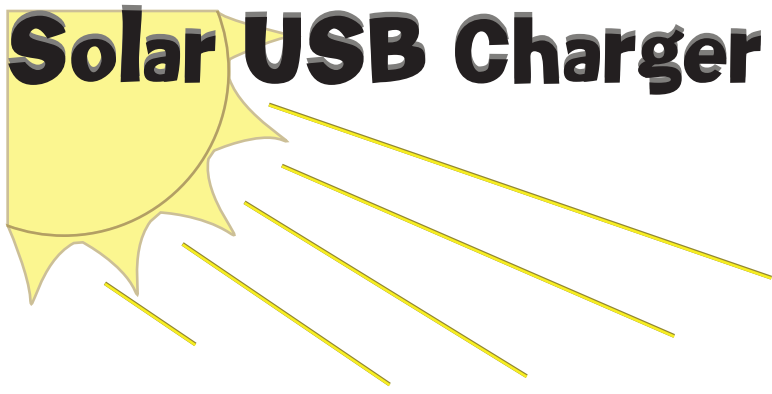


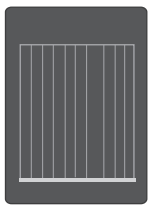
Solar USB Charger I.O



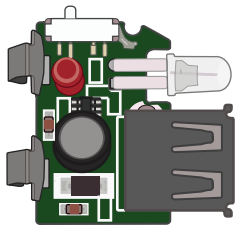
TIME:
30-60 MINUTES

YOU WILL NEED:

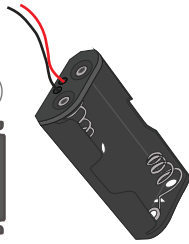
PARTS:



4V Solar Cell



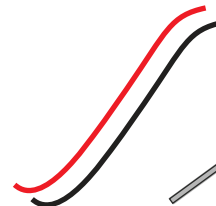
USB Charging Circuit



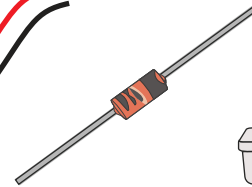
AA 2 Battery Holder



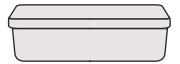
2 AA Rechargeable Batteries



Wire

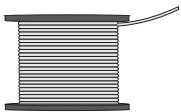


1N914 Diode

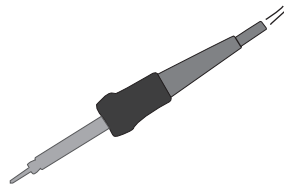


Encloser (optional)

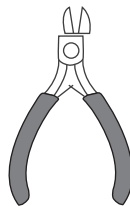
TOOLS:



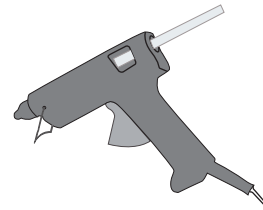
Solder



Soldering Iron



Wire Cutters



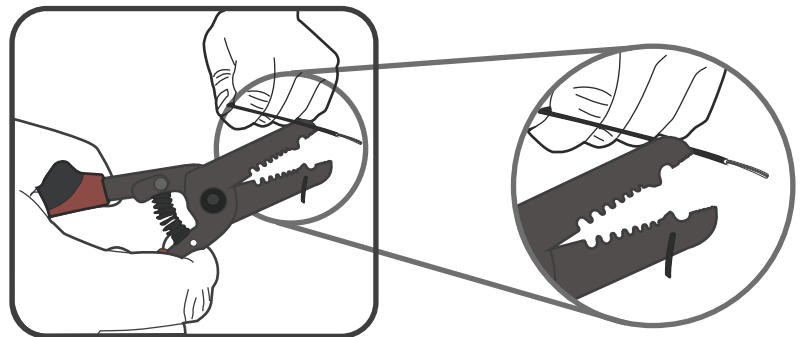
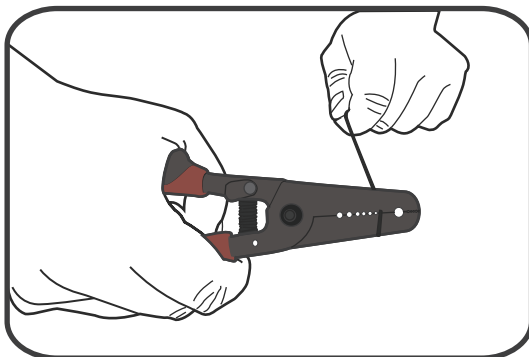
Hot Glue Gun or Foam Tape (optional)



Make sure to warm up your Soldering Iron and Glue Gun before you start.

