## Bucket O'Fishies



A simulation of schooling and preditor-prey interactions

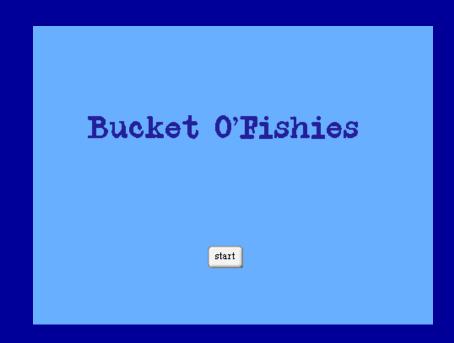
# Objectives

- Create an interaction simulation
   With fish (what else)
- Demonstrate predictor-prey interactions
- Randomized and path based movement
- Relative position recognition
- · Object oriented (fish)

#### Interactive World

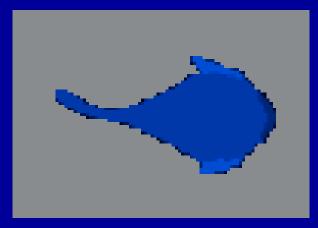
 User interaction is required to start program...

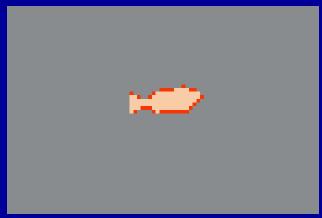
okay is a start button.



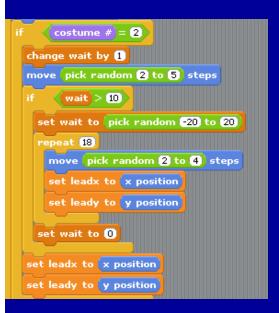
### Preditor-Prey

- Predator
  - Large blue fish travels in straighter path then prey
- Prey
  - Agile, able to avoid predator, sometimes





### Randomized-Path Movement



- · Left
  - random leader movement
- Right
  - Occasionally follow
  - Bum movement

```
change wait by 1

if count < 1

point towards follower v

set count to danger

if wait > 5

set wait to pick random -18 to 18

repeat 5

turn v wait degrees

move pick random 2 to 5 steps

change count by -1

set wait to 0
```

#### Relitive Position



- Returning the relitive direction of the current leader
- Based on "side project" soccer game...

### Objective Fishies

```
when I receive votemein v

if newleader > 0

if not costume # = 3

if pick random 1 to numfish = pick random 1 to numfish

set newleader to 0

switch to costume leader v
```

- Fish are programed to be individual
- Each one is capable of being the leader
- Bluefish target respective to follower sprite

GO.