

Topic: Energy and Insolation

Aim: How is heat energy transferred between places / substances?

recall

notes

1. How does heat flow through a field or system?

Heat energy will flow from higher temperatures (heat sources) to lower temperatures (heat sinks).

2. What are the three methods of heat energy transfer?

I. CONDUCTION

- heat transfer by direct contact of molecules
- mainly solids
- especially metals

II. CONVECTION

- heat transfer by molecules flowing due to density differences
- liquids and gases
- heated air / liquid rises because it is less dense

III. RADIATION

(page 14 ESRT – electromagnetic spectrum)

- transfer by electromagnetic energy waves
- no medium necessary
(no substance needed to travel through)
- can travel through a vacuum (outer space)