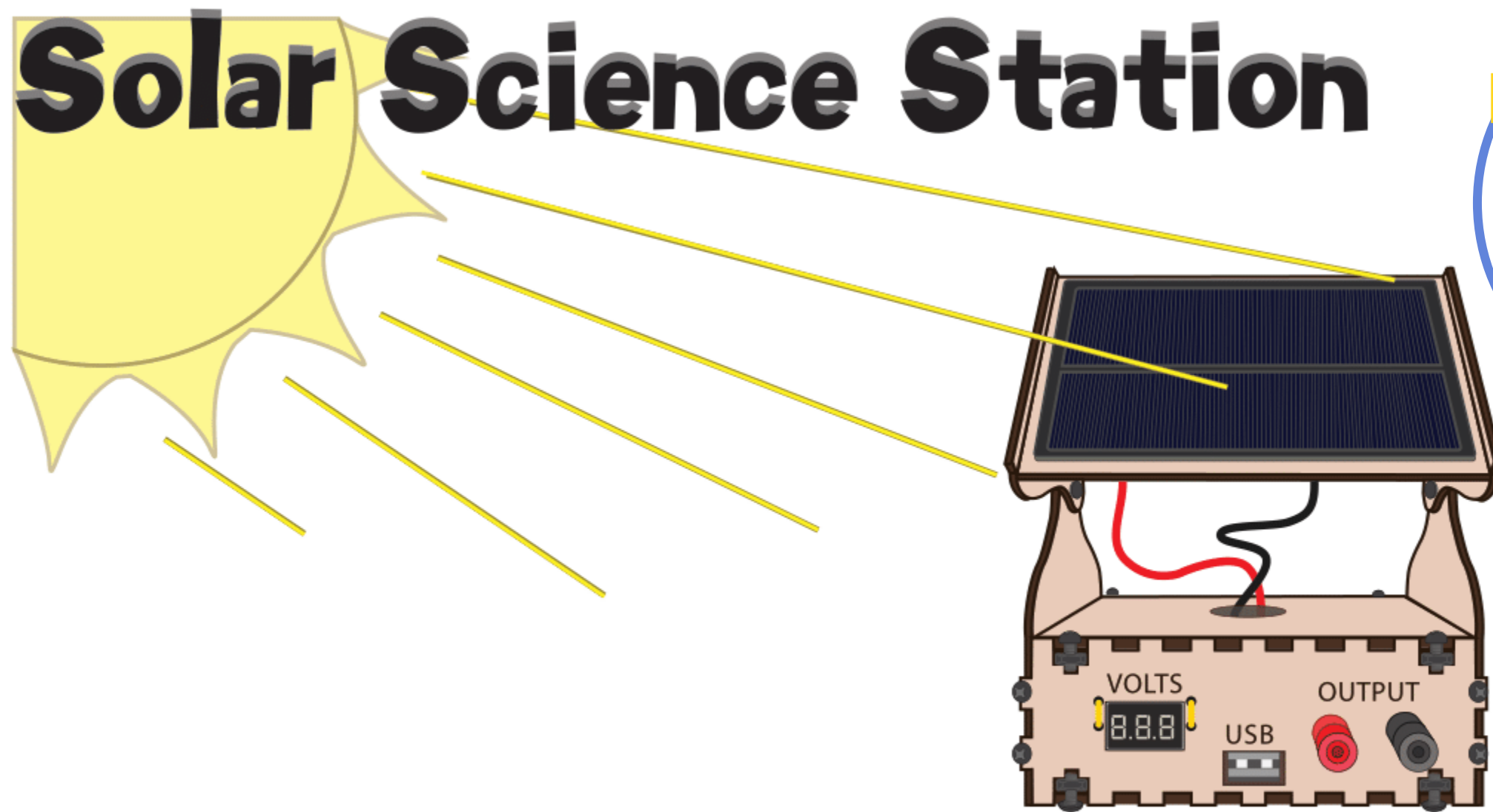


# Solar Science Station



See [carbondalepubliclibrary.org/png](http://carbondalepubliclibrary.org/png) for how-to video!



