getting started with

SMART ART

WELCOME!

Your toys are about to come to life with Circuit Cubes, the electronic building blocks that add power, motion, and light to your creations. Designed by teachers, Circuit Cubes can turn a light on, power a motor, or make wheels spin — plus they work with all your LEGO® bricks.

Getting Started

Get your markers in motion by adding a wheel, motor, and bright LED light to your favorite art projects. Some drawings you control; some, you don't! Watch what happens to your art when you try different Circuit Cube builds.

Projects

Once you've mastered the ten projects in this booklet, go online to find others: **tenkalabs.com/circuit-cubes/build**. Tag your projects with **#circuitcubes** to share.

WARNING: Some of these projects require the use of scissors. Please have a parent or guardian supervise when you're working with sharp objects.

MEET THE CUBES

These three Circuit Cubes are all you need for endless projects and hours of fun!

Battery Cube

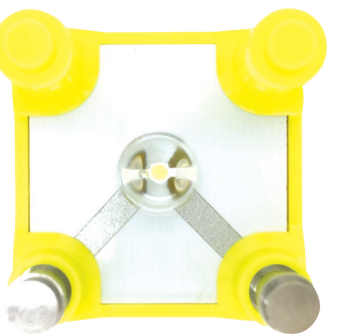
The rechargeable Battery Cube powers your projects for up to an hour of active play time! If it's green, it's charged and ready to go; if it needs charging, plug it into the MicroUSB charger in the kit. Works great with all your LEGO®s.

Motor Cube

A perfect fit for your LEGO® gears and wheels, the Motor Cube is *fast* — in both directions! Or slow it down by swapping out gears — a large one for a small one, it's changing the gear ratio (like you do on your bicycle!

LED Cube

Snap this ultra-bright oversized LED onto your LEGO® bricks and get thousands of hours of light to light up your builds, from easy flashlight set-ups to tricky projects only you can think up.



READY. SET. BUILD!

Get to know Circuit Cubes with these fun, easy builds.

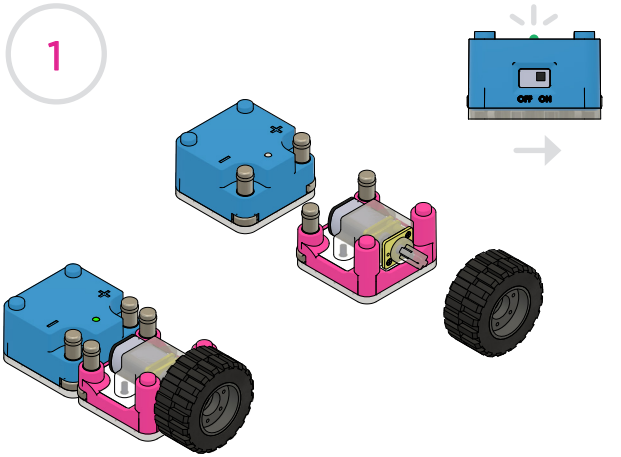
1 Connect the Battery + Motor: Get things revving!

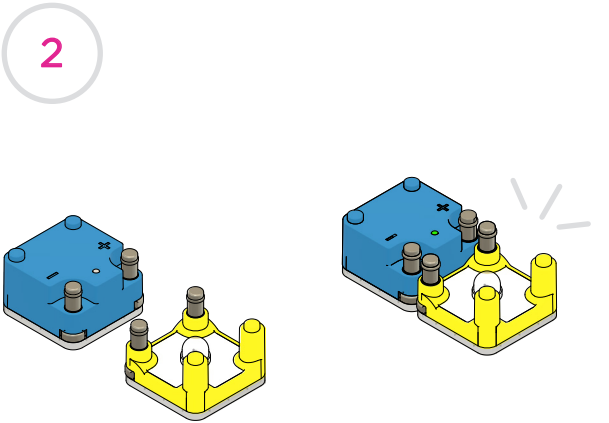
2 Connect the Battery + LED: Instant light!