1 STRIP WIRES

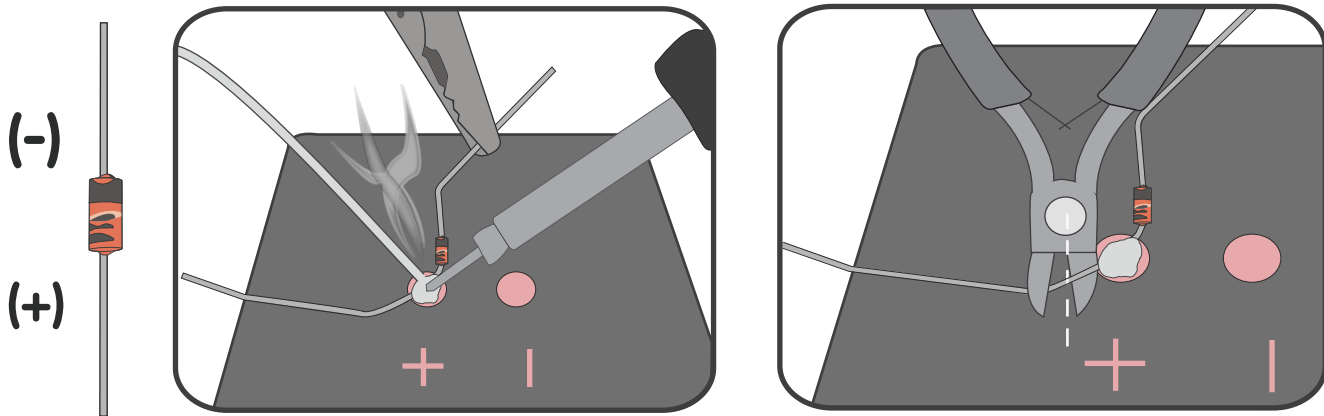
Strip the ends of the loose black and red wires, including the ones on the battery holder.



Please visit www.BrownDogGadgets.com for more great ideas & info.

