### Day of the Dead Circuit Projects Día de Muertos Circuito Proyectos



Sugar s



### Includes Templates and Instructions!









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The projects in this eBook can be created using our **Paper Circuits Kit** or our **Origami Circuits Kit**. Follow the included instructions for your choosen project. You'll need your own paper, tape, glue, and scissors, as well as a safety pin or push pin to make holes in the paper for the LED legs.

Guides for each of these projects (and many more!) can be found at learn.BrownDogGadgets.com



#### Sugar Skull Paper Circuit

We've included four different templates to cut out and color, and then add a circuit featuring two LEDs for eyes. You can find the LEDs, CR2032 Batteries, and Maker Tape in our Paper Circuits Kit.

Instructions: Pages 3-5 Templates: Pages 6-9



#### Smiling Skull Origami Circuit

For a more advanced paper project try this skull that will move across a surface using a vibrating motor powered by a CR2032 Battery. You'll find these supplies in our Origami Circuits Kit.

Instructions: Page 10 Template: Pages 10-11







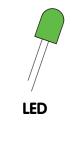




Maker Tape



**Battery** 



Motor





New to paper circuits? Check out our Getting Started with Paper Circuits video available at: https://youtu.be/BxOqugaH1ZE

For more free templates and fun project ideas visit us at BrownDogGadgets.com

Make a Sugar Skull (with light-up eyes) using two LEDs, a CR2032 battery, and some Maker Tape.

You can find all these parts in our Paper Circuits Kit. Just supply your own paper, scissors, and colored pencils or crayons.



### Cut Out Skull

Use scissors to cut out the skull. Choose one of the templates found at the end of this file.

### 2 Color & Decorate Skull

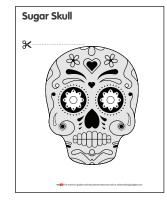
Use colored pencils, crayons, or markers to color and decorate your skull as you see fit.

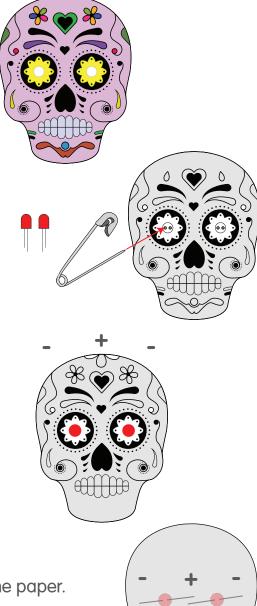
#### **3** Poke Holes

Use a safety pin or a thumbtack to poke holes for the LED legs to go through.

#### **4** Insert LED Legs

The longer (positive) legs of the LEDs should be on the inside (closer to the center) and the shorter (negative) legs should be on the outside edge.





#### **5** Bend LED Legs Flat

Turn your skull over and bend the LED legs flat against the paper.

The two longer (positive) legs in the center should touch. If they don't touch we'll need to make sure we connect them with some Maker Tape.

#### 6 Add Negative Tape

Add Maker Tape so the two shorter (negative) legs on the outside are connected with a third piece of tape forming a wide "U" shape.

#### Add a Tape Loop

Make a loop of tape and stick it down to the bottom piece of tape. (This is where we'll stick our battery.)

#### **8** Add the Battery

Stick the battery to the Tape Loop with the negative side down to the Tape Loop and the positive side facing up. (Positive is the shiny side with a + sign on it.)

#### Add the Positive Tape

Finally, add one more piece of Maker Tape that connects the two longer (positive) LED legs to the top of the battery.

Make sure the positive tape is touhcing both positive LED legs, and if it is not, just add another piece of tape to connect them.

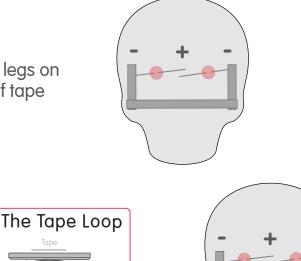
#### D Enjoy your light-up Sugar Skull!

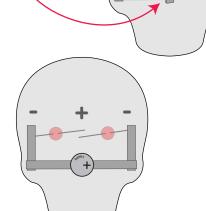
If it doesn't light up, check all your connections. Make sure to press down on the tape firmly where it connects to the LED legs.