3 Connect the Battery + LED + the Motor: Lights and action!

4 Connect the Motor + LED + Wheel: Turn the wheel to generate electricity!

5 Connect the Battery + Motor + Wheel + Wires: Your Circuit Cubes can take on anything!





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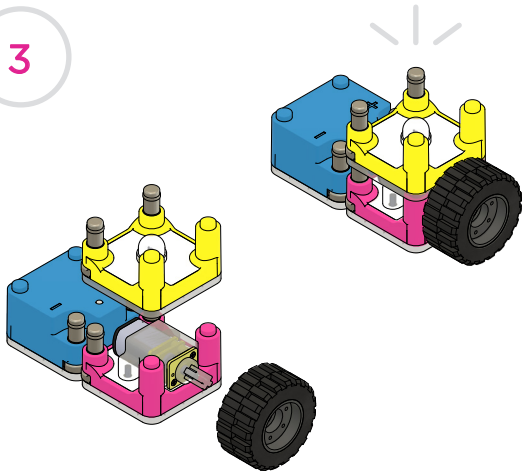

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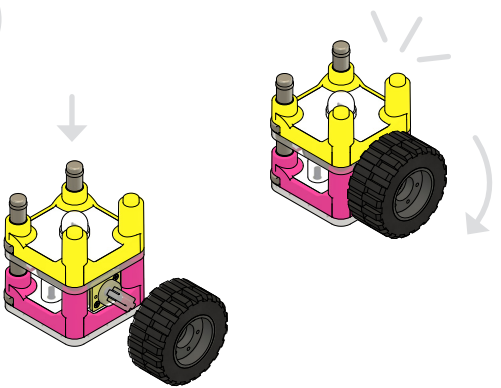

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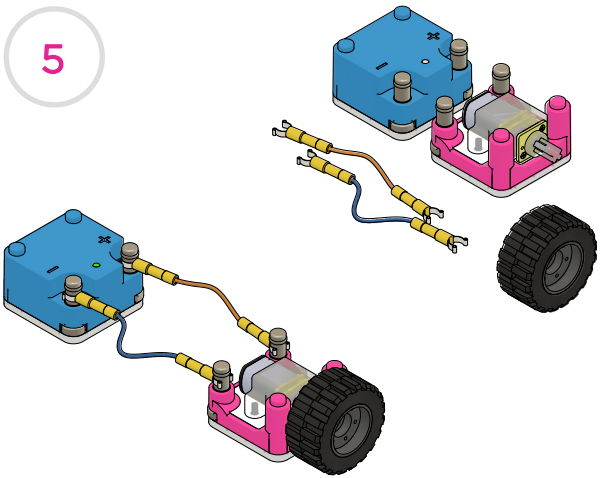
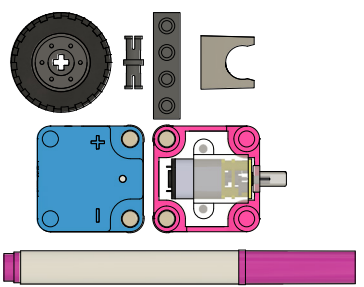


1-MARKER SCRIBBLEBOT

Make a basic Scribblebot using just one marker. Notice how it moves forward as it spins. That's because of the friction between your Scribblebot's wheel and the paper. That's one crazy spiral design!

MATERIALS



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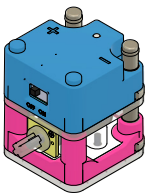

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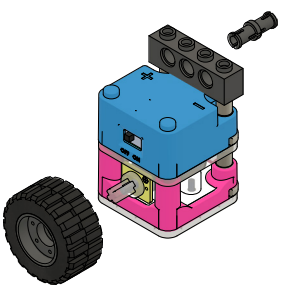

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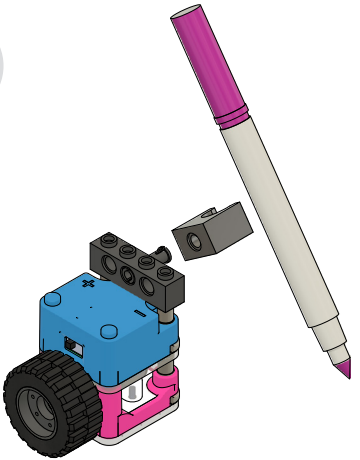

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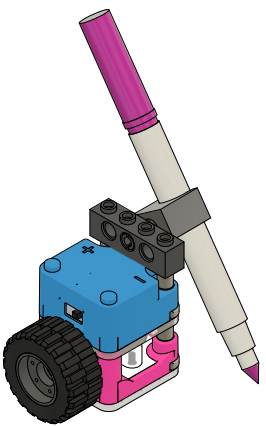
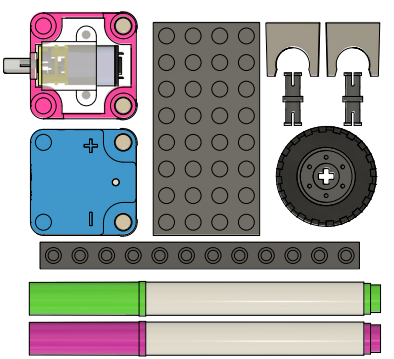


2-MARKER SCRIBBLEBOT

Take your basic Scribblebot and make it even cooler using two markers. Try placing them in different places on the axle. Do your drawings change?

