Testing Your Knowledge and Going Beyond

More ideas to think about.

- 1. What does LED stand for?
- 2. What does a diode do?
- 3. Which side of the LED goes with the positive side of the battery?
- 4. Draw the card circuit using electronic symbols for the parts.
- 5. How did the Card Company line up the two copper tape lines correctly?
- 6. What properties of the materials kept the battery from always being on?

7. Can you think of another way to make a switch for your card? Describe it.

11. Do you think the thickness of the paint layer affects conduction? How would you test this?

12. Can you think of a design that would minimize the amount of carbon paint necessary?



13. Can you think of a design that would incorporate two LEDs? Draw it.

14. Put a red LED and a blue LED on the same battery. Which light is brighter? Why do you think one is brighter than another? The two LEDs are made from different materials. One takes more energy than the other to make the LED light. (This is called a band gap in semiconductor physics). Which one do you think takes more energy? If you were a stream of electrons coming from a battery do you think you would go to the light the LED that takes more energy or less?