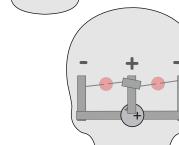
If only one LED lights up you may have one of them reversed. Flip the battery upside down and see if it lights up. You may need to remove and rotate an LED 180 degrees for the correct polarity.

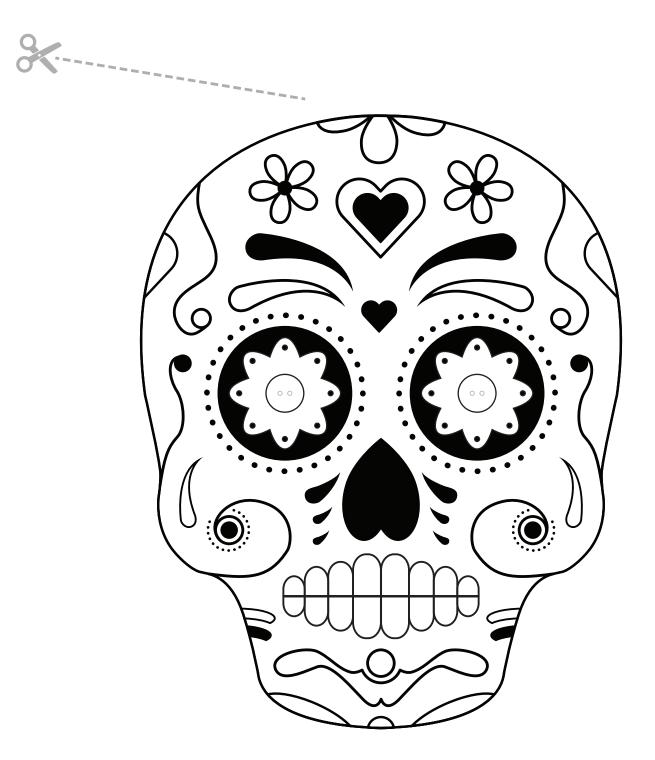
Tape Loor



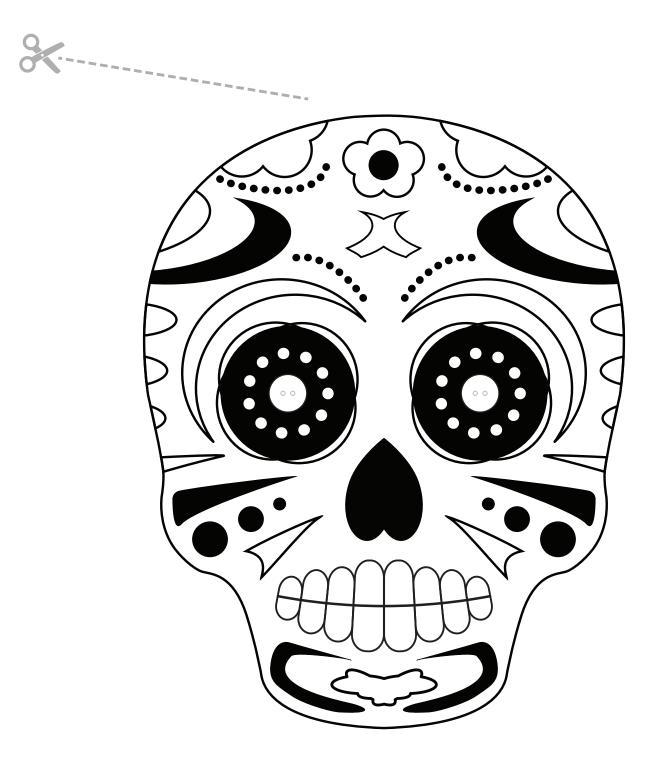




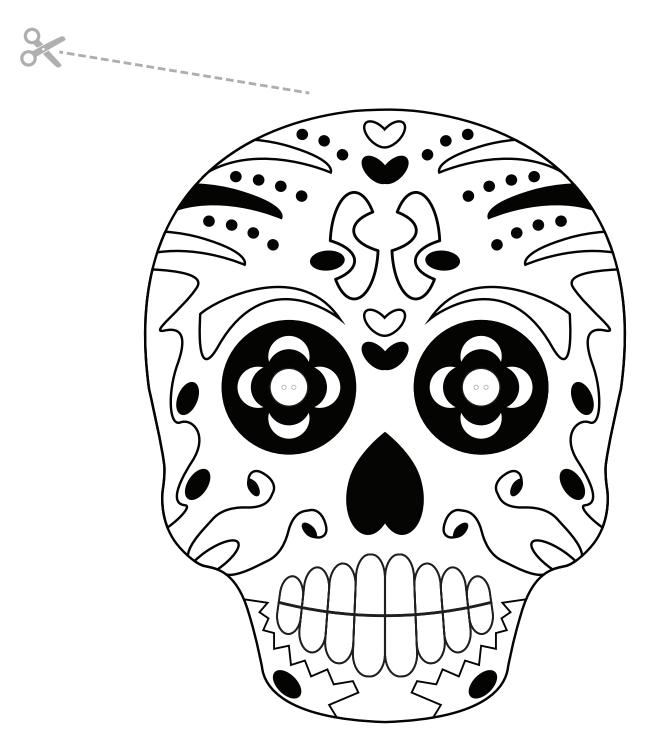


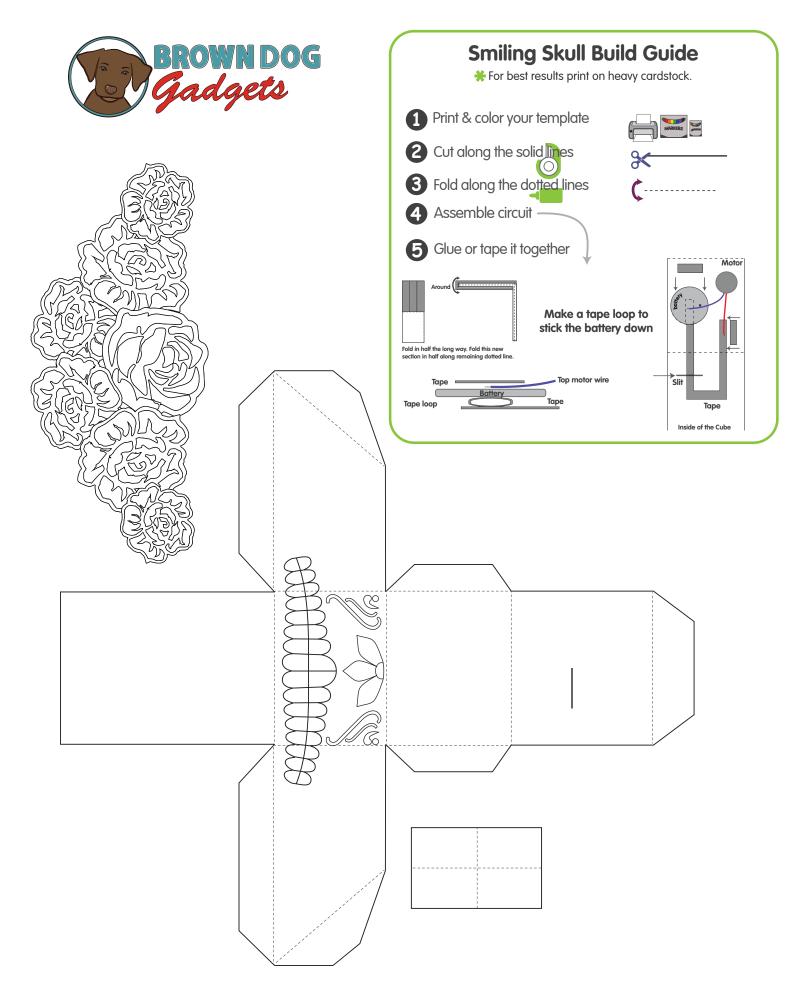


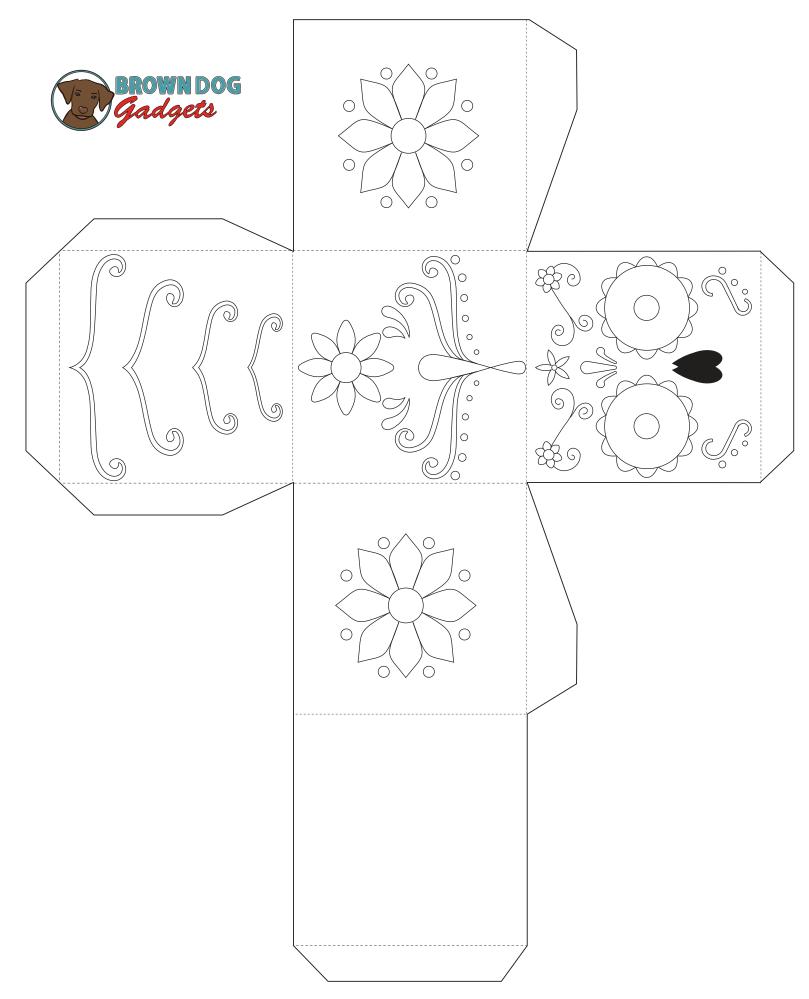




Sugar Skull 4 of 4







# More Projects & Inspiration

Using Maker Tape allows you to build circuits on more surfaces than just paper!

This makes it a great material to design circuits on top of felt or other craft materials, like the LED bracelet below. It works