

# WORKSHOP EXTENSION ACTIVITY

Built by The Home Depot Kids Workshop



## GINGERBREAD HOUSE

Ages 5-8 and 9-12

**MAKE. CREATE. EXPLORE.**

#KidsWorkshopExplore





Many cultures use lights to celebrate special events and holidays.

Here are some ways that people use light to **celebrate**.



**Use your Gingerbread House to engineer lights** for some added holiday fun! Outdoor holiday lights can be seen on porches, homes, and in windows. Many cultures use lights to celebrate special events and holidays. The lights might dance to music, flicker, change colors, or illuminate. When selecting lights, it's important to think about how they work and how you want to use them.

There are a few ways we can help you light up your Gingerbread House!

## Investigate!

**Discover how to make a circuit and use your results to light up your Gingerbread House.**

**You'll need...**

- (1) LED Bulb
- (1) 3-Volt circular watch battery
- (2) 6" inch pieces of wire (strip off each end)
- (2) Alligator clamps
- Insulating tape

1. Use the battery, wire, and alligator clamps to make the bulb light. Draw every set-up you try. When you have completed your testing, circle which one(s) make the light turn on.



Share your discovery! Use **#KidsWorkshopExplore** to post pictures of your experiment and results.

Draw each set-up you try. Circle the ones that were successful.


2. Why do you think some of the circuit set ups you tried worked, but others did not?

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3. Where does the electricity go in the circuits that work?

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4. Use the insulating tape to mount your circuit on the outside of you completed Gingerbread House.

5. Remove connection to turn off lights when not in use.

**Why do some circuit set-ups work, but not others?**



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# Accent!

String lights around your Gingerbread House.

## You'll need...

- Strip of battery-powered LEDs
- Batteries
- Ruler
- Painter's Tape, supplied stickers, thumbtacks

1. Measure your Gingerbread House and sketch the dimensions.

<b>Front view</b>	<b>Side view</b>
<b>Side view</b>	<b>Back view</b>

2. Measure the amount of lights you have.
3. Add to your sketches where you plan to place your lights. They might spell out a word, go straight across, or drape around the Gingerbread House. Don't forget to consider where you will put the battery pack.
4. Place the lights on the Gingerbread House according to your design and use the Painter's tape, supplied stickers, or thumbtacks to secure.
5. Switch off or remove batteries when not in use.





## Window Candles!

Use single LEDs to look like window candles.

### You'll need...

- (2) 3-Volt circular watch batteries
- (2) LED lights
- Painter's Tape

1. Use the longest leg of the LED and place it on the positive side of the battery.
2. Place the shorter leg on the negative side.
3. Use the painter's tape to secure the legs in place so the light remains on.
4. Line up the light to the base of the windows on your Gingerbread House. Secure in place with the Painter's tape.
5. Remove one of the legs when not in use to turn off the light.

**Share your build!** Use [#kidsworkshopexplore](#) to post pictures of your Gingerbread House.

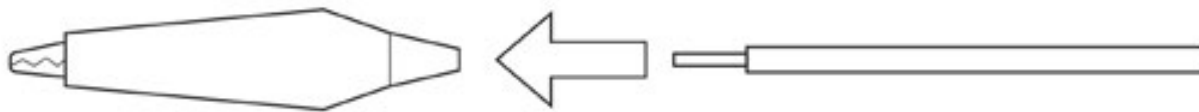




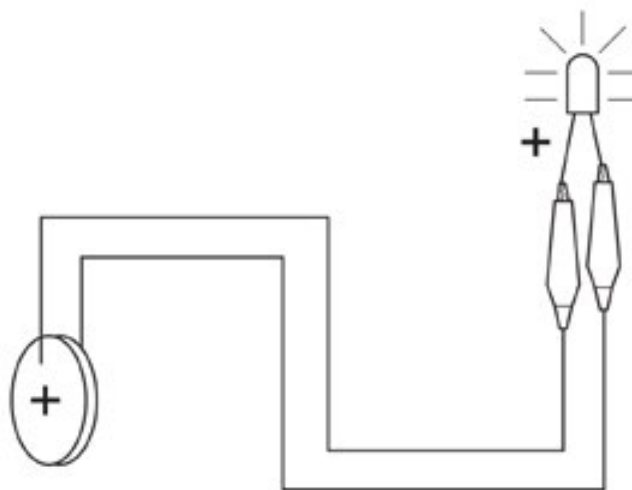
Cut wire into (2) 6" sections.



