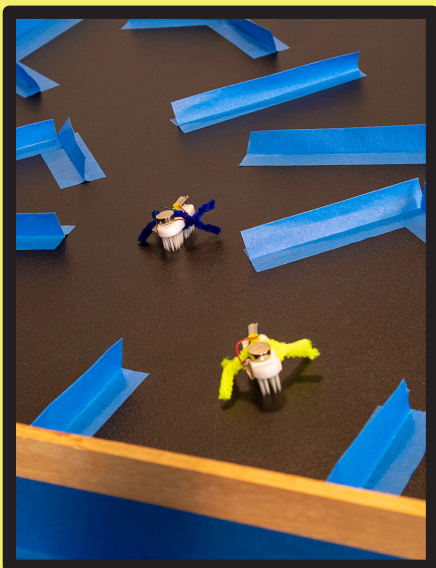
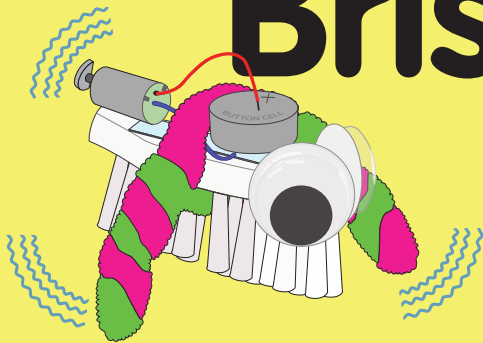




BROWN DOG *Gadgets*

Let's Make Bristlebots!



Let's make Bristlebots!

Bristlebots are small vibrating robots that move around and have a personality of their own! In this eBook, we'll show you how to build a Bristlebot, share some alternate body templates, and how to build games that you can play with them.

In this eBook:

Page 3 • How to build a Standard Bristlebot

Page 4 • Alternate Bristlebot Bodies

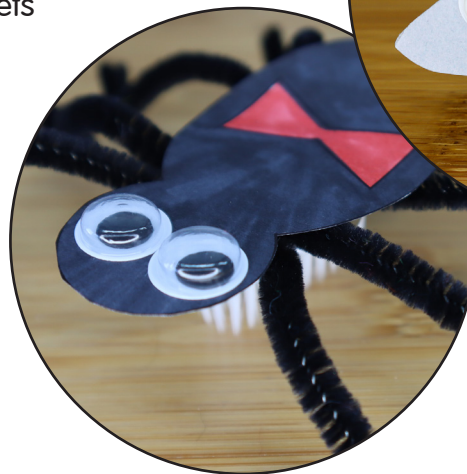
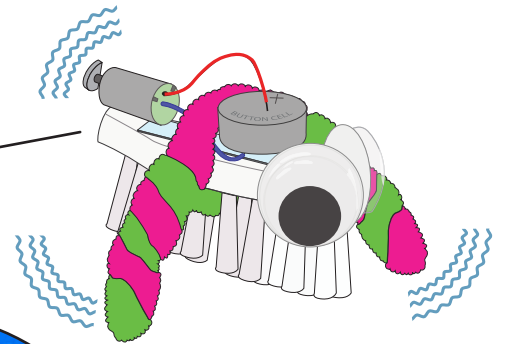
- Shark (Shark Week!)
- Spider (Halloween)
- Cockroach (April Fools!)
- Chicks (Spring / Easter)

Page 8 • Bristlebot Games

- Maze
- Last Bot Standing
- Paint Bots

Page 11 • Printable Templates

Page 15 • More from Brown Dog Gadgets



You can also follow along with the "How to Build a Bristlebot" video by scanning this code.



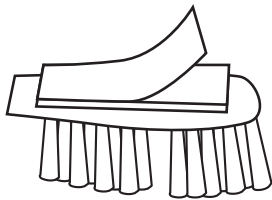
Standard Bristlebot Build:

A Bristlebot is a fun little robot that's quick and easy to make! It's powered by an on-off-set weighted vibrating motor and a small battery. Here's how you assemble a Bristlebot from the Brown Dog Gadgets Kit.

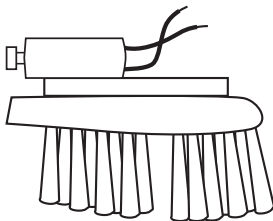
Time: 5-10 minutes

***Cut pipe cleaners in fourths before starting.**

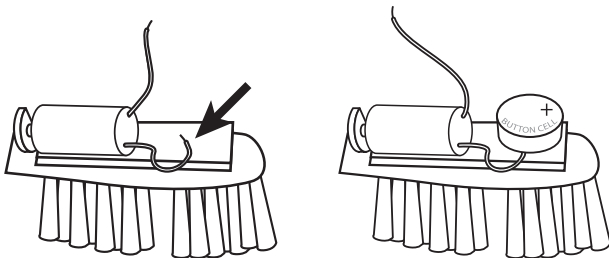
1. Apply double-sided tape to the top of the brush



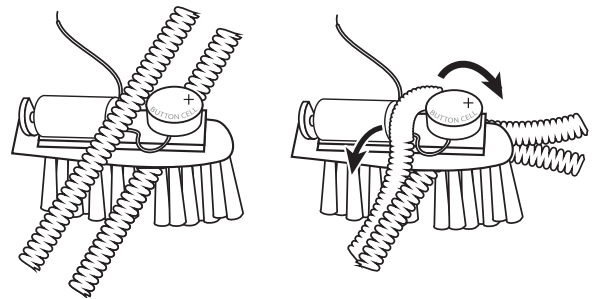
2. Attach the motor to the double-sided tape so that the weight hangs over the end and spins freely.



