swarmathon 5

competition guide

# Competition overview

## submitting your file

# rules

Please read the following rules carefully before beginning your competition submission. Complete the checklist as you work to ensure that your submission will be accepted. **Be sure to double-check your code before submission. Submissions that violate any of the following rules will not be accepted.**

## FILE SETUP

* You are using NetLogo 5.2.
* Your file is named *highschoolname\_*hs\_sw17.nlogoExample: DelNorte\_hs\_sw17.nlogo
* Your base code includes the required code it came with, **unmodified.** A script will be run to check for modifications to the required code.

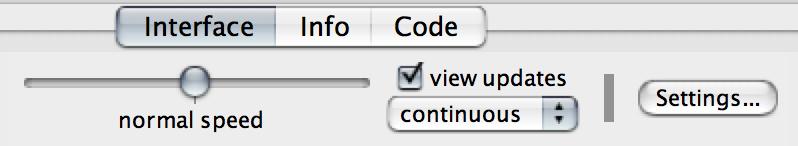
## WORLD setup

Your world has the following properties:

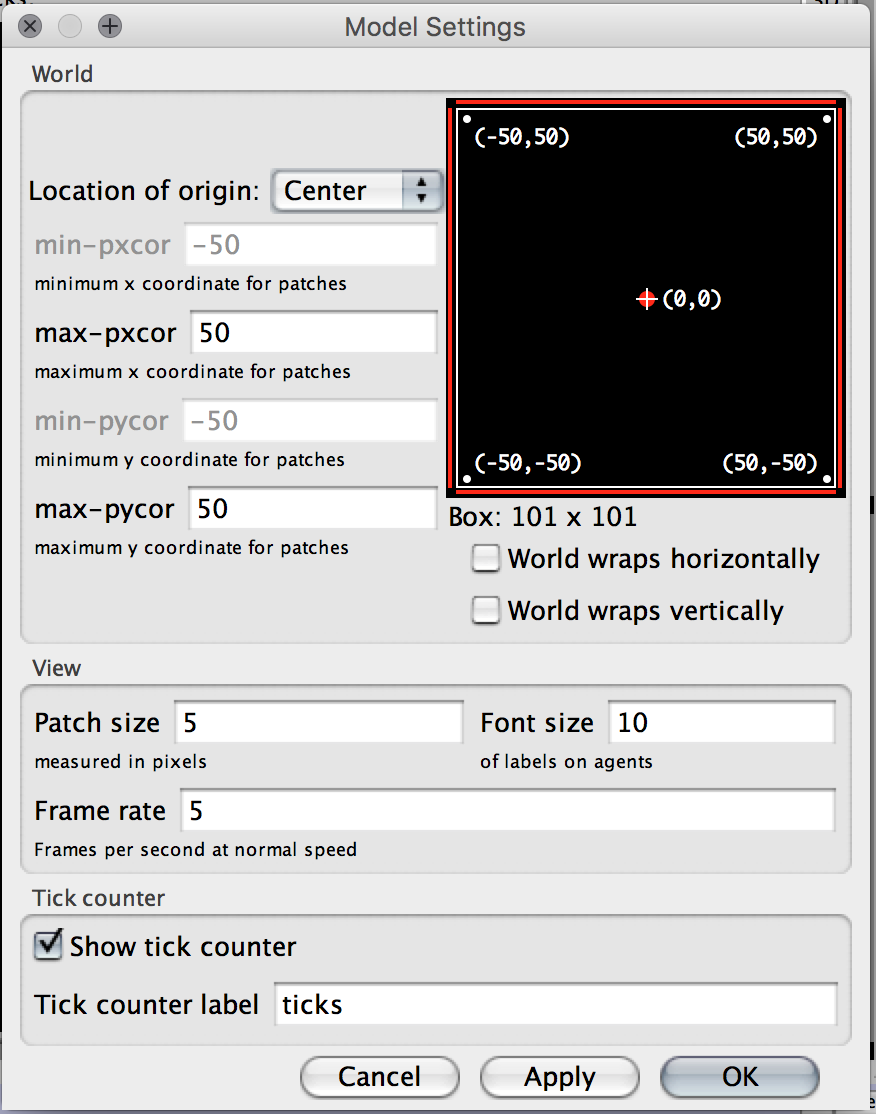
* The origin is located at the center.
* min-pxcor and min-pycor are set to 50.
* max-pxcor and min-pxcor are set to 50.
* Both horizontal and vertical world wrapping are unchecked.
* Patch size is 5.
* The tick counter box is checked.
* The tick counter label is “ticks”.

**The base code for [Sw5] comes with these settings already. However, because each NetLogo install can have its own quirks and default settings, be sure to check these settings on your file before submission.**

### How do I check the settings on my file?

Navigate to the interface tab and press the **Settings…** button:

A menu will pop up. Compare the picture below to your menu or to your checklist above. If everything matches, you’re good!



## robots and their properties

* You must create and setup **exactly six robots**.
* These same six robots must be in play throughout the competition. (You may not use the commands **hatch**, **die**,or **sprout**,or any other commands that create or destroy robots after the initial setup.)
* Robots can move a maximum of 1 step on each tick. Be careful that you are not calling multiple procedures in one tick that include move commands! Robots may also remain stationary.
* Turning is not considered a move command. Example:

**left 90**

**forward 1**

is allowed.

* The robot must have the shape “robot” when not carrying a rock and the shape “robot with rock” when carrying a rock.
* Robots may have any labels you wish, or none.
* Robots do not have an unlimited vision distance—they can see a maximum of 2 patches around them. Examples: The commands **in-radius 1** and **in-radius 2** are allowed; **in-radius 3**, **in-radius 4**, … etc. are not. The commands **patch-ahead 1** and **patch-ahead 2** are allowed; **patch-ahead 3**, **patch-ahead 4**, …etc. are not. **Neighbors** and **neighbors 4** are allowed.

## patches and their properties

* Patches may only remove a rock (change their color back to the base color) when a robot has contacted that patch and picked up a rock.
* Patches must remove the rock when the robot has picked up the rock, or the score will not be counted for that rock.

## global variables

# placeholder

## placeholder

# placeholder

GREAT JOB! You completed SWARMATHON 5.

BUG REPORT? FEATURE REQUEST?

email elizabeth@cs.unm.edu with the subject SW5 report

Good luck in the competition!

final checklist

## FILE SETUP

* You are using NetLogo 5.2.
* Your file is named *highschoolname\_*hs\_sw17.nlogo**Example:** DelNorte\_hs\_sw17.nlogo
* The origin is located at the center.
* min-pxcor and min-pycor are set to 50.
* max-pxcor and min-pxcor are set to 50.
* Both horizontal and vertical world wrapping are unchecked.
* Patch size is 5.
* The tick counter box is checked.
* The tick counter label is “ticks”.

## WORLD setup