

# Powerful Produce

Which has more zing, a lemon or a tomato? Or is it a potato? Fruits and vegetables can act as conductors for electric current when included in a circuit. Raid the refrigerator for this experiment, and show your family how fun it can be to play with your food.

## PROBLEM/PURPOSE

**Which fruit or vegetable conducts electricity the best?**

## EXPERIMENT SUMMARY

You'll make a complete circuit that tests each piece of produce for its ability to generate and conduct electric current.

## WHAT YOU NEED

- ▶ Assortment of same-sized fruits and vegetables (try lemons, limes, oranges, grapefruits, tomatoes, turnips, potatoes, and onions)
- ▶ 1-inch (2.5 cm) piece of copper
- ▶ 1-inch (2.5 cm) piece of zinc
- ▶ Multimeter (battery tester) or small lightbulbs with varying wattages
- ▶ 2 pieces of copper wire with the ends stripped (if using lightbulbs)
- ▶ pH paper

## EXPERIMENTAL PROCEDURE

1. Insert the pieces of zinc and copper into opposite ends of your first piece of produce, leaving  $\frac{1}{4}$  inch (6 mm) of the metal exposed.

