



# Comparing Light Bulbs

## Grade Levels: 1-4

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### Background

We use light bulbs to see when it is dark. Many light bulbs also produce heat. It requires a lot more energy to make heat than it does to make light. Some light bulbs use less energy than others.

### Question

Do incandescent and fluorescent bulbs produce the same kind of light? Do incandescent and fluorescent bulbs produce the same amount of heat?

### Possible Hypotheses

Incandescent and fluorescent bulbs do/do not produce the same kind of light.

Incandescent and fluorescent bulbs do/do not produce the same amount of heat.

### Materials

- One incandescent and one compact fluorescent bulb that have the same number of lumens (look at the box to see how many lumens each bulb produces)
- Thermometer
- Lamp

### Procedure

1. Have an adult place the fluorescent bulb in the lamp and turn it on. Observe the light that is produced.
2. Hold a thermometer six inches above the bulb for one minute and record the temperature. Turn off the lamp and let the bulb cool.
3. Have an adult remove the fluorescent bulb, place the incandescent bulb in the lamp and turn it on. Observe the light that is produced.
4. Hold a thermometer six inches above the bulb for one minute and record the temperature.

### Analysis and Conclusion

Could you tell any difference in the kind of light the two bulbs produced? Did one bulb produce more heat than the other? Which bulb uses less energy?

