

P5 Heating and Cooling

1	Define the energy transfer 'Heating'	Transfer of energy from hotter objects to colder objects through conduction, convection, and radiation
2	What is temperature?	A measure of the kinetic energy of particles
3	What is thermal energy?	Energy store filled by heat transfer
4	What is conduction?	The transfer of thermal energy from particle to particle through vibration in a solid
5	How are particles arranged in a solid?	Fixed positions, touching, regular pattern
6	What happens to the particles in a solid if their temperature increases?	They vibrate more vigorously
7	What happens to the kinetic energy of particles of an object as it is heated?	It increases
8	What is convection?	The transfer of thermal energy when particles in a heated fluid rise
9	What is a fluid?	a liquid or a gas
10	Why do fluids expand when they are heated?	The particles move faster, causing them to take up more space as the gaps between particles gets bigger.
11	Which is more dense? A liquid or a gas?	A liquid
12	Explain why a liquid is more dense than a gas	Particle in a liquid are closer together than in a gas
13	What is radiation?	The transfer of thermal energy as an electromagnetic wave
14	What is infrared radiation?	A type of electromagnetic wave.
15	Energy can be transferred via radiation in a vacuum. Explain why	Radiation can transfer energy without particles
16	What is thermal equilibrium?	The state where all object in the system are the same temperature
17	What is a thermal insulator?	Material that only allows heat to travel slowly through it
18	Give an example of a thermal insulator	Air, plastic or polystyrene
19	What is a thermal conductor?	Material that allows heat to move quickly through it
20	Give an example of a thermal conductor	Metal