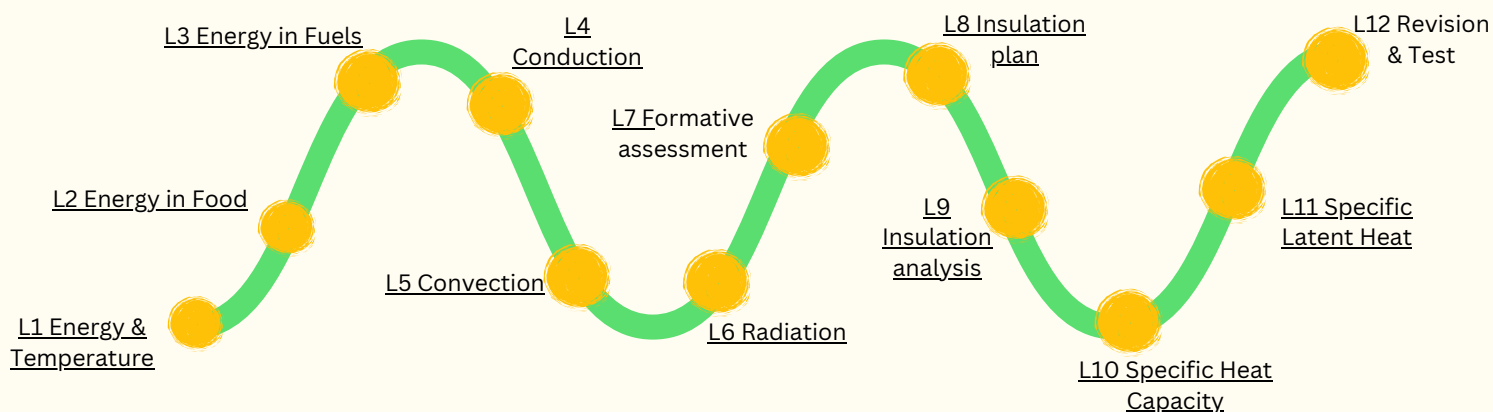


Yr8 Energy (Heating)

In this unit, you will learn how energy is stored in fuels and foods and how it is transferred during physical processes. You will explore how heat moves by conduction, convection, and radiation, and how materials like insulation help reduce unwanted energy transfer. You will also investigate how specific heat capacity affects how much energy is needed to change an object's temperature.



Prior learning link: KS2 Properties and changes of materials.

Key words

- **Energy** – The ability to do work or cause change; measured in joules (J).
- **Joule (J)** – The unit used to measure energy.
- **Thermal Energy** – Energy stored in an object due to its temperature.
- **Chemical Energy** – Energy stored in fuels, food, and batteries.
- **Kinetic Energy** – The energy of a moving object.
- **Specific Heat Capacity** – The amount of energy needed to raise the temperature of 1 kg of a substance by 1°C.
- **Conduction** – The transfer of heat through a solid, usually from particle to particle.
- **Convection** – The transfer of heat through fluids (liquids or gases) by movement of the particles.
- **Radiation** – The transfer of heat energy as infrared waves, which can travel through a vacuum.
- **Insulator** – A material that does not conduct heat well and reduces energy transfer.
- **Conductor** – A material that allows heat energy to pass through it easily.
- **Energy Transfer** – The movement of energy from one store or system to another.
- **Efficiency** – A measure of how much useful energy is produced compared to how much is wasted.
- **Fuel** – A substance that releases energy when burned or chemically changed.
- **Energy Store** – A way of keeping track of energy, such as thermal, chemical, or kinetic stores.

Revision Resources

[BBC KS3 Energy](#)

[BBC KS3 Changes of State](#)