Backpack Light

Have you ever dropped your pencil inside your bag and couldn't find it? Make a backpack light to illuminate your bag so your stuff is always in sight!

Written By: Natasha Dzurny

       learn.browndoggadgets.com/

INTRODUCTION

Make this backpack light. Be seen on the trail, or use it as a handy source of light to dig small objects from the bottom of your pack! The entire project takes under an hour and requires just basic sewing skills to complete.
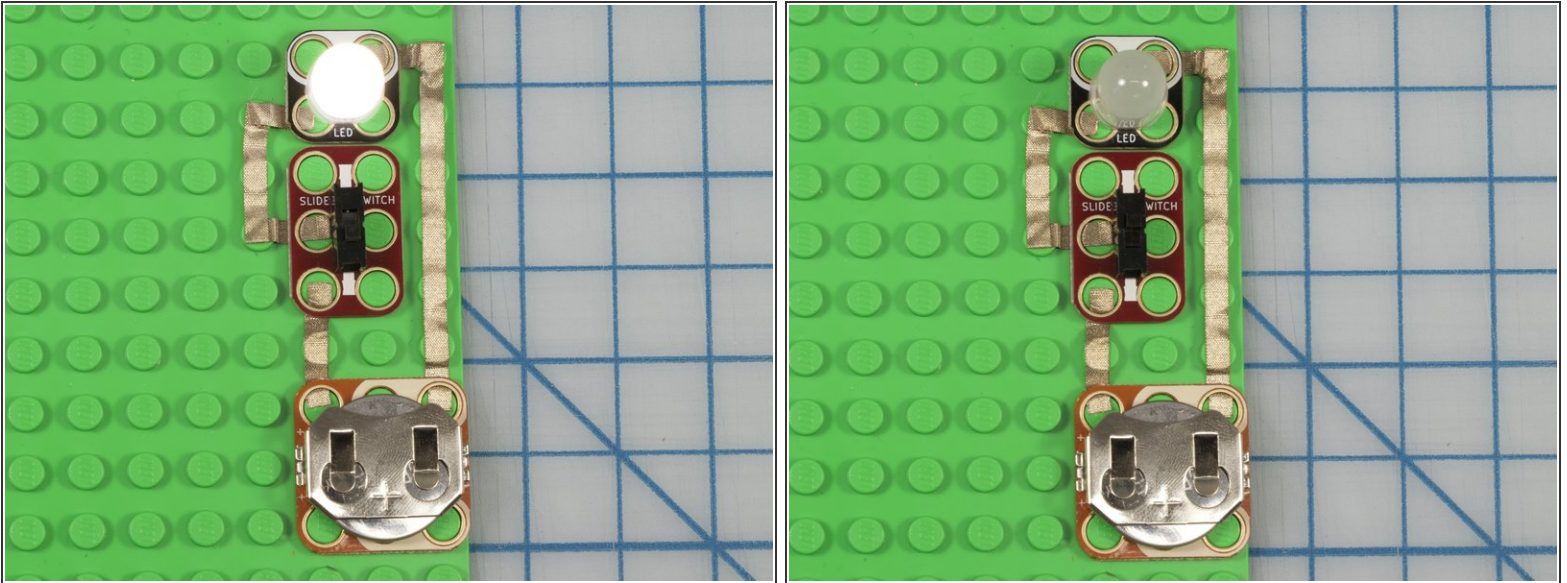
TOOLS:

- Scissors (1)
- Craft Knife (1)
- Pen or Marker (1)
  Something that writes on felt
- Printer (to print out the template) (1)

PARTS:

- Crazy Circuits Starter Sewing Set (1)
- Sewing Circuits Kit (1)

This document was generated on 2022-04-03 10:25:56 AM (MST).
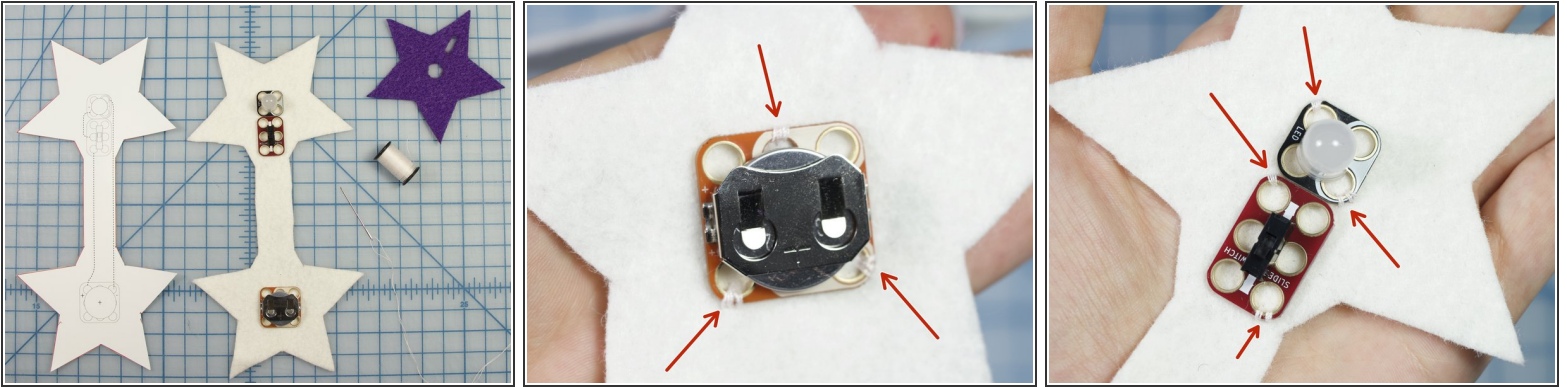
Step 1 — Make a circuit prototype

- Prototype your circuit with lego and Maker Tape

Step 2 — Gather supplies

- Cut out the template

- Trace the shapes onto the felt. (The shape with the two attached stars, pictured in white, should be in contrast to the star shape, pictured in purple.)