MATERIALS



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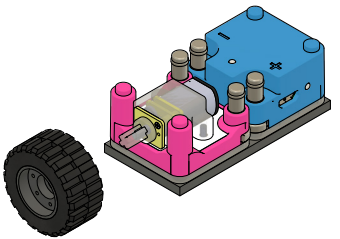

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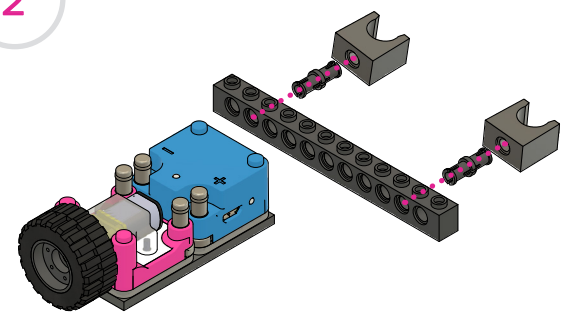

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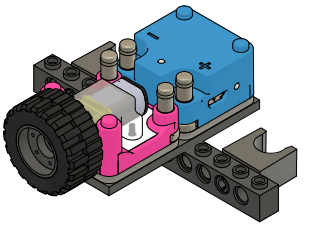

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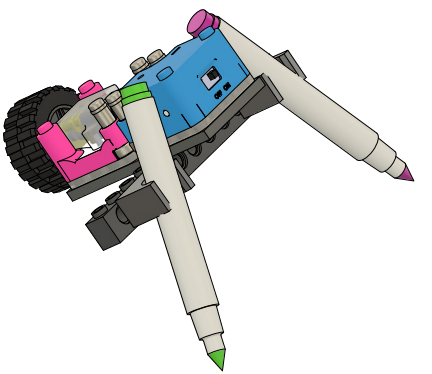
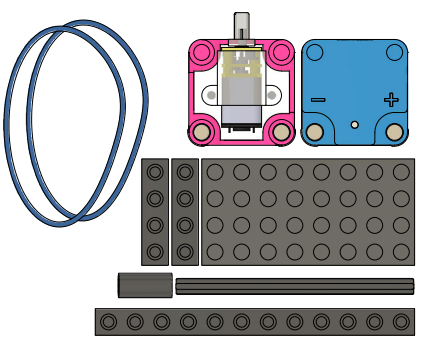


4-MARKER SCRIBBLEBOT

Adding four markers in various colors causes some amazing shapes as the markers hop around on the paper. What happens if you put the markers close together? How about when you space them far apart? Don't be afraid to experiment!

MATERIALS



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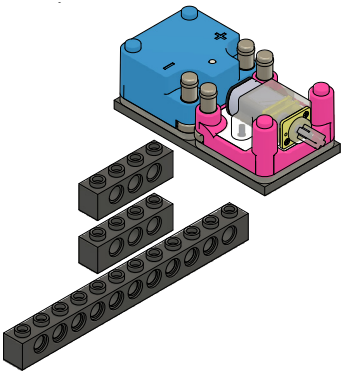

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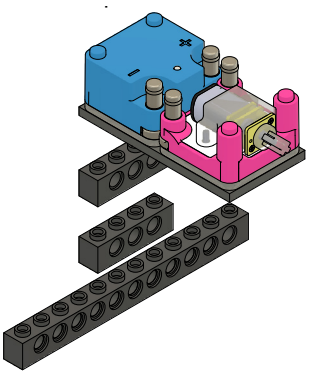

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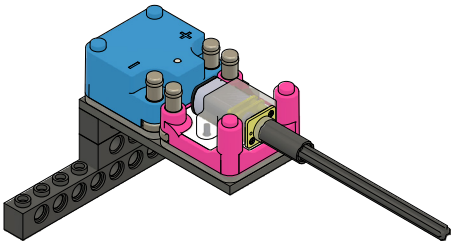

