

# CAIE Physics IGCSE

## Topic 2.3 - Transfer of Thermal Energy

### Flashcards

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In what kind of materials can conduction occur?



In what kind of materials can conduction occur?

Solids and liquids.



# Describe the process of conduction (supplement)



Describe the process of conduction (supplement)

- Solid/liquid is heated
- Particles vibrate more
- Energy is transferred to adjacent molecules via collisions, transferring energy from hot to cold regions



# In which materials can convection occur?



In which materials can convection occur?

In fluids (liquids and gases).



Describe the process of convection.





## Describe the process of convection.

- When a section of fluid is heated, it becomes less dense
- This causes it to rise
- Denser fluid falls to take its place and is then heated, causing it to rise
- This sets up a convection current



What kind of materials can transfer infrared radiation?



What kind of materials can transfer infrared radiation?

Any kind of material; it does not require a medium.



# What is infrared radiation?



# What is infrared radiation?

It is an electromagnetic wave.



What are the best absorbers of infrared radiation?



What are the best absorbers of infrared radiation?

Black, dull surfaces.



What are the best emitters of infrared radiation?





What are the best emitters of infrared radiation?

Black, dull surfaces.



What factors affect the amount of IR emitted by a body? (supplement)



What factors affect the amount of IR emitted by a body? (supplement)

- Temperature (higher = more IR)
- Surface area (larger = more IR)