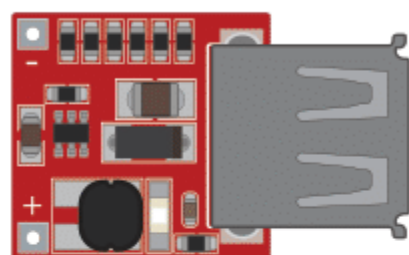
**TIME:**  
30-60 MINUTES

## YOU WILL NEED:

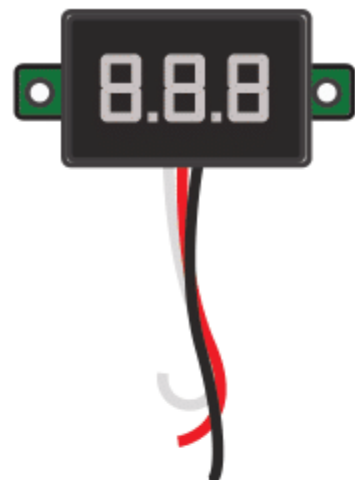
### PARTS:



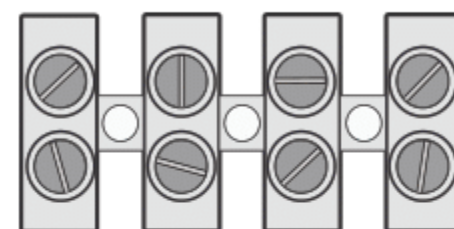
6V 200mA Solar Cell



USB Charging Circuit



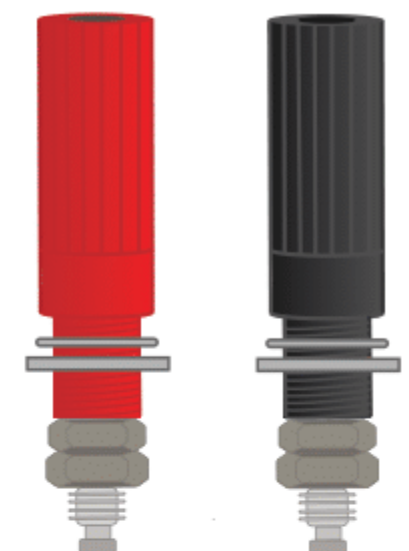
LED Voltmeter



4 Port Screw Terminal Block



24 Screws and Nuts



Banana Socket (Black and Red)



