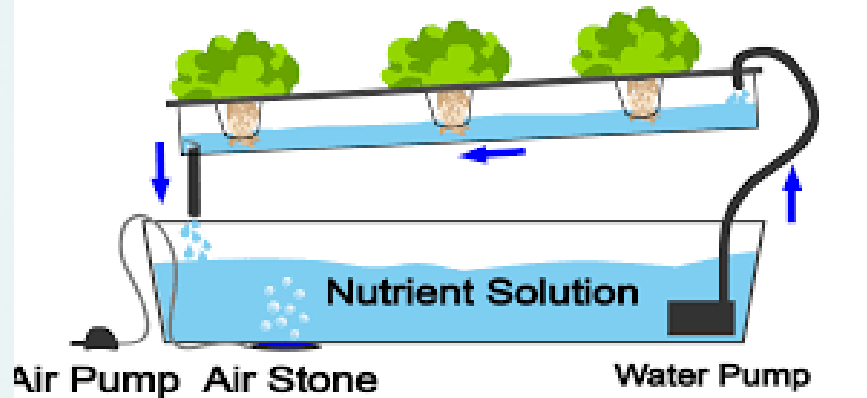


Simple DIY Hydroponics



Types of Hydroponics

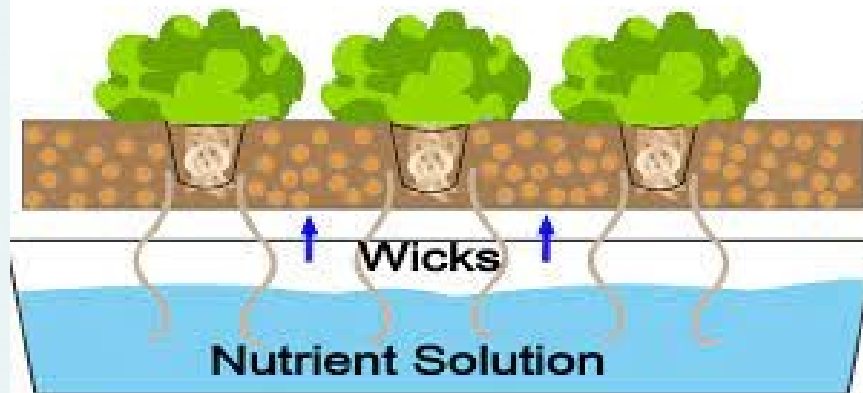
Nutrient Film Technique



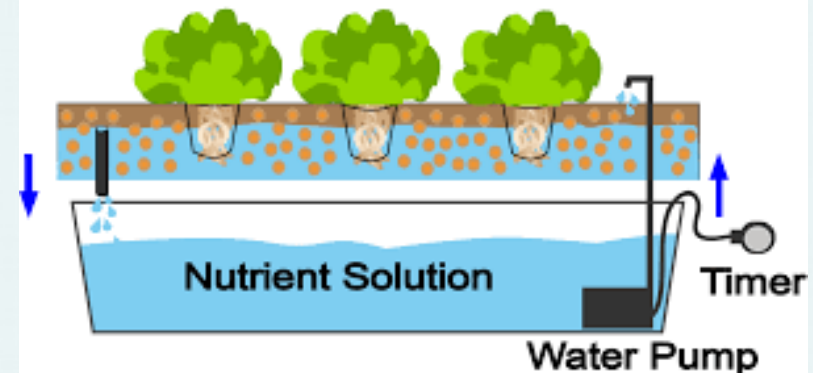
Deep Water Culture (DWC)



Wick System



Ebb And Flow



Source: <https://www.nosoilsolutions.com>

We chose NFT for ease of construction and available materials



DIY NFT Hydroponics Materials

- PVC (1 length per row + bends for each additional row)
- Water reservoir (5 gallon bucket)
- 1/2" hose
- Submersible pump
- Grommets
- Stand (scrap wood?)
- Rockwool (medium for seed germination)
- Nutrients (vendor recommendation)
- Mesh pots



Identifying Space



Plenty of outdoor space in garden, but it will freeze soon



Indoor?



Indoor grow tent with LED light and makeshift table



Construction



Drill holes to hold 3" mesh cups which will hold medium (rockwool)



Construction (Cont.)