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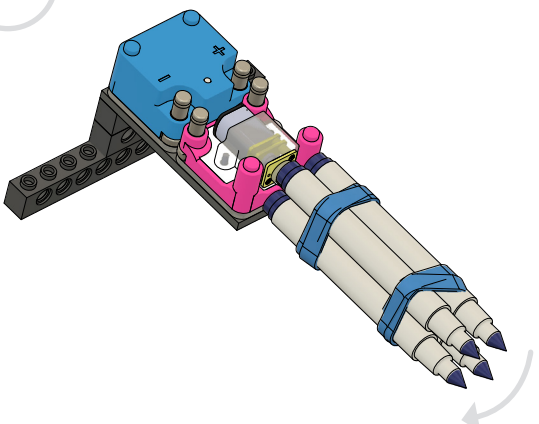
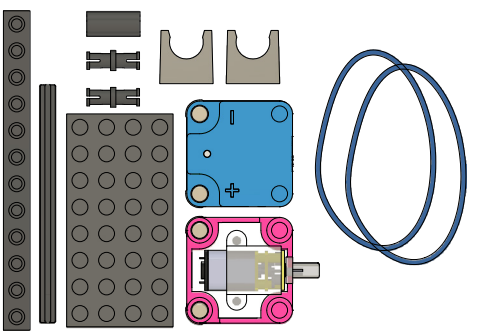


6-MARKER SCRIBBLEBOT

Make the ultimate Scribblebot using all the markers in your kit. This bot is certain to shake and swirl all over your paper.

MATERIALS



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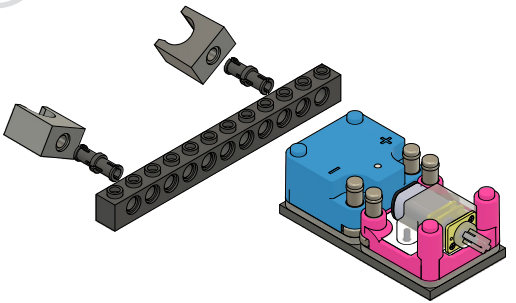

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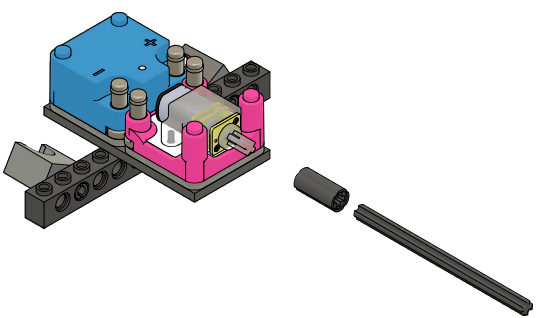

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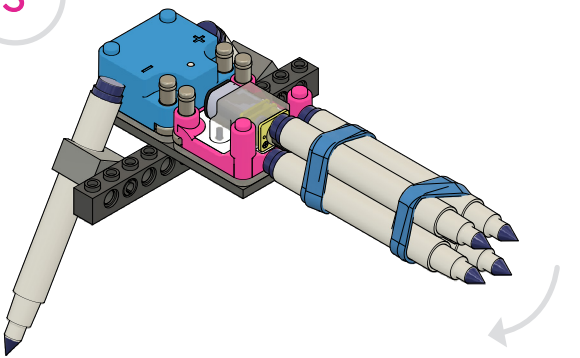
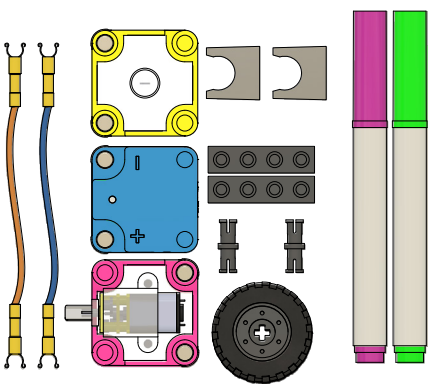


SCRIBBLEBOT STACK

Use two markers and put your motors into motion all over the paper. Place an obstacle in your Stack's way. How does it move differently?

