## Components of a Scientific Conclusion

- ***Answer the investigative question in a general way,*** using the words from the question in your answer if possible: What happens to the brightness of a bulb when you change the length of wire in a closed circuit? "When I change the length of wire in a closed circuit, the brightness of the bulb changes."
- ***Provide evidence from your observations or tests.*** *Include:*

  Qualitative data (for example, *more/less*; *longer/shorter*; *brighter/dimmer*): "The bulb was brighter with shorter wire and dimmer with longer wire."

  Quantitative data (measured data): "For example, with 10 cm wire, the bulb brightness was 9. But with the 30 cm wire, the brightness was only 7."
- ***Make a concluding statement(s) that is based on the evidence:*** "Therefore, the shortest wire makes the bulb the brightest and the longest wire makes the bulb the dimmest."
- ***Refer to your prediction.*** Did your data support it? If they did not, how has your thinking changed? "The data did not support my prediction because I thought that the bulbs would have the same brightness. I didn't think the length of the wire would make any difference. Now I know that the length does have an effect."
- ***Make an inference about what you think caused these test results:*** "I think this happens because longer wire has more resistance than shorter wire."
- ***If you had data that were different from what other groups had, what do you think could have caused these results?*** "I think my group got different results because we used a different type of wire than the others did. We should have kept that variable the same as everyone else."
- ***What other questions do you have now that you want to investigate?*** "What would happen if we used wires of different thicknesses?"