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https://drive.google.com/file/d/0BwnzDzjNUjLFbTdwWHRadmNXT1FzaUd3T3FvSmpLSEtvQUQ4/view

Fast Plants Photojournal

- Organize your observations of the Fast Plants.
- Each group member must embed the doc on to the Biochem 2 blog page and provide a reflection of the project. The reflection must touch upon the various learning objectives from the course (visit the class Canvas pages for learning objectives). You may submit the same data as your group, but your reflection must be unique to you.
- You may create a time-lapse video too, but must provide observations from throughout your gardening and your reflection on how the Fast Plants connects to your understanding of cell growth and genetics. What factors affected your garden? What conclusions can you draw based on your observations?
- Submit the link to your blog on Canvas assignment Fast Plants Photojournal, this will be worth a project grade for Quarter 3 (not a benchmark).
- **This photojournal will be an individual submission at the end of the project, so keep your data organized and communicate with your group members!**

Fast Plants Observations

Carefully observe your sprouts and include observations, predictions, and questions in your lab notebook. Be sure to write each day's date when you make observations! You should also create a doc where your groups members can access the data.

Remember to take lots of pictures and label them with correct plant trait name. Perhaps have a time lapse!

Helpful tips for when making Observations:

Quantitative:

How many seeds did you plant? How many of each type of seed sprouted?

How many leaves in each?

How tall are each plants? (use centimeters)

Anything that can be observed using numbers...

Qualitative:

What color are your plants?

Is there any smell?

Anything that can be observed using a description

Fast Plants Genetics

Label	Phenotype	Genotype	Dominant or Recessive?
ST	Standard Purple Stem Hairy		
NP	Non-Purple Stem	anl/anl	
YG	Yellow-Green Leaf	ygr/ygr	
NG	Non-Purple stem yellow-green leaf	anl/anl ygr/ygr	

Fast Plants Genotypes and Phenotypes - Parental Types

Label	Phenotype	Genotype	Dominant or Recessive?
ST	Standard Purple Stem Hairy		
NP	Non-Purple Stem	anl/anl	
YG	Yellow-Green Leaf	ygr/ygr	
NG	Non-Purple stem yellow-green leaf	anl/anl ygr/ygr	

Fast Plants Genotypes and Phenotypes - F1 types

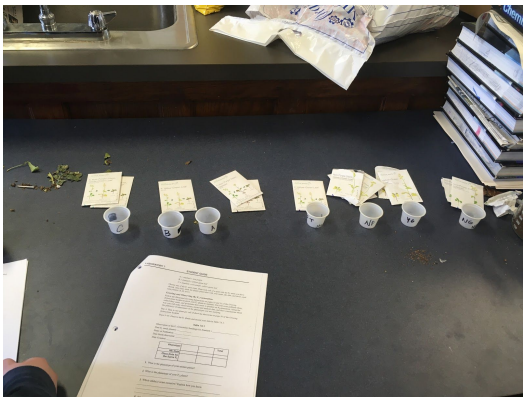
Label	Phenotype	Genotype	Homo vs Hetero

			zygous?
A	Non-purple stem	anl/ANL	Homozygous, heterozygous
B	Yellow Green leaf	ygr/YGR	Homozygous recessive
C	Non-Purple Stem, Yellow-Green Leaf	anl/ANL ygr/YGR	heterozygous
Var	Variegated	Var	

Fast Plants Observations

1. Possible data chart (remember, you need to create what makes sense for your group and is also useful)

Table 1: Day 0 January 29, 2018 (whatever day you planted your seed)

Plant trait	Quantitative Observation	Predictions/ inferences	Questions	pictures/drawings
Type “B” will be purple and green based on the genotypes of parents	F1 Non-Purple stem Yellow-Green Leaf Seed is really small	Based on how the parents look the offspring will be tall and will have two different colored leaves.	Does the offspring have co-dominance of the parents genes? When we cross “B ” with the other standard plants will that codominance affect the new offspring?	

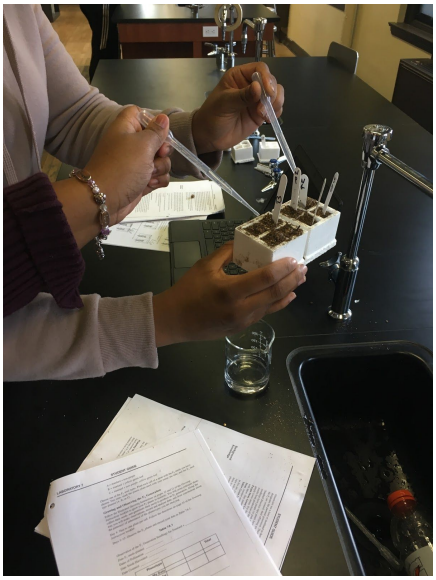
				
(ST)Standard Purple Stem Hairy (NP)Non-Purple Stem (YG)Yellow-Green Leaf (NG)Non-Purple stem yellow-green leaf	Differentiate a little bit in color (seeds) Shaped oval/ circle Very small and light			

