

# Go Guide

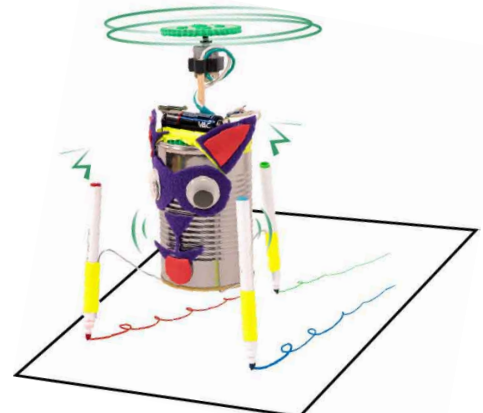
Wiggle-Bot



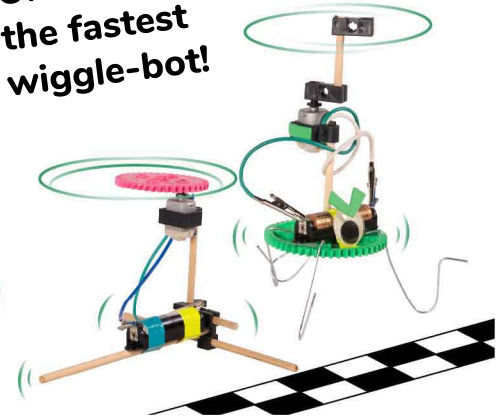
Design and build your own motorized Wiggle-Bot. Evolve your design to spin, wiggle, and more!



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

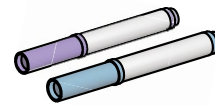
NAME	QTY	PICTURE
<b>Gear Set</b> SKU 1821-28	<b>1 set</b> 4 gears	
<b>Blocks</b> SKU 1821-34	<b>2</b>	
<b>Battery Holder</b> SKU 1821-01	<b>1</b>	
<b>Small Motor w/Leads</b> SKU 1821-01	<b>1</b>	
<b>Steel Wire</b> 30 cm (12 in) SKU 1821-72	<b>2</b>	
<b>Dowels</b> various sizes SKU 1821-20	<b>6</b>	<p><b>Dowel Sizes</b>            2x 30 cm (12")    1x 7.5 cm (3")            2x 15 cm (6")    1x 5 cm (2")</p>

#### MATERIALS YOU SUPPLY

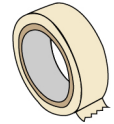


##### Recycling Materials

What can you use for a Wiggle-Bot body?



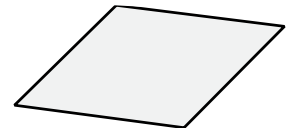
Markers



Tape



AA Battery



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

#### Optional Tools

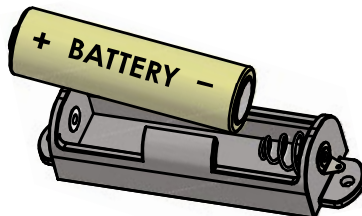
Modify materials to make even more creative designs with the  
**Maker Tool Set**  
SKU 1823-84



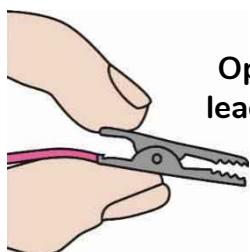


### Make It Spin

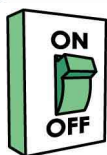
- 1 Put the **battery** into the **holder** with the flat side against the spring.



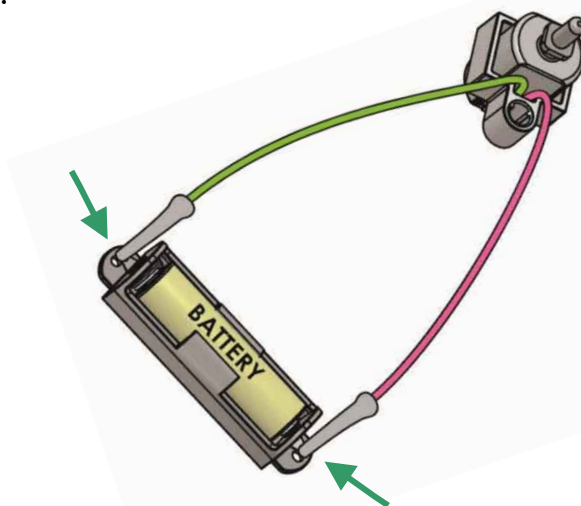
- 2 Connect the **motor leads** to the battery **holder** tabs. This should turn the motor on.



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



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

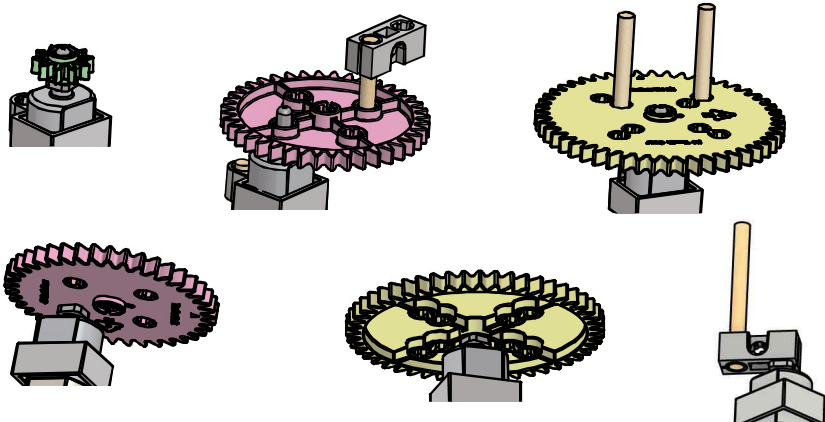


Want to learn more about electricity using your Wiggle-Bot?

