

Lesson Aims:

All learners:

1. Define efficiency.

Most learners:

1. Sankey diagrams.
2. The efficiency formula.

Some learners:

1. Complete all tasks.

Starter !!

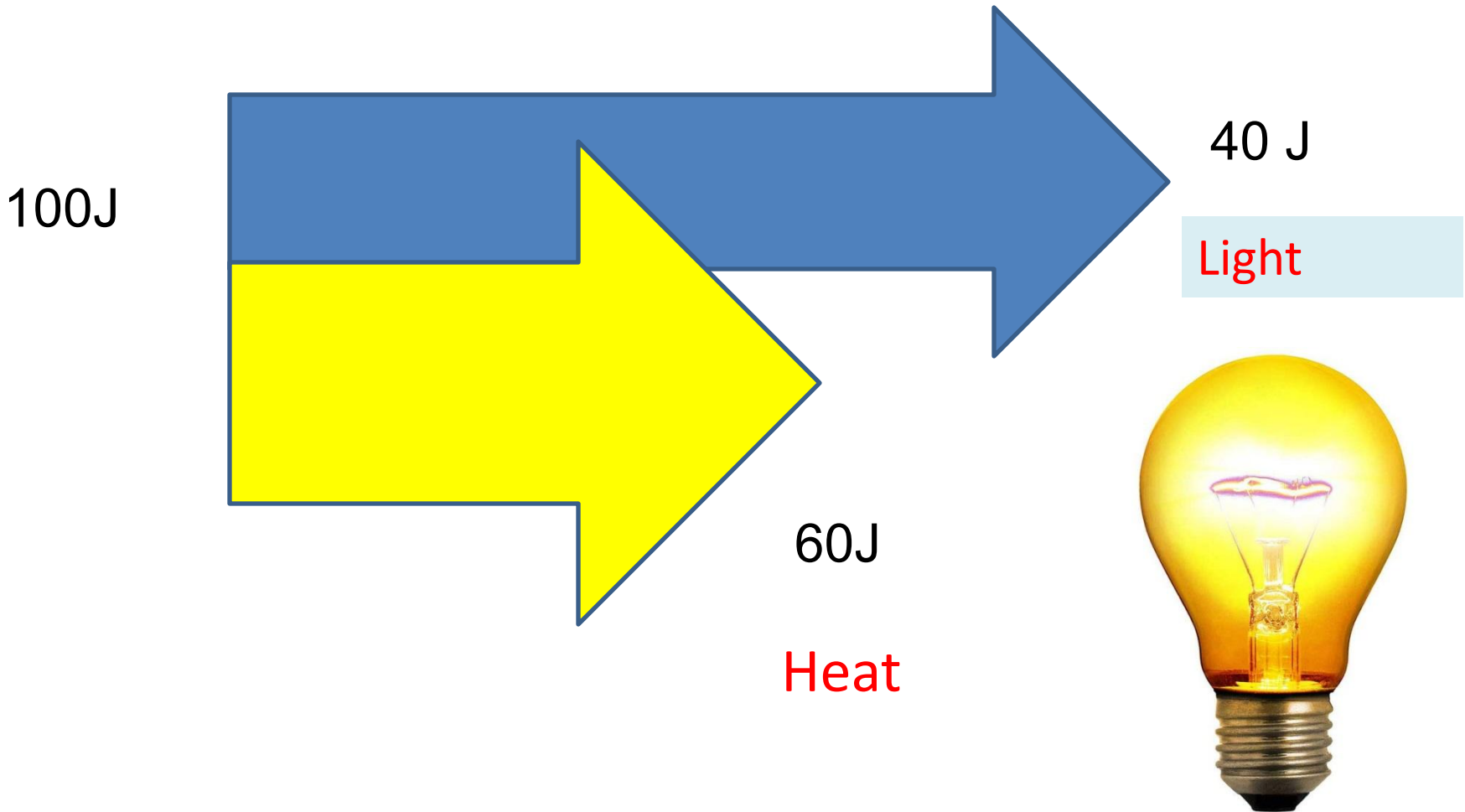
1. What energy do fossil fuels contain?
2. Where does most of the Earth's energy come from ?
3. How many joules are there in a kJ?
4. True/False: Energy cannot be created, but can be destroyed.
5. A metal bar feels cold because it takes h_____ from our hands.

Starter !!

1. What does 'energy transfer' mean ?
2. What does 'useful energy' mean ?
3. What does 'Wasted energy ' mean ?
4. List 8 ways electricity is used to transfer energy in the home.
5. How many Joules in 1.34MJ?
6. Convert 2345000J into standard form and also as MJ.