Stranded Wire



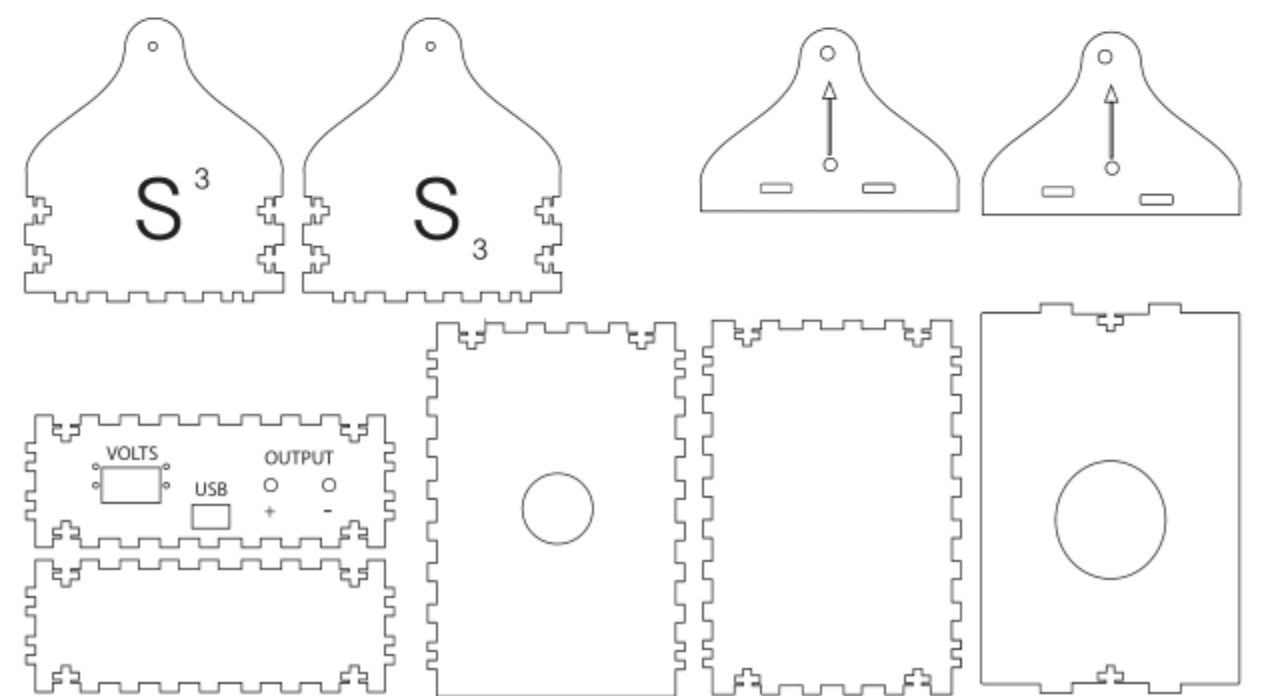
Solid Core Wire



Double-Sided Foam Tape

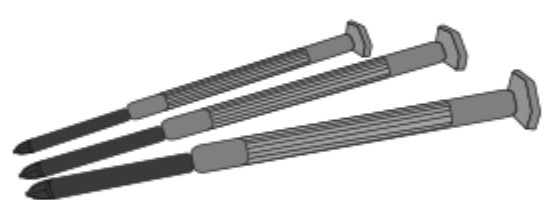


Velcro



Wooden Case

### TOOLS:



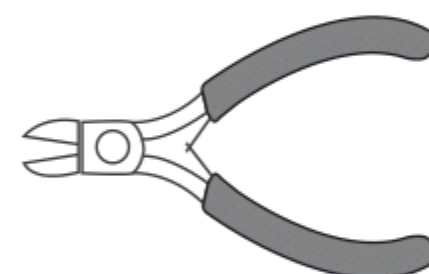
Screwdrivers



Scissors



Wire Strippers



Wire Cutters



We put 2 screwdrivers in your Station Kit. Use the Phillips (+) for the case and the flathead (-) for the terminal block. You won't need wire strippers or wire cutters.

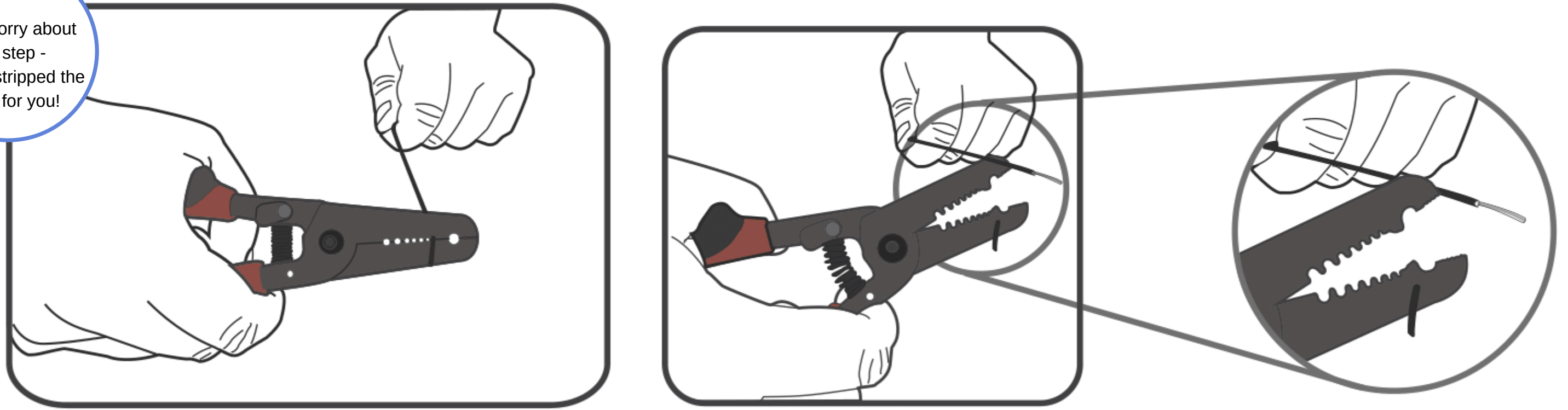
Please visit [www.BrownDogGadgets.com](http://www.BrownDogGadgets.com) for more great ideas & info.