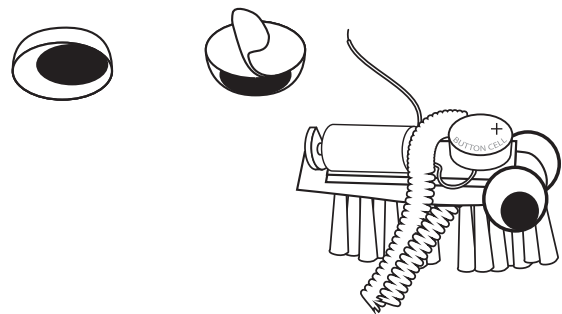
3. Place the blue wire on top of the tape with the metal end in the center. Place the battery on top of the metal end as shown:



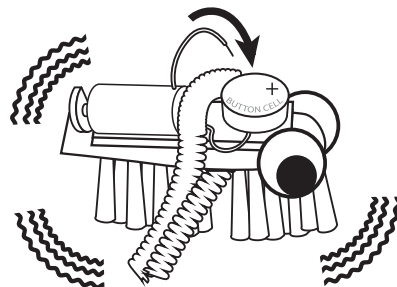
4. Add pipe cleaner "legs" by threading one pipe cleaner through the bristles and twisting another pipe cleaner on top.



5. Remove the paper from the back of the googly eyes and stick them to the front of the brush.



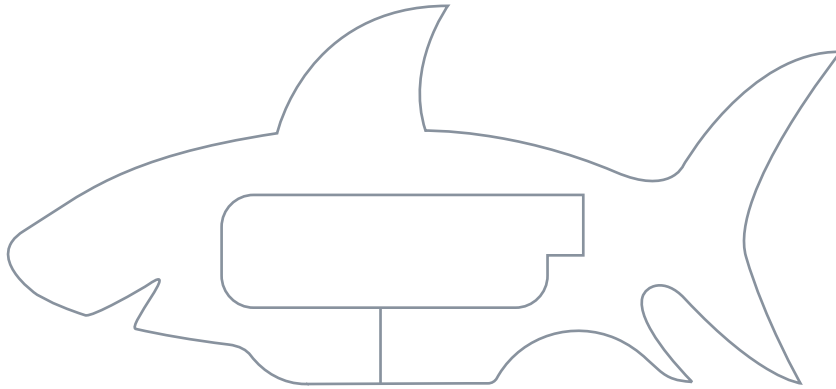
6. Touch the red wire to the positive side of the battery. It will begin to wiggle! Place it on a smooth flat surface to watch it move around! If desired, add a piece of tape on top to keep the wire in place.



Bristlebot Shark

Cut out these templates to give your bots some personality!

1. Follow steps 1-3 in the Standard Bristlebot Build guide to build the Bristlebot body.
2. Choose silver or grey pipe cleaners instead of the ones that came with the kit.
3. Cut the silver pipe cleaner in half, threading one half of the pipe cleaner through the bristles and twisting another 1/2 pipe cleaner on top.
4. Twist the pipe cleaner into a triangular "fin-like" shape.
5. Cut out the shark template from grey or silver cardstock.
6. Wrap the shark body around the Bristlebot, threading the belly between the bristles.
7. Apply the googly eyes to the eye area as shown.
8. Connect the red wire to the top of the battery and watch the shark go!



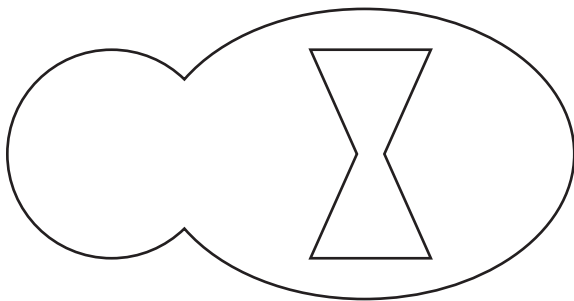
*A full page of printables is available at the end of this eBook.