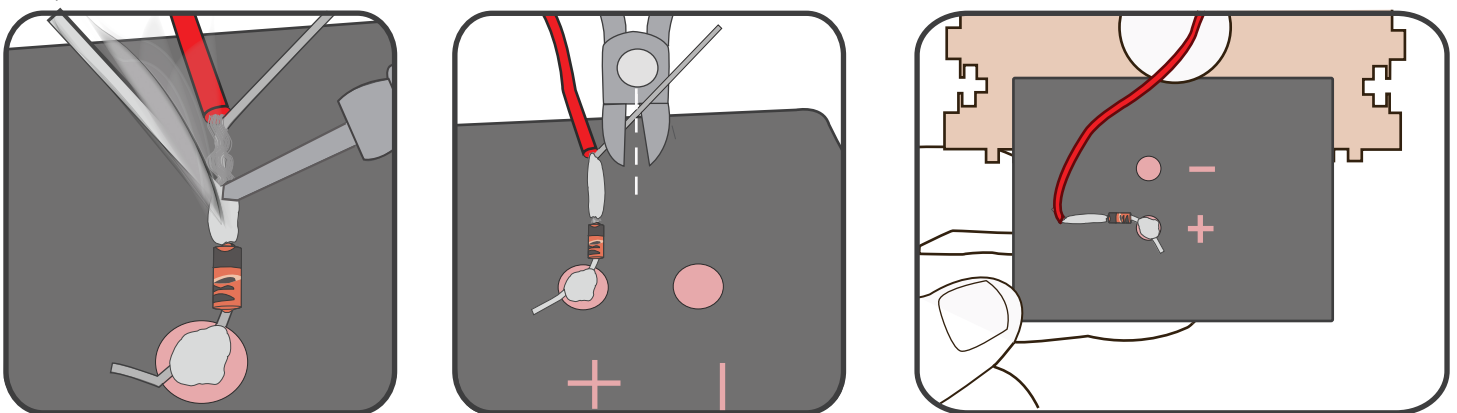
2 **SOLDER the DIODE**

Look at your diode. Find the black stripe. This is the negative end. Solder the wire on the positive (orange) side of your diode to the positive (+) terminal of your solar cell. Cut off the excess wire on the positive (orange) side of the diode.



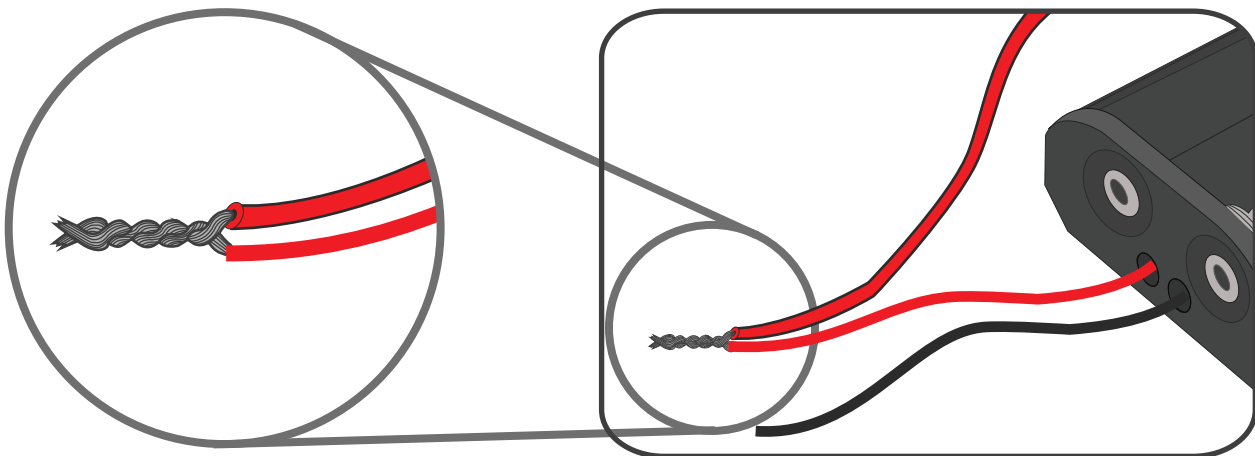
3 **SOLDER LOOSE RED WIRE**

Twist one end of the first loose red wire around the negative (black stripe) side of your diode. Solder them together. Put the other end of the wire through the hole in the top piece of the box.



