

PART LISTS - USE THIS TO KEEP ITEMS TOGETHER



Shelf w/plant lighting & light timer



Rockwool and seed raising container



52 net cups



Seed Pack



Nutrient Packet (3 part)



5 Gallon Bucket and Stir Stick



1 gallon container



pH & EC Meter with pH down solution



Blue Bag - 10 plant trays
(2-propagation (13 holes@) & 8-
plant trays (3 holes))



GARDEN SETUP

1. Set the garden up against a wall near an outlet.
2. Plug the timer in and be sure it is set to timer mode, not "on". Set the timer to be on for around 12 hours. You can rotate the timer to see it turn on and off and check it's function.
3. Check that two lights are on per shelf. If one is off, check that the plugs are fully inserted into the lights and the toggle switch is "on" at the bottom.



1



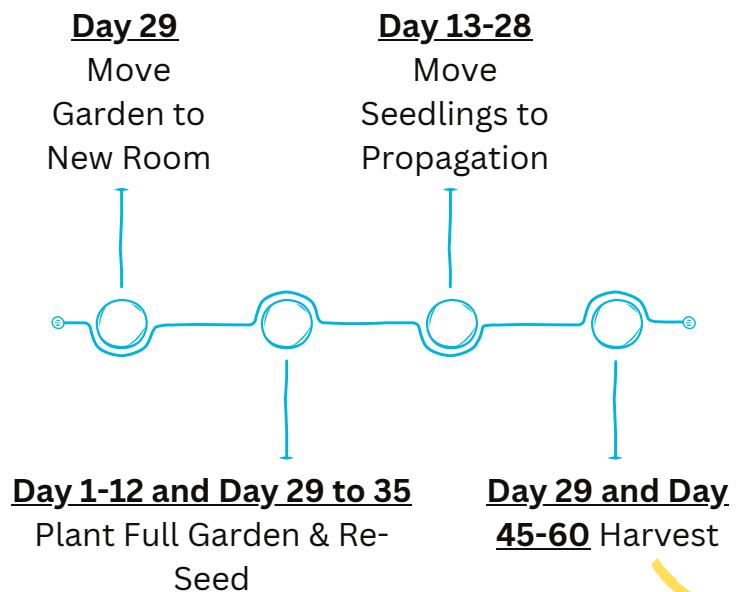
2



3

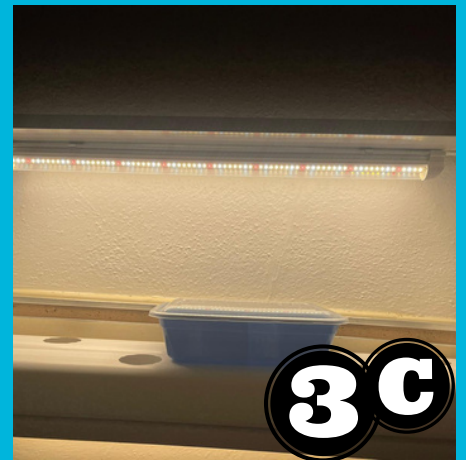
PLANT CYCLES

You will always be running two plant cycles simultaneously and planting seeds for the next classroom. This guide shows days by plant cycle. See the graphic here to understand more.



SEEDING (DAYS 1-12)

1. Wet the rockwool in the sink with room temperature water.
2. Squeeze rockwool to make it damp dry.
3. Seed the rockwool.
 - a. For lettuce, one pelleted seed per block
 - b. Herbs - depending on herb I place more seeds per block; parsley, dill, thyme and oregano are examples that can be densely seeded
 - c. Cover with plastic to keep moist
 - d. Check daily and water as needed - do not over water
 - e. When the seedlings have approximately 3 leaves - begin watering with 50/50 strength water & nutrient solution & UNCOVER to be sure they get oxygen
 - f. When seedlings have 4 plus leaves - usually a full strength solution can be used.
 - g. Yellow leaves means they need more nutrients. Burnt leaves (brown on the edge) means there is too concentrated of nutrient
4. Set under the lights on one of the garden shelves.



PROPAGATION (DAYS 13-28)

1. Place two propagation trays (13 holes) on THE TOP shelf.
2. Move each rockwool block with the plant start to a net cup.
3. Mix Nutrients
 - a. Fill 5-gallon bucket with hot water about 5 inches up from the bottom
 - b. Add pre-measured NPK (Nitrogen-Phosphorus-Potassium) and stir well
 - c. Add pre-measured Magnesium and stir well
 - d. Add pre-measured Calcium and stir well
 - e. Add cold water to about 3 inches from the top of the bucket. Stir and let it settle.
 - f. Read pH and EC with your meters
 1. Is pH between 5.5 and 6.2?
 - a. If no, add pH down (our water is near 7.5 usually). It's safer to keep the solution closer to the low side as pH usually shifts up as plants grow.
 2. Is EC between 1000 (1.0) and 1500 (1.5)?
 - A. Solution should be the proper mix per our recipe but you can add more water if you need to lower EC.
 - B. EC will shift down as plants grow
4. EC will shift down as plants grow.
5. Place net cups in the tray and make sure nutrient comes into the cup about .5 centimeter. Too much water will starve the plants of oxygen.
6. WATCH the plants closely the first week, Check pH and watch water level to be sure all plants have equal access to nutrient solution. Once the roots are an inch or two below the cup, you are ready to transplant!
7. Keep the rest of your nutrient for the full garden set-up around day 29.