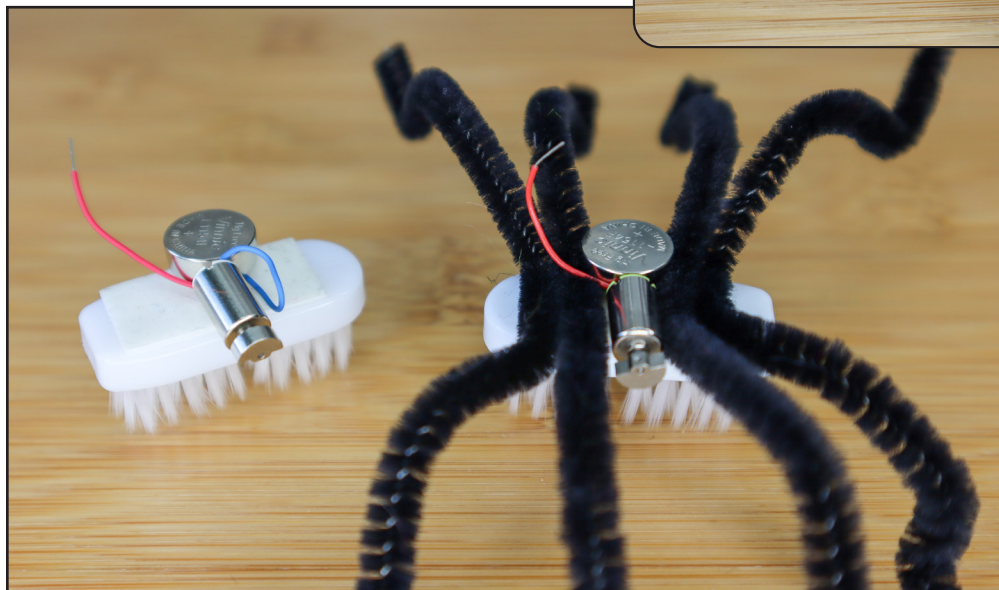
Bristlebot Spiders

Cut out these templates to give your bots some personality!

1. Place the double-sided tape on top of the brush head.
2. Place the motor in the middle of the tape as shown below (this is different from the standard instructions.)
3. Adhere the blue wire behind the motor, then place the battery on top of it.
4. Choose black pipe cleaners instead of the ones that came with the kit. Cut two in half.
5. Place the four half pipe cleaners over the body, adhering them to the double sided tape.
6. Cut out and color the spider body template below.
7. Apply the googly eyes to the eyes to the top of the body.
8. Tape the spider body on top of the legs.
9. Connect the red wire to the top of the battery and watch the spider walk!



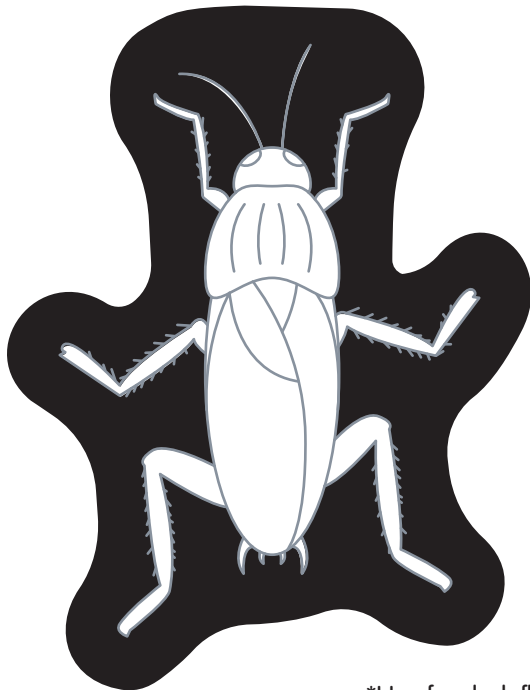
*A full page of printables is available at the end of this eBook.



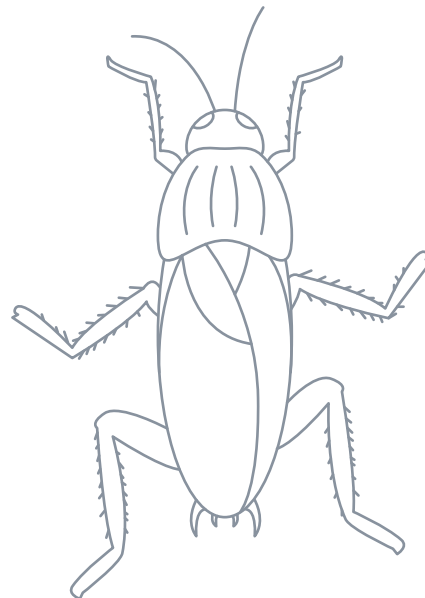
Bristlebot Cockroach

Add a cockroach topper to play a fun prank on April Fool's Day!

1. Follow the Standard Bristlebot Build guide to make the Bristlebot.
2. Print, color, and cut out the cockroach template below.
3. Use a loop of masking tape to stick the cockroach to the top of the Bristlebot.
4. Place the buzzing bot on the floor to scare a friend!



*Use for dark floors



*Use for light floors



*A full page of printables is available at the end of this eBook.

Bristlebot Baby Chick

Make your Bristlebot into a baby chick and watch it run all around!