Terrible hole saw,
invest in a quality
one

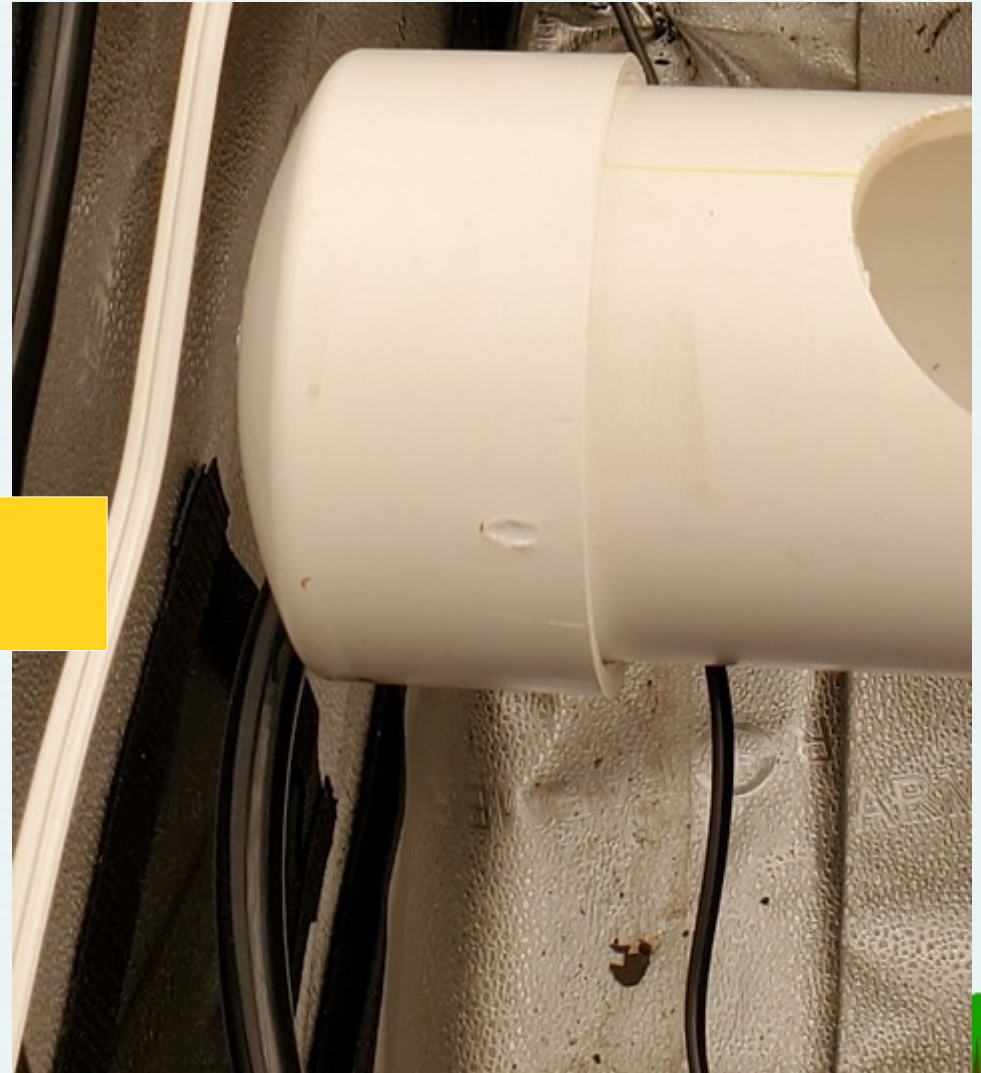
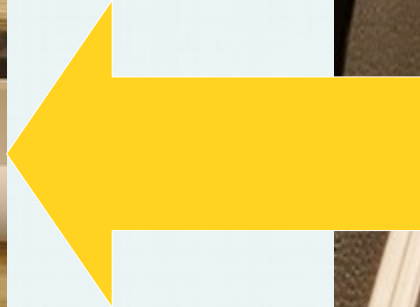
5 gallon bucket will
act as water
reservoir



Assembly



Assembly (Cont.)



This end leaks, needs
a better fit for the hose



Assembled

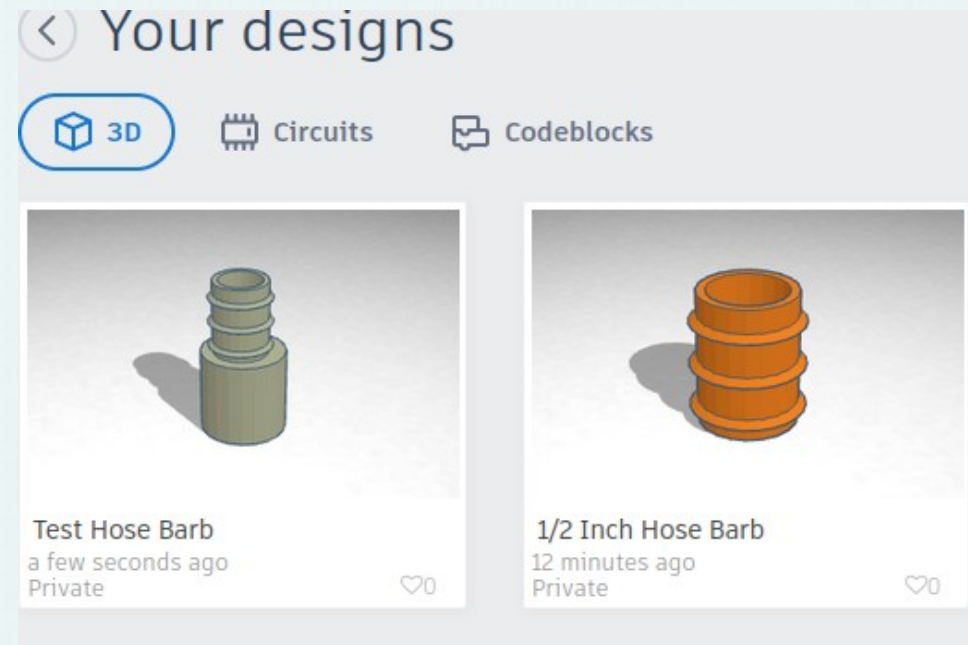


Water flows out of the reservoir, through the PVC channels, then back into the reservoir for re-circulation. Nutrients will be added to the reservoir, holes in PVC channels will hold mesh pots with rockwool and germinated seeds.



Next Steps

- Improve seals
- Print funnel for end
- Automation (arduino + Pi for temp/humidity/nutrient control)
- DWC pots
- Fogponics/aeroponics/other methods



References

- <https://www.nosoilsolutions.com/6-different-types-hydroponic-systems/>
- <https://youtu.be/nyqykZK2Ev4>
- <https://www.instructables.com/Quick-NFT-Hydroponic-System/>

