

# Setup of an aquarium

## Steps

- ① Research + choose your aquarium organism
- ② Purchase the tank  
 SIZE → # of gallons  
 SHAPE
- ③ Place the tank

\*water 8 lbs/gallon

**Do's**  
 sturdy surface  
 flat

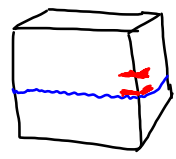
vs

**Don'ts**  
 put it near a heater/ac  
 put it on floor  
 put it in direct sunlight  
 put it out of reach

- ④ Clean the tank  
 cold water + Kosher salt  
 "non-iodized"
- NEVER USE
- SOAP
  - BLEACH
  - WENDEX
  - HOT WATER

- \* ⑤ Place the tank on cardboard
  - i. Ease of movement
  - ii. Detect leaks

- ⑥ Check the tank for leaks
  - i. Fill the tank half-way w/ water and use a dry-erase marker to mark the water level on the glass
  - ii. wait 24 hrs
  - iii. observe the water level
  - iv. if unchanged repeat steps i-iii but this time fill to the top.



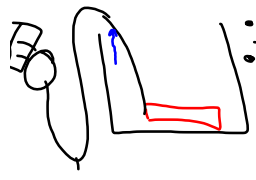
- ⑦ Clean the substrate ("stuff" that goes on the bottom)

F.W.	↓	S.W.
gravel sand		live sand crushed coral dolomite

Place the substrate in a container, put under running water and allow the container to slowly overflow

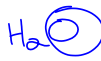
\*pour the gravel (substrate) into the tank (1-3 inches)

- ⑧ Install an aquarium heater/chiller  
 Most aquarium animals require a temp. 72-80° F (21-25° C)
- 5 Watts per gallon of water (100 Watts / 20 gallons of water)
  - Place the heater horizontally on the bottom of the tank



- Wait 15 minutes before plugging in
- Plug it in using a "drip-line"

⑨ Insert a thermometer  
 ↳ measures temperature  
 72°-80° F



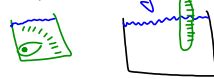
⑩ Install a Filter

- Parts of a filter:
  - a) Pump → circulate water
  - b) Pad (Blue) → physical filtration (traps large solid particles)
  - c) Black Rock (Petrified Calcium) → absorbs toxins
  - d) Bio-wheel → wheel covered in beneficial bacteria → breaks down fish waste (NH<sub>2</sub>-ammonia)

⑪ Add Salt

\*1,000 g/L F.W. tank → Add 1 tablespoon salt  
 S.W. tank → Add salt until we achieve a density of

1.020 g/L  
 HYDROMETER  
 ↳ measures density



⑫ Add Decorations

pH

- NEVER OVER-DECORATE
- F.W. ≠ S.W.  
 No corals or shells YES corals or shells
- Plastic Plants or Real Plants\*
  - Hidey spots
  - Sleep
  - Lay eggs



⑬ Add "Starter" Fish

- Allows to test the tank + make sure it's safe
- Acclimate fish correctly
- "Cycle" the tank → NH<sub>3</sub>, Bio-wheel, bacteria

13A Acclimating

- Place the plastic bag still sealed, in the water
- Let float for ~15 min
- Open the bag + mix in some water but DON'T let the fish out!!
- Wait 5-10 min
- Slowly let the animal swim out

13B Cycling the tank

- NO NH<sub>3</sub> in the tank (ammonia)
- Add a new fish; that fish goes!!
- ↑ NH<sub>3</sub> (spikes)
- Bio-wheel increases bacteria levels
- ↑ bacteria eat/breakdown NH<sub>3</sub>
- ↓ NH<sub>3</sub>; when 0 tank is cycled

⑭ pH



F.W. pH → 7.0  
 S.W. pH → 8.0

⑮ Feeding

- #1 cause of death is over-feeding
- pinch of food flakes
- allow them to eat for 2 minutes + remove any excess

⑯ Water Change

- every 3-4 weeks
- change about 20-25%
- replace w/ "aged" water
  - ↳ F.W. = F.W.
  - ↳ S.W. = S.W.
- Use a SIPHON

# \* Cycling the Tank

• the rise + drop in nitrogenous waste levels in an aquarium tank