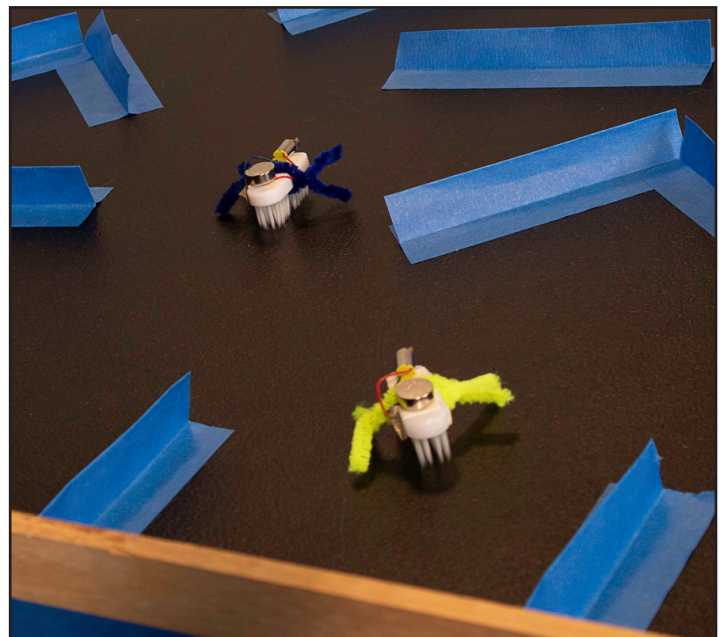
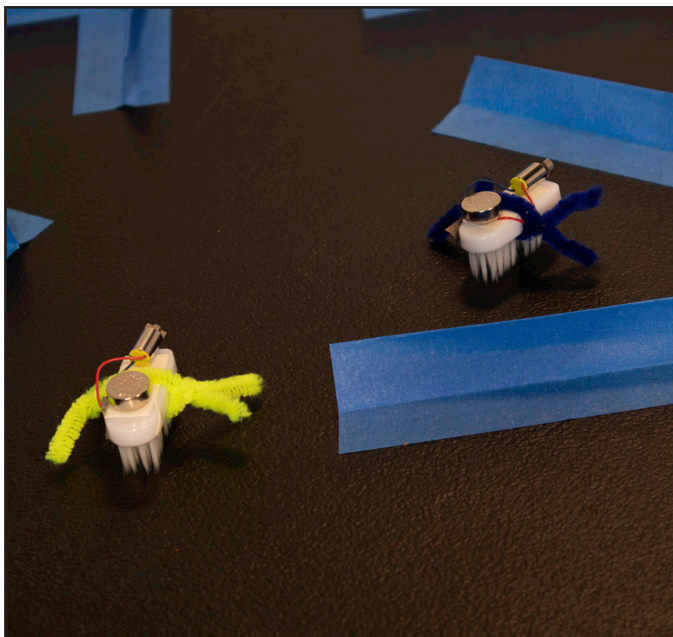
1. Follow the instructions for building the standard Bristlebot, but don't apply the eyes, and use an orange pipe cleaner for the "legs".
2. Glue two yellow pom-poms on top of the Bristlebot.
3. Fold an inch-long piece of orange pipe cleaner in half and insert it into the top pom-pom as a beak.
4. Adhere the googly eyes on top of the beak.
5. Watch the chick run around!



Bristlebot Maze

Can your Bristlebot Escape a maze of your own creation?

1. Build Bristlebots.
2. Use a table as a base. Prop two table legs up to make the surface slanted.
3. Using 3-inch masking tape, create barriers in a maze pattern. Add one or more "goal" locations at the bottom of the board.
4. Place one or more Bristlebots in the maze to see if they can find their way to the winning spot!



Group Activity: Last Bot Standing

Which Bristlebot can stay inside the longest?

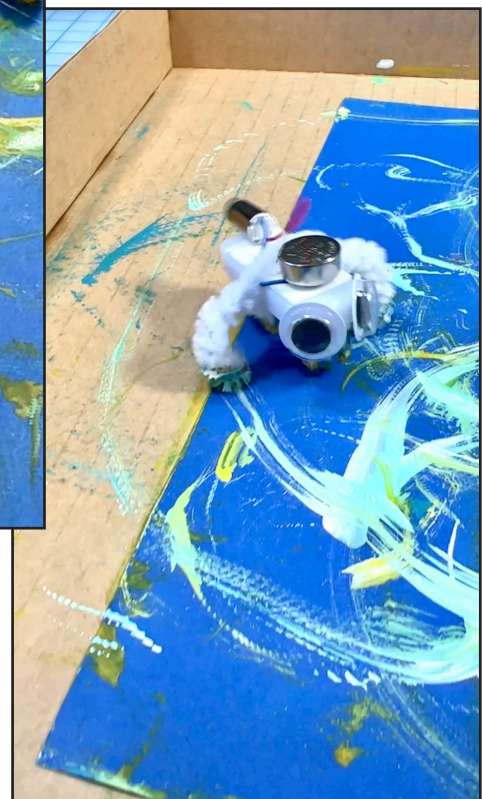
1. Build Bristlebots.
2. Make a ring or box on the table with masking tape.
3. Place all competing Bristlebots inside the ring or box. Any bot that stops vibrating is immediately disqualified and removed from the ring or box.
4. The last Bristlebot left inside the ring or box is the winner! You may also use a timer to determine the longest Bot standing of all time!



