



Project Zero

# e-SMARTkids

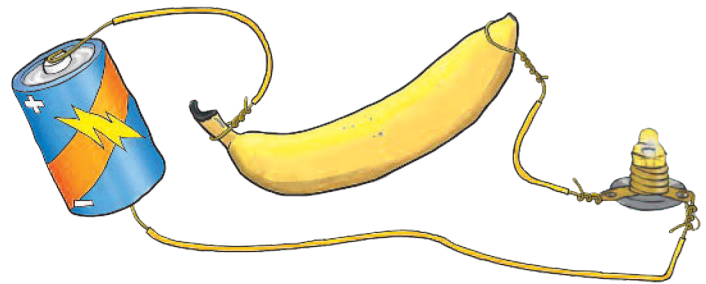


## EXPERIMENT

## Conductors & insulators

Print this page and follow the directions to build your own circuit and test electrical conductors and insulators.

Just as a metal spoon conducts the heat from a hot drink to your hand, electrical conductors allow electricity to flow through them easily. And just as a potholder insulates you from heat, electrical insulators slow down or resist the flow of electricity.



1. Get a 1.2-volt light bulb, a matching light bulb base, a D-cell battery, a banana, and three pieces of copper wire with the insulation stripped off the ends. Ask an adult to help you strip the insulation.
2. Set up the equipment as shown and tape the wires to the battery. Does anything happen? Does the banana allow electricity to flow through the circuit and light the bulb? Is it a conductor or an insulator?
3. With a partner, gather a variety of objects to test.
4. List your items below. Put a "C" by the ones you predict will be the best conductors, and an "I" by those you think will be insulators.
5. Substitute your objects, one at a time, for the banana. How were the results different from your predictions?

Item	Prediction ("I" or "C")	Result ("I" or "C")
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____