

Science Project Journal

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4-21-2020
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Physical Science

DATE: October 14, 2019

ENTRY NUMBER: 1

TOTAL MINUTES

THIS ENTRY: 5

TIME: 3:10-3:15 P.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 5

WORK: I have gathered all my supplies and I plan on beginning my investigation today. I have previously purchased the following: four pots, two begonia plants, two peace lily plants, four bags of indoor potting soil, a bag of rocks, and four plates to put underneath them to catch water drainage.

OBSERVATION/DATA:

DATE: October 14, 2019

ENTRY NUMBER: 2

TOTAL MINUTES

THIS ENTRY: 23

TIME: 3:35-3:58 P.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 28

WORK: I have begun my experiment. I placed my plants in their positions for my experimentation. Earlier today, I pruned my begonias because they both had dead leaves and blooms on them. If any more dead leaves or blooms appear in the future, I will also trim them.

OBSERVATION/DATA: I have taken measurements of the height of my plants. This will be the value for $measurement_1$ from my equation for calculating plant growth ($measurement_2 - measurement_1 = amount\ of\ growth$).

Quiet Begonia	17 cm
Quiet Peace Lily	40 cm
Noisy Begonia	15 cm
Noisy Peace Lily	36 cm

DATE: October 16, 2019

ENTRY NUMBER: 3

TOTAL MINUTES

THIS ENTRY: 13

TIME: 11:27-11:40 A.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 41

WORK: I have taken updated measurements of my plants.

OBSERVATION/DATA:

New Measurements

Quiet Begonia	16.5 cm
Quiet Peace Lily	41.5 cm
Noisy Begonia	15.5 cm
Noisy Peace Lily	37 cm

Amount of Growth

Quiet Begonia	-0.5 cm
Quiet Peace Lily	1.5 cm
Noisy Begonia	0.5 cm
Noisy Peace Lily	1 cm

My results are very interesting. The Begonia in the quiet environment has apparently wilted a little because it had lost some of its height. The other interesting result is that the plant with the most growth was the peace lily in the quiet environment. My final results might be that certain plants do better in quiet conditions, and others do better in noisy conditions.

DATE: October 17, 2019

ENTRY NUMBER: 4

TOTAL MINUTES

THIS ENTRY: 5

TIME: 9:35-9:40 A.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 46

WORK: I had to cut off more dead leaves and blooms from the begonia in the quiet environment.

OBSERVATION/DATA: It's very interesting to me that the peace lily seems to be doing fine in the quiet environment, but the begonia is not. I will be interested to see if this pattern continues.

DATE: October 19, 2019

ENTRY NUMBER: 5

TOTAL MINUTES

THIS ENTRY: 15

TIME: 11:30 – 11:45 A.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 61

WORK: Today I took new measurements of my plants and watered them with 400 mL of spring water. I also rotated the plants so that the other side could get some sunlight.

OBSERVATION/DATA:

New Measurements

Quiet Begonia	17 cm
Quiet Peace Lily	41 cm
Noisy Begonia	16 cm
Noisy Peace Lily	41 cm

Amount of Growth

Quiet Begonia	No growth from original height
Quiet Peace Lily	1 cm
Noisy Begonia	1 cm
Noisy Peace Lily	5 cm

Today's data is also interesting. The Quiet Begonia has grown half a centimeter since my last measurement but has still not grown larger than its original height. It is also looking sickly. It only has one bloom that isn't dying, while the noisy begonia has several blooms. The noisy peace lily has grown significantly taller, but the quiet peace lily seems to have lost some of its height from the last time I measured.

DATE: October 22, 2019

ENTRY NUMBER: 6

TOTAL MINUTES

THIS ENTRY: 8

TIME: 9:07-9:15 P.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 69

WORK: Today I took updated measurements and pictures of my plants.

OBSERVATION/DATA

New Measurements

Quiet Begonia	16 cm
Quiet Peace Lily	42 cm
Noisy Begonia	16 cm
Noisy Peace Lily	40 cm

Amount of Growth

Quiet Begonia	-1 cm
Quiet Peace Lily	2 cm
Noisy Begonia	1 cm
Noisy Peace Lily	4 cm

My Quiet Begonia seems to have wilted some more. It now has no healthy blooms growing on it. The noisy peace lily has lost 1 cm of height, but I believe the cause might be that the tip of the leaf I measured might have fallen off since the last time I measured it. It doesn't appear to have wilted like the quiet begonia. The quiet peace lily has gained another centimeter of height, and my noisy begonia remained at its previous height.

