

## Topic 6

### Energy and the future

- 6.1 Demonstrate an understanding that energy is conserved
- 6.2 Describe energy transfer chains involving the following forms of energy: thermal (heat), light, electrical, sound, kinetic (movement), chemical, nuclear and potential (elastic and gravitational)
- 6.3 Demonstrate an understanding of how diagrams can be used to represent energy transfers
- 6.4 Apply the idea that efficiency is the proportion of energy transferred to useful forms to everyday situations

6.5 Use the efficiency equation:

$$\text{efficiency} = \frac{(\text{useful energy transferred by the device})}{(\text{total energy supplied to the device})} \times 100\%$$

6.6 Demonstrate an understanding that for a system to be at a constant temperature it needs to radiate the same average power that it absorbs

6.7 *Investigate how the nature of a surface affects the amount of thermal energy radiated or absorbed*