# 1 STRIP WIRES

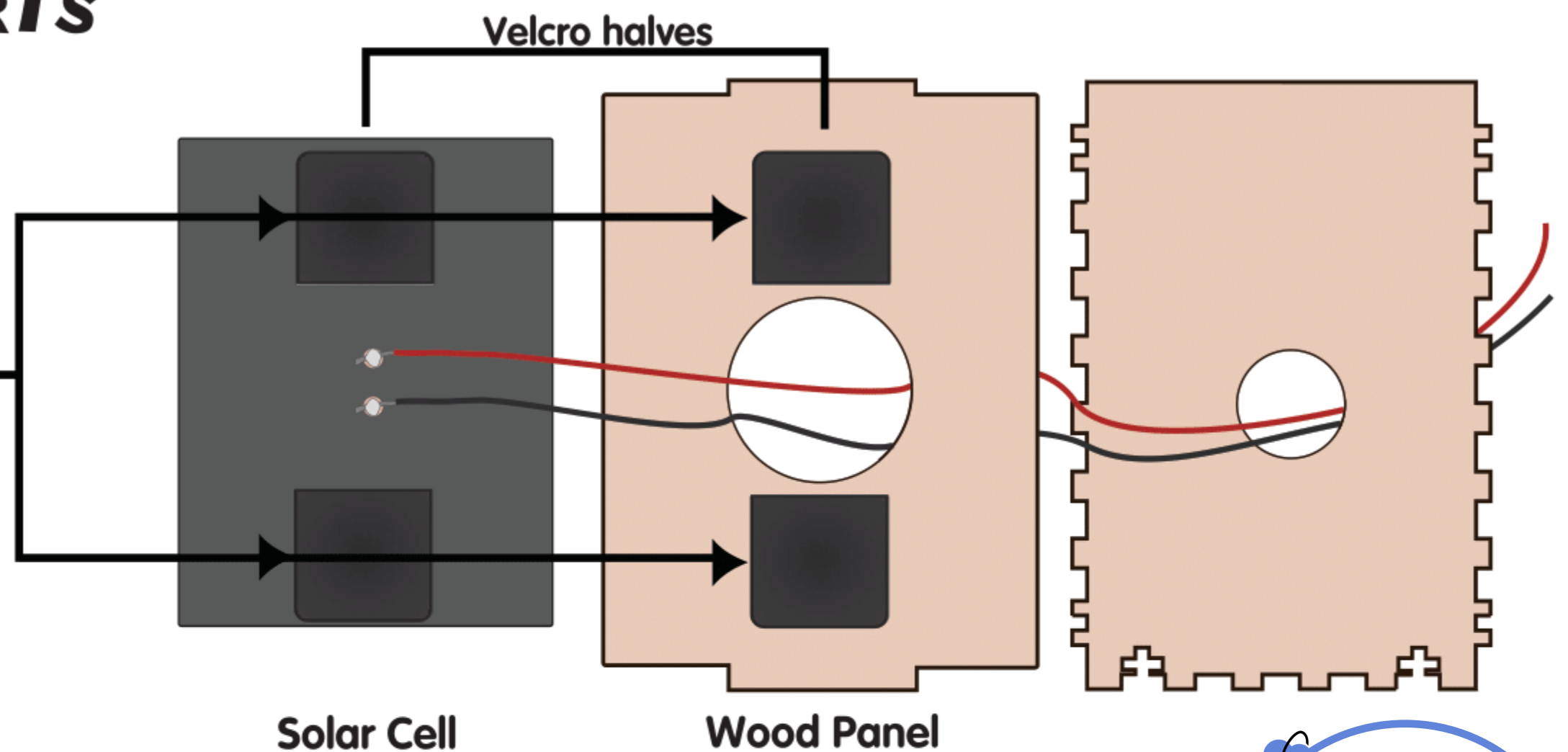
Strip the ends of the loose black and red wires, including the ones on the battery holder and solar panel.