GARDEN ROOM TRANSFER - START HERE

GARDEN SET-UP (DAY 29) - SET UP PLANT TRAYS (3 HOLES)

1. Set 2 plant trays on each of the bottom 4 shelves.
 - a. ***Alternate the hole patterns to allow more room for plants to grow***
2. Alternate the hole patterns to allow more room for plants to grow
3. The top shelf is for propagation - set those trays there. If you have extra plants, they can stay there in case one of your other plants dies.
4. Fill with nutrient solution. (K-5, mix nutrients per instructions days 13-28 above). Be sure the nutrient solution comes up to the bottom of the net cups.
 - a. ***Be sure the solution is not too high as well - if the rockwool is covered with solution, the roots will not receive adequate oxygen supply.***
5. That's it! You are done for day one! GREAT WORK.



1

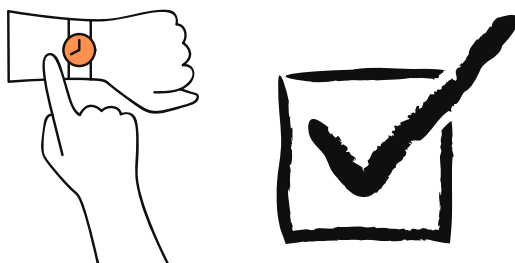


4

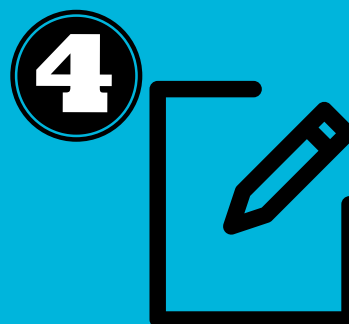


DAY (29-35)

The first week is the time you need to watch your garden closely. Here's what to watch - if you can, check each tray. Sometimes your results will vary.

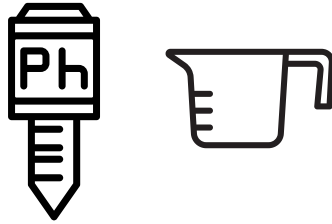


1. Check pH daily. pH will most likely swing right after transplanting as the plants stabilize.
2. Look at the roots. Are they white? Yellow roots often mean pH is swinging up above 6.2.
 - a. If pH high, add a few drops of pH down to correct the rail (literally a couple drops may do).
 - b. Rock the rail to mix pH down in, re-test.
3. Usually EC will be fine and pH is more critical.
4. Record your findings on your sheet for each day - room on back for detailed notes.

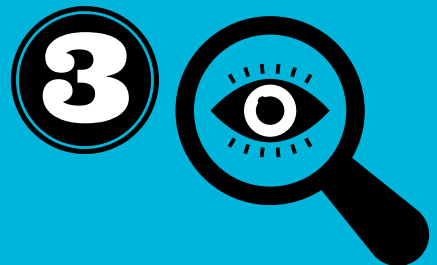
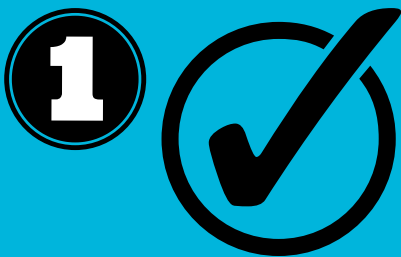


MAINTENANCE - DAY (36-42)

Plants will become more stable as they form roots in their new home. Check and record pH every few days and watch the nutrient level. It's ok if you have to be gone on a weekend.

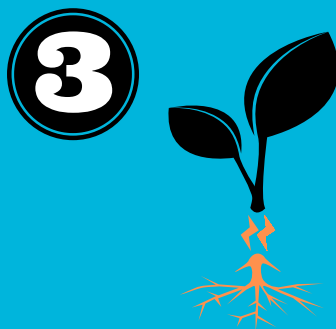


1. Check each tray at least once over the course of the week (maybe rotate which one you check every day).
2. Check pH in the system (one tray) every other day and record
3. Observe the roots on various plants (pick 3 each day and look). Are they white? Great. If not, check pH.
 - a. If pH high, add pH down to correct
4. Any other issues, call or text me 319-404-4997 or please post in the group so other can learn too!



DAY (42-HARVEST)

1. Check pH in various trays every 3-4 days
2. Is the nutrient getting low? $\frac{1}{3}$ or less - we may need to top off
3. Check roots and watch leaves (look for wilting or brown spots)
 - a. **Brown spots can mean plants are getting too much light or nutrient**
 - b. **Wilting can mean root disease or pH trouble**
4. Watch for bugs - sometimes we can still get bugs inside
5. Feel free to rotate plants - if one is larger (getting more light) swap him with a smaller one.
6. Be careful of the roots as they get larger - place them gently back in their place



HARVEST

1. There are 2 ways to pull plants from the system.
 - a. Pull the whole net cup and place lettuce in bucket to haul to your cleaning area (it is easier for younger kids to cut lettuce after it is out of system of a flat surface)
 - b. Cut lettuce off at the base in the system - take cut lettuce to cleaning area



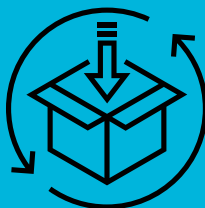
TEAR DOWN

1. Dump remaining solution down drain with water running (dilutes the already diluted solution).
2. Re-package garden as it was delivered.
3. Notify me to pick it up.

1



2



3