great on cardboard, tabletops, even glass windows. With the same paper circuits techniques, you can build all kinds of projects! The possibilities are endless.



#### Light-Up Cards (Maker Tape, LEDs, Batteries, and Paper)



**Light-Up Heart** 



Laser Cat



**Birthday Candles** 



**Light-Up Tree** 

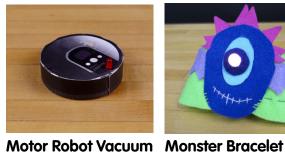
Robots and Wearables (Maker Tape, LEDs, Motors, Batteries, Paper, Felt)



**Tree Bracelet** 



#### **Motor Robot Buddy**





These are just some of the projects to try next! Check out all of our free project templates and guides available to download at www.BrownDogGadgets.com



### Learn, Create, and Inspire–Even on a Budget

Creating a project from scratch can be difficult for the casual builder. Finding the right directions, the right parts, and the right tools—all at the right price—can be a major hurdle.

At Brown Dog Gadgets, we've created kits and projects for creators of all ages and budgets. Follow our step-by-step project directions and learn more with our classroom resources or find individual parts to dream up your own creations. No matter how or what you create, our products can help you learn the basics of electronics, circuitry, and solar energy.

Find additional eBooks, crafting guides, videos, directions, and educational resources at BrownDogGadgets.com. Contact us for educational discounts and free professional development classes.

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