Teaching Your Robot To Move

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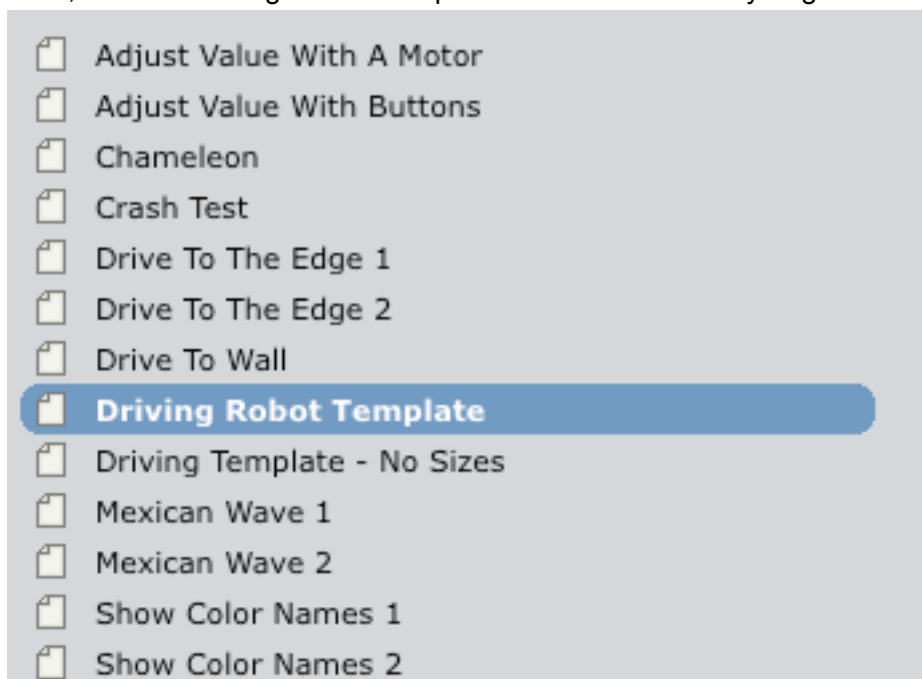# How to configure enchanting to manipulate robot movements

First, click on the file in the enchanting menu.

File

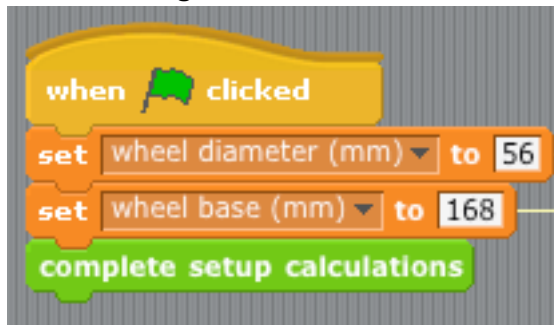You should then see a window like this open up. Click on examples.
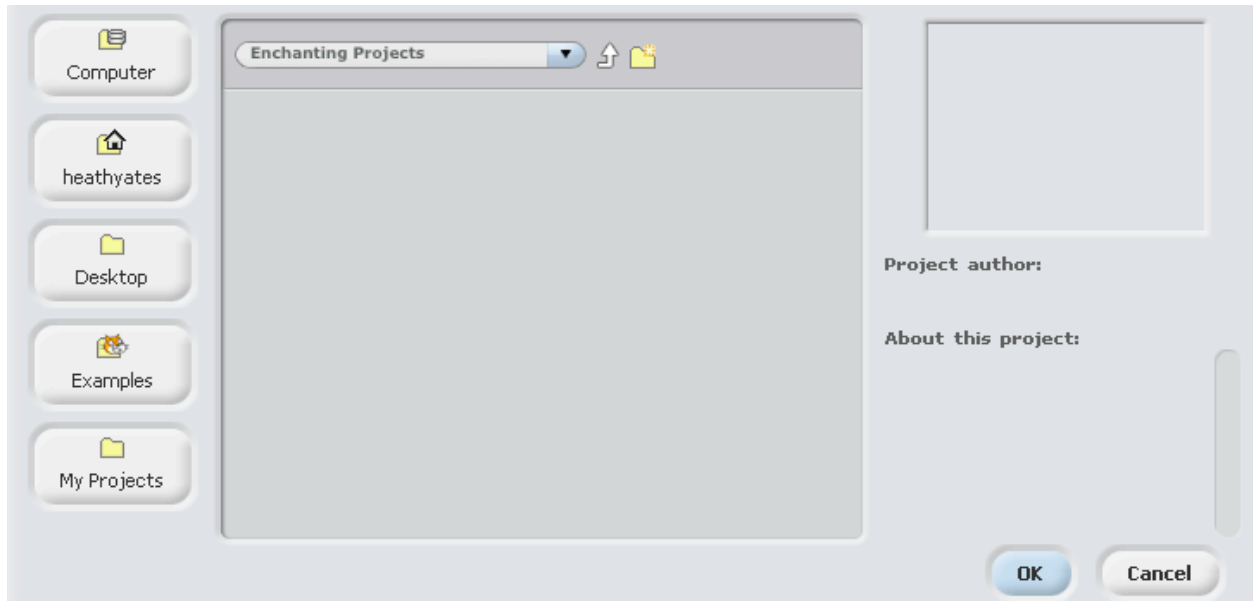
Next, click on Driving Robot Template. You are now ready to go!

