



# 7 KEY CONCEPTS IN HEAT

YOU MUST KNOW BEFORE PSLE

## WHAT IS HEAT?

Heat is a form of **energy** that makes things hot.



## GOOD CONDUCTORS OF HEAT

Materials that **allow** heat to flow through **easily**. E.g. iron, copper



## SOURCES OF HEAT

Things that **produce** heat:

**the Sun**



**Fuels e.g. wood, coal**



**Electrical appliances e.g. oven, toaster**



## BAD CONDUCTORS OF HEAT

Materials that **do not allow** heat to flow through easily. E.g. air, rubber, wood



## HEAT VS TEMPERATURE

Heat is a form of **energy** that makes things hot.



Temperature is a **measurement** of the **degree of hotness** of an object or place.



## HOW DOES HEAT FLOW?

Heat travels from a **hotter** object to a **colder** object until both reaches the **same temperature**.





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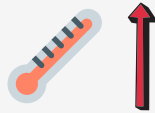
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## Effect of heat gain and heat loss

*Frequently tested in application-based questions:*

### HEAT GAIN

**Temperature change**



When an object gains heat, its **temperature increases**.

**Expansion**



Matter can **expand** when it gains heat.

**Melting**



When a **solid** (ice) gains heat, it **melts** to become a **liquid** (water).

**Evaporation**



When a **liquid** (water) gains heat, it **evaporates** to become a **gas** (water vapour).

### HEAT LOSS

**Temperature change**



When an object loses heat, its **temperature decreases**.

**Contract**



Matter can **contract** when it loses heat.

**Freezing**



When a **liquid** (liquid wax) loses heat, it **freezes** to become a **solid** (solid wax).

**Condensation**



When a **gas** (water vapour) loses heat, it **condenses** to become a **liquid** (water).