DATE: October 25, 2019

ENTRY NUMBER: 7

TOTAL MINUTES

THIS ENTRY: 9

TIME: 4:06-4:15 P.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 78

WORK: Today, I took updated measurements of my plants.

OBSERVATION/DATA:

New Measurements

Quiet Begonia	15 cm
Quiet Peace Lily	42 cm
Noisy Begonia	15 cm
Noisy Peace Lily	40.5 cm

Amount of Growth

Quiet Begonia	-2 cm
Quiet Peace Lily	2 cm
Noisy Begonia	No growth from original height
Noisy Peace Lily	4.5 cm

My noisy begonia had a few dead leaves and blooms I had to pick off today. I think it might have wilted a bit, that is why it is down a centimeter from my last measurement. My plants haven't been getting as much sun lately because it has been rainy. The quiet begonia is doing about the same as it was last time. It hasn't grown any new blooms or leaves yet, hopefully it will soon. The peace lilies seem to be doing fine.

DATE: October 28, 2019

ENTRY NUMBER: 8

TOTAL MINUTES

THIS ENTRY: 6

TIME: 10:26 – 10:32

CUMULATIVE TOTAL

MINUTES TO DATE: 84

WORK: I took some more plant measurements.

OBSERVATION/DATA:

New Measurements

Quiet Begonia	4 cm
Quiet Peace Lily	42 cm
Noisy Begonia	15 cm
Noisy Peace Lily	40 cm

Amount of Growth

Quiet Begonia	-13 cm
Quiet Peace Lily	2 cm
Noisy Begonia	No growth from original height
Noisy Peace Lily	4 cm

Recently, I had to cut a lot off my noisy begonia. It had a rotten spot in its stem, and it had bent over, so I had to basically trim off the whole plant and leave a stub. I don't know if it will survive. If it dies, I will simply list it as "died" in my finally conclusion. It's very strange because it seemed to be the begonia that was doing better in the beginning. I guess it may have been because of the isolation from sound.

DATE: November 5, 2019

ENTRY NUMBER: 9

TOTAL MINUTES

THIS ENTRY: 7

TIME: 10:38-10:45 P.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 91

WORK: Today I took more measurements of my plants. I have been sick lately and, I missed taking measurements of my plants so, this is a few days late.

OBSERVATION/DATA:

New Measurements

Quiet Begonia	1 cm
Quiet Peace Lily	42 cm
Noisy Begonia	10 cm
Noisy Peace Lily	40 cm

Amount of Growth

Quiet Begonia	-16 cm
Quiet Peace Lily	2 cm
Noisy Begonia	-5 cm
Noisy Peace Lily	4 cm

I think both of my begonias are dying now. The quiet begonia will probably be dead by my next measurement, and the noisy begonia is slowly wilting. The peace lilies seem okay though. I can record that the noisy begonia lived longer than the quiet begonia if they both do die.

DATE: November 14, 2019

ENTRY NUMBER: 10

TOTAL MINUTES

THIS ENTRY: 17

TIME: 9:24-9:41

CUMULATIVE TOTAL

MINUTES TO DATE: 108

WORK: Today I took updated measurements of my plants. Both of my begonias have died, so I will no longer be measuring them. I will record the dates of their approximate deaths and use that in my investigation.

OBSERVATION/DATA:

New Measurements

Quiet Peace Lily	43 cm
Noisy Peace Lily	40.5 cm

Amount of Growth

Quiet Peace Lily	3 cm
Noisy Peace Lily	4.5 cm

Both of the begonia's stems rotted which made them bend over and wilt. I will record the approximant date of their death.

Day of Death

Quiet Begonia	October 28, 2019
Noisy Begonia	November 11, 2019

As you can see from the data, the quiet begonia died earlier than the noisy begonia. I will use this data in my conclusion to support that the begonias preferred the noisy environment over the quiet environment.

DATE: November 20, 2019

ENTRY NUMBER: 11

TOTAL MINUTES

THIS ENTRY:6

TIME: 11:00-11:06

CUMULATIVE TOTAL

MINUTES TO DATE: 114

WORK: Today I took some measurements of the peace lilies.

