

Hydrogarden at Discovery Elementary



ARLINGTON PUBLIC SCHOOLS
DISCOVERY ELEMENTARY
EXPLORERS



Outdoor Gardening





How do you
provide an
authentic food
growing
experience for
students during the
winter months?



Hydrogarden Requirements

- Operate during winter months
- Grow food that can be used by Dining Services
- Become a resource for learning
- Promote healthy food choices
- Give back to the community
- Benefit from surplus electricity generated at Discovery

The Prototype

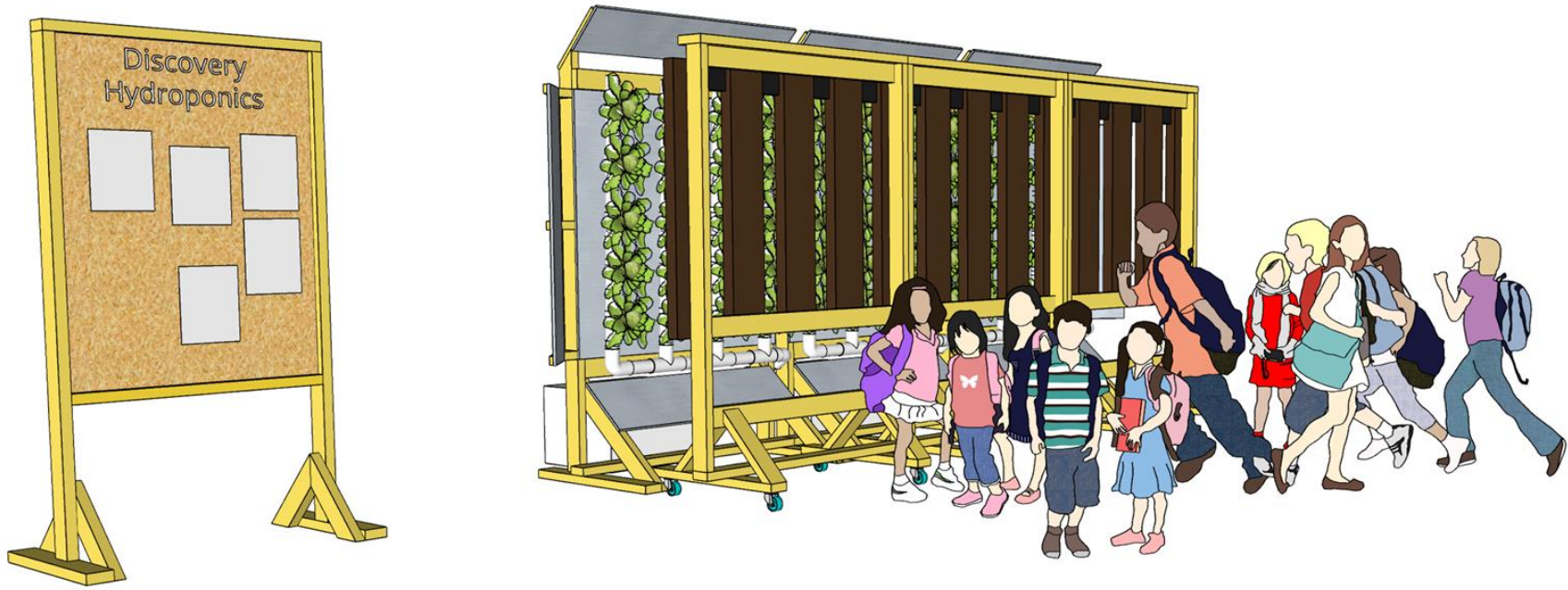


Greg Rusk
@RuskTeach

60 salads ready for staff meeting
@DiscoveryAPS. Fresh from our
#hydroponics harvest yesterday.



Hydrogarden Design



60 Grow Sites, 15 feet long, 3 Separate but Connected Modules, 24 T5 Light Tubes, 12 Fans, Cafeteria Location

2018



2018



Final Hydrogarden



Final Hydrogarden



Kindergarten Seedlings



First Harvest



Feeding The School



Student Hydrofarmers



Vertical Hydroponic System

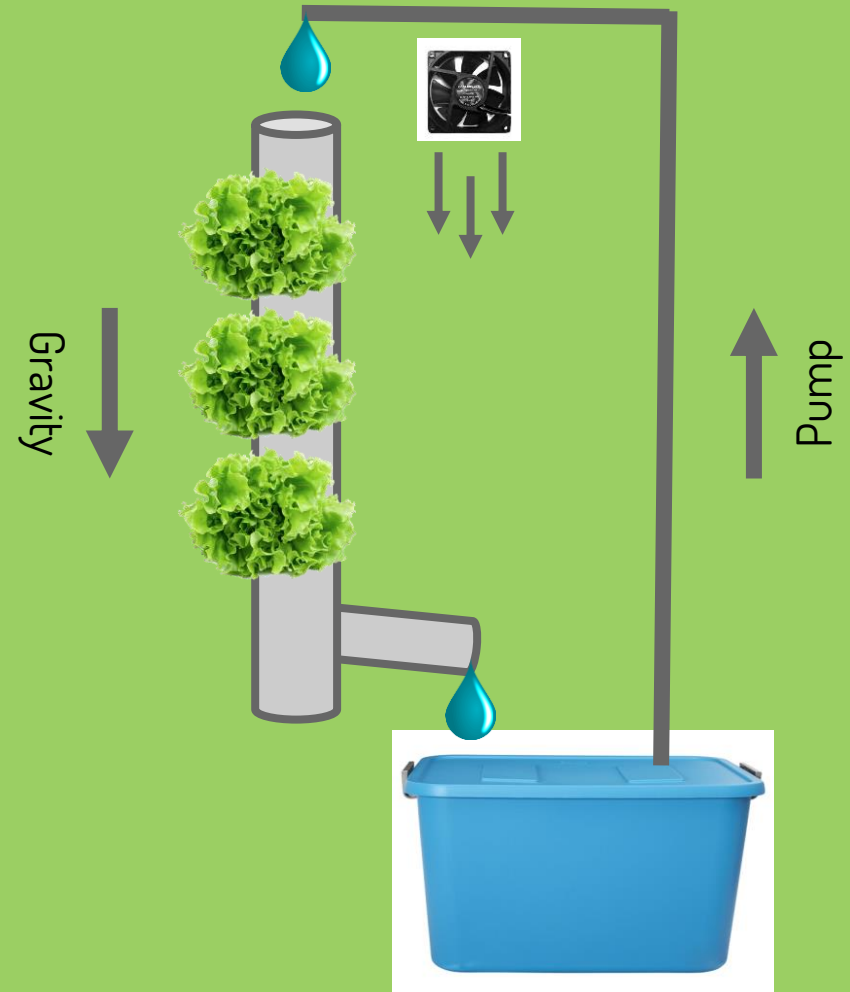
Nutrient solution is mixed and monitored in tank

Pump moves water from nutrient tank to top of plant tower

Water drips down through tower onto the roots of plants

Through transpiration plants pull nutrients from roots to leaves (air flow improves transpiration)

Excess nutrients drain back into tank





Greg Rusk
greg.rusk@apsva.us