MATERIALS



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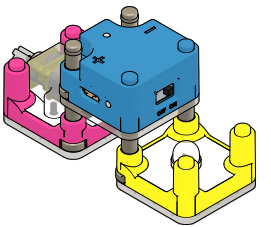

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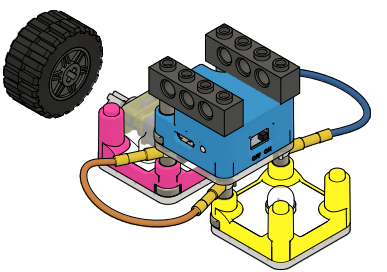

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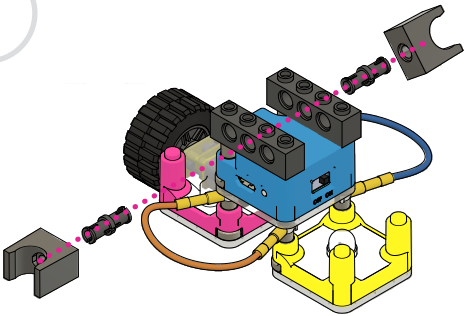

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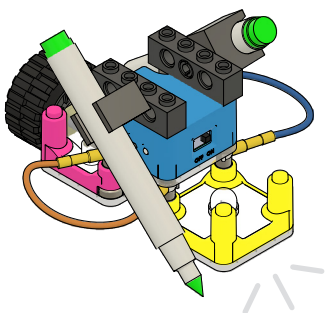
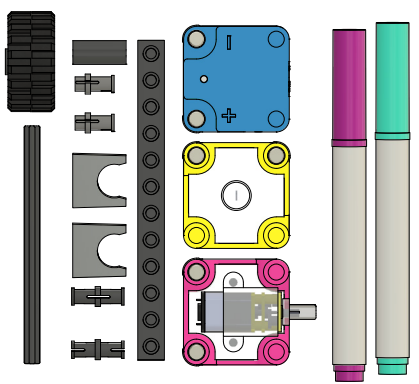


DARK ARTBOT

This bot flips and rolls and shines light on your art as it draws in the dark! The two-marker combo creates cool spiral designs while the rubber bands help to keep the LED in place.

MATERIALS



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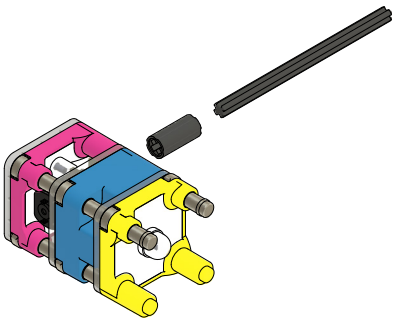

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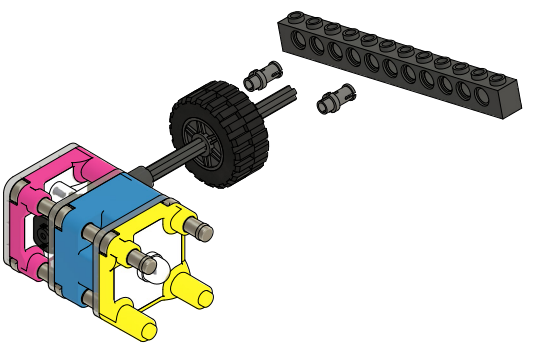

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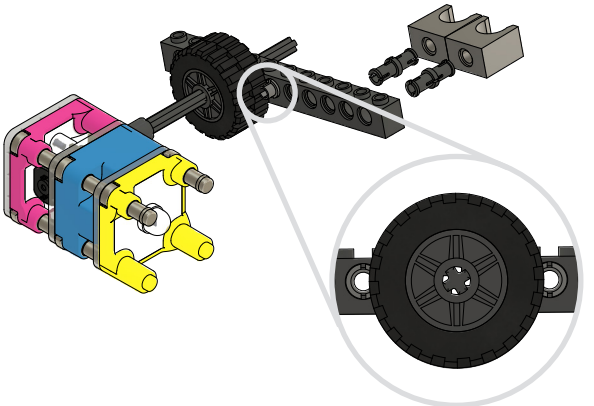

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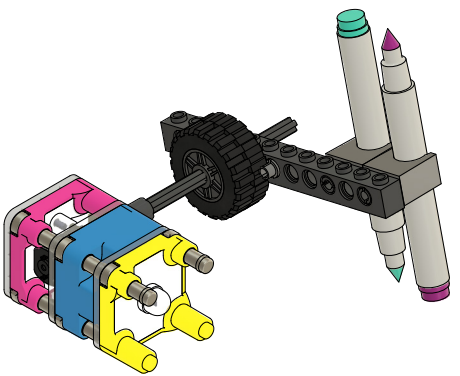

LIGHT ARTBOT

Replace your markers with some string and let it spin all around in the dark. Try hanging the bot from different holes in the axle to see how the spins change shape and direction.