OBSERVATION/DATA:

New Measurements

Quiet Peace Lily	42 cm
Noisy Peace Lily	40 cm

Amount of Growth

Quiet Peace Lily	2 cm
Noisy Peace Lily	4 cm

Both of my plants haven't seemed to grow much over the past few days. It has actually been six days instead of three in between these two measurements. To explain what seems to be a loss of growth, sometimes the tips of the peace lily leaves will turn brown and fall off. So, they have basically not grown over the past six days. I haven't been misting them as frequently as I once was. Right now, it is pretty cold, so the misting might do more harm than good.

DATE: November 27, 2019

ENTRY NUMBER: 12

TOTAL MINUTES

THIS ENTRY: 5

TIME: 11:06-11:11

CUMULATIVE TOTAL

MINUTES TO DATE: 119

WORK: Today, I decided to change my original watering specifications. Instead of 400 mL of water every week, I will be giving them 200 mL. I will also only mist them once a week. They seemed to be very moist when I went to water them today, and the tips of their stems were brown. That can be a sign of overwatering. I haven't been keeping up with my recording of their heights lately, things have been pretty hectic. I don't think this will affect my experiment any, but I will try to be more consistent.

OBSERVATION/DATA:

DATE: December 2, 2019

ENTRY NUMBER: 13

TOTAL MINUTES

THIS ENTRY: 2

TIME: 10:26-10:28

CUMULATIVE TOTAL

MINUTES TO DATE: 121

WORK: Today I took some measurements of my plants.

OBSERVATION/DATA:

New Measurements

Quiet Peace Lily	42 cm
Noisy Peace Lily	40 cm

Amount of Growth

Quiet Peace Lily	2 cm
Noisy Peace Lily	4 cm

Nothing has changed since I last measured them.

DATE: 12/5/19

ENTRY NUMBER: 14

TOTAL MINUTES

THIS ENTRY: 1

TIME: 10:59-11:00 P.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 122

WORK: I have taken updated measurements

OBSERVATION/DATA:

New Measurements

Quiet Peace Lily	43 cm
Noisy Peace Lily	40 cm

Amount of Growth

Quiet Peace Lily	3 cm
Noisy Peace Lily	4 cm

The quiet peace lily has grown 1 cm, but the noisy peace lily has remained the same height.

DATE: December 20, 2019

ENTRY NUMBER: 15

TOTAL MINUTES

THIS ENTRY: 6

TIME: 1:00-1:06

CUMULATIVE TOTAL

MINUTES TO DATE: 128

WORK:

OBSERVATION/DATA:

So, its been kind of crazy lately with the holidays, and I haven't taken measurements in a while; but I'm going to have to make some changes if I want to continue with my experimentation. We've been having little gnats called fungus gnats all through our house because of the plants, and it can be caused by overwatering. I will attempt to solve this problem by watering them with 200 mL of water every two weeks, and we may use an insecticide to kill the bugs. I also might switch to measuring the plants every week instead of every three days because of all the busyness of this time of year.

DATE: January 4, 2020

ENTRY NUMBER: 16

TOTAL MINUTES

THIS ENTRY: 4

TIME: 9:59 – 10:03 A.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 132

WORK:

OBSERVATION/DATA: Well, the holidays are over so I plan on getting back on schedule with measuring. I have decided over these past few weeks that the best thing to do for watering the plants is to go by the recommended amount of watering — only watering once they start to wilt. I didn't follow this previously because I felt that it was not very scientific, but I think that doing what's recommended will be what's best for them. I will record measurements of how much they have grown over the past few weeks soon.

DATE: January 10, 2020

ENTRY NUMBER: 17

TOTAL MINUTES

THIS ENTRY: 5

TIME: 3:30-3:35 P.M.

CUMULATIVE TOTAL

MINUTES TO DATE: 137

WORK: Today I have taken my last measurements I will be recording for this experiment.

OBSERVATION/DATA:

New Measurements

Quiet Peace Lily	43 cm
Noisy Peace Lily	42 cm

Amount of Growth

Quiet Peace Lily	3 cm
Noisy Peace Lily	6 cm

By changing the amount of water given to plant, we successfully got rid of the bugs. I believe the reason the begonias died was because I over-watered them.

