

Go Guide

Super
Wiggle-Bot



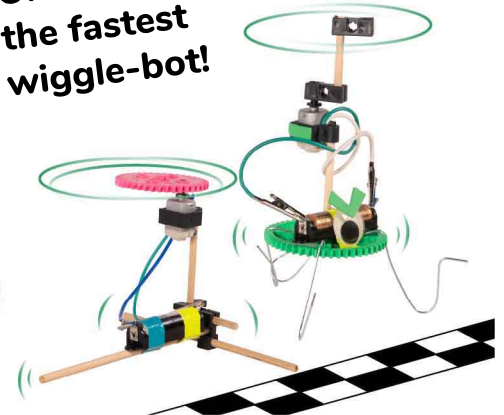
Design and build your own motorized Wiggle-Bot. Evolve your design to spin, wiggle, and more!



Create a scribble-bot that makes art!



Or compete to make the fastest wiggle-bot!



You Are Here

Choose how you would like to complete this activity.
Download documents & videos at shop4-h.org

Go Guide

Start here! Build your Wiggle-Bot, evolve your design, and begin a challenge!

Optional Labs

- Electricity Lab (Ages 8+)
- Wave Lab (Ages 8+)

Optional Challenges

- Scribble-Bot Challenge*
- Wiggle-Race Challenge*

*See Page 5



Supplies

These are the parts you need to build one Wiggle-Bot.

WIGGLE-BOT PARTS

Do you have fewer parts? You may have the Basic Wiggle Bots kit.
Download the [Basic Go Guide](http://shop4-h.org) at shop4-h.org

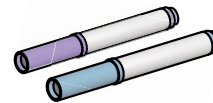
NAME	QTY	PICTURE
Strips 30 cm (12 in) SKU 1821-31	2	
Hole Plate SKU 1821-32	1	
Screws 25 mm (1 in) SKU 1821-22	2	
Nuts #10 hex SKU 1821-25	2	
Gear Set SKU 1821-28	1 set 4 gears	
Blocks SKU 1821-34	3	
Battery Holder SKU 1821-01	1	
Small Motor w/Leads SKU 1821-01	1	
Steel Wire 30 cm (12 in) SKU 1821-72	4	
Dowels various sizes SKU 1821-20	8	 Dowel Sizes 4x 30 cm (12") 1x 7.5 cm (3") 2x 15 cm (6") 1x 5 cm (2")

MATERIALS YOU SUPPLY

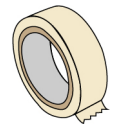


Recycling Materials

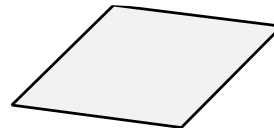
What can you use for a Wiggle-Bot body?



Markers



Tape



Paper
or
Poster Board
(for scribble-bots
to draw on top of)



AA Battery

Optional Tools



Modify materials to make even more creative designs with the

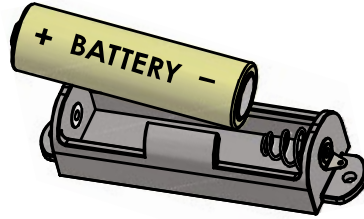
Maker Tool Set

SKU 1823-84



Make It Spin

- 1 Put the **battery** into the **holder** with the flat side against the spring.

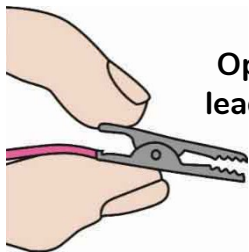


Want to learn more about electricity using your Wiggle-Bot?

Download the [Electricity Lab](http://shop4-h.org) at shop4-h.org

Ages 8+

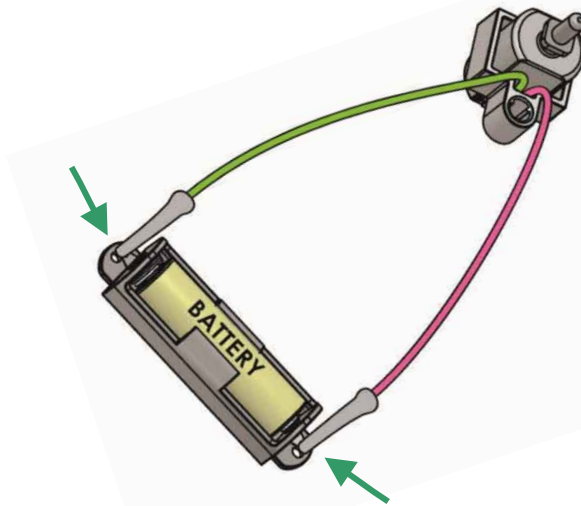
- 2 Connect the **motor leads** to the battery holder tabs. This should turn the motor on.



