



NETLOGO TUTORIAL II

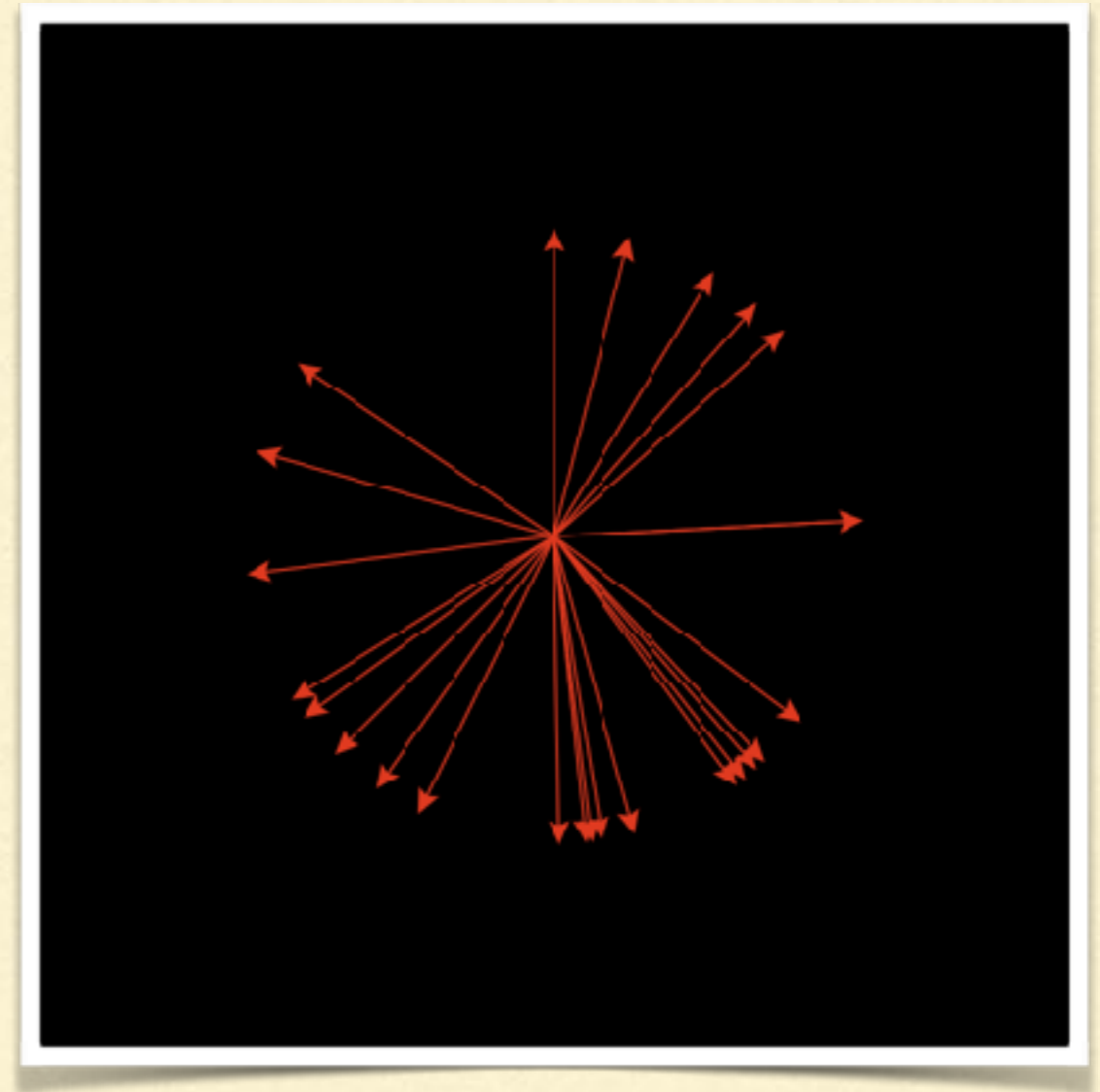