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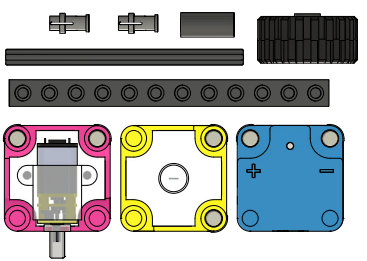

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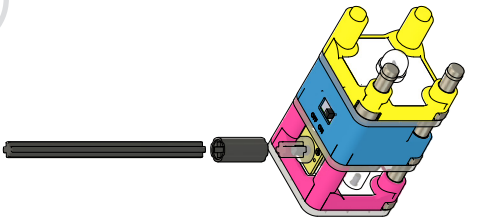

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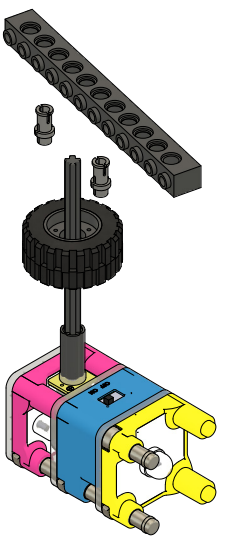

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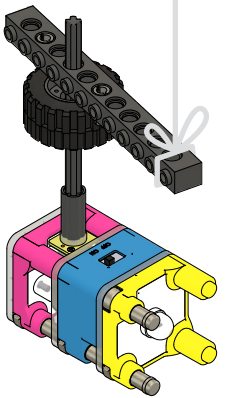

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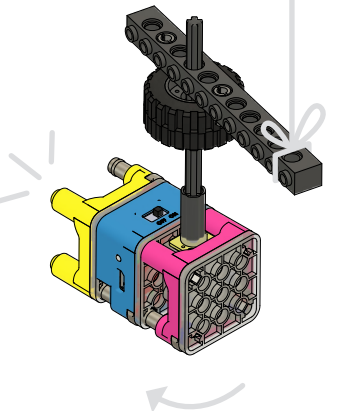
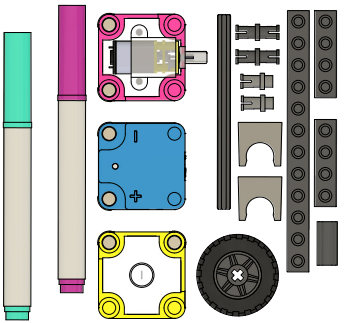


SPINNING MOBILE

Use your markers to draw your art and then use them to build the project! Make a cool drawing and then mount it to two of the markers. Watch them spin around while being lit from below. For our Spinning Mobile, we chose to draw two sets of fish—one big fish chasing a school of little fish spinning around and around. What will you do?

MATERIALS



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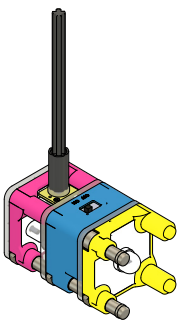

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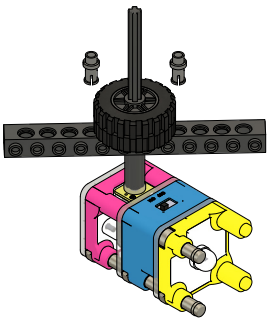

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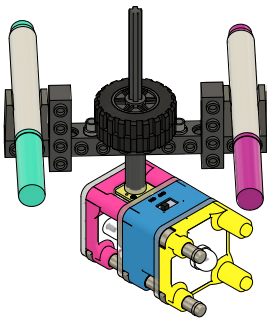

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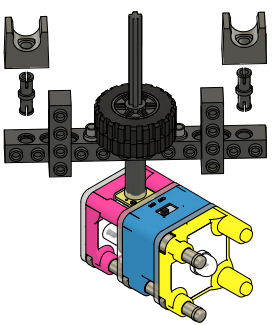

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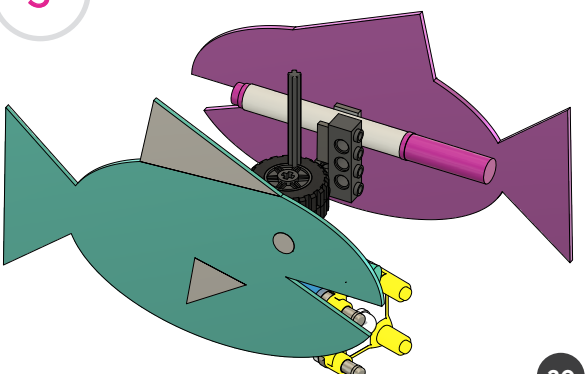
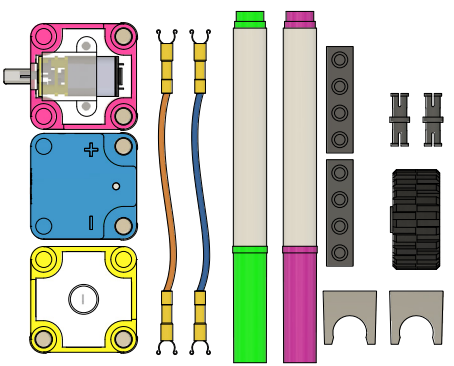