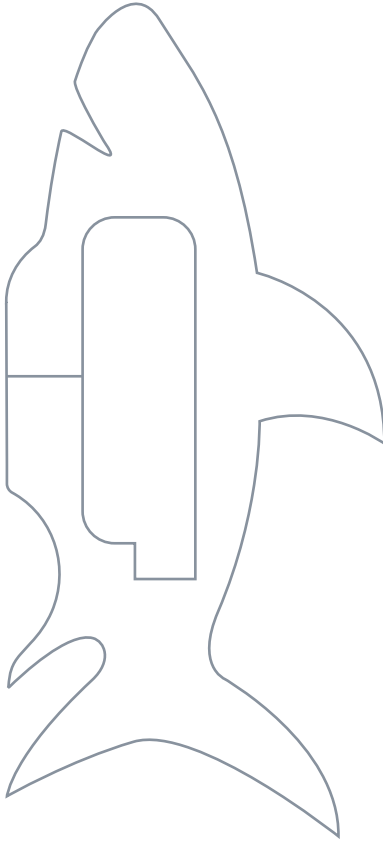
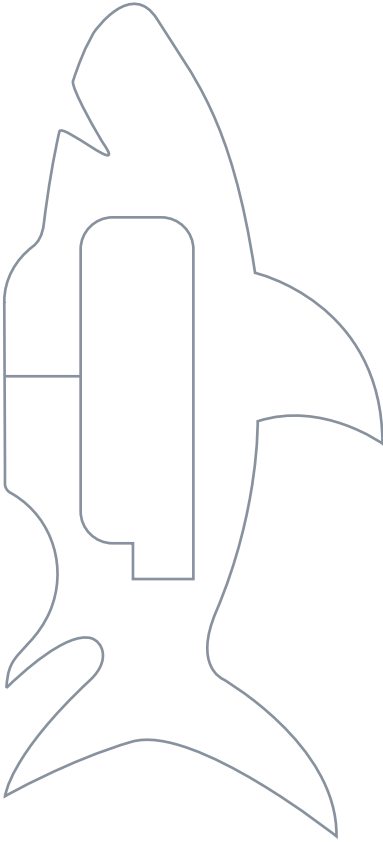
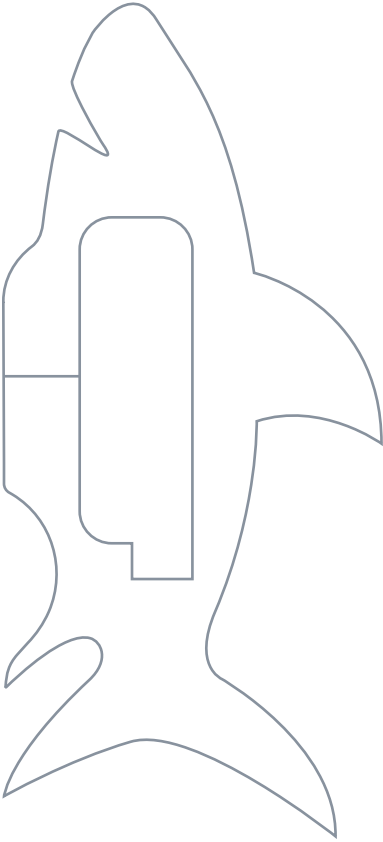
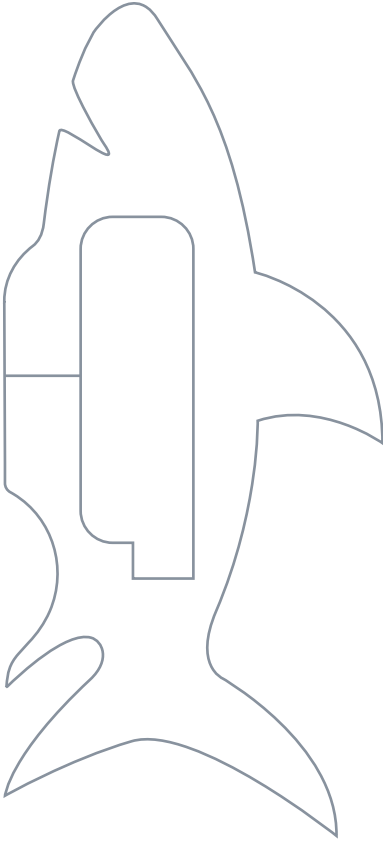
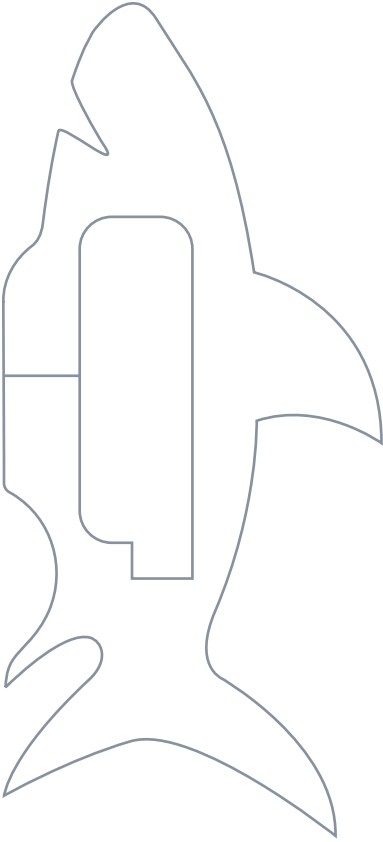
Bristlebot Artists

With so many bristles, these Bots were born to paint!

