____ the surroundings.

The temperature of the surroundings then _____.

In an exothermic reaction, the reactants have _____ energy than the products.

An example of an exothermic reaction is a _____ reaction.

A "real life" example of an exothermic reaction is _____.

Endothermic reactions

Endothermic reactions are reactions when energy is _____ the surroundings.

The temperature of the surroundings then _____.

In an endothermic reaction, the reactants have _____ energy than the products.

An example of an endothermic reaction is a _____ reaction.

A "real life" example of an endothermic reaction is _____.

Words:

- Taken in from (absorbed from)
- Given out to (released to)
- Increases
- Decreases
- More
- Less
- Thermal decomposition
- Combustion
- Instant ice pack
- Hand warmers

2. Interpreting Data

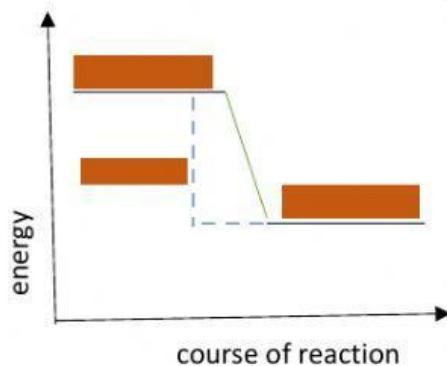
Determine whether the following reactions are exothermic or endothermic.

Reaction	Temperature change	Exothermic or endothermic?
$\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$	-5 °C	
$\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$	+30 °C	
Hand warmer	+25 °C	
Instant ice pack	-10 °C	

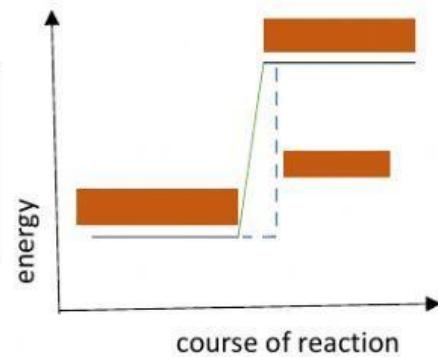
3. Energy Level Diagrams

Fill in the gaps.

This is an exothermic / endothermic reaction.



This is an exothermic / endothermic reaction.



Words

Reactants x 2
Products x 2
Energy absorbed
Energy released

4. Summary Table

Fill in the summary table.

	Exothermic reaction	Endothermic reaction
Energy released or absorbed?		
Which has more energy: products or reactants?		
Example 1		
Example 2		