# Foxford Learning Plan

Year 8

Summer 2

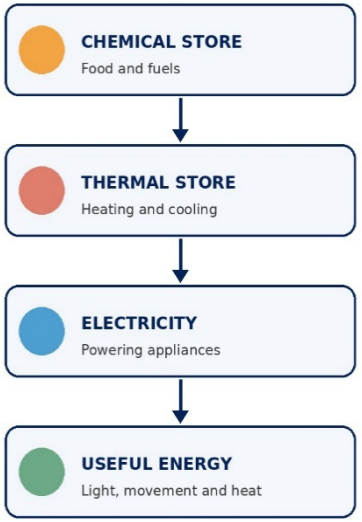
Energy Transfers and Resources

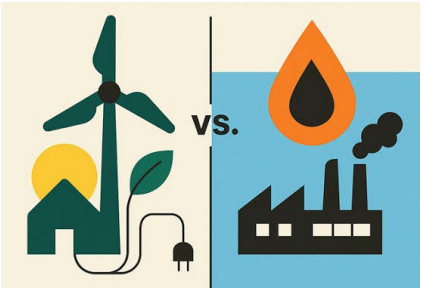
| Key Vocabulary | |
|---|---|
| Energy | The ability to cause change or do work. |
| Fuel | A substance that releases energy when used. |
| Energy store | A way energy is stored, such as thermal or chemical. |
| Power | The rate at which energy is transferred. |
| Watt | The unit used to measure power. |
| Joule | The unit used to measure energy. |
| Temperature | A measure of how hot or cold something is. |
| Conduction | Transfer of thermal energy through a material. |
| Convection | Transfer of thermal energy by moving liquids or gases. |
| Radiation | Energy transfer by waves, without needing particles. |
| Renewable | An energy resource replenished naturally. |
| Efficiency | The proportion of input energy usefully transferred. |

## Over this course I will be able to

### Key Skills

- Identify energy stores and describe transfers in food, fuels and everyday devices.
- Calculate energy use, power and appliance running costs using scientific data.
- Explain conduction, convection and radiation using examples of heat transfer.
- Compare insulation methods and calculate efficiency from useful and total energy.
- Compare renewable and non-renewable energy resources and justify their use.




## I will understand

- How energy is stored and transferred, and how food and fuels provide energy.
- How energy, power and appliance costs are calculated and compared.
- How thermal energy moves by conduction, convection and radiation.
- How insulation reduces heat loss and how efficiency describes useful energy transfers.
- How renewable and non-renewable resources generate electricity and how machines make work easier.