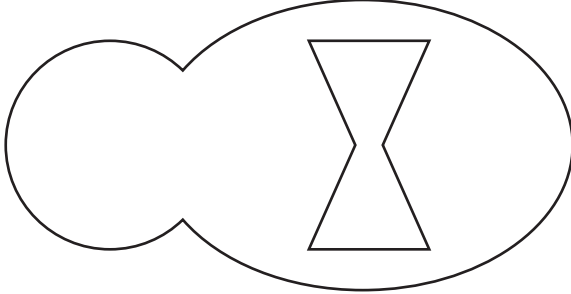
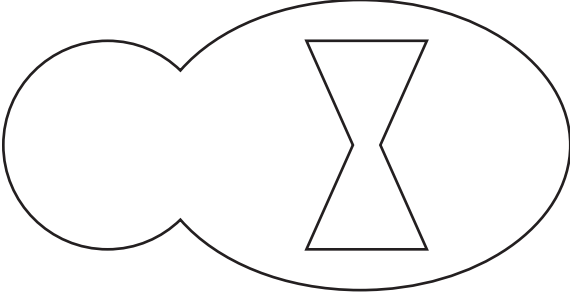
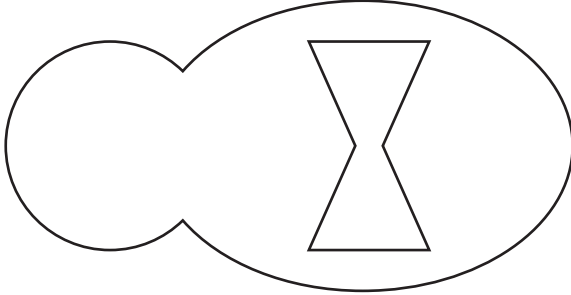
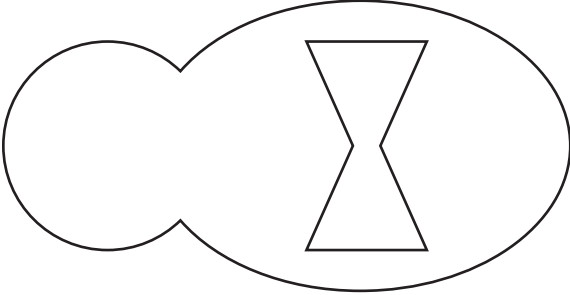
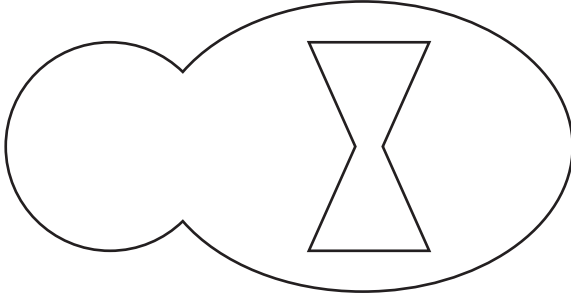
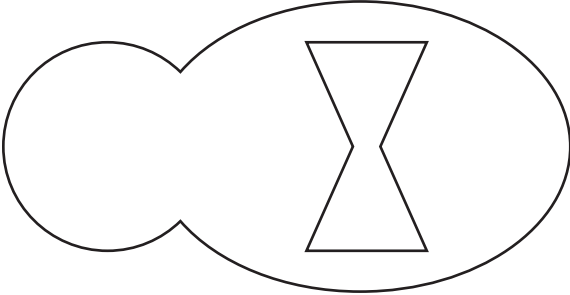
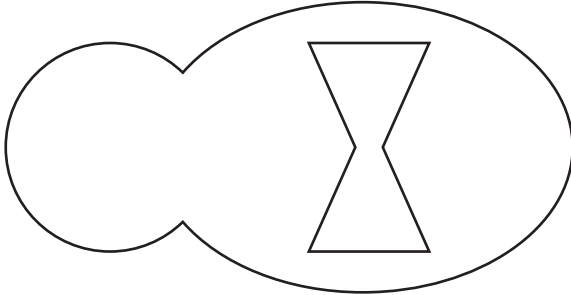
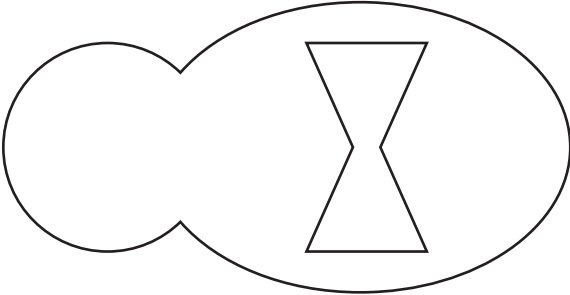
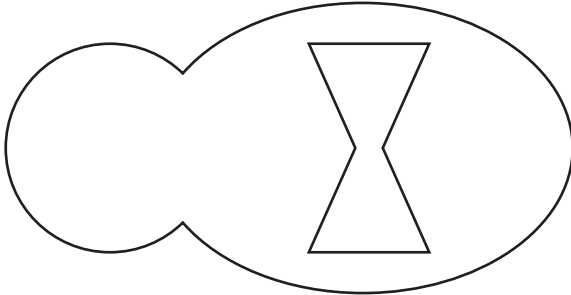
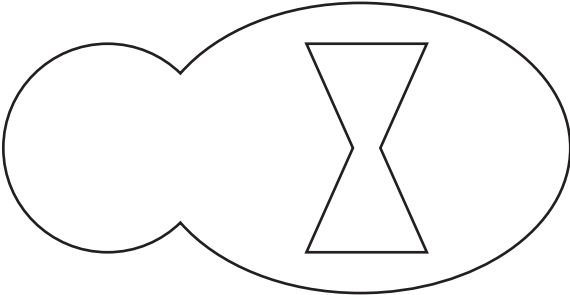
1. Build Bristlebots.
2. Use a cafeteria tray, or build one from cardboard that is 9.5 x 12 inches, with 1-inch walls.
3. Place a piece of standard printer paper inside.
4. Add a dab of acrylic paint to one or more Bristlebots, and place them on the paper.
5. Watch as the Bots paint their own masterpiece! Switch colors of paint to make it extra special. Replace the paper to make another work of art.



