

Make Your
Own

LED Flashlight

Julia Garstecki and
Stephanie Derkovitz





Hi Jinx is published by Black Rabbit Books
P.O. Box 3263, Mankato, Minnesota, 56002.
www.blackrabbitbooks.com
Copyright © 2020 Black Rabbit Books

Marysa Storm, editor; Michael Sellner, designer;
Omay Ayres, photo researcher

All rights reserved. No part of this book may
be reproduced in any form without written
permission from the publisher.

Names: Garstecki, Julia, author. | Derkovitz, Stephanie, author.
Title: Make your own LED flashlight / by Julia Garstecki and
Stephanie Derkovitz.
Description: Mankato, Minnesota : Bolt/Black Rabbit Books, [2020] |
Series: Hi jinx. Make your own fun | Includes bibliographical references
and index. | Audience: Ages 9-12. | Audience: Grades 4 to 6.
Identifiers: LCCN 2018033590 (print) | LCCN 2018036490 (ebook) |
ISBN 9781680729405 (e-book) | ISBN 9781680729344 (library binding)
| ISBN 9781644660652 (paperback)
Subjects: LCSH: Flashlights-Design and construction-Juvenile literature.
|Light emitting diodes-Juvenile literature.
Classification: LCC TK4388 (ebook) | LCC TK4388 .G37 2020 (print) |
DDC 621.32-dc23
LC record available at <https://lccn.loc.gov/2018033590>

Printed in China. 1/19

Image Credits

Alamy: David J. Green - electrical, 7 (alum. tape); toons4biz, Cover (bolts),
2-3 (bolts), 4 (bolts); Black Rabbit Books: Michael Sellner, 7 (battery, light),
8 (steps), 10-11 (tools), 12-13, 13 (tools), 14, 15 (tool), 16, 18-19 (tool);
Shutterstock: Arcady, 7 (sticky note); belka_35, 7 (scissors); Coprid, 7 (clear
tape); Fedorov Oleksiy, 7 (pencil); Galyna G, 15 (bkgd); Georgii Red, Cover
(middle bolt); Jumnonng, 7 (electrical tape); Memo Angeles, Cover (bulbs),
4 (bulb), 5 (bulb), 6 (bulb), 15 (bulbs), 18 (hand), 19 (bulb), 20 (bulb), 21
(bulb); mohinimurti, Back Cover (bkgd), 4 (bkgd), 12 (bkgd); Mumut, 19
(glasses); opicobello, 10 (tear), 14 (tear); Pand P Studio, 1; Pasko Maksim, Back
Cover (tear), 13 (tear), 18 (tear), 23 (tear), 24; Patoman Color, Cover (tube),
4 (tube), 23 (tube); pitju, 6 (curl), 21 (curl); Ron Dale, 5 (marker stroke), 6
(marker stroke), 14 (marker stroke), 17 (marker stroke), 18 (marker stroke),
20 (marker stroke); supawat bursuk, 7 (tp roll); tawatchai.m, Cover (limbs),
4 (limbs), 23 (limbs); totallypic, 8 (arrow, circles), 10 (arrows), 11 (arrows),
12-13 (arrows), 18 (arrow), 19 (arrow); Vector Tradition, Cover (expression),
4 (expression), 23 (expression); yavi, 20 (dance) Every effort has been made to
contact copyright holders for material reproduced in this book. Any omissions
will be rectified in subsequent printings if notice is given to the publisher.

Contents

CHAPTER 1

Get Ready for
Some Fun! 5

CHAPTER 2

Let's Make It! 6

CHAPTER 3

Get in on the Hi Jinx. 20

Other Resources. 22

Chapter 1

Get Ready for Some Fun!

Making your own fun isn't complicated. In fact, it can even be useful. Today's handy fun is a flashlight! You never know when you might need one. They're **essential** for nighttime adventures. You need one if the power goes out on a stormy night too. So get building! There's fun to be had.



Let's Make It!

Building a flashlight might seem hard. But it really isn't. Just gather some supplies, and get to work. Don't worry if something doesn't work right away. Experiment until it does. And, most importantly, remember to have fun!



What You'll Need



toilet paper tube



5 mm LED light bulb with wires (with 1/2 inch [1 centimeter] of wire exposed)



3-volt coin cell battery with wires (with 1/2 inch [1 cm] of wire exposed)



1 1 x 1-inch (2.5 x 2.5-cm) piece of aluminum tape



clear tape



electrical tape

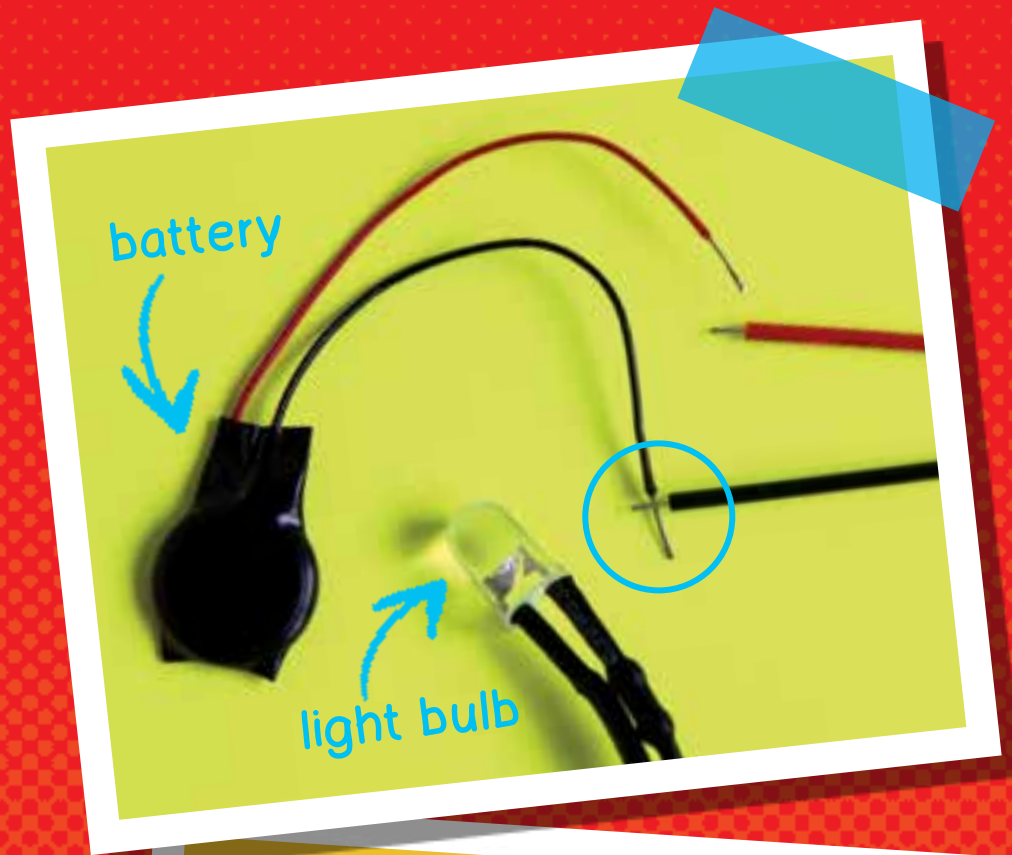


sharpened pencil



scissors

a responsible adult to help you



battery

light bulb

Test the Bulb and Battery

1

Touch the light bulb's black wire to the battery's black wire.

2

While keeping the black wires together, touch the red wires together. When the wires connect, the light should glow.

3

Once you've tested the light and battery, you can stop holding the wires together.