**Light Bulb Evaluation Research**

**Task 1: Produce an evaluation of light bulbs available at Bunnings.**

1. Find 5 different light globes on the Bunnings website. These light globes should all be designed to do the same role (E.g.: 5 light globes for a ceiling light. **Not** 3 for a ceiling, 1 for a torch and 1 for a car headlight)
2. For each light globe record
	* 1. Cost
		2. Brightness (in lumens)
		3. Power (in watts)
		4. Lifespan (in hours)
3. These light globes will produce both heat and light energy from electrical energy. Some globes are better than others at producing the useful light energy. To find out which is the best, it is useful to know the ***brightness per watt***.

$$Brightness per watt (lumens per watt)=\frac{Brightness (lumens)}{Power (watts)}$$

Having more brightness per watt is good as it means the light globe is more efficient at producing light energy from electrical energy. Calculate the ***brightness per watt*** for each of your light globes.

1. These light globes have different operating lifespans. These are often thousands of hours but may even be more. Each time a light globe stops working a new light globe needs to be purchased. Longer lasting light globes may be more expensive to buy one but often cost less in the long term because they last a long time. Calculate the ***cost per hour*** for each globe.

$$Cost per hour (\$ per hour)=\frac{Cost (\$)}{Lifespan (hours)}$$

Having a higher ***cost per hour*** is bad because you are spending more money for each hour the light globe is turned on for.

1. Based on your research and calculation of
	* 1. Cost
		2. Brightness
		3. Power
		4. Lifespan
		5. Brightness per watt
		6. Cost per hour

Write a paragraph or two explaining which light bulb you believe is the **best choice**.

**Present all the information in a table**