List of the Basic Types of Robot Movement
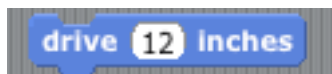
Basic Settings

Click on the down arrow key icon. Set the wheel diameter to 43.2 and wheel base to 168.
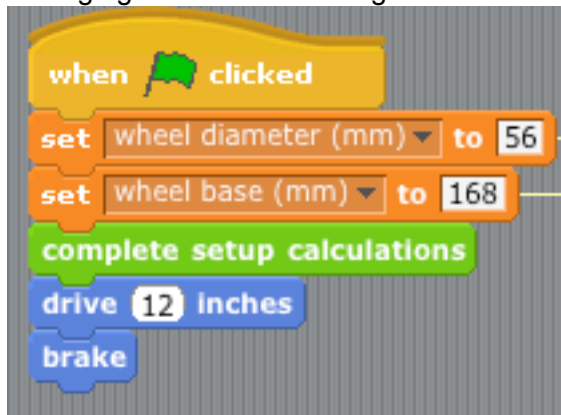

This tells the software that you are done describing your two wheeled robot to it. It is now ready for you to tell it what you want the robot to do.
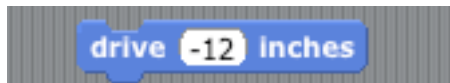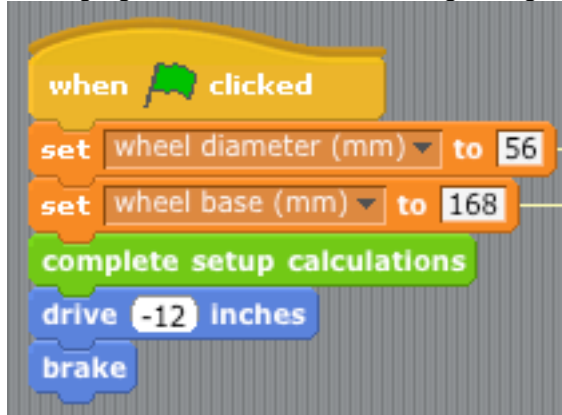
Move Forward

Changing the distance changes how far forward the robot will go.
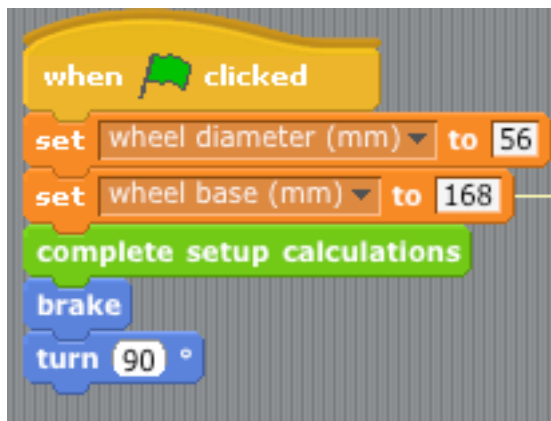
Move Backward

Changing the distance and making it negative changes how far backward the robot will go.
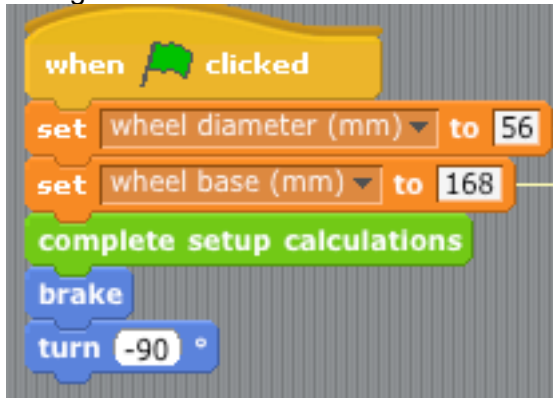

Turn Left

Select the turn command as shown above with the arrow pointing left. Changing the degrees changes how much the robot will turn left.