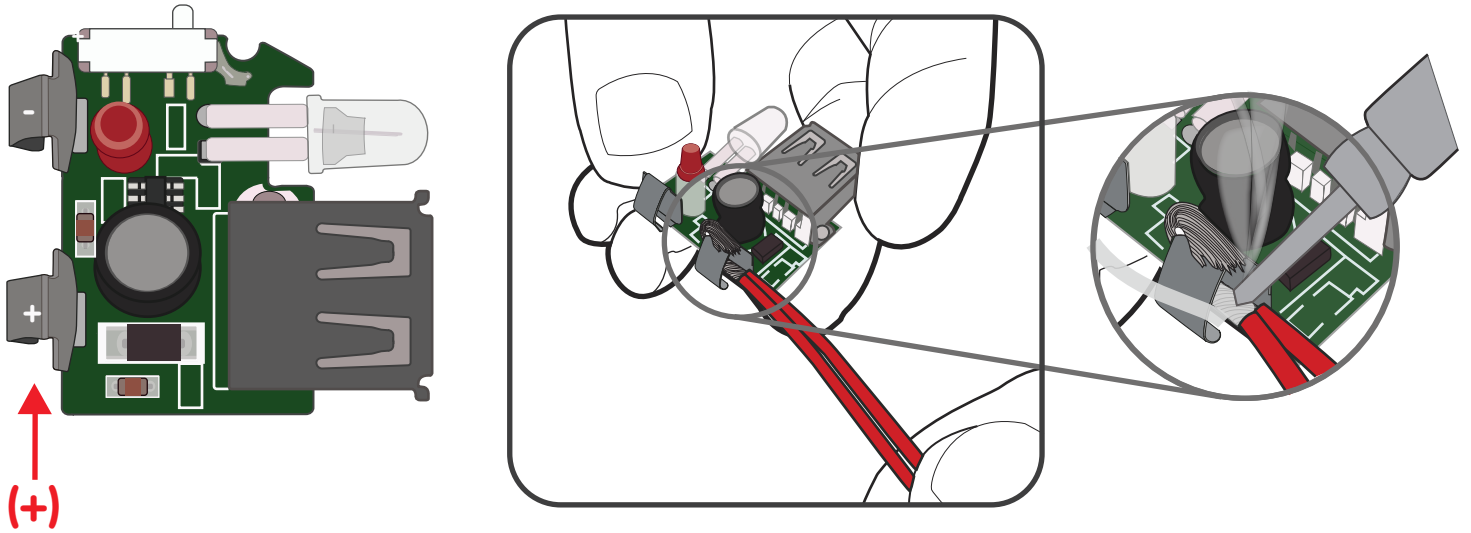
4 **TWIST BOTH RED WIRES**

Twist the other end of the first loose red wire with the positive (red) wire from the battery pack.



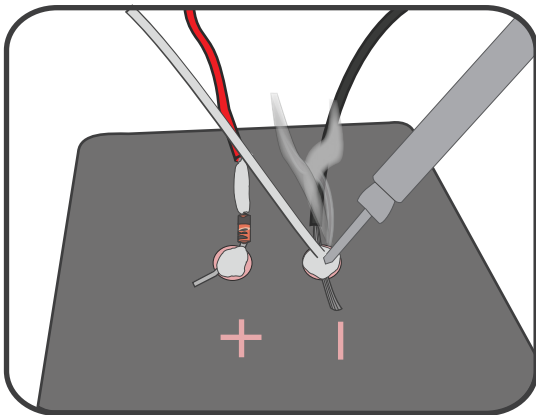
5 SOLDER RED WIRE to USB CIRCUIT

Solder the other side of the second red wire to the positive (+) terminal of the USB circuit.



