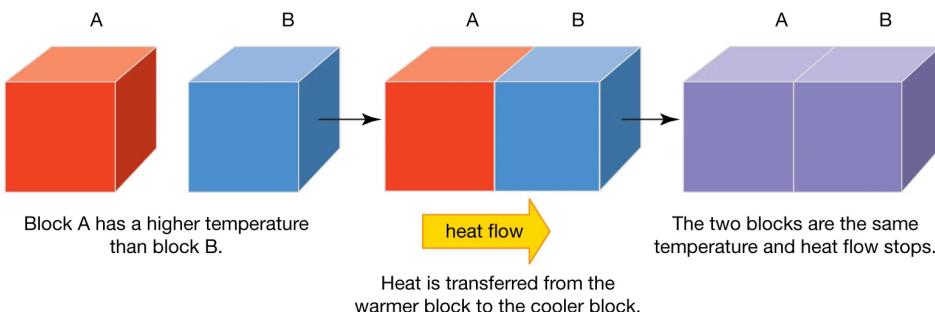


# Movement of Energy

## Energy Flow and Energy Transfer

Energy flow is the process in which energy **transfers** (*moves from one object to another*) between particles in a direct interaction



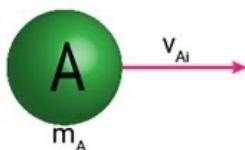
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# Movement of Energy - Collisions

## Elastic Collisions

The interaction (*collision*) between two particles where each particle absorbs energy from another object but does not bond, instead bounces off in the other direction keeping their original energy.

Before Collision



After Collision

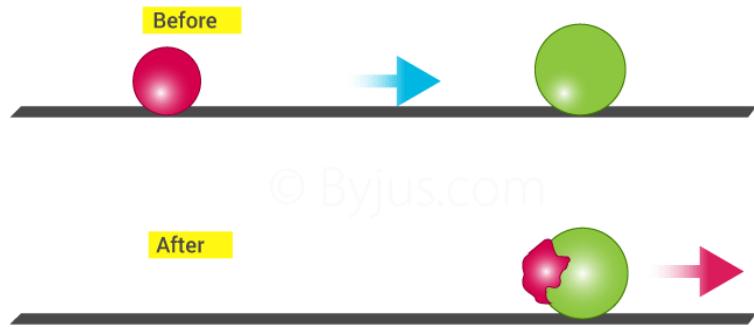


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# Movement of Energy - Collisions

## Inelastic Collisions

The interaction (*collision*) between two particles where each particle absorbs energy causing the particles to bond (*stick*) together

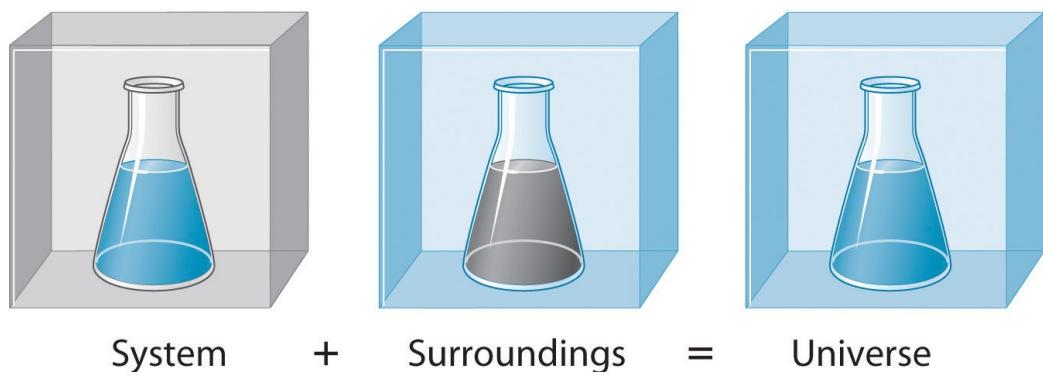


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# System and Surroundings

System: The object we are studying during energy flow

Surroundings: The area around the system (*everything else*)



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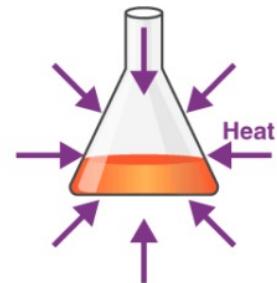
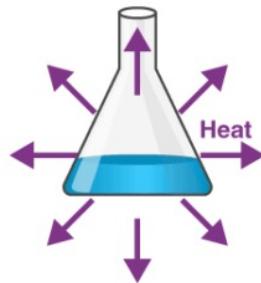
## Defining Energy Flow

### Exothermic System

A system that has more energy than the surroundings

Energy transfers from the system to the surroundings

Sign = - (*lose heat*)



#### Exothermic Reactions

A reaction that releases energy from the system in the form of heat.

#### Endothermic Reaction

A reaction that the system absorbs energy from its surrounding in the form of heat.

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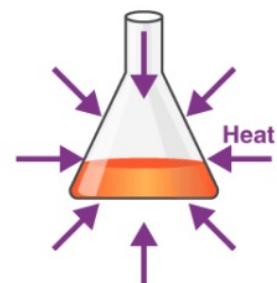
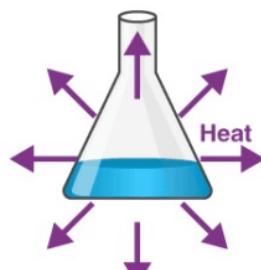
## Defining Energy Flow

### Endothermic System

A system that has less energy than the surroundings

Energy transfers from the surroundings to the system

Sign = + (*gain heat*)



#### Exothermic Reactions

A reaction that releases energy from the system in the form of heat.

#### Endothermic Reaction

A reaction that the system absorbs energy from its surrounding in the form of heat.

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