



# 4-H Electric – Level 4 Record Sheet

Completed (40 possible) \_\_\_\_\_  
Accuracy of answers (30 possible) \_\_\_\_\_  
Appropriate grammar (15 possible) \_\_\_\_\_  
Neatness of record (15 possible) \_\_\_\_\_  
Total \_\_\_\_\_

A = 86-100 points  
B = 71-85 points  
C = 70 points or less

Record for Year \_\_\_\_\_

A completed record sheet is due by the last business day of May to exhibit each project at the fair.  
Use any 4-H publications, the internet, the library, or a professional to help you prepare your responses.

## The Basics

Name \_\_\_\_\_ 4-H Club \_\_\_\_\_

Years in 4-H \_\_\_\_\_ Grade \_\_\_\_\_

## Getting Started

Define lumen. \_\_\_\_\_

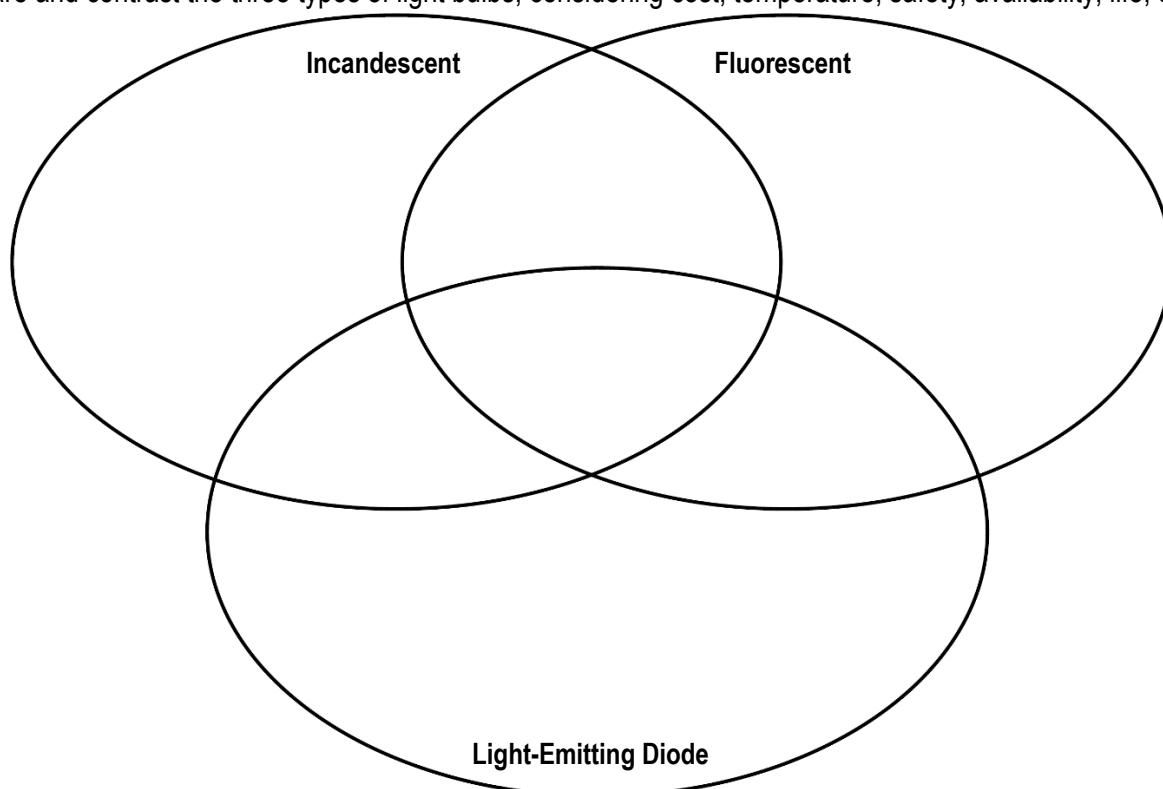
Explain the difference between a direct glare and a reflected glare. \_\_\_\_\_

What is an example of task lighting? \_\_\_\_\_

What is an example of general lighting? \_\_\_\_\_

## Making Connections

Compare and contrast the three types of light bulbs, considering cost, temperature, safety, availability, life, etc.



## Lighting It Up

We do not necessarily care what you spent constructing your exhibit, but it is good for you to understand that things have a cost. Even poster boards are not free. Approximately how much did you spend constructing your exhibit or think you'll spend once it is complete? Circle one.

\$0.00-\$5.00    \$5.00-\$15.00    \$15.00-\$30.00    \$30.00-\$50.00    Greater than \$50.00

What did you enjoy the most about your project this year? \_\_\_\_\_

What was the most challenging thing you encountered with this year's exhibit? \_\_\_\_\_

## Shining On

Think about how kilowatt-hours are calculated as it relates to an electrical bill. If you light your living room for an evening (5 hours) with a lamp and one overhead light, how much would you spend? The overhead light has a 75-watt-equivalent LED bulb that uses 13 watts, and the lamp has a 60-watt-equivalent bulb that uses 8 watts. The current cost per kilowatt-hour is \$0.10. Use the formula below to find your answer.

$$\text{kWh} = \frac{\text{watts} \times \text{hours}}{1000}$$

Current cost of electricity = \$0.10/kWh

Businesses hire electricians, and this is how some people "make a living" and take care of themselves or their families. Name three places or institutions in you could study electricity and become a certified electrician.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

What is one thing you learned or sparked your interest as a result of completing this project? \_\_\_\_\_

In what way does this project apply to your life, or why is this subject matter important to you? \_\_\_\_\_