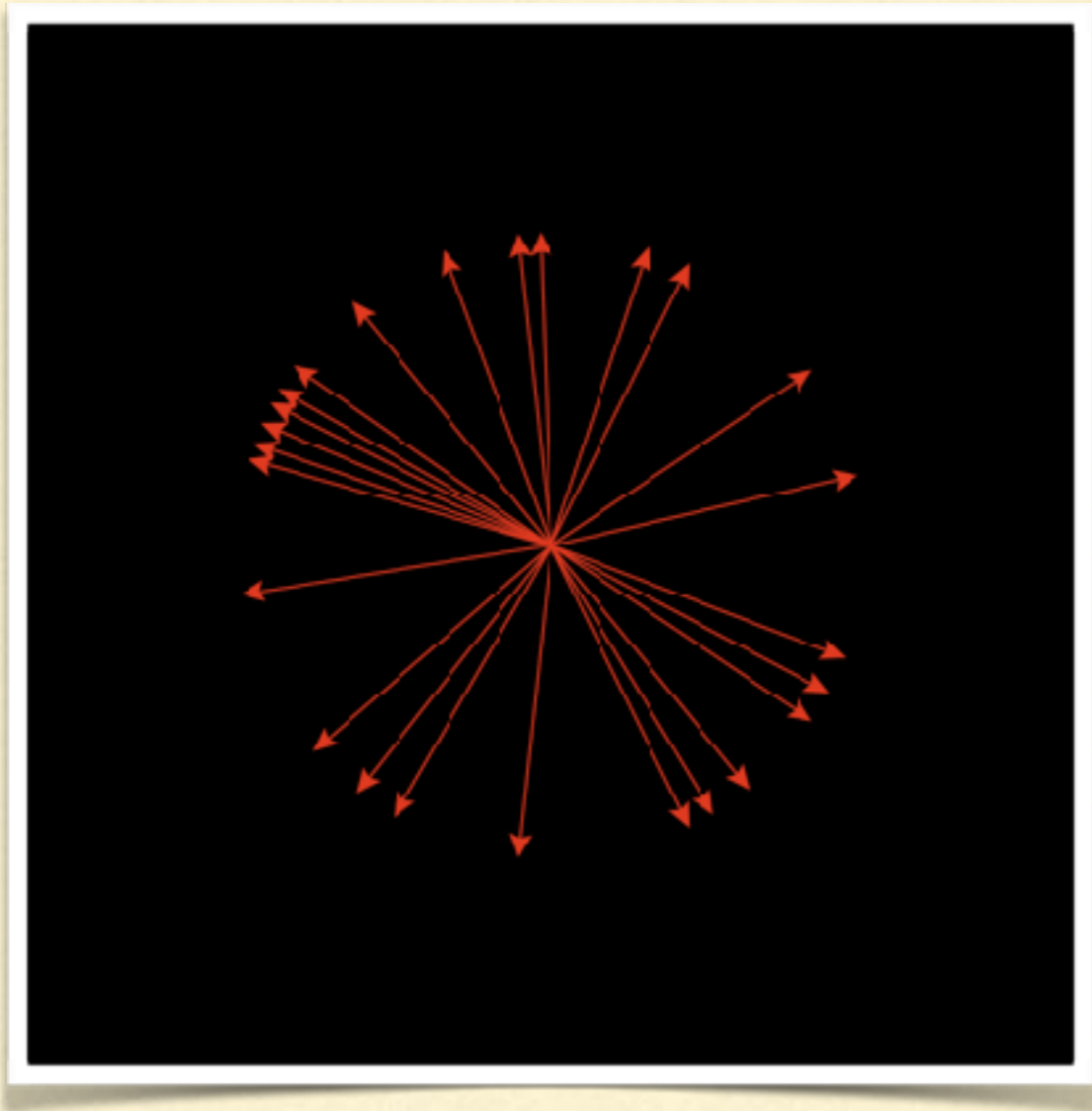
Lisa McManus
NBHS STEM Club

