



Materials Cost Examples (from RadioShack.com)

one 9 volt snap connector (RadioShack model 270-324 \$2.69 each)
 one slide switch (RadioShack model 275-409 \$2.69 2-pack)
 one 330 ohm resistor (RadioShack model 271-1315 \$0.99 5-pack)
 two LEDs (RadioShack model 276-309 \$1.49 each)
 small piece of PC board (RadioShack model 276-148 \$1.99 each)
 one 9 volt battery (RadioShack model 23-875 \$3.99 each)
 insulated wire (RadioShack model 278-1218 \$4.99 spool)
 electrical tape (RadioShack model 64-2373 \$1.99 roll)

Tools

wire cutters / strippers (RadioShack 64-2980 \$8.99)
 soldering iron & materials (RadioShack basic kit 64-2802 \$7.99)
 hot glue gun (Hobby Lobby sku 222497 \$1.99)
 hot glue sticks (Hobby Lobby sku 284851 \$1.99 20-pack)

What is a Resistor?

Think of a resistor as a protector. It does what its name says, resists electricity. It blocks some of the electricity as it passes through, and this protects the other components in the circuit.

If an LED is hooked up directly to a 9 volt battery, all that electricity will go pouring through the LED until it burns up. But if you put a resistor in between the two, the LED will be protected.

Scrounge

Look around and see what you can find for free, before you go out and buy anything!

Snip a battery connector from a broken toy. Re-use wire from a different project, even old speaker wire will work for this. Ask at the electronics store for scraps of PC board. Tear the power switch out of an old game. Borrowing tools, rather than buying them can also save a lot of money.

Split the costs with a friend and you can help each other with the project, plus it'll cost less.