Bristlebot Shark Printable Templates

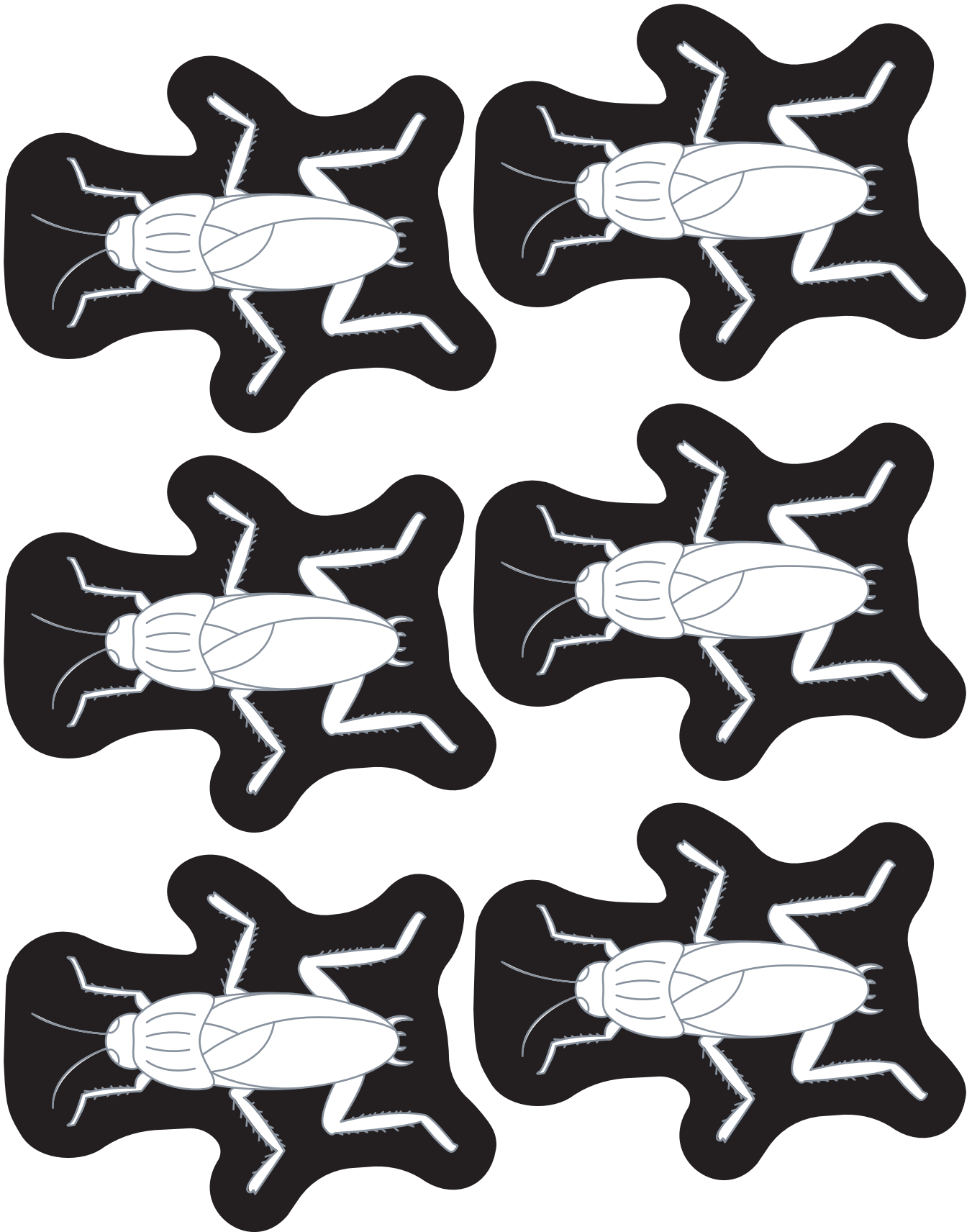


Bristlebot Spiders Printable Templates



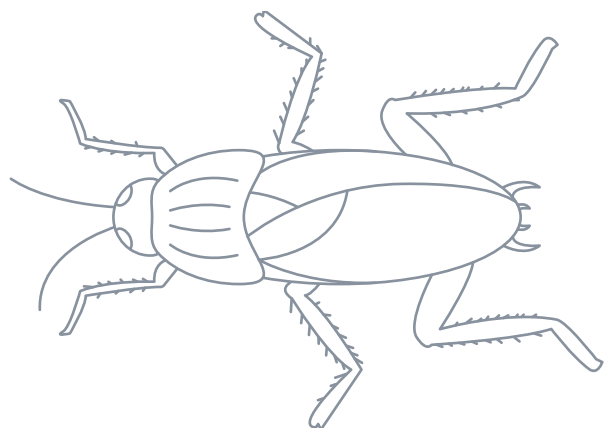
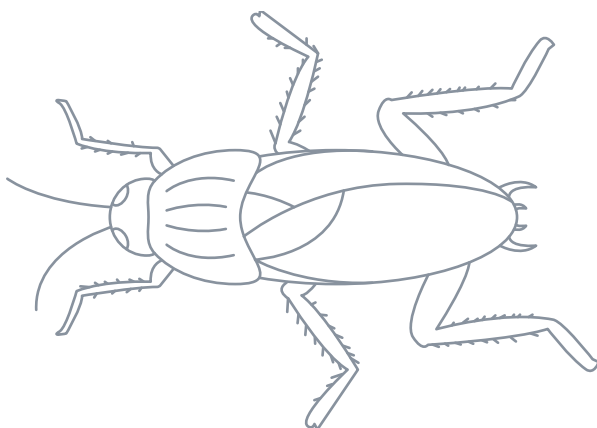
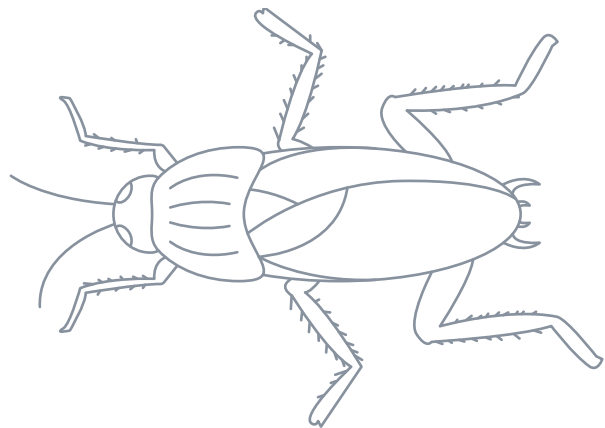
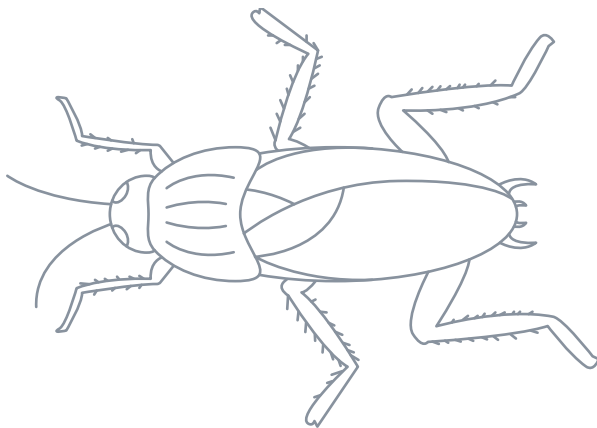
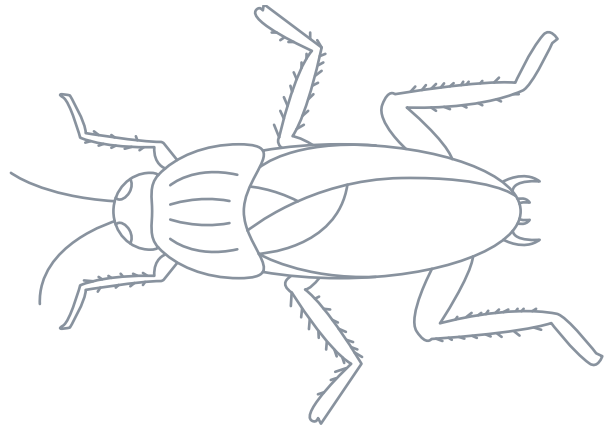
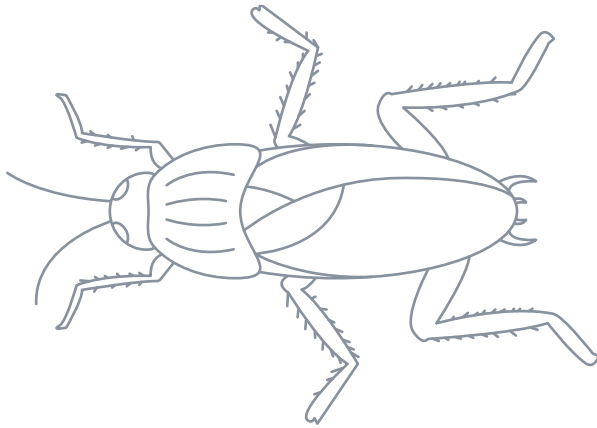
Bristlebot Cockroach Printable Templates

(For dark floors/surfaces)



Bristlebot Cockroach Printable Templates

(For light floors/surfaces)



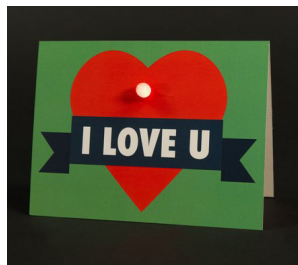
More Projects & Inspiration

Other Materials

Build upon the basic circuit techniques in this eBook to design circuits on top of bricks, paper, fabric, or other craft materials. Add lights, movement, and interactivity to any project that you can dream up - the possibilities are endless. Keep going!



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



Light-Up Heart



Laser Cat

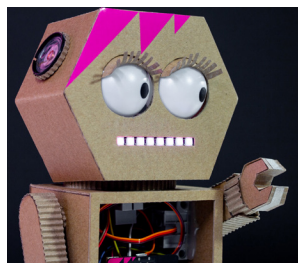


Birthday Candles



Light-Up Tree

Robots & More (Maker Tape, LEDs, Motors, Batteries, Paper, Felt, LEGO, Crazy Circuits)



"High-Five" the Bot



Motor Robot Buddy



Motor Robot Vacuum



LED Shoes

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

Kits from Brown Dog Gadgets

You don't need to buy our kits to make the projects in our eBooks and website, but we do have everything you need for your convenience.

Solar Bug Kit



Origami Circuits Kit





BROWN DOG *Gadgets*

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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