Swarm Notes - Parrish 👨‍💻💚👨‍💻

**General**

* Swarm States
  + Still
  + Wander
  + Seek
  + Follow
  + Flee
  + Near
* Individual States
  + Seek friends
  + Dying
* Global Variables
  + Swarm state
  + Swarm size
  + Swarm mass
* Info for each creature
  + Position
  + Speed x-y
  + Individual States
* Full time functions
  + Update position
  + Collisions
  + Nearby rules???
* Part time functions
  + Individual States
  + Swarm Exploder (spacial)
* Helper functions
  + Bounded Random #
  + Mouse Click (position enabled)
  + Space for state rotation
    - Say in browser title
  + State change functions
  + Render
  + Framerate (setInterval(30))
* Settings
  + Randomness?
  + Constant movement

**Object Embedding**

* Swarm
  + Entity
    - Item
      * Apple
    - thing

Targeting methods

* Swarm center of mass movement
* Individual tracking
  + X
    - cos(Angle) \* maxSpd
  + Y
    - sin(Angle) \* maxSpd
  + This treats trig like percents needed to achieve max speed which can vary to make things look swarm.

Mouse events

canvas.addEventListener("mousedown", handleClick, false);

function handleClick(event) {

var x = event.pageX;

var y = event.pageY;

s(2, {x: x, y: y});

}