

## My Journal

March 22, 2018

Planting Science,

Today we began our experiment! We began by cutting five of our seeds in half, and peeling off the outer shell on ten of them. After this process was done we labeled our fifteen cups and put  $\frac{3}{4}$  cup of soil in each. Then we planted our ten half seeds, our ten no outer shell seeds, and ten full seeds one inch deep. There were 2 seeds in each cup. Next we gave each seed  $\frac{1}{2}$  inch of water. We can't wait to continue this project!

-Hannah

March 23, 2018

Planting Science,

Today was an uneventful day. We did not do anything with our experiment today.

-Hannah

March 26, 2018

Planting Science,

Today we watered the plants. We have decided to change the watering schedules to Monday and Friday because the soil was a bit dry. All of the full seeds, and the seeds without the shell had sprouts, but only one of the half seeds had a sprout. We are very excited to see our first sprouts and can't wait to see more! Below is an averaged table for the measurements of our new sprouts.

Full Seeds	1.4 cm.
Half Seeds	.2 cm.
W/O Outer Shell	1.3 cm.

-Hannah

March 27, 2018

Planting Science,

Today was not a very eventful day. What we did today was measure our newly growing sprouts and average them together. We did not water the plants today but will be doing that Thursday. Below are today's averages.

Full Seeds	3.7 cm.
Half Seeds	.5 cm.
W/O Outer Shell	2.45 cm.

-Hannah

March 29, 2018

Planting Science,

Today we watered the seeds once again and took our averaged measurements. The seeds have started to grow out of the cups! It is crazy how quickly they grow! Below is the daily averages.

Full Seeds	10.1 cm.
Half Seeds	1.1 cm.
W/O Outer Shell	4 cm.

-Hannah

March 30, 2018

Planting Science,

Today was another uneventful day though we did see a lot of growth! Below are the measurements for the day.

Full Seeds	12.7 cm.
Half Seeds	1.2 cm.
W/O Outer Shell	6 cm.

-Hannah

April 2, 2018

Planting Science,

Today we watered our plants. We had a LOT, a LOT of growth and are thinking about using some sort of support for them. We have also noticed many leaves. Other than this nothing has really changed. These are the averages for today.

Full Seeds	24 cm.
Half Seeds	1.3 cm.
W/O Outer Shell	7.2 cm.

-Hannah

April 3, 2018

Planting Science,

Today we didn't do much with our plants. We got verification from our mentor to use popsicle sticks for plant support and think we will do that either tomorrow or thursday. Our plants have grown so much and definitely need the support! These are the averages for today;

Full Seeds	27.3 cm.
Half Seeds	1.4 cm.
W/O Outer Shell	10.6 cm.

-Hannah

April 5, 2018

Planting Science,

Today we watered our plants and measured. All of the plants have grown but the half seed plant. Except for the one mysterious one that keeps on growing like the rest. These are the measurements for today.

Full Seeds	32.5 cm.
Half Seeds	1.7 cm.
W/O Outer Shell	11.9 cm.

-Hannah

March 6, 2018

Planting Science,

Today we finally added our support to our plants by tying them to popsicle sticks. We didn't add popsicle sticks on all of the them just the droopy ones. The growth is the same except for more growth in the already growing ones. These are the averages for today.

Full Seeds	34.4 cm.
Half Seeds	1.7 cm.
W/O Outer Shell	12 cm.

-Hannah

April 9, 2018

Planting Science,

Today we watered the plants. We have definitely noticed that the growth is beginning to slow. The same plants that have been growing are still the only one growing. We are thinking we will be ending the experiments very soon. These are the averages for today;

Full Seeds-	30.5 cm.
Half Seeds-	2 cm.
W/O Outer Shell-	13.7 cm.

-Hannah

April 10, 2018

Planting Science,

Today we measured our plants. We haven't noticed much change in our plants except for a bit of growth. These are the averages for today;

Full Seeds-	32.75 cm.
Half Seeds-	1.95 cm.

W/O Outer Shell-	14.05 cm.
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-Hannah

April 11, 2018

Planting Science,

Today we watered our plants. We have noticed that one of the half seed plants, that hasn't been taking in water is starting to smell like rotten eggs. We still only have one plant growing in this group. All of the others are growing the same way; the full seeds, about two growing in each, and the without outer shell plants, one plant in each. We also realized that we don't have holes in our cups to drain the water. We realize that this could have been a big problem. We poked holes in them today. It was not fun!! We decided not to take averages for today.

-Hannah

April 13, 2018

Planting Science,

Today we measured our plants for the last time. We have not been watering our plants recently, because we have been doing other things in science class. Because of this, our plants have shriveled up a bit. They all still have their green color though. There still no growth in the half seed cups except for the one. It looks as though the growth in the plant has slowed to little or none. We had a great time working on this experiment and think we have come to our conclusion!

-Hannah

May 3, 2018

Planting Science,

Our experiment is officially ended! Our final measurements were taken in April, and our conclusion has been written. We have decided that our hypothesis was partly correct. We had said that the plants would grow as long as they had the main part of the seed that makes the plant grow. Our conclusion was that you must have the whole embryo to grow the seed. We think this is why our half seeds didn't grow; because the seed was not intact. We do still wonder why one of the half seed lant cups grew a plant. We wonder if maybe the majority of the half plant didn't grow because we didn't have drainage holes in the cups and because the seeds were cut in half and smaller, they could not take in the water as easily as the others. We also realized that the without outer shell seeds mostly grew one plant with the two seeds in the cup, and the full seeds mostly grew two seeds of the two

seeds in each cup. All in all, we have come to the final conclusion that the seed's whole embryo must be intact in order for the seed to grow a plant. Thank you to our mentor for all of the help and guidance with this project, we had a great time!

-Hannah

This is my data graph-

