Capital High

;Jaguars

;Oscar Lopez

;Ryan Romero

;Alyssa Huerta

;NetLogo

;;## WHAT IS IT?

;This netlogo project showes a red improted fire ant colony.

;## HOW IT WORKS

;This model shows ants picking up food and bringing it back for reproduction

;## HOW TO USE IT

;press setup and go and adjust the slider

;## THINGS TO NOTICE

100 ticks = 1 hour

globals [ food-source ]

turtles-own [energy]

to setup

 clear-all

 ask patches

 [ set pcolor green

 ]

 create-turtles 10

 ask turtles

 [

 set color red

 set size 4

 set shape "bug"

 ]

 rocks

 food

 water

 Ant-hill

 reset-ticks

end

to rocks

 ask patches [

 if (distancexy (-2.4 \* max-pxcor) -45) < 8

 [ set pcolor gray]

 if (distancexy (-2.7 \* max-pxcor) 80 ) < 9

 [ set pcolor gray]

 ]

end

to food

 ask patches

 [

 if (distancexy (0.6 \* max-pxcor) 0) < ant-food / 1.2

 [ set pcolor red]

 if (distancexy (1.2 \* max-pxcor) 0) < ant-food / 1.3

 [ set pcolor red]

 if (distancexy (.75 \* max-pxcor) -66) < ant-food / 1.5

 [ set pcolor red]

 ]

end

to water

 ask patches[

 if (distancexy (0.2 \* max-pxcor) 50) < 12

 [ set pcolor blue]

 ]

end

to Ant-hill

 ask patches

 [

 if (distancexy (0 \* max-pxcor) 0) < 5.5

 [ set pcolor brown]

 ]

end

to eat

ask turtles

 [

 if pcolor = red

 [

 set pcolor green

 right 180

 ]

 if pcolor = blue

 [

 set pcolor green

 right 180

 ]

 ]

end

to go

 eat

 tick

 ask turtles

 [

 move

 if pcolor = blue or pcolor = red

 [ set energy energy + 20 ]

 if energy > 100

 [set heading towards patch 0 0

 if pcolor = brown

 [

 set energy energy - 75

 hatch 1

 [ set energy 10

 move]

 ]

 ]

 if pcolor = gray

 [

 left 180

 ]

 ]

end

to move

 left random 40

 right random 40

 forward 1

end