Open alligator clip leads, by pinching, to attach and detach them.

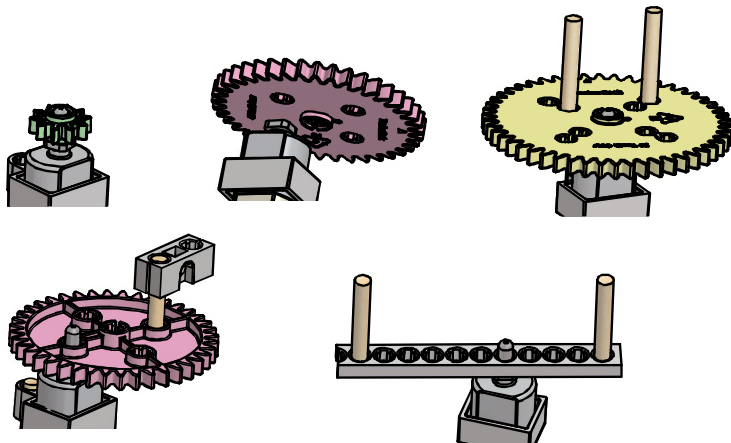


To turn the **motor off**, disconnect a lead.

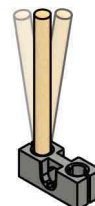


Make It Vibrate

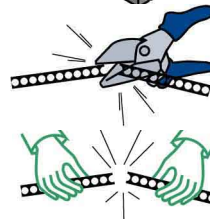
Attach different components to your motor, in different places. Can you **make it vibrate** slow or fast? Vibration (wobbling) can make your Wiggle-Bot move.



Building Tips



Connect dowels to components by wiggling or tapping them into holes.



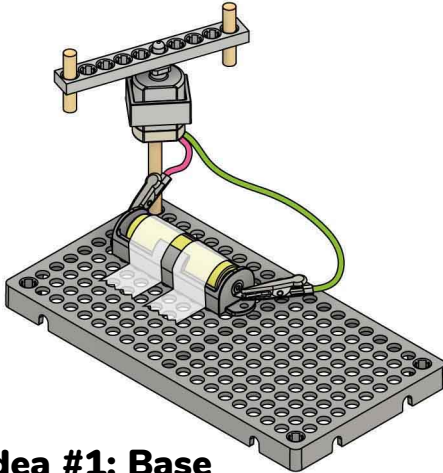
Strips can be cut or snapped into smaller pieces. Multi-cutters also work on dowels.



BUILD YOUR BOT

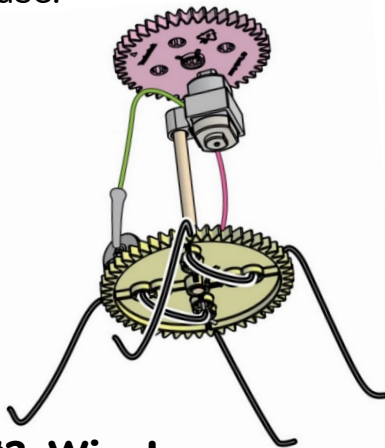
Here are some ideas to get you started.

Your first design may not work, but don't give up! You're doing real engineering! Keep experimenting and evolving your bot.



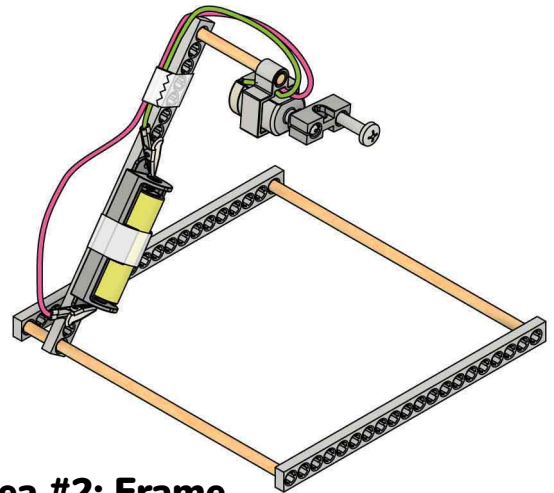
Idea #1: Base

Use **hole plates** or **gears** as a base.



