

Endothermic Reactions



Endothermic reactions absorb thermal energy, and so cause a **decrease** in temperature.

What are some examples?

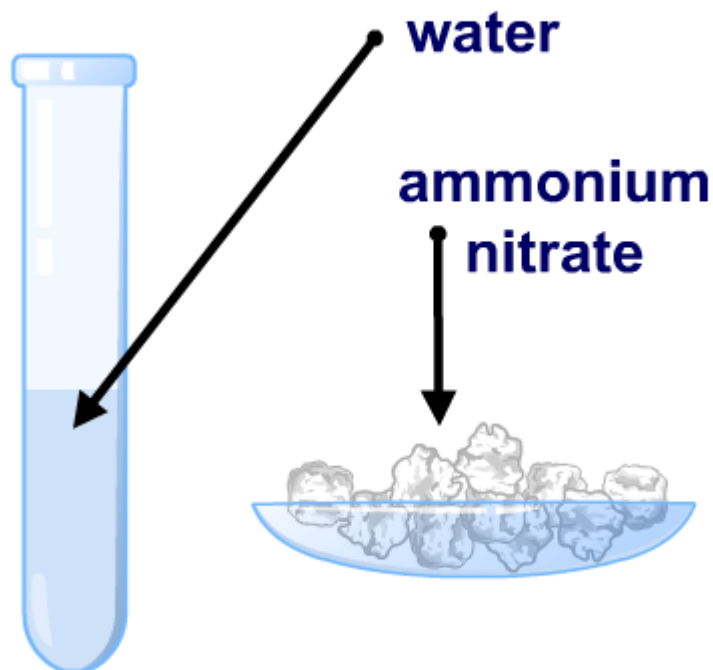
- thermal decomposition, e.g. calcium carbonate in a blast furnace
- photosynthesis
- some types of electrolysis
- some types of candy.



Is this reaction exothermic or endothermic?

When ammonium nitrate reacts with water it produces a temperature change.

Click "**play**" to find out if the reaction is endothermic or exothermic.



What happens to energy in the reaction between ammonium nitrate and water?



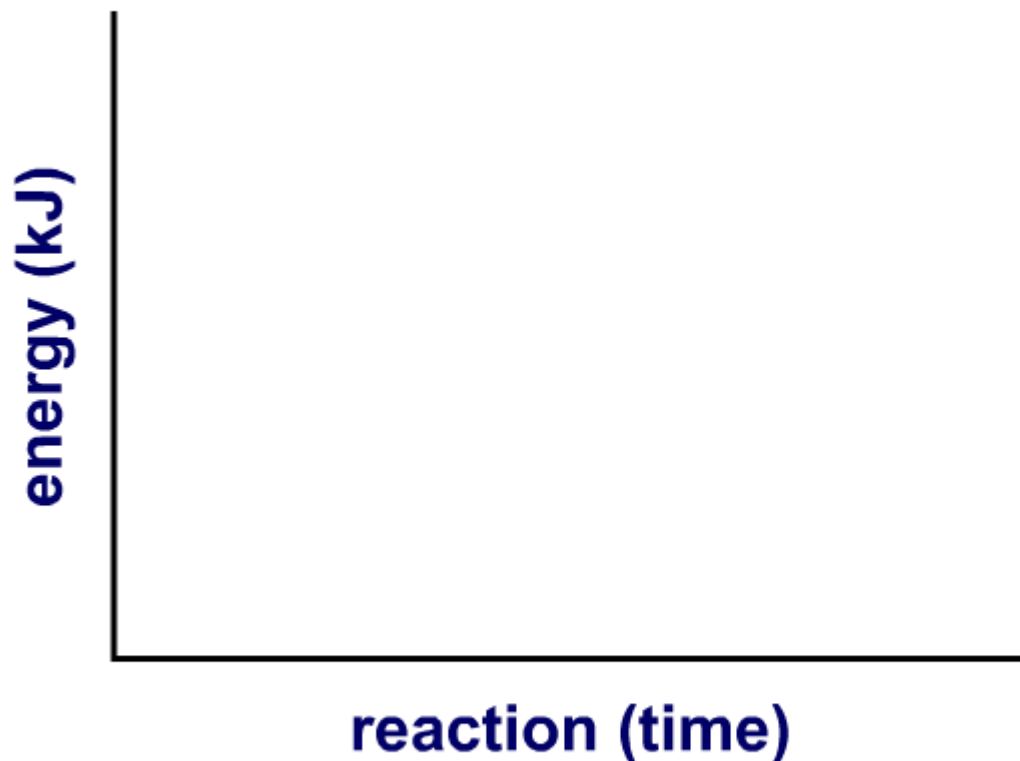
- During the reaction, thermal energy from the reaction mixture is converted to chemical energy in the products.
- This causes the temperature of the reaction mixture to fall.
- Thermal energy from the surroundings is transferred to the reaction mixture, and the temperature eventually returns to normal.



Energy level diagram for an endothermic reaction

The energy transfer in a reaction can be represented in an **energy level diagram**.

Click "**play**" to find out more about the energy level diagram for an endothermic reaction.



What are the missing words about endothermic reactions?

1. An endothermic reaction energy.
2. In an endothermic reaction, e.g. ammonium and water, the temperature will .
3. This is because , or thermal energy, is taken in from the surroundings.
4. In an endothermic reaction, the reactants have energy than the products.



solve



Exothermic or endothermic?

Are these examples exothermic or endothermic processes?

exothermic

endothermic

lighting a match

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Energy transfer: true or false?

