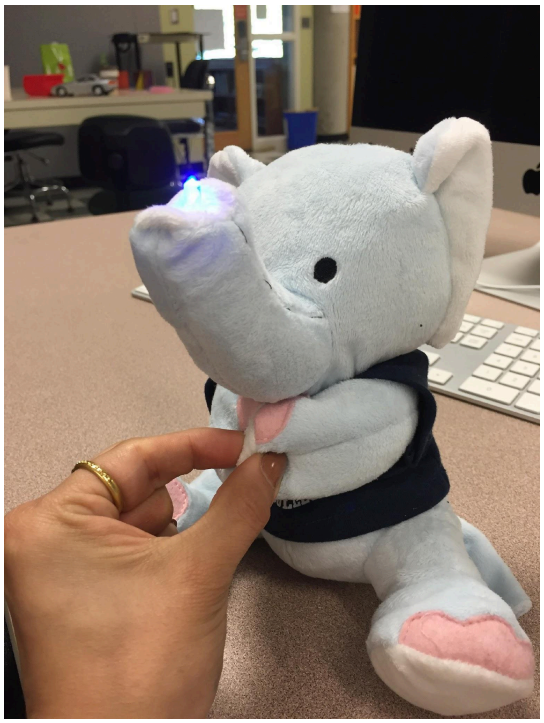
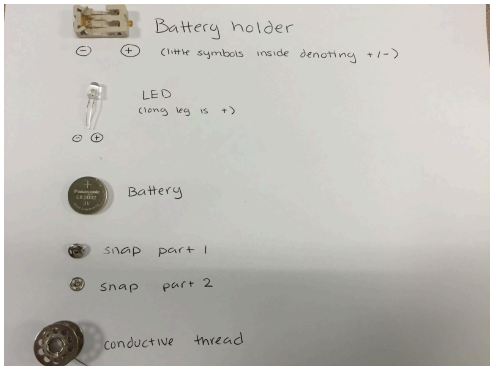
Assignment 2: Soft Circuit





Materials:



	Notes
Plush Toy	
LED	
Battery Clip	

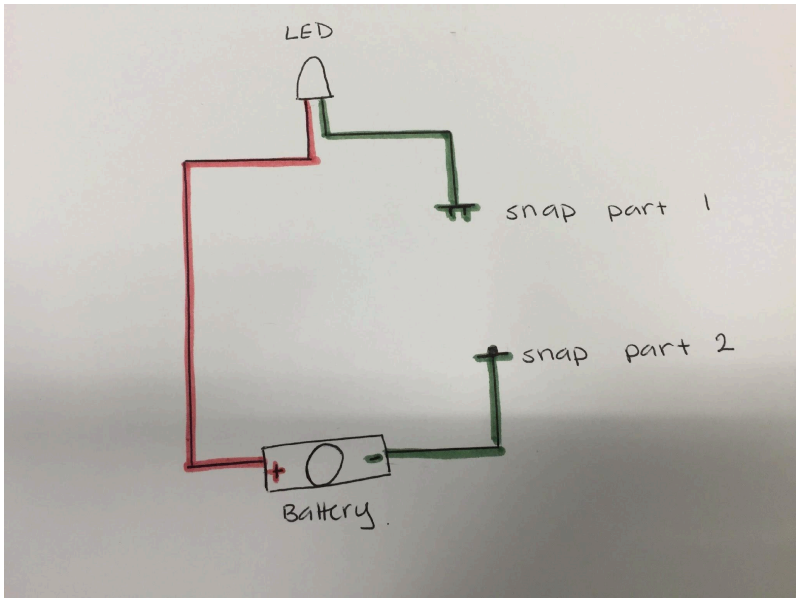
Metal Snaps	
Conductive Thread	~at least 1 foot
Small Nose Pliers	
Scissors	
Sewing Needle	

Goal:

- Transform a stuffed animal into a light up plush by completing a basic circuit.
- Learn how to create circuit using conductive thread

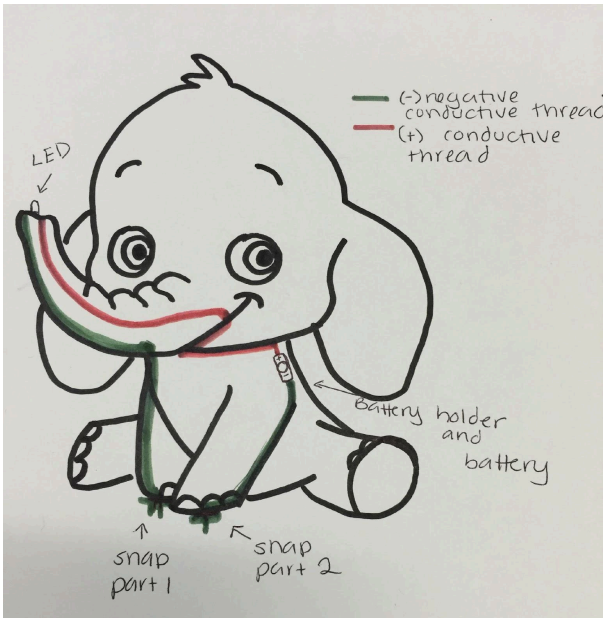
Step 1:

We will begin by making a simple circuit diagram. In our diagram we will have a battery clip with one side being positive and the opposite side being negative. One side of the battery clip will connect to the LED, in the case of our example we connected the positive leg to the LED. The negative side of the battery clip will connect to one of the snaps. The negative leg of the LED will connect to another snap.



Step 2:

Make a drawing of your plush toy and plan how you will sew the circuit onto it. Make sure to not cross wires anywhere!



Step 3:

Poke the legs of the LED through the fabric of the plush toy, remember to take note of which leg is positive and which one is negative.



Step 4:

With the needle nose plier curl the end of the LED that will connect directly to the battery, in the example I used the positive leg.





Step 5:

Cut a long piece of the conductive thread. Tie a knot on one end and loop the other end through the sewing needle and then tie a knot securing it onto the needle. Make sure to cut the excess thread off of the end with the knot.

Step 6:

Sew a couple of loops around the circle you created with the LED leg and then sew through the plush of the fabric until you get to the spot on the plush toy where you planned the battery clip to be at. **Tip: if you sew on the seams of the toy you wont see the thread as much**





Step 7:

Loop the thread into the correct side of the battery clip a couple of times and then sew another stitch and securely tie off the thread and cut it.



Step 8:

Loop the other LED leg the same way you did before and loop a new long piece of conductive thread around it and sew it to the spot where one of the snaps will go. **Tip: again, if you sew on the seam you won't see the stitches as much**

Step 9:

Put the thread through one of the holes in the snap, then stitch it to the next hole. Repeat this until you have sewn all the way around the snap. Now tie off the stitch securely and cut the end.



Step 10:

Cut another long piece of conductive thread. Tie a knot on one end and secure the other end onto the needle. Go to the place on your plush toy where the other snap will go. Sew the snap onto the spot the same way you did before.

Step 11:

Stitch all the way to the spot where the battery clip is. Loop the thread into the correct side of the battery clip a couple of times and then sew a stitch and tie it off. Make sure to cut off all the excess thread.

Now you have completed the circuit you drew on your sketch before and when you clip the hands together you should be completing the circuit so the LED should illuminate.