PROCEDURES

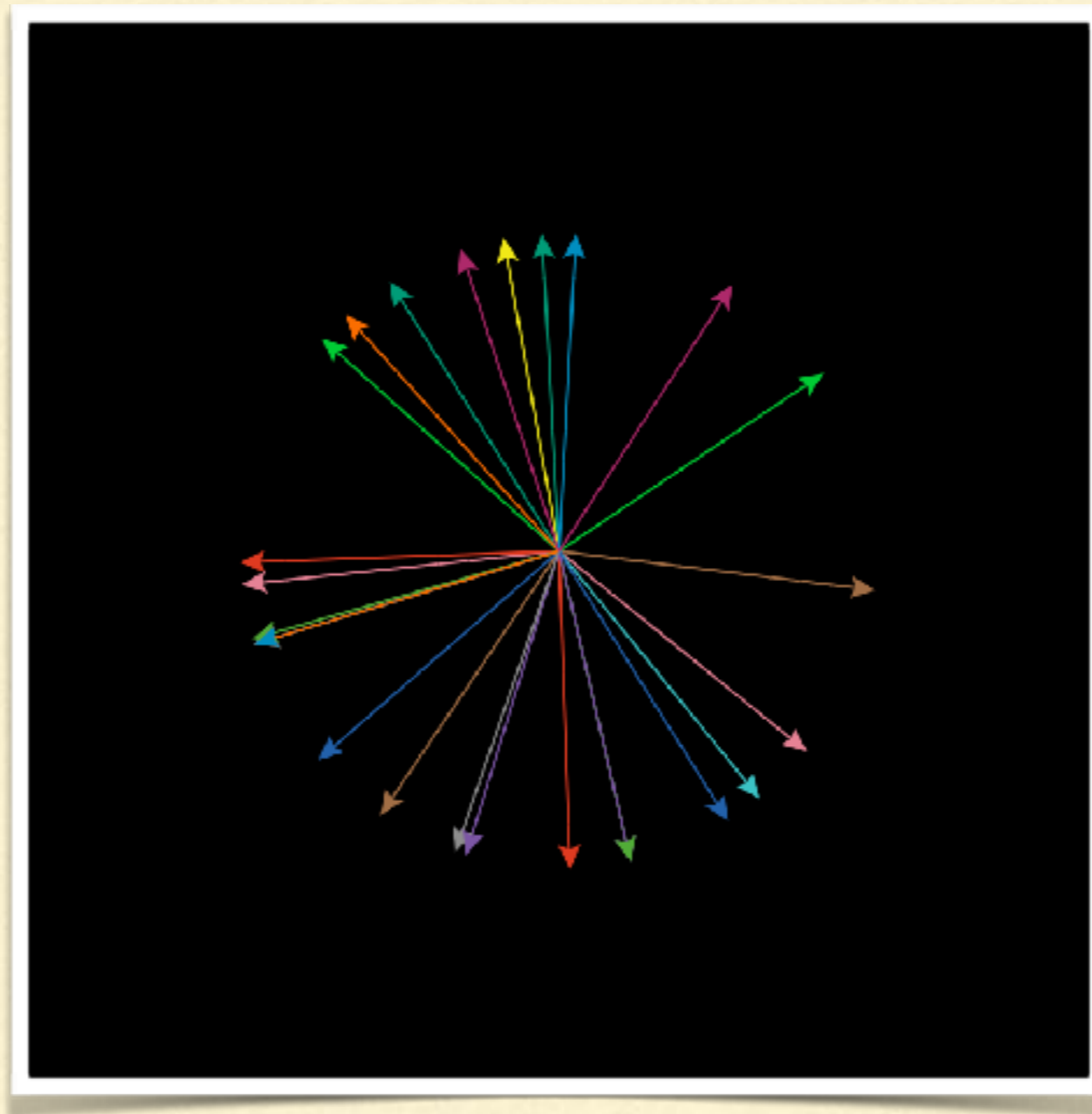
- A set of instructions is known as a procedure or a function
- Click on the 'NetLogo Code' tab: select all the text and delete (Ctrl-A and Delete)
- Type the following and then press 'Recompile Code'

```
to goBoom  
  clear-all  
  create-turtles 25 [set color red]  
  ask turtles [  
    pen-down  
    forward 10  
  ]  
end
```

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- Change to the observer context in the Command Center
 - Type 'goBoom' and hit enter, try this a few times
 - Why does this procedure look slightly different each time?
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HOW DO YOU MAKE THIS?



CORAL-ALGAE MODEL:VERSION 1.0

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- Go back to the 'NetLogo Code' tab
 - Type the following and then press 'Recompile Code'

```
to setup-algae  
  clear-all  
  ask patch 0 0 [set pcolor green]  
end
```

```
to grow-algae  
  ask patches with [pcolor = green] [ ask neighbors [set pcolor  
  green] ]  
end
```

- Make sure you press 'Recompile Code' every time you make a change!
 - Go back to the Command Center in the observer view
 - Enter **setup-algae** in the Command Center
 - Enter **grow-algae**Try entering **grow-algae** several times
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- Go back to the 'NetLogo Code' tab
 - Type the following and then press 'Recompile Code'

```
to setup-algae  
  clear-all  
  ask n-of 10 patches [set pcolor green]  
end
```

```
to grow-algae  
  ask patches with [pcolor = green] [ ask neighbors [set pcolor  
  green] ]  
end
```

- Make sure you press 'Recompile Code' every time you make a change!
 - Go back to the Command Center in the observer view
 - Enter **setup-algae** in the Command Center
 - Enter **grow-algae** Try entering **grow-algae** several times
-

ALGAE GROWTH



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- Go back to the 'NetLogo Code' tab
 - Type the following and then press 'Recompile Code'

```
to setup-coral  
  clear-all  
  ask n-of 10 patches [set pcolor pink]  
end
```

- Let's change our code so that algae and coral can only grow on 'free space', which we represent with our black patches

```
to grow-algae  
  ask patches with [pcolor = green]  
  [ ask neighbors [if pcolor = black [set pcolor green] ]  
end
```

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- Let's change our code so that algae and coral can only grow on 'free space', which we represent with our black patches

to grow-algae

ask patches with [pcolor = green]

[ask neighbors [if pcolor = black [set pcolor green]]

end

to grow-coral

ask patches with [pcolor = pink]

[ask neighbors [if pcolor = black [set pcolor pink]]

end

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- In the **setup-coral** and **setup-algae** procedures, get rid of the 'clear-all' command since we are putting that into a new procedure

```
to setup
  clear-all
  setup-algae
  setup-coral
  reset-ticks
end
```

```
to go
  if ticks >= 20 [ stop ]
  grow-algae
  grow-coral
end
```

REEF PLOT

