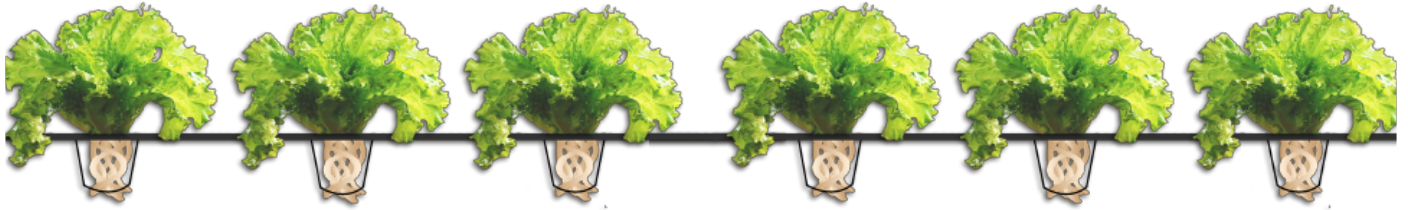


## Tips for Classroom Aeroponics



### Bucket Design and Set-up

- Choose buckets that are opaque. Sunlight will damage the roots and promote algae growth in the water.
- Each plant will need something to stabilize it inside the net pot. You can use expanded clay pebbles, neoprene cloning collars or rock wool cubes.



Expanded Clay Pellets



Neoprene Cloning Collars



Rock Wool Cubes

- Water will be spraying inside the buckets. Be sure the placement of the net pots provides a tight seal to avoid having water spray outside of the bucket.
- When purchasing your net pots, look for one that has a wide lip. This will allow the pot to drop all the way into the hole without falling through.



## Plant Selection & Preparation

- If starting your own seedlings, use a Jiffy 7 or rock wool cubes. Once they have roots coming out of the bottom or sides, the seedling is ready to move to the aeroponic baskets. (If you use a Jiffy 7 carefully remove the plant from the soil and rinse off the roots before placing it in the system.)
- Start seeds 2-4 weeks before you intend to move them to the aeroponic system.
- For a quicker option, you may also purchase plant starts from a local greenhouse or nursery. Carefully wash away the soil from the roots and place in the aeroponic baskets.
- Ideal plants for aeroponics include:
  - Greens: Lettuce, spinach, kale,
  - Herbs: Basil, arugula, cilantro,
  - Tomatoes: You can use tomato starts or cuttings. If you would like to grow tomatoes to fruit, select an indeterminate variety.
    - **Note:** *Ideal plants are listed here for your background knowledge. However, if possible, allow students to select their own plants and perhaps even fail. The experience will be more impactful as students come to realize that aeroponics may be a suitable alternative farming method for some food crops, but not for others (tree fruits/nuts, large vine plants, etc.).*

## Maintenance and Growth

- **Temperature:**
  - Very cold water temperature inside the bucket will slow/stop plant growth.
  - Hot water temperatures over 80° encourages algae growth. Aeroponic buckets will be most successful in the spring or fall depending on your climate.
- **Light:**
  - Place buckets inside a greenhouse or use a grow light.
- **Water/Nutrient Solution:**
  - Add 1 gallon of water/nutrient solution to each bucket.
  - The pump should be fully submersed at all times.
  - After 3 weeks, dump out the water and replace it with new water.
- **Electricity:**
  - Be sure the power source for the water pump can't be bumped or switched off accidentally. Even a short period of time without water will result in the plant's dying.