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Secret life of Garbage and Recyclables

* Informed consumers take many factors into account when purchasing a new item: Price, color, style, quality, etc – but many people don’t think about the life of an item or where it goes after it is no longer useable.
* A simple comparison of light bulbs might help us look at different aspects of purchasing an item by looking at its initial price and its longevity.

**Please fill out the chart below as we test different bulbs**.

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| --- | --- | --- | --- | --- | --- | --- |
| Type of bulb | Watts | Initial Cost | Light  (in lumens) | Cost of Use  ( per year) | Lifespan  (in hours) | Total cost over 10 yrs |
| Incandescent |  |  |  |  |  |  |
| Compact Fluorescent |  |  |  |  |  |  |
| LED |  |  |  |  |  |  |
| Heat lamp |  |  |  |  |  |  |

**Incandescent**: A light bulb featuring a filament (usually made of tungsten) that emits light and heat as an electric current is passed through it.

**Compact Fluorescent (CFL):** A light bulb that contains a long narrow tube filled with a gas, usually Mercury vapor. The gas emits light when a current is passed through it.

**LED**: A tiny light bulb made of a material, a semiconductor, which gives off light when even the smallest of currents is passed through it. Many LEDs are combined to create a light bulb the size of a standard incandescent.

Cost of Use per Year:   
 1. Multiply the Watts used X 6 hrs a day X 365 days =\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Divide by 1000 to find KWatt used per year = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Multiply by $.102 to calculate cost per year= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cost Over 10 Years: (10 years = 21,600 hours of use)

1. Take answer from #3 above and multiple by 10 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Take 21,600 and divide by bulb lifespan= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Take answer from #2 and multiply by cost of bulb= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Add lines 1 and 3 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (cost over ten years)

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| **Dirty Jobs – The San Francisco Dump** |

1. How is the food separated from the other waste material?
2. What do the people do inside the recycling facility?
3. How does the waste food become energy?

**Day in the life of your Garbage and Recyclables**

1. How are the recyclables separated from the rest of the garbage?
2. What happens to materials that cannot be recycled?
3. List 5 ways in which you can decrease the amount of garbage you produce.