**PNG**  
Don't worry about this step - We pre-stripped the wires for you!



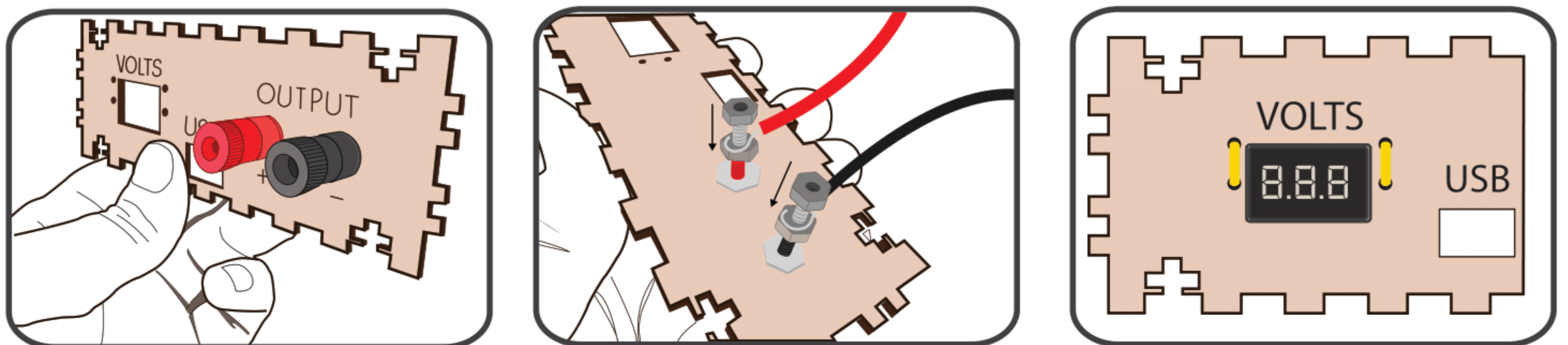
# 2 ATTACHING PARTS

Cut the velcro in half and attach to the solar cell and wood panel.



# 3 INSTALL HARDWARE in FACEPLATE

Use the screws on the back of the Banana Plug to secure the loose red and black wires in place.



**PNG**  
Wrap the **stripped** ends of the loose red and black wires around the Banana Plugs.

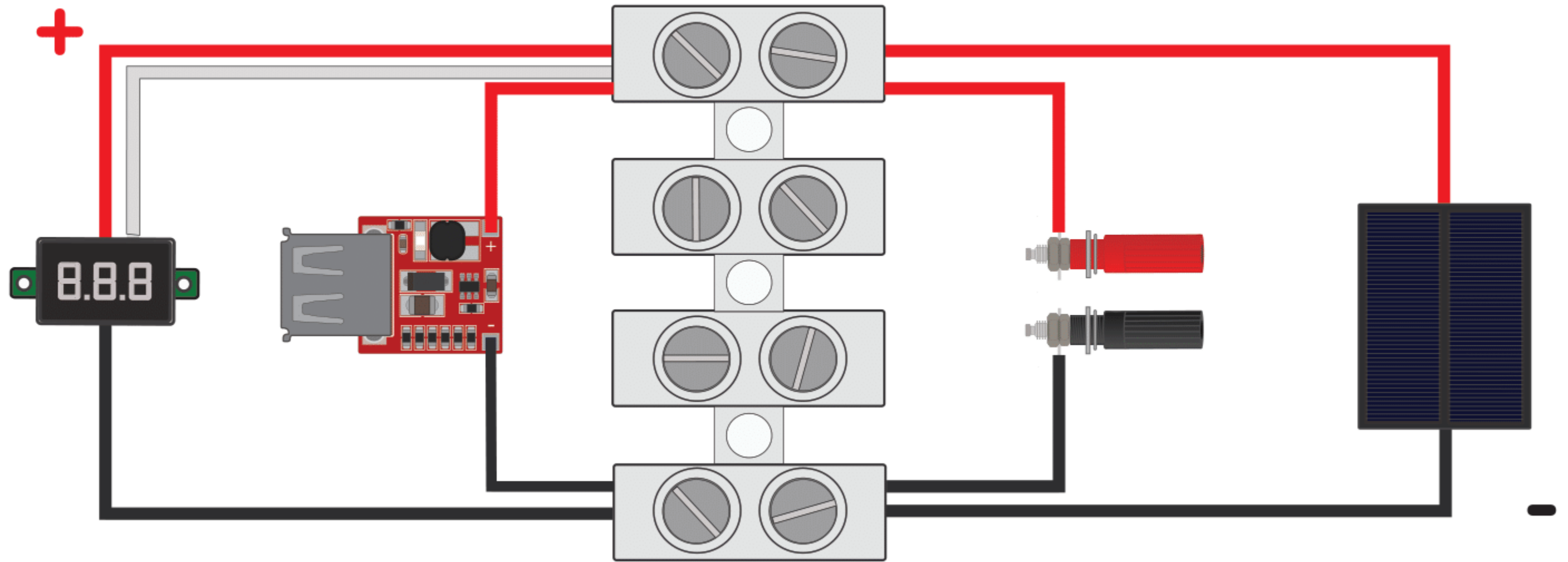
**PNG**  
Non-stripped wire ends have a perforated coating. Slip off the extra coating before using with the Terminal Block (next page).

