8K Energy Transfers- Revision Worksheet

Complete the table below:

	Definition	Units
Temperature		
Internal Energy		

Describe what determines the amount of **internal energy stored** in an object.

....

....

Explain why **sweating** cools you down.

....

....

....

Describe what happens when a **cool** drink is placed in a **hot** room.

....

....

Label the arrows below to describe the process of **convection**.
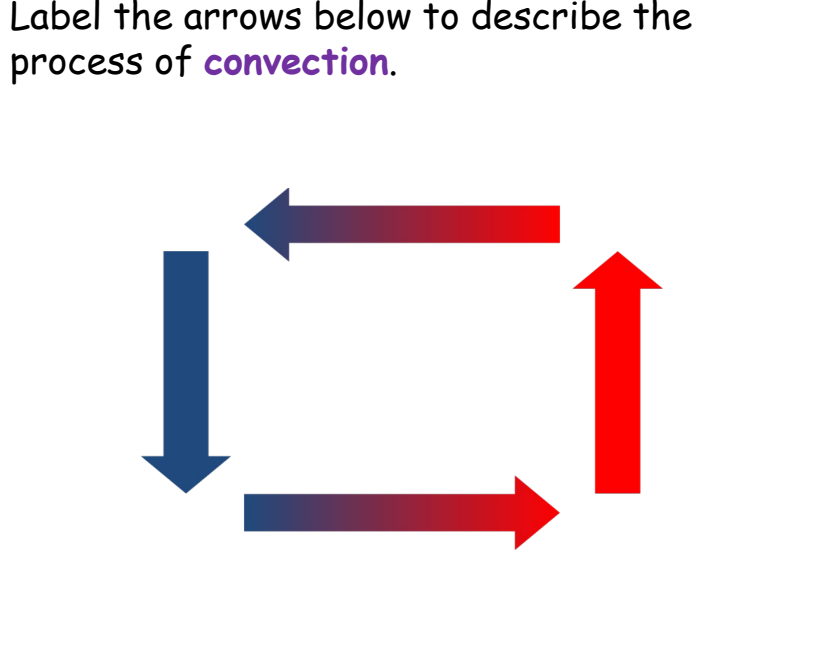
Describe how **radiation** is different to **conduction** and **convection**.

....

....

Describe what determines how much **infrared radiation** an object **emits**.

....

....

Describe, using a diagram to help you, what **conduction** is.

....

....

....

Define the following words:

Conductor	
Insulator	

Explain why **air** is such a poor **conductor**.

....

Describe how people in **cool** countries can keep **warmth** inside their homes..

....

....

Describe how people in **hot** countries can keep their homes **cool**.

....

....

Explain how a **vacuum flask** is designed to keep the **heat** inside.

....

....

....

....

Define the following words:

Accuracy	
Precision	

Label what each part of the **Sankey diagram** represents.
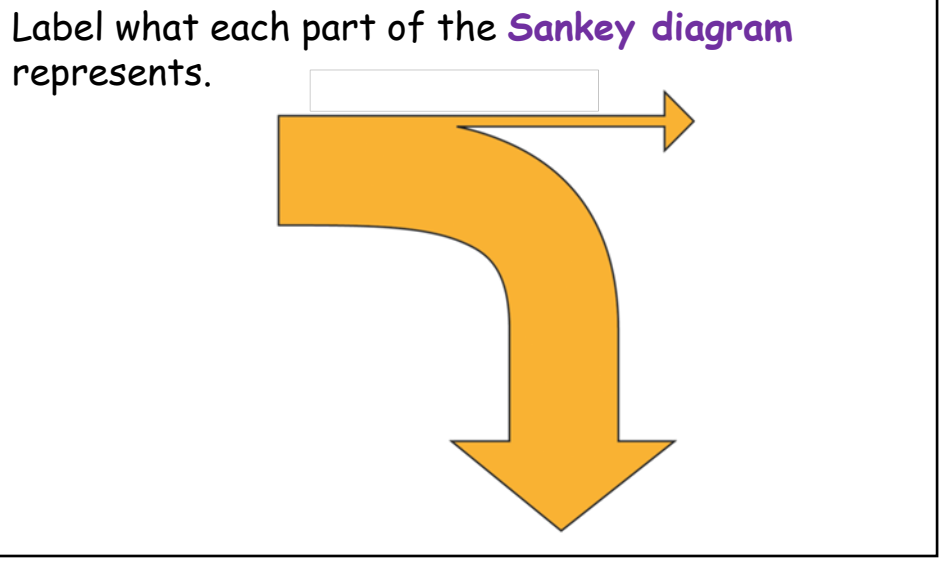
Explain how **efficient** the device with the **Sankey diagram** above is.

....

....

State what an appliances **power** is.

....

State the **units** used for **power**. ....

State the **formula** for calculating **efficiency**.

Describe what an appliances **efficiency** means.
....
....

Calculate the **efficiency** of a light bulb that transfers 7J of energy by light every second, using 20J to do this

....

Calculate the **energy use** from the following **power ratings** and **time**.

a)   3kW, 3 hours

b)   0.4kW, 2 hours

c)   1.5kW, 12 hours

d)   2kW, 0.25 hours

Describe what a **kilowatt-hour** is.
....

Complete the missing numbers on the **electricity bill** below:

Reading last time   2520

Reading this time   3105

Units used   ………

Total cost   ………
(15p per unit)

Describe what is meant by **payback time**.
....

Complete the table below:

	Cost	Yearly Saving	Payback Time
Solar Panels	£3500	£70	
Loft Insulation	£150	£150	
Double-Glazing	£3700	£200	

Explain which method above is the most **cost efficient**.
....
....

Give advice to a family on who to save money on their **electricity / gas bills**.
....
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