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

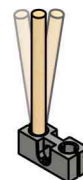
### Make It Vibrate

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.



#### Tip

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



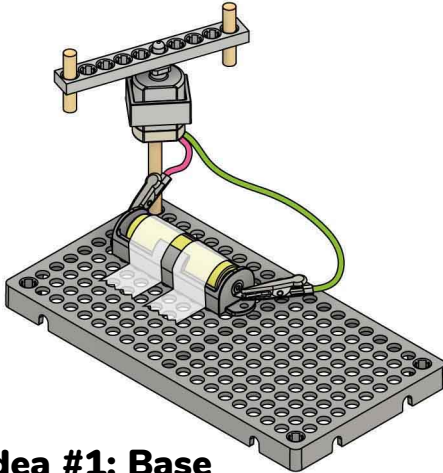




### BUILD YOUR BOT

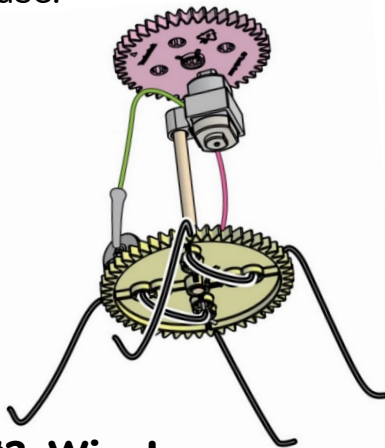
Here are some ideas to get you started.

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



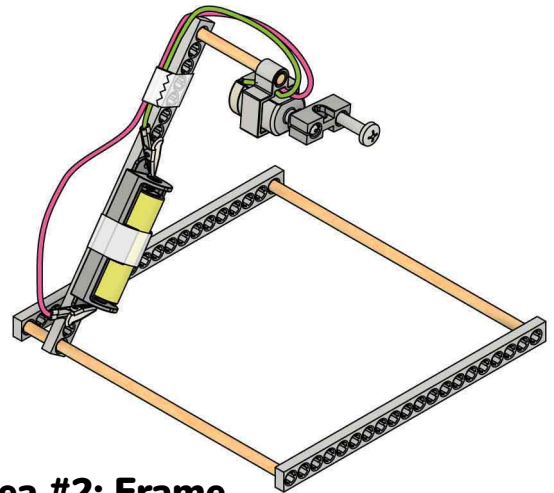
#### Idea #1: Base

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



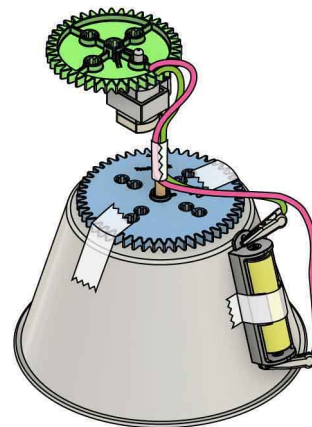
#### Idea #3: Wire Legs

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.





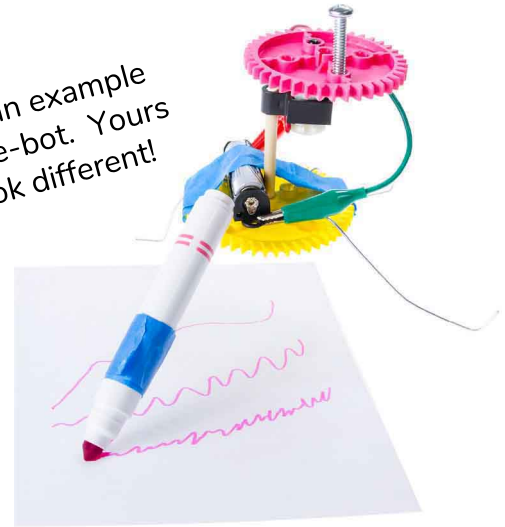
### Scribble Bot Challenge

#### Design a Wiggle-Bot to make artwork!

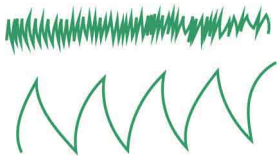
Attach markers to your Wiggle-Bot, then let it loose on a big piece of paper or poster board!

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

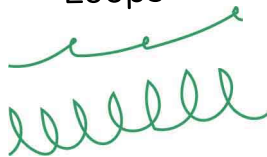
This is an example scribble-bot. Yours will look different!



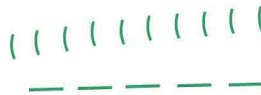
Zig-Zags



Loops



Dashes



Solid Lines



Dots



Want to learn more about waves?

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

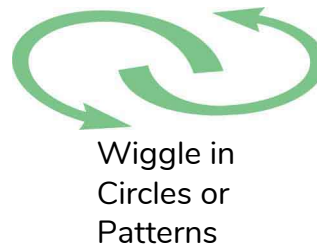
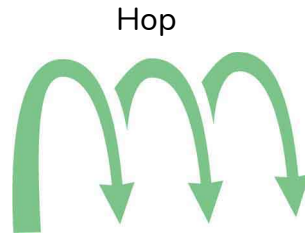




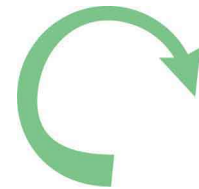
### Keep Experimenting

**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!**