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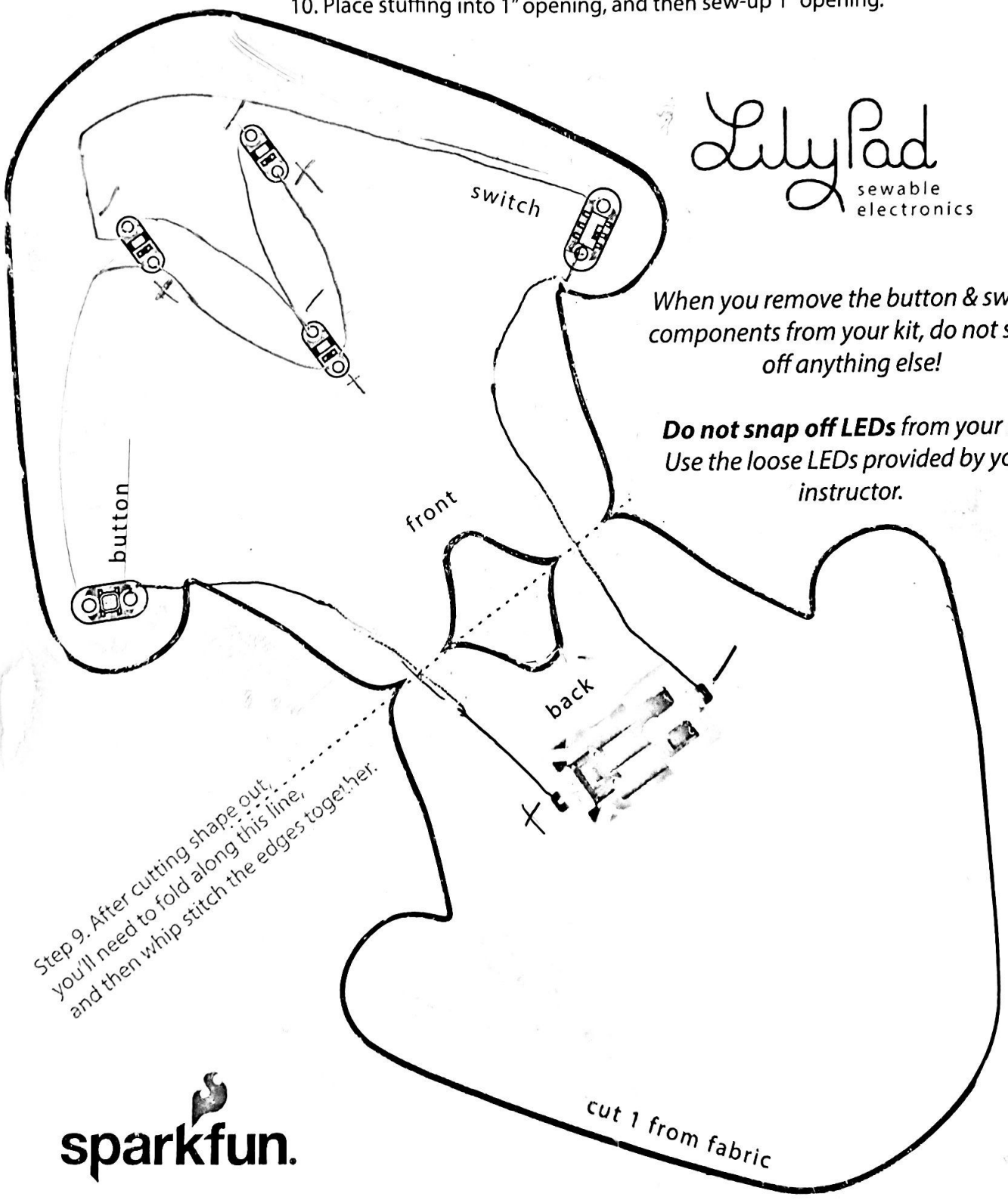
CS103: Circuit Plushy Pattern

1. Label the positive & negative ends of all components (on this paper, using a pencil).
2. Using a pencil, draw lines representing where you'll sew the conductive thread (Assignment: Simple Circuits #4).
3. Using the components, connect them with alligator clips as drawn in 2, to ensure it works.
4. Trace the plush shape onto your fabric.
5. Sew components to fabric in appropriate spot, using conductive thread.
6. Cut your threads super short, or secure them well! Don't want them overlapping with other threads!
7. Place battery in holder, and test that the circuit works when switch is 'on' and button is pressed.
8. Decorate plushy as desired. Then cut from fabric.
9. Use non-conductive thread and sew plushy together with whip stitch. Leave a 1" opening.
10. Place stuffing into 1" opening, and then sew-up 1" opening.



LilyPad sewable electronics

When you remove the button & switch components from your kit, do not snap off anything else!

***Do not snap off LEDs** from your kit. Use the loose LEDs provided by your instructor.*

sparkfun.

Assignment: Simple Circuits - due Tuesday, beginning of class

For this assignment, we're practicing implementing some simple circuits on paper and fabric.

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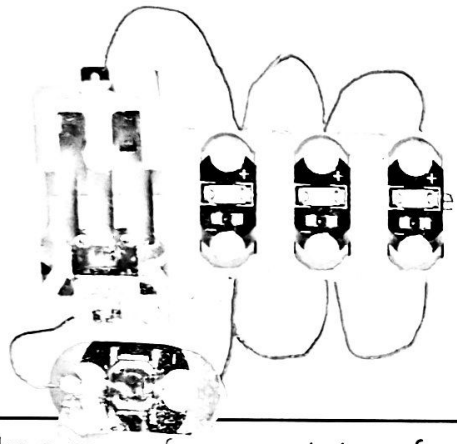
3. Make a copy of your prototype from #2b, but instead of patches of conductive thread, use a button. **How does this change your design? How should this change the circuit's behavior?**

Requires 7 alligator clips.
LEDs light up when button is pressed (momentary switch).

...after answering the question, test your prototype with alligator clips and components. Fix your design so that it works. **Do not break connections of any of the other Lilypad Kit components!**

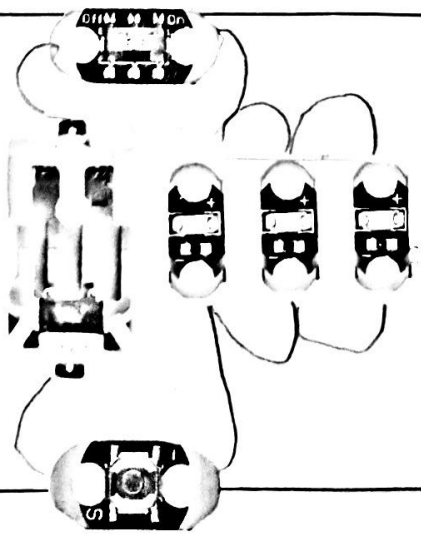


e your components for 3 in this space

4. Make a copy of your prototype from #3, but modify it to be an open circuit. Make the break on the other side of the LEDs from the button. Now, place a slide switch. Fill out the LED1,2,3 columns below with your estimates of the circuit's behavior with the given button & switch inputs.

Button	Switch	LED1	LED2	LED3	Results from testing w. alligator clips & components
un-pressed	off	off	off	off	True
un-pressed	on	off	off	off	True
pressed	on	on	on	on	True; only when switch is on & button is pressed do the LEDs light up
pressed	off	off	off	off	True

...when you've answered the question, test your prototype with alligator clips and components. Fill out the "Results..." column of the table with the observed behavior with real components.



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