Table 1: [Name of Plant Trait #1] Growth over Time

[Records of day for all plants]	Quantitative Observation (units)	Qualitative Observation	Predictions / inferences	Questions	pictures
Day 1 (date)	N/A	Very small with	the plant	How do we	N/A

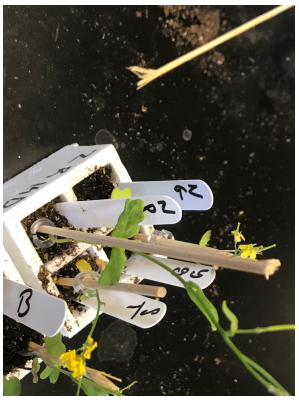
1/30/18		color of stems showing through	will grow slow.	know if the plant dies? When they pollinate doe the seeds fall to the soil or stay in the plant?	
Day 2 (date) 1/31/18	N/A	We noticed that the constants began to grow.	That they will continue to grow at least .5 inches every day.	Is the dominant and recessive gene affect the growth of the plant? Or is it just the controlled environment ?	 
Day 3 (date) 2/2/18	N/A	We were really surprised at how fast they popped up, usually plants up to four days to be spotted but this one was in only 3 They kind of looked like a four leaf clover at its growing state.	That “B” will be the smallest of all the plants. That they may have a sudden growth spurt at some point.	Will any leafs start to fall off for some reason? Will they all look the same?	

					 
Day 4 (2/5/17)	(YG) 2 cm (NP)3/12 cm (ST) 2 cm (B1 bottom left hand corner)- 1/12cm (B2 upper right hand corner) - a cm	That the (NG) isn't really growing (the slowest rate of them all) 1 of our B's is still drying out pretty quick.	We think that the plants will grow too 4 or more cm by the end of the week. We also think that NG will start to show a little of not it may be dead.	Will they all have different shapes or maybe colors like in the mendel video?	 

Day 5 (2/06/18)	(YG) 2cm (NP) 3/12 (ST) 2 cm (B1) ⅕ cm (B2) 1 cm	Some leaves on (YG) is a little lighter pinch of green than the other plants. Plant B is developing slower than the rest.	Plant B is going to rise up taller than the rest. We say this because it gets really dryer than all of the rest so with all of the water that we have been giving it, maybe it could influence the growth faster than normal.	Why is B taking the longest if they all are being cared for equally? Are all of the stems pink? Is pink going to be the stem color when we cross breed all of the constant with variable B?	  

Day 6 (2/7/18)	(YG) (NP) (ST) (B1) (B2)				 
Day 7 (2/10/18)	(YG) (NP) (ST) (B1) (B2)				
day 8 (2/12/18)	(YG) (NP) (ST) (B1) (B2) p				

					
Day 9 (2/13/18)	(YG) 5.5cm (NP)14 cm (ST) 7.5cm (B1 bottom left hand corner)- 4.5cm (B2 upper right hand corner) - 4.5cm B3(bottom right hand) -3m B4(upper left)-3cm				 
Day 10 (2/14/18)	(YG) 6.5cm (NP)14.5cm (ST) 7.5cm Ng - 2cm (B1 bottom left hand corner)- 9cm (B2 upper right hand corner)				

	- 4.5cm B3(bottom right hand) -3.5m B4(upper left)-4cm				 

F2 Plants:

A table for the following information and an explanation of your predictions.

Parent 1 type and Phenotype	Parent 1 Genotype	Parent 2 type and Phenotype	Parent 2 Genotype	Expected Child Phenotype	○ Expected Child Genotype
Yellow-Green Leaf.	Ygr /ygr.	Yellow Green leaf	ygr/YGR	Yellow green leaf because both parents have the yellow green leaf characteristic.	○ The expected genotype would be Ygr/ygr or either ygr/ygr. We are expecting this because if you draw a punnett square using

					both parents genotypes you get a 25% chance of either one.

What factors are affecting the plant growth? (provide examples of biotic and abiotic factors and explain why you categorized them as such.

- The factors that are affecting the plant growth is the climatic factors such as rainfall and water, light, temperature, humidity, air, and wind. These are examples of abiotic, including soil. Biotic features are animals and plants that live in an ecosystem. Since our plants wouldn't be affected by any animals or other different plants it could only be affected by abiotic features which is the environment that the plant is surrounded by.

[Records of day for all plants]	Quantitative Observation (units)	Qualitative Observation	Predictions / inferences	Questions	pictures!
Day 0 (date) 4/11/18	N/A	F2 only had a little bit of seeds inside.	Based on how the parents looked the F2 plants may be tall and will have two different colored leaves which are yellow and	Will the process now be faster since we replanted them? Are the baby seeds stronger than the adult seeds?	

			green.		
Day 1 4/12/18					
4/20					
4/23					
4/25					
4/30					
5/4					