Strip 1/2" off each end



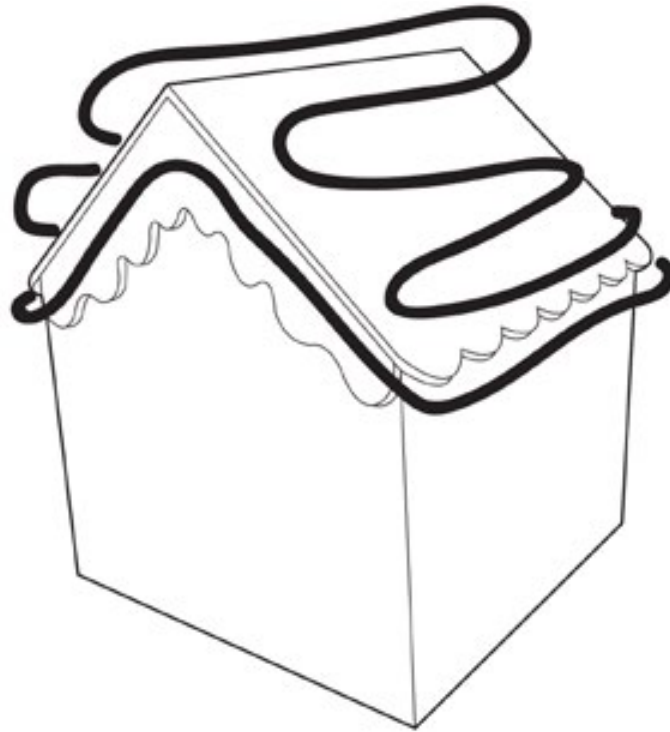
Insert one end into alligator clamp and crimp together.



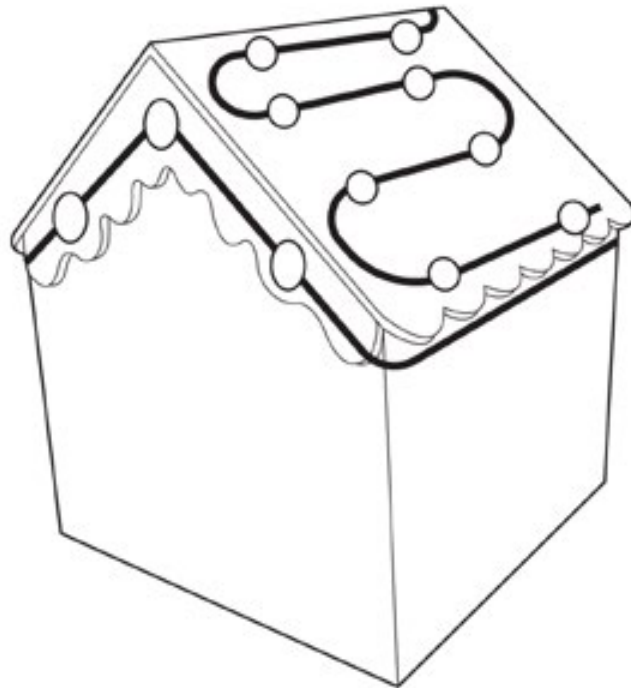
Create circuit by connecting clamps to LED leads and attaching the longer lead to the positive side of the battery and the shorter lead to the negative side of the battery. Attach to house in desired location.



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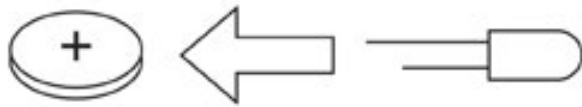
Roughly lay out lights in orientation you wish to decorate your house.



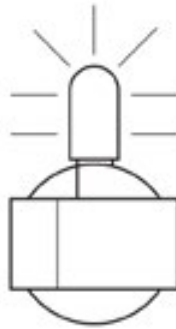
Using supplied stickers or tape secure in place.



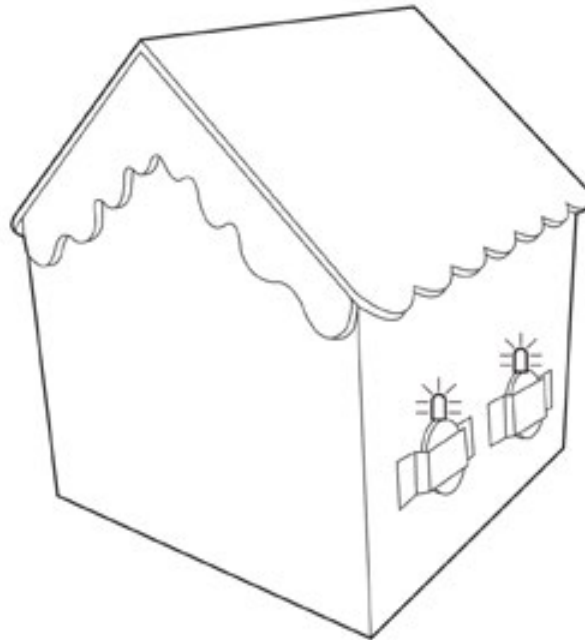
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Create "candles" by touching long LED lead to positive side of battery and short side to negative side.



Pinch leads to battery and secure with tape.



Attach to house in front of base of windows.



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