Turn Right

turn -90 °

Select the turn command as shown above with the arrow pointing left. Changing the degrees changes how much the robot will turn left.

when [green flag] clicked
set wheel diameter (mm) ▼ to 56
set wheel base (mm) ▼ to 168
complete setup calculations
brake
turn -90 °

Turn Around (by turning left)

turn 360 °

It is up to you which direction you which the robot to turn. However, it is just a matter of having the robot spin the same amount of degrees that there are in a circle. That is, 360 degrees.

when [green flag] clicked
set wheel diameter (mm) ▼ to 56
set wheel base (mm) ▼ to 168
complete setup calculations
brake
turn 360 °
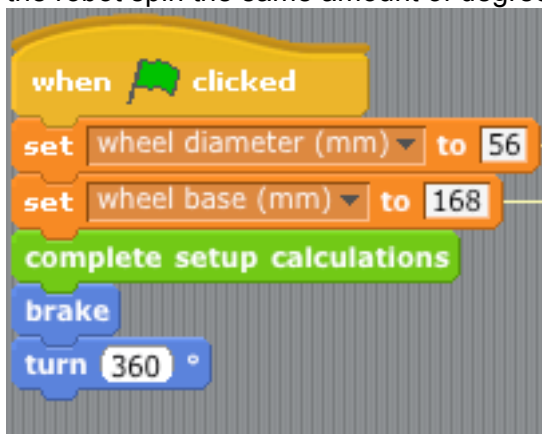
A few important things to remember. Please add this at the end of your program. This makes sure you robot will quit it's program after the commands are run.

Terms: How it Works

- <u>Degrees</u> - How many degrees the robot will turn before stopping
- <u>Distance</u> - the inches the wheel will travel before stopping

Challenges

Challenge One: Go Into a Garage

Starting from *behind* any of the three starting points, have your robot drive into the garage across from it *without touching any of the garage walls*.
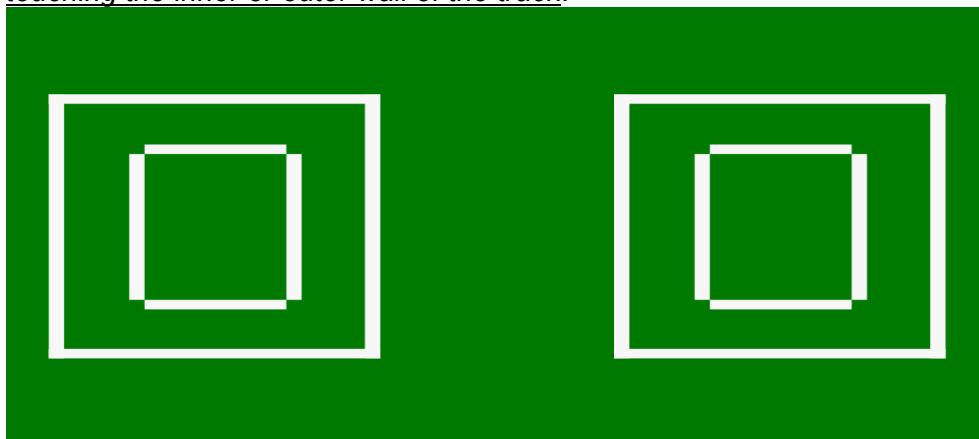

Challenge Two: Back Into a Garage

Do the same as challenge one, but have your robot turn around and back into the garage once it gets close, again *without touching any of the garage walls*.

Challenge Three: Drive Two Laps Around a Track

Starting from any point on either track, your robot must go around the track twice *without touching the inner or outer wall of the track*.

Bonus Challenge: Drive Two Laps Backwards Around a Track

As a bonus if you finish the first three challenge, try to do challenge three but having you robot go backwards instead of forwards for the whole time.