Sankey Diagrams

Light Bulb

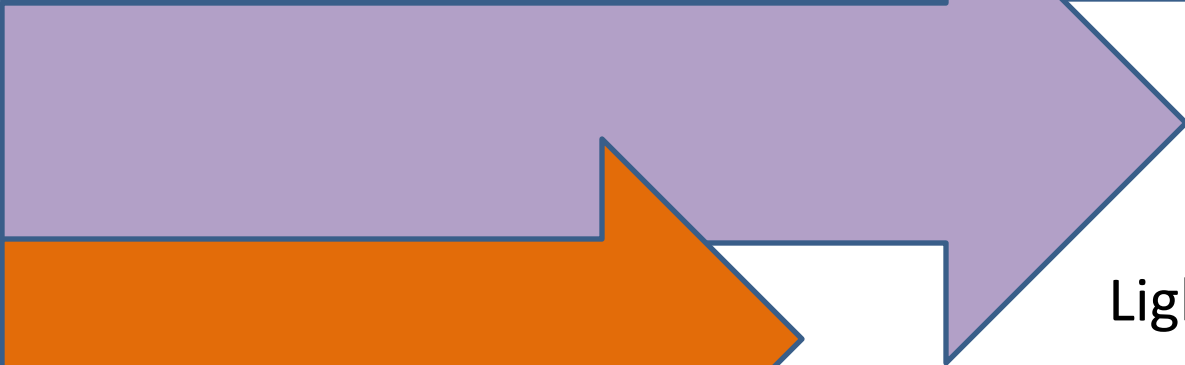
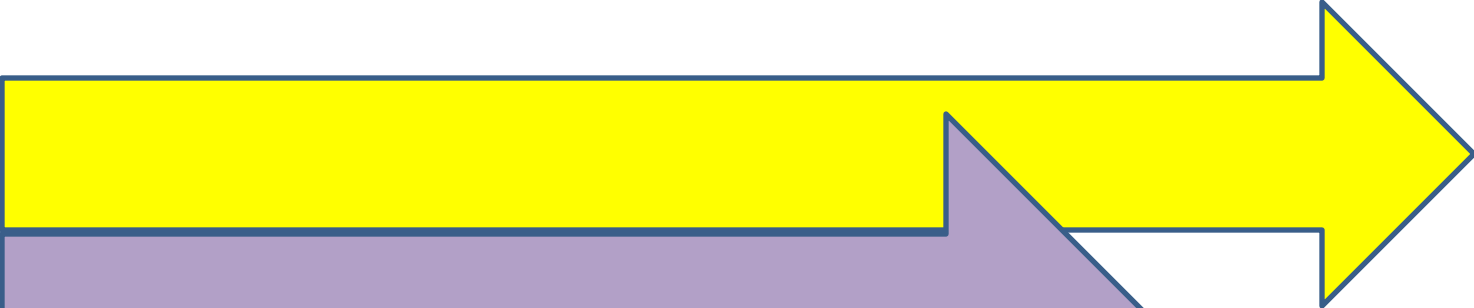


Efficiency Formula

$$\text{Efficiency} = \frac{\text{Useful energy} \times 100\%}{\text{Total energy input}}$$

LED TV

Heat 10 J



Light 20 J



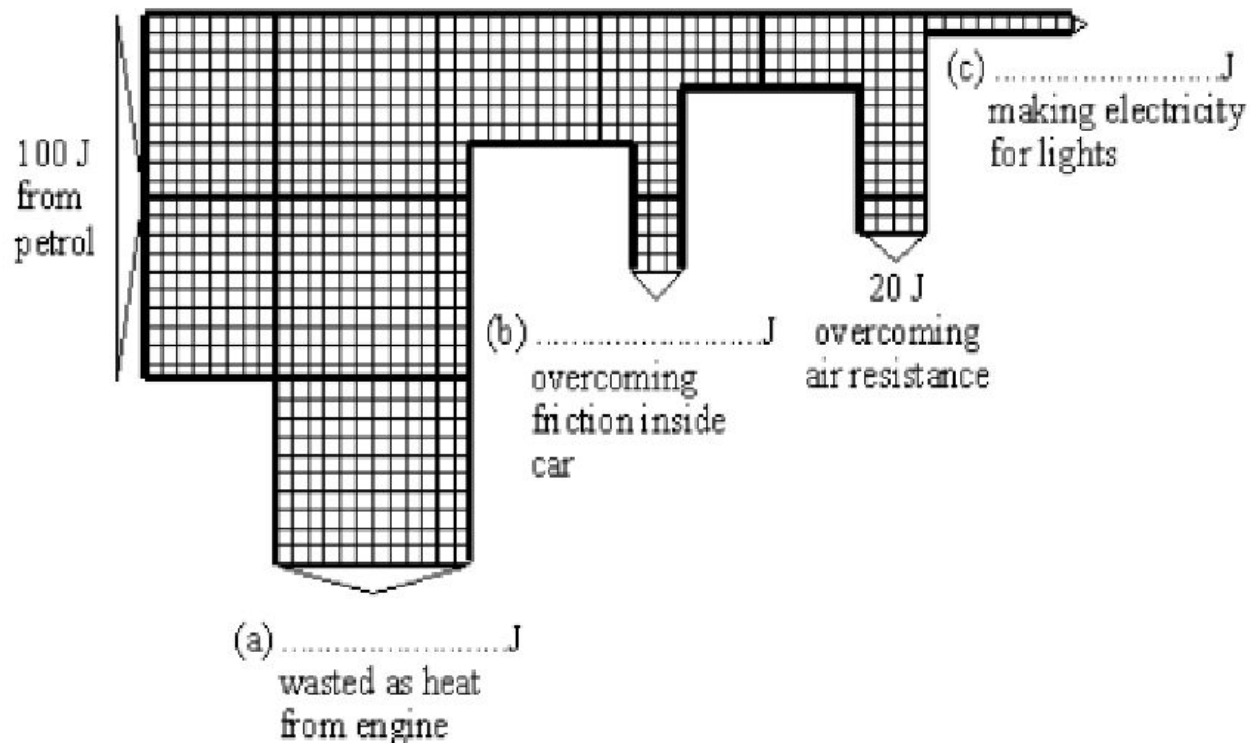
Sound 15 J

45 J



Q1. A car burns petrol as it travels along a flat road.

The diagram shows what happens to each 100 joules (J) of energy released by burning the petrol.



Complete the diagram by adding the missing numbers.

(Total 3 marks)