

Pumpkin Battery - Chemical Energy

Materials

- Pumpkin
- Alligator Clips
- Copper wire
- Zinc nail
- Multimeter or microammeter

? Question

1. How will a pumpkin produce electricity with different metals?

✱ Hypothesis

Use the words **a lot**, **a little**, or **no** to complete the statements below:

- a. I think the pumpkin will produce _____ electricity when the large nail and thick copper wire are pushed into the pumpkin.
- b. I think the pumpkin will produce _____ electricity when the large nail and thick copper wire are pushed into the pumpkin.
- c. I think the pumpkin will produce _____ electricity when the large nail and thick copper wire are touching inside the pumpkin.

✓ Procedure

Part One

1. Insert the large nail and thick copper wire into the pumpkin (do not let the ends of the metals touch).
2. Attach the end of one alligator clip to the positive (red) terminal of the microammeter, and the other end of the clip to the thick copper wire.
3. Attach one end of the second alligator clip to the negative (black) terminal of the microammeter, and the other end to the nail. Draw what you see.
4. Record the reading on the microammeter in your data table.

What happens when you....

1. Push the nail and the wire further into the pumpkin?
2. Try a combination of metals and distances?
3. Which combinations of metals produced the most electricity?
4. Which produced the least?
5. Try different size pumpkins, squash, or pieces of fruit?