

LED vs. Incandescent Cost Comparison: Lesson 2

“Why should I change my light bulbs to LED’s?
That is a great question! To get the answer, we need to look at the life cycle cost for light bulbs.

What is the life cycle cost? The life cycle cost is the initial cost of the appliance (in our case a light bulb) AND the cost of energy needed to use the appliance over its life.

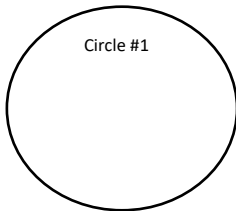
Initial cost of light bulb + Energy costs (electricity)
= Life Cycle Cost of light bulb

Use the chart at the right to complete the equations below to determine which light bulb has the lowest life cycle cost and the greatest savings to provide 15,000 hours of light.

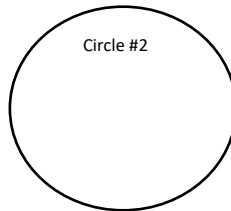
| Bulb Specifications | IL Incandescent | LED Light Emitting Diode |
|--|------------------------|--------------------------|
| Light Output (lumens) | 640 lumens | 800 lumens |
| Life Expectancy (hours) | 2,500 hours | 15,000 hours |
| Energy Used (watts) | 60 watts | 9.5watts |
| Cost per Bulb (dollars) | \$.50 | \$3.00 |
| Number of Bulbs needed for 15,000 hours of light | 6 | 1 |
| Cost of Light Bulbs for 15,000 hours of light | \$3.00 (circle 1) | \$3.00 (circle 3) |
| Cost of Electricity for 15,000 hours of light | \$117.00 (circle 2) | \$18.53 (circle 4) |

Use the table above to complete the chart.

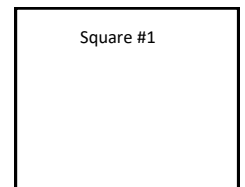
Incandescent



Cost of Incandescent Bulbs

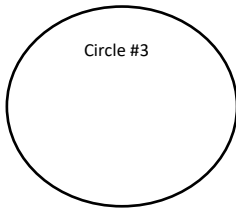


Cost of Electricity

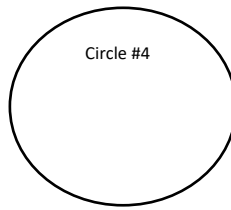


Incandescent Life Cycle Cost

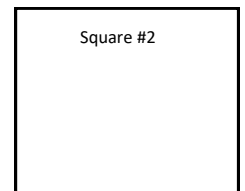
LED



Cost of LED Bulbs

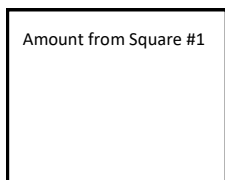


Cost of Electricity

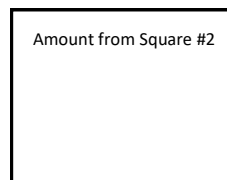


LED Life Cycle Cost

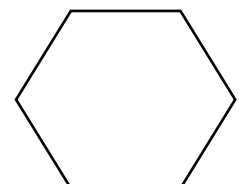
Savings



Incandescent Life Cycle Cost



LED Life Cycle Cost



Life Cycle Savings for replacing one IL with a LED