- Cut out the felt shapes

This document was generated on 2022-04-03 10:25:56 AM (MST).

© 2022
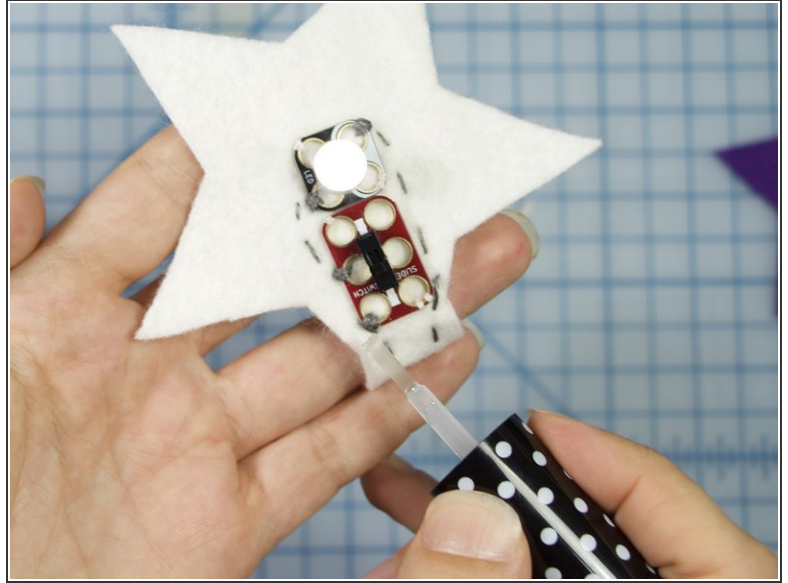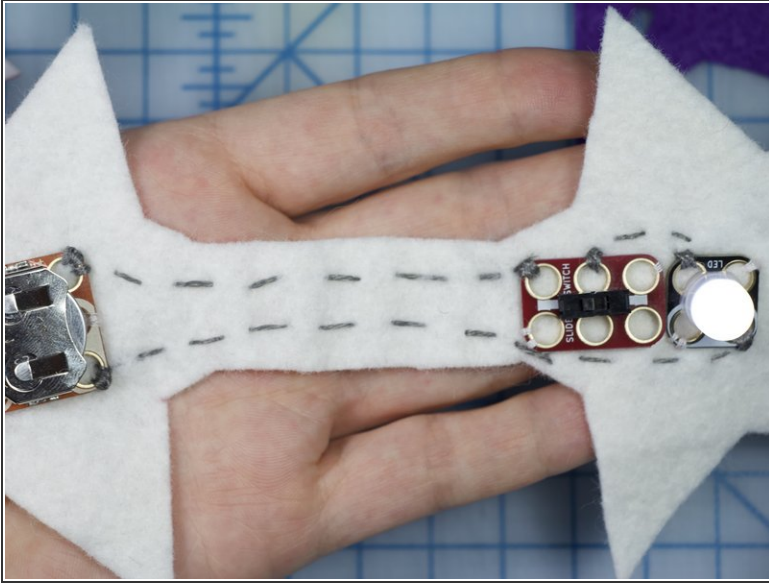learn.browndoggadgets.com/
Page 3 of 8

Step 3

- Place your crazy circuits according to the diagram on the template

- Use a needle and thread to tack the crazy circuits components in place as shown.

Step 4

- Using conductive thread, stitch a secure connection to the battery's positive hole.

  - Tip: Use a series of finishing knots for this step. To create a finishing knot, pass the needle back through each stitches loop just before you tighten the stitch. This will help prevent your knot from untying.

- Sew a running stitch to the switch's bottom hole and secure with multiple finishing knots. Trim the thread.

- Starting with a new piece of thread, stitch a secure connection from the switch to the LED using the same method.

This document was generated on 2022-04-03 10:25:56 AM (MST).

© 2022

learn.browndoggadgets.com/

Page 4 of 8

Step 5

- Starting with a new piece of thread, connect the negative hole of the LED to the negative hole of the Battery.

  - Tip: Be sure that the thread doesn't go underneath the switch component so that the metal pads are not connected accidentally.

  - Test your circuit by sliding the switch

  - When all connections are working, seal your knots with clear nail polish or a similar adhesive like super glue.

This document was generated on 2022-04-03 10:25:56 AM (MST).

© 2022   learn.browndoggadgets.com/   Page 5 of 8

Step 6

- Place the small star over the LED and switch

- Place the interior star underneath the main star

- Attach the keychain around both pieces, just like you would add a key to the loop.

Step 7

- Now it's time to decorate!

- Use embroidery floss to add stitches and embellishments.

  - Tip: Embroider the top star before connecting it to the project for easy stitching.

- Test your circuit one more time before the next step.

This document was generated on 2022-04-03 10:25:56 AM (MST).

© 2022

learn.browndoggadgets.com/

Page 6 of 8

Step 8

- Whip stitch around the edge of your star to hold the project together.
  - Tip: To do a whip stitch, insert your needle through the same side of the felt for each stitch, and allow the thread to wrap over the edge.
- Add a few more stitches to tack the top star in place.

Step 9

- You're ready for backpack bling!

This document was generated on 2022-04-03 10:25:56 AM (MST).

You will need:

- Felt in 2 or 3 colors
- Keychain Ring (1 inch or larger)
- Needle and thread (that matches the main felt color)
- Embroidery Floss/Thread (accent color) with larger eyed needle
- Clear nail polish (to seal knots)

This document was generated on 2022-04-03 10:25:56 AM (MST).