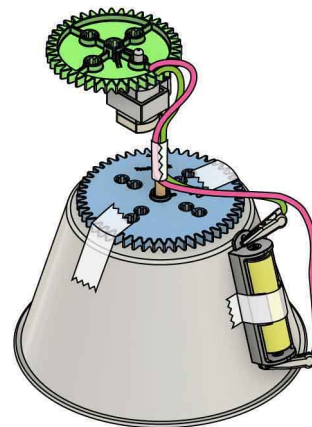
Idea #3: Wire Legs

Use **steel wire** to create legs. Bend them to change how it wiggles.



Idea #2: Frame

Make a frame using **strips**, **dowels** and **blocks**.



Idea #4: Other Materials

Use **other materials** to add to and change your Wiggle-Bot.





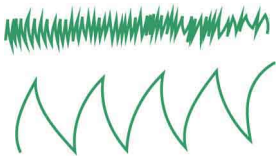
Scribble Bot Challenge

Design a Wiggle-Bot to make artwork!

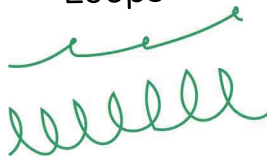
Attach markers to your Wiggle-Bot, then let it loose on a big piece of paper or poster board!

Redesign your Wiggle-Bot to draw as many marker patterns as you can!

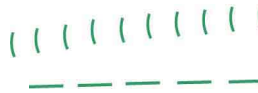
Zig-Zags



Loops



Dashes



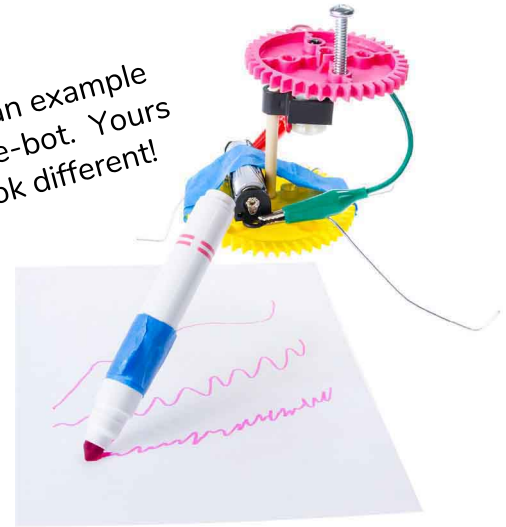
Solid Lines



Dots



This is an example
scribble-bot. Yours
will look different!



Want to learn
more about waves?

Download the [Wave Lab](http://shop4-h.org)
at shop4-h.org
Ages 8+

Wiggle Race Challenge

Build the fastest Wiggle-Bot!

Race an opponent or try for the shortest time!

Set up a start and finish line, then add yard sticks (or other boundaries) for each racer's lane (to keep your Wiggle-Bot going straight).

Don't have yard sticks?
Poke your Wiggle-Bot to
keep it going straight.

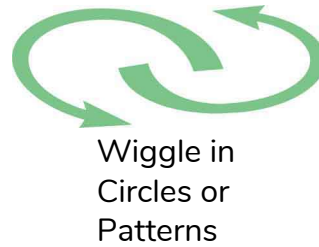
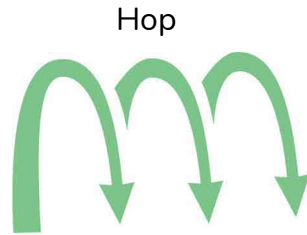




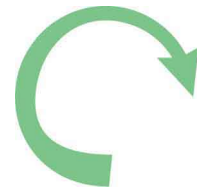
Keep Experimenting

Keep improving and changing your design. There is no perfect design; every design can be improved.

Can you make it...



Roll or Spin



What Else Can You Make?

Use Wiggle-Bot components to make your own inventions...

Wiggle Pen



Boat



Fan



The only limit is your imagination!