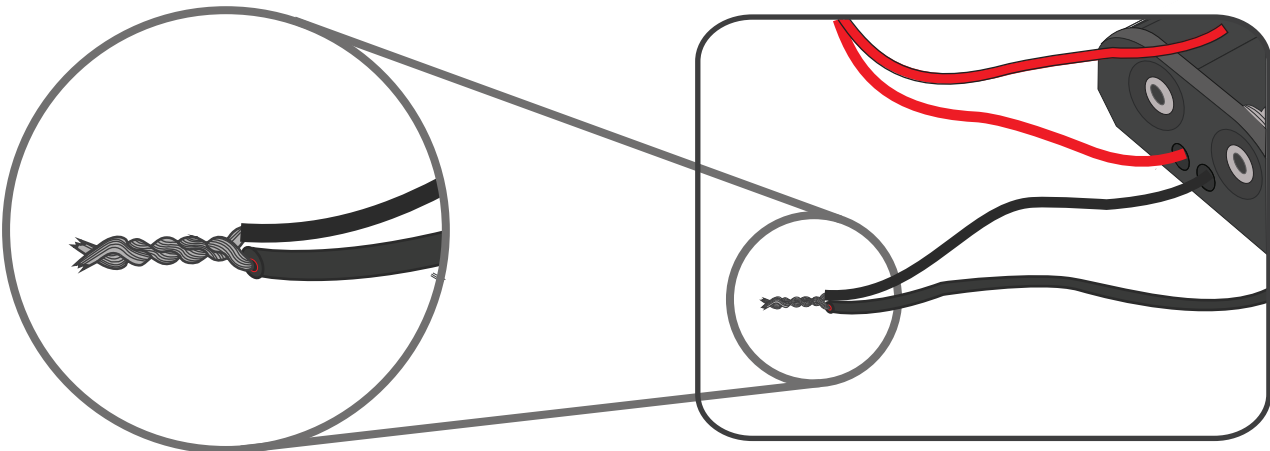
6 SOLDER LOOSE BLACK WIRE

Solder one end of the loose black wire to the negative (-) terminal of your solar cell.



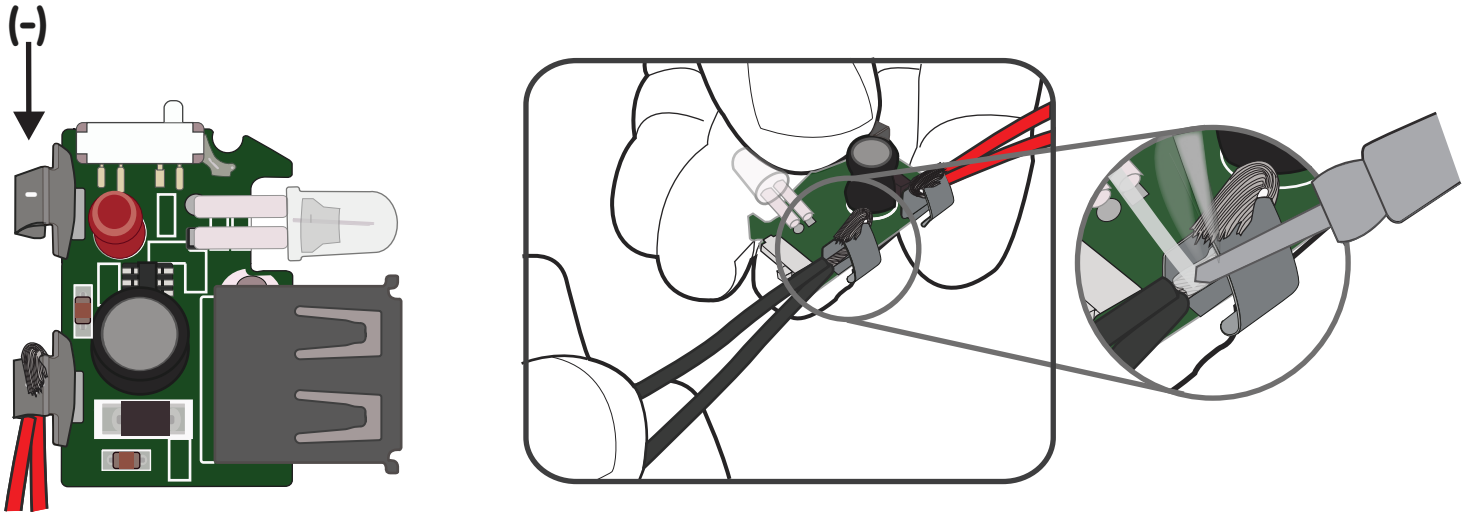
7 TWIST BLACK WIRES

Twist the negative (black) solar cell wire and the negative (black) battery holder wire together.