TWO-HEADED SCRIBBLEBOT

Use wires to connect your Cubes and then add markers going different directions. Your Zigzag Drawbot moves across the paper using the power of just one wheel.

MATERIALS



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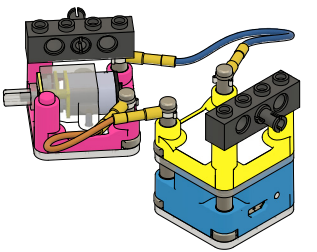

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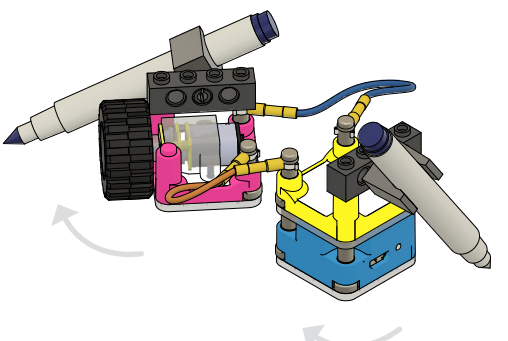
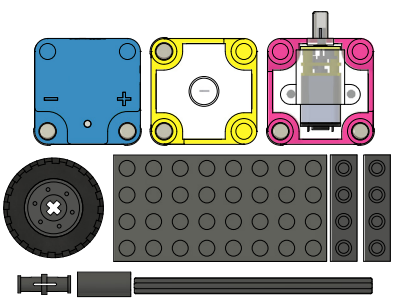


BUGSPLAT

This fun project flips and flops all around, spinning and crawling over the table. Watch it move around in circles. How can you change its movement?

MATERIALS



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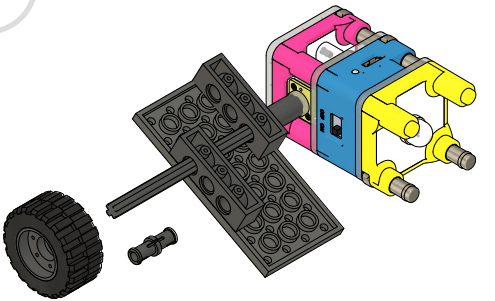

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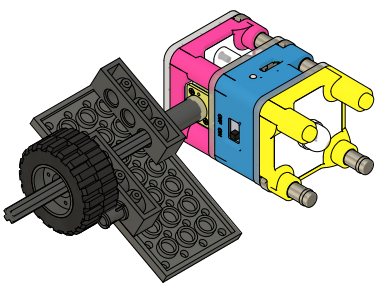


JOIN THE CIRCUIT CUBE CLUB: C³ IS FOR YOU!

Sign up for our free Cube Club — we call it C³ — and never miss an update, discount, or piece of insider info.

We've got lots of great ideas for more Cubes and kits. We can't wait to share them with you.