DATE: January 10, 2020

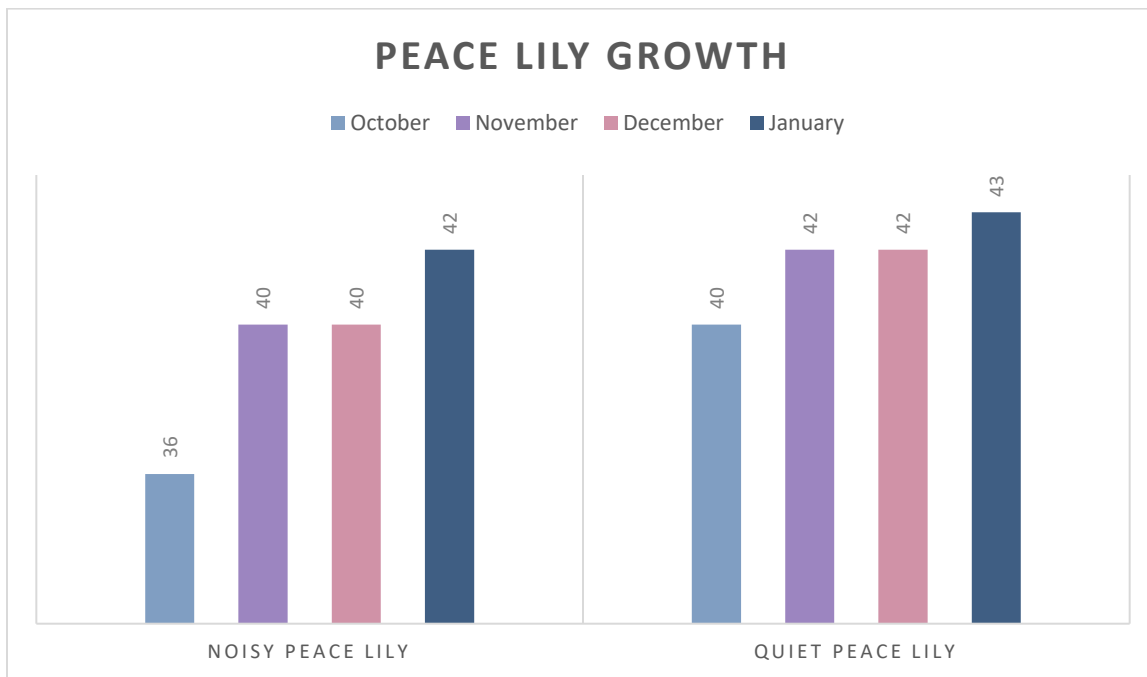
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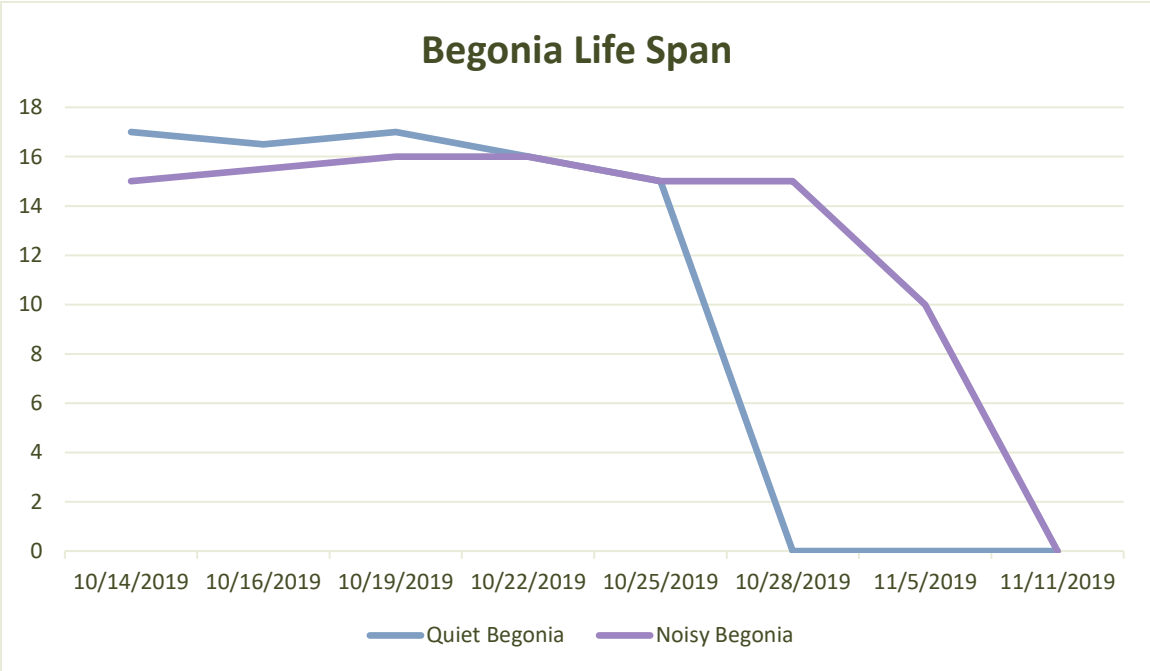
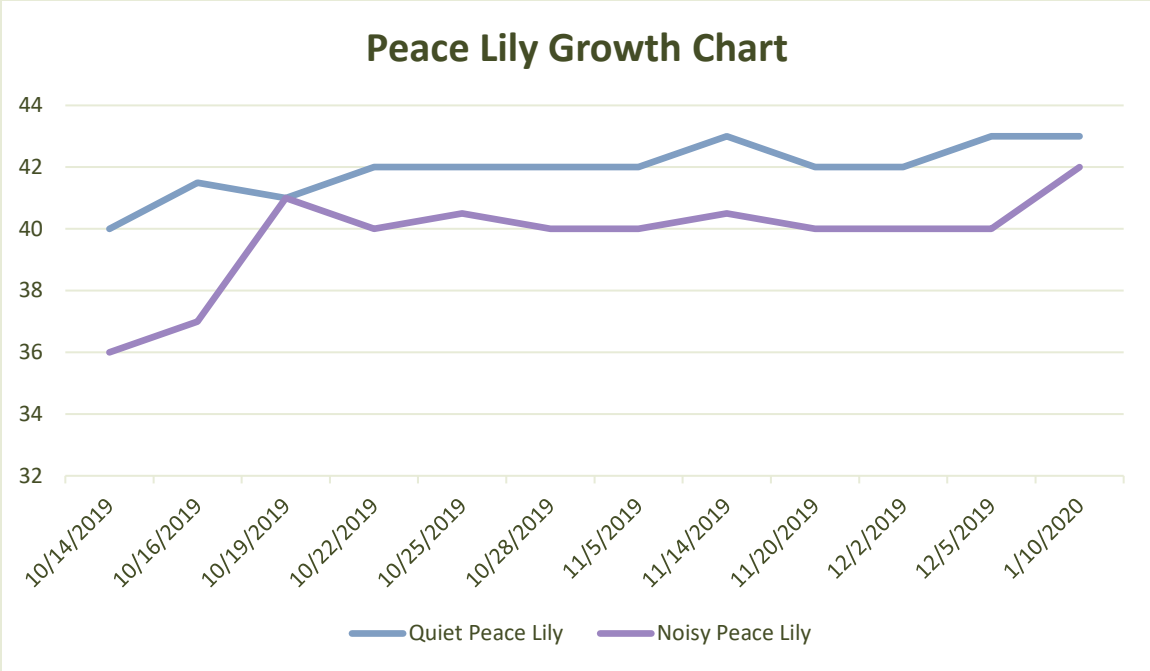
TOTAL MINUTES
THIS ENTRY:

TIME: 3:35 P.M.

CUMULATIVE TOTAL
MINUTES TO DATE:

WORK: I have interpreted my data to reach a conclusion





OBSERVATION/DATA:

From the combination of the amount of growth of the Peace lilies, and the life span of the Begonias, I have concluded that my hypothesis was correct. In my original investigation plan, I stated that if the plants in the noisy environment grew at least 5 cm taller than the plants in the quiet environment, that my hypothesis would be correct. At this time though, I did not know that both the

begonias would die. So, even though the noisy Peace Lily only grew 3 cm taller than the quiet Peace Lily, I am also taking into account that the Noisy Begonia lived 14 days longer than the Quiet Begonia. I believe that they both died from overwatering, but one, the Begonia exposed to noise, lived 2 weeks longer than the Begonia that was kept in a silent room.