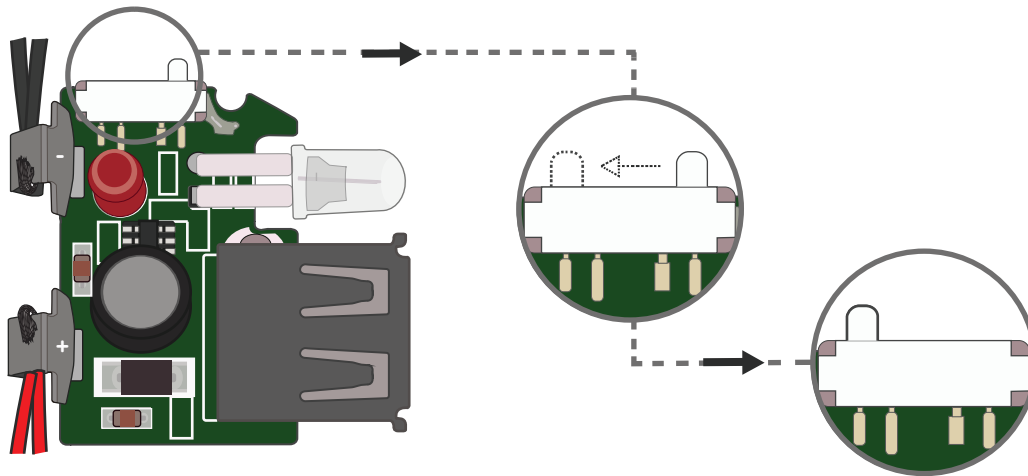
8 **SOLDER BLACK WIRES to USB CIRCUIT**

Solder the other side of the loose black wires to the negative (-) terminal of the USB circuit.



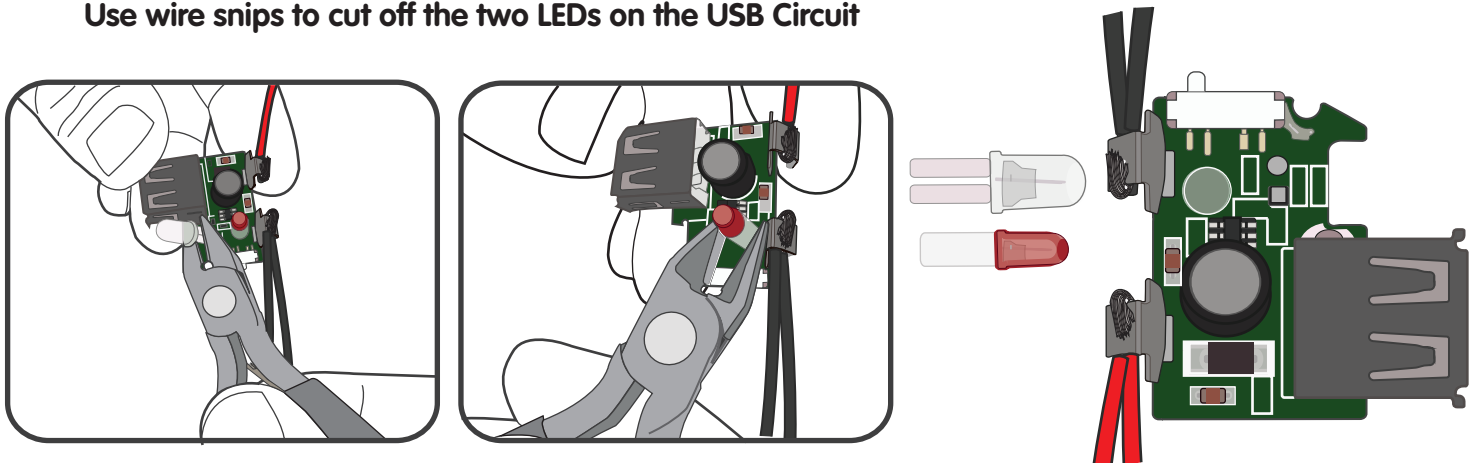
9 **FLIP the SWITCH**

Push the switch on the USB circuit all the way back (toward the soldered terminals)



