

How are seeds germinated hydroponically? – Part II

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Do Now

- Answer the following in your note book:
 - What is a hypothesis?
 - How is a hypothesis written out?
 - Can a hypothesis be written as a data table?

Do Now

- Answer the following in your note book:
 - What is a hypothesis?
 - An educated guess.
 - How is a hypothesis written out?
 - If...then...because.
 - Can a hypothesis be written in a data table?
 - Yes. See lesson below.

HW

- Continue your germinating lab report.
- Add Hypothesis table and written hypothesis.
- Add materials and procedures to your report

Objectives

- I can formulate a hypothesis by writing it out and using a data table.
- I can calculate the real germination rate and % error.
- I can germinate seeds hydroponically.

Developing a Hypothesis

- Develop a hypothesis for the germination success rate in your lab report.
 - Example table hypothesis:

Day	Hyp. Rate%	Adjusted Hyp
6		Leave
7		Me
8		Blank
9		For
10		now

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Developing a Hypothesis

- Hypothesis written out: If seeds are left to germinate between 6 and 10 days then...

Day	Hyp. Rate%	Adjusted Hyp
6	50	
7	55	
8	70	
9	75	
10	90	

Developing a Hypothesis

- Hypothesis written out: If seeds are left to germinate between 6 and 10 days then eventually there will be a 90% germination rate because...

Day	Hyp. Rate%	Adjusted Hyp
6	50	
7	55	
8	70	
9	75	
10	90	

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Developing a Hypothesis

- Hypothesis written out: If seeds are left to germinate between 6 and 10 days then eventually there will be a 90% germination rate because according to (.....) 10 days is the maximum time that healthy seeds need to germinate.

Activity

- You will now add seeds to your sponges.

Materials

- Air conditioner (weather) sealer sponge 1 ¼ inches x 1 ¼ inches x 42 inches.
- Scissors
- Permanent Markers
- Grids
- Germinating trays
- Waterproofing plastic (optional)
- Black plastic garbage bag to cover seeds.
- Tray cover
- Seeds
- Paper for seeds
- RO/DI water
- Watering can or water bottles
- Ruler

Procedures

- Add no more than 4 seeds to the sponge by placing each one on a separate notch in the cross.
- Make sure you keep a record of the kind of seed you used in you log sheet.
- Place sponges in grid by taking the sponge from the “cross” side place it $\frac{2}{3}$ of the way into the grid.
- Adjust the height pulling from the bottom.
- Space out the sponges skipping a square along each row (length-wise).

Procedures

- Place the tray in the desired location. Fill up the tray about half way with water.
- Place grid in water and spray the sponges until they are soaked.
- Cover your sponges with the black plastic sheet.
- Place the tray cover over your seedlings to retain moisture.
- Add air stone to tray.
- Monitor growth every day. Spray sponges daily if necessary.
- Once your seedlings are about 3-5 inches long and have strong roots you may transfer them to the AEMs.

2) Cut a cross on one side of the sponge halfway into the sponge itself.



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3) Add no more than
3 seeds to the
sponge.

How are seeds germinated hydroponically?

4) Label your sponges with a unique symbol. On your log sheet write germination date, # of sponges, # of seeds per sponge, # of seeds in total, type of plant, and the symbol you used.

How are seeds germinated hydroponically?

5) Place your sponges in the grid leaving an empty space in between each sponge.



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- 6) Fill up the tray to **the middle** with water.
7) Place grid in water.

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7) Cover your seeds with the black plastic sheet.

How are seeds germinated hydroponically?



Products of Hydroponically Germinated Seeds.



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