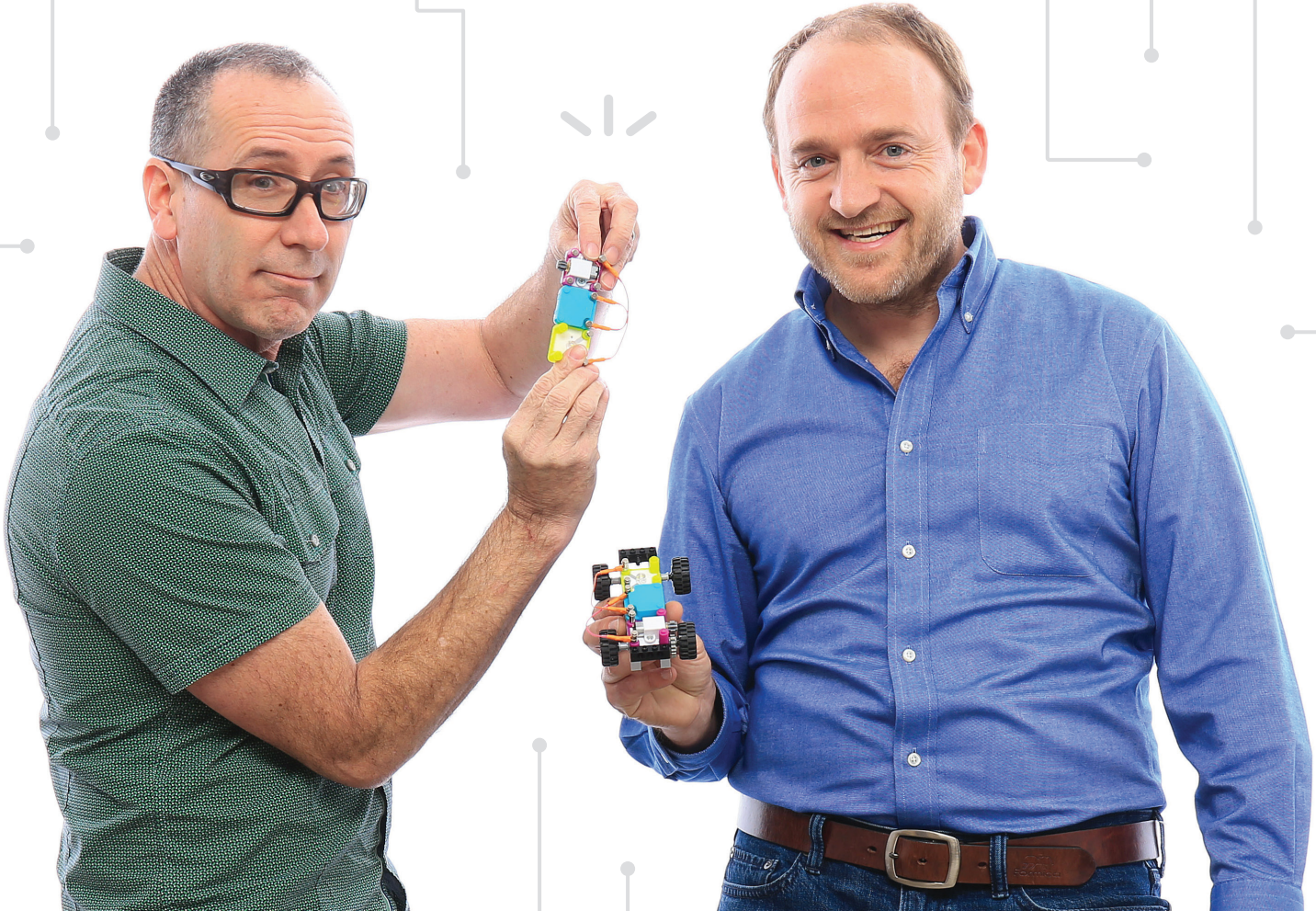
When you join the C³ community, you'll be the first to hear about our newest Cubes and kits as they come out. You'll get special discounts, extra info, and a chance to reserve new Cubes before they even hit the shelves. Plus, you'll be able to share your Cube builds and projects with other C³ members.

Want to know about our super-secret Super Spy kit? Want to use Bluetooth to connect your Cubes to the world around you? C³ members get first access to these and more! Go online to **tenkalabs.com/circuit-cubes-club** or email us: **c3@tenkalabs.com**.

Join our C³ community today! We can't wait to meet you.

Keep building!

tenkalabs.com/circuit-cubes/build



ABOUT CIRCUIT CUBES

Invented by two teachers, Circuit Cubes' unique design provides visibility so that kids can literally see how the connections are made to complete a circuit to drive a motor, light an LED, or engage a sensor. Only Circuit Cubes, with magnetic corners on multiple sides, enable kids to build horizontally, vertically, or diagonally. Circuit Cubes' design fully integrates with authentic LEGO® style bricks and Mattel's MegaBloks.

Find us online @circuitcubes:

WARNING This product contains chemicals known to the State of California to cause cancer and birth defects (or other reproductive harm). **WARNING** This product contains small magnets. Swallowed magnets can stick together across intestines causing serious injuries. Seek immediate medical attention if magnets are swallowed or inhaled. **WARNING** Choking hazard—small parts. Not for children under 3 years. **WARNING** Lithium-ion batteries may overheat, explode or ignite, and cause injury. Do not connect the positive terminal and negative terminal of the battery to each other with meta objects. Do not expose battery to water or allow the battery to get wet.

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