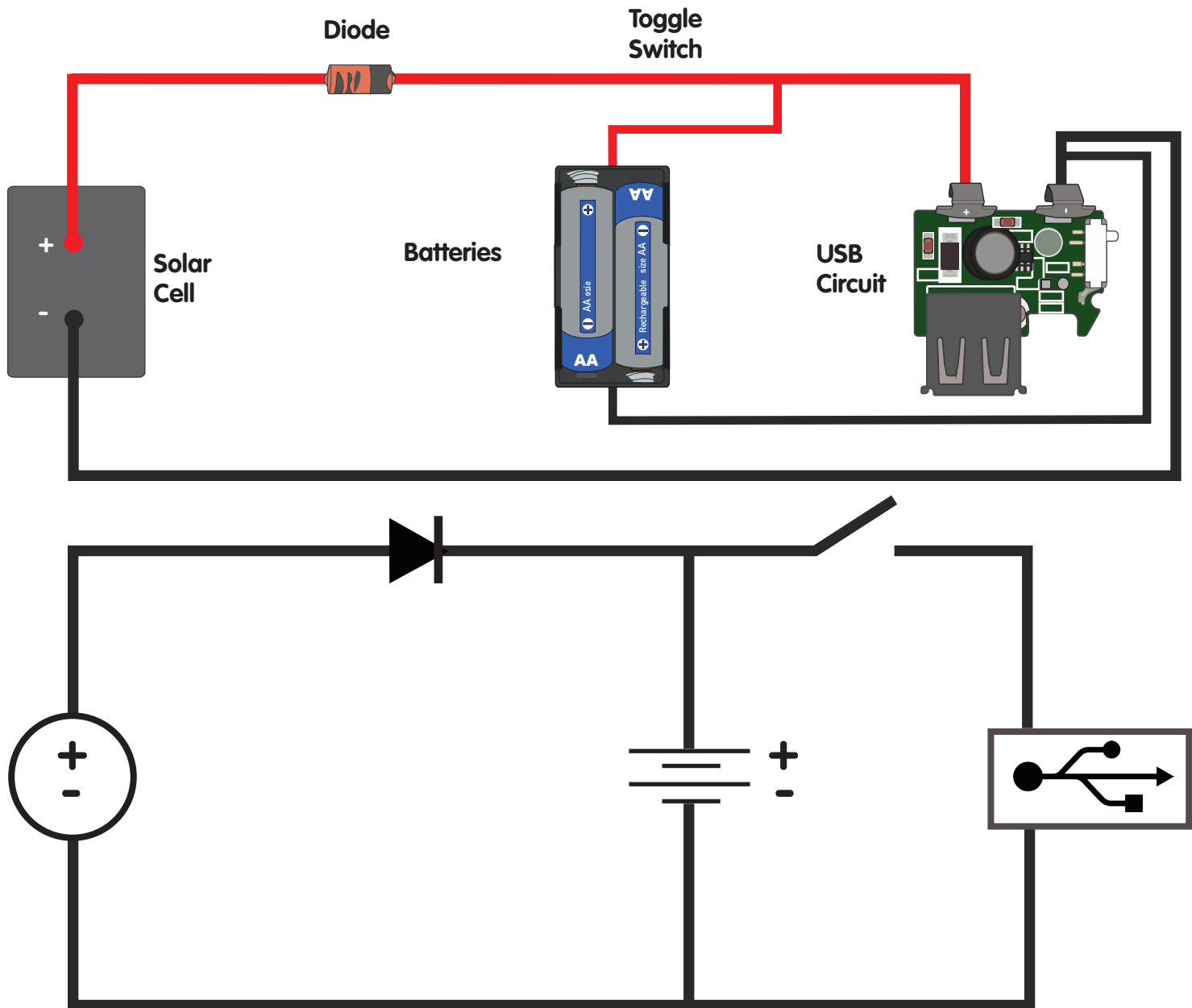
10 **CUT LEDs**

Use wire snips to cut off the two LEDs on the USB Circuit



YOU'RE FINISHED !!

Plug a device into the USB port to see if it charges. You're also ready to put your Solar USB Charger in an enclosure if you have one. If you have issues, check the circuit diagrams and troubleshooting list below.



TROUBLESHOOTING

1. Check the switch on the USB Circuit (step 10)
2. Try a different device. Some devices are not compatible with the USB circuit.
3. Check the batteries:
 1. Are they firmly in place and pointing in the correct direction?
 2. Do they have a charge? You can check this with a digital multimeter.
4. Check your solder points for short circuits or loose connections
5. Make sure your diode is aligned properly.

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