Use the piece of stranded core wire like a twist tie to hold the volt meter in place. You may need to cut it in half.

**PNG**  
Your yellow stranded core wire has been cut for you!



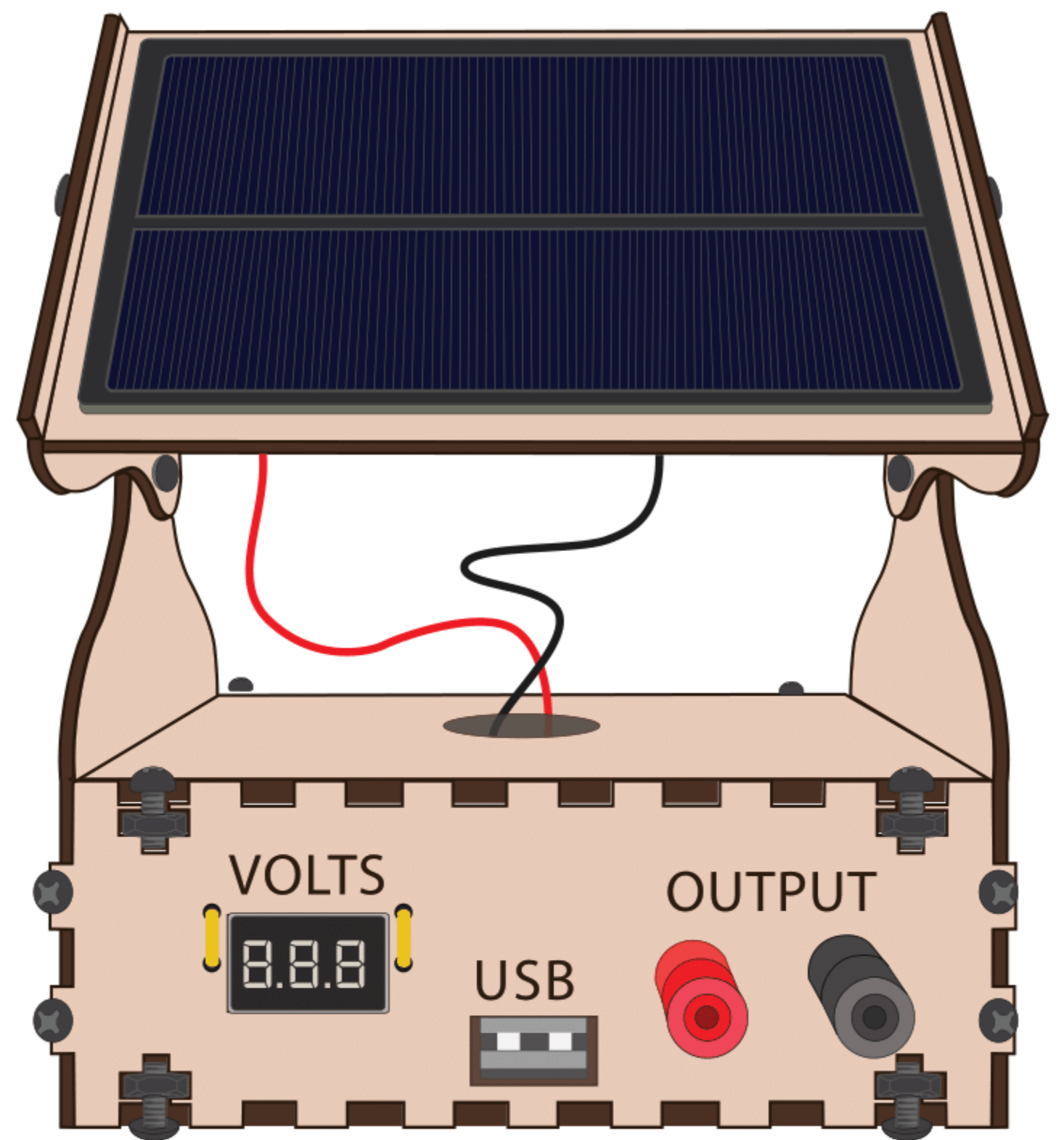
