

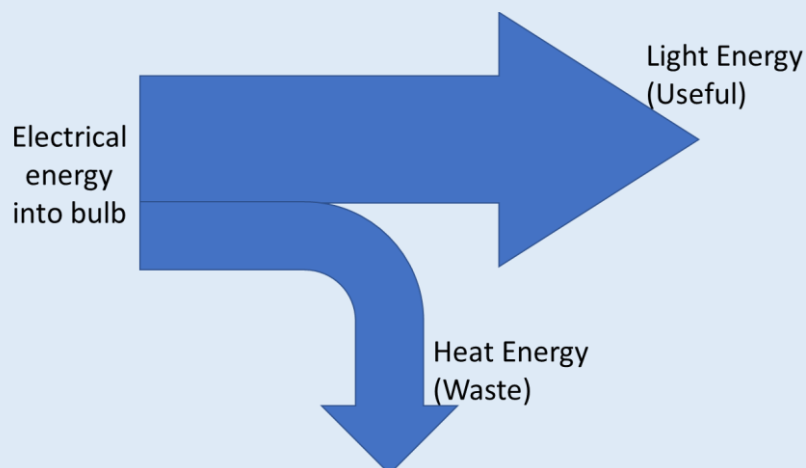
## S1 Lesson 3 (11/1 to 15/1)

Lesson	Learning Intentions - I can...	Information	Task
1	1. Name the 8 types of energy: potential (stored), sound, heat, atomic, chemical, kinetic (moving), light, and electrical.	What is Energy?	Information and questions on sheet 1
2	<ul style="list-style-type: none"><li>I will be able to state the Law of Conservation of Energy</li><li>I will be able to identify energy changes in different examples</li></ul>	Energy Changes	Information and questions on sheet 2
3	<ul style="list-style-type: none"><li>I can give examples of how not all Energy transferred is useful</li></ul>	Waste Energy	Information and questions on sheet 3

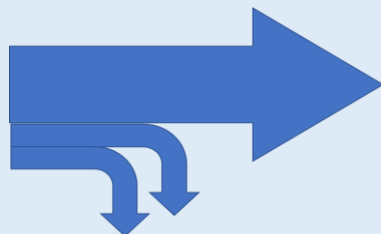
### 3. Waste Energy.

Energy can't be destroyed in an energy change, but not all energy is turned into the type desired. We use lightbulbs to light a room, but the bulbs also give off lots of heat energy (this is why they are very hot to touch when turned on). The heat is not the energy we want from them so it is considered a **waste energy**.

This can be shown on a **Sankey diagram**. The base of the arrows is the 'Energy in' and the points are the 'energy out'. Straight arrows are useful energy out, and arrows curving away are waste ENERGY.

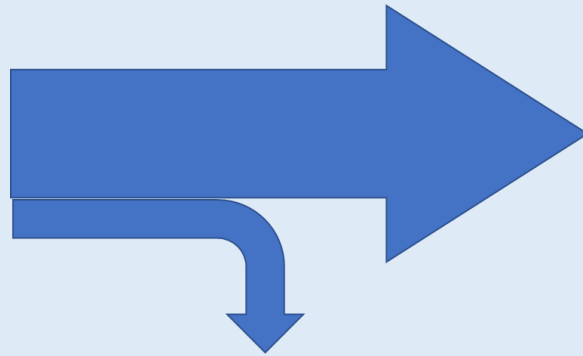


A thicker the arrow means more of the energy is in that form. A Sankey key can have multiple arrows in each direction. (Like this one that has 2 types of waste energy!)



Questions: answer in your jotter and send an image through Satchel one (SMHW).

Q1. A microwave is designed to heat up food, but it also makes an annoying hum! Copy and complete this Sankey diagram for the microwave. (USE A RULER!)



- Q2a. What is the 'energy in' for a car engine?
- b. What is the useful energy out of a car engine?
- c. What waste energy is produced from a car engine?
- d. Design a Sankey key for the car engine

Q3. Design a Sankey key for a cyclist on a bicycle. *Hint: can you think of 2 types of useful energy!*

When you have complete all 3 lessons this week. Make sure you have uploaded all files to Satchel one and press the 'submitted' button!