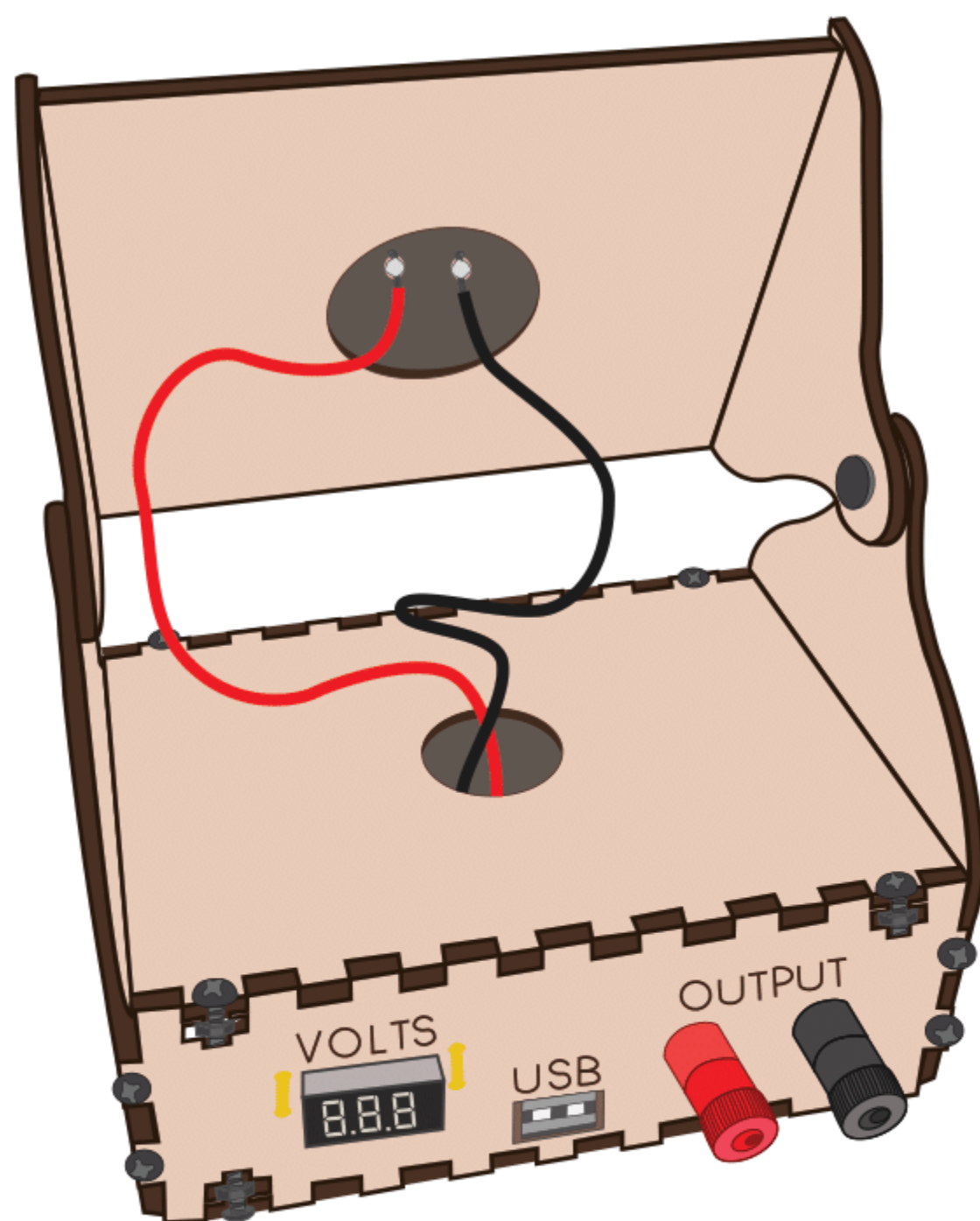
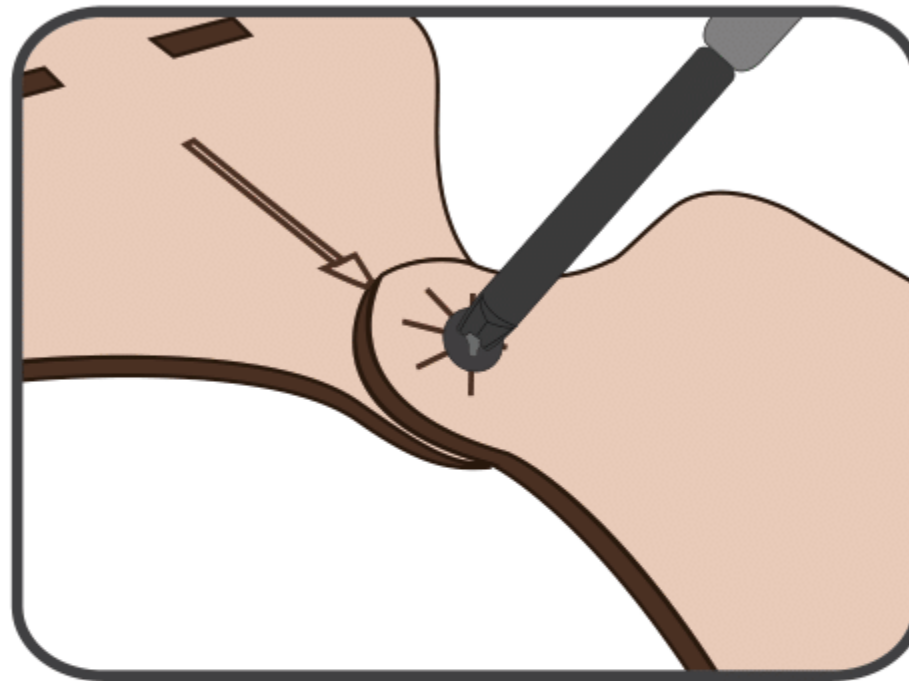
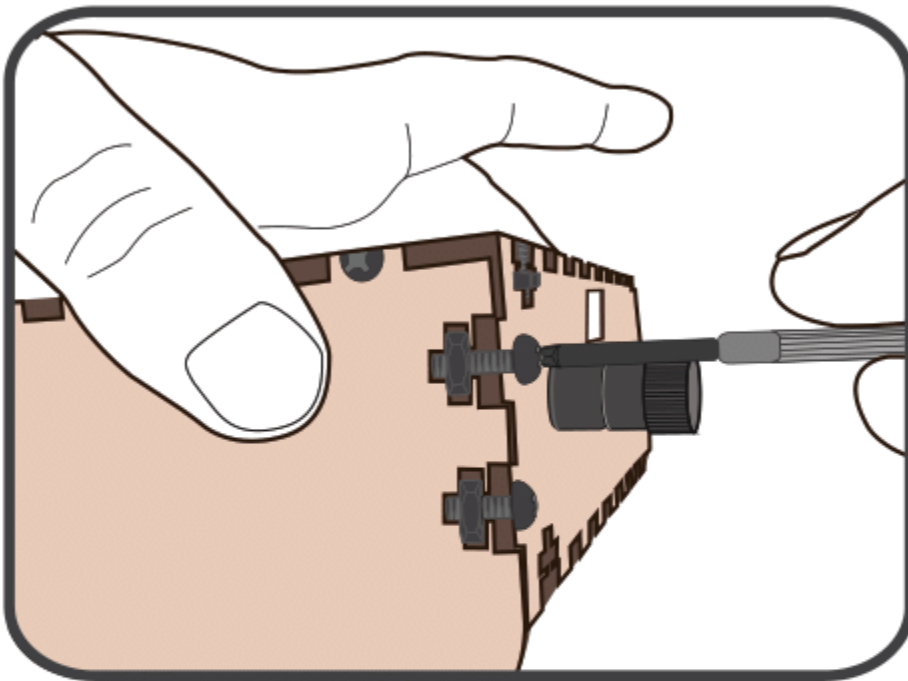
## 4 WIRING



## 5 ASSEMBLE the BOX

Use the foam tape to secure the USB circuit to the base of the wooden box.

If you're using a battery pack, but the foam tape in half and use the extra tape for the battery holder.



Please visit [www.BrownDogGadgets.com](http://www.BrownDogGadgets.com) for more great ideas & info.

# 7 WIRING

