

# Planting Science Journal

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B block

Onion Seeds- 11 to 12 hours of sunlight for onions and onions need to be "irrigated to a depth of an inch (2.5 cm.) once a week"- Google. onion seeds should be planted 12-15 inches apart.

Pea Seeds need full sunlight to grow and Soak the soil when watering, to a depth of at least one inch each week during the growing season.- Google. Pea seeds should be planted 1-3 inches apart.

We are going to have six different pots. Two pots will have normal planting soil, with four pea seeds in one pot, and five onion seeds in the other. In the next four pots, two will have cotton balls as soil, and the other two will have wood chips as soil. These pots will also have five onion seeds and four pea seeds in the other. All of these plants will be cared for and treated the same way, the soil will just be different. We are going to see if these plants can grow successfully by first seeing if they sprout. If they do sprout, will they continue to grow? We will be measuring the plant's height, the amount of leaves it has (if any), and the overall size of the plant if it does grow in these certain materials as the replacement soil.

## Materials:

- Cotton balls
- Planting soil
- Wood chips
- Water
- 15 Onion seeds
- 12 Pea seed
- 6 pots

## Predictions:

The cotton balls will be able to grow the plants, while the wood chips won't or won't as much. We think that because cotton is very absorbent and wood does not absorb a lot of water. The cotton balls will most likely be able to at least sprout the plants because of

how absorbent they are and how much they can decompose. We think it will be hard for the wood chips to sprout because it looks like the wood chips don't absorb water well at all.

## Experimental Design:

Steps to the project:

1. Get six small pots.
2. Fill two of the pots with regular potting soil. (Ensure the soil is almost to the top of the pot.)
3. Fill two of the pots with cotton balls. (Make sure it's not overflowing.)
4. Fill the last two pots with wood chips (Make sure the wood chips are similar to the amount of soil and cotton balls in the other four pots.)
5. After filling the pots with the contents, start planting your seeds.
6. Soil pots one pot will have four pea seeds, and the other will have five onion seeds. Dig small holes in the soil about one inch- two inches down in the soil. Space the seeds evenly in both pots. Drop one seed in each of the holes you made. Make sure to cover up the holes with potting soil.
7. Cotton ball pots Separate the cotton balls in both pots to make small holes to plant your seeds in. Plant four pea seeds evenly spread out in one pot, and five onion seeds spread evenly in the other.
8. Repeat steps 6 and 7 except with wood chips as the soil.
9. Water all of the pots so that the contents of the pots are evenly moist. (The water does not have to be the same in each pot, just make sure the soil, cotton balls, and wood chips are moist.)
10. Place the pots in the sun through a window and then let the plants grow

Over time, monitor the seedlings in the pot. Make sure that the soil is always moist enough for the plants to grow, but not too wet. If the seedlings start to sprout, record your observations and measure the size of the sprouts. Record the height of the plants, the amount of leaves (if any), and the overall size compared to each plant.

Mar 4, 2024

Today we are going to start planting our seeds. We planted onion and pea seeds, which we watered and cleaned up. It was a long process but we finished in class as soon as the bell rang. I hope the plants will grow!

March 7, 2024

We are going to check on the plants and see if they need anything or are grown. They sprouted a bit but didn't reach the top. Control 1 the pea had grown a little bit just barely reaching the surface.

March 11, 2024

The pants have grown quite a bit. The peas have grown quite a bit easily. The control as well as the cotton balls are growing quite fast but the wood chips aren't growing. We have had one sprout with the Woodchip 1 but none with the Woodchip 2. I have noticed how pea 1 looks dried up because the leaves are curled. Control 1 looks like it has a light green stem a little darker than the others, unlike the cotton balls which look like they have a whiter stem. This shows how much better the controls are growing compared to the others.

March 13, 2024

Control 2 is growing quite fast and it has some progress. The onion plants are way shorter than the pea plants. The pea plants have grown faster with almost all the onion plants sprouting that plant was in control 2. The plants have been growing so rapidly and faster than I thought i wasn't expecting them to sprout and grow so soon. From our experiment though the controls have been growing much better than the others. The controls also look much better than the others with their leaves not curled and not only one sprouting but three.

March 15, 2024

Some plants are starting to lean over slightly. I wonder how we can fix that? The peas look very healthy compared to the onion plants. The peas also have way more progress than the onion plants. With the plants in the soil looking the most healthy. The second most healthy is the cotton balls and the third is wood chips. All though it's very cool to see the progress in the plants this has been a challenging project but it's fun!

March 19, 2024

Some plants are starting to wilt so we wonder if we are over-watering. I also wonder if they need more sunlight. We put them in the sunlight today. We are going to see more results of the sunlight in a couple of days.

March 22, 2024

The plants are droopy and look dried up. We have watered them today. The onions look a little bit battered down while the peas look shriveled up. They look not the best today but hopefully, they will look better on Monday. I think they are shrinking because of the lack of water and we haven't been able to water them lately because of other class assignments.

March 25, 2024

The pea plants are starting to lean slightly over. While the onions are battered down and not tall at all. Some of the pea plants are starting to shrivel a little bit in their leaves. The pea woodchip one looks a little whiter on the stem compared to the other ones.

April 1, 2024

The plants have started to grow wild in the pea section. The cotton ball pea one also has a tiny bit of mold in it. The onions are shrinking and we think they died. Some parts of the pea plants are starting to die. The pea plants are growing wild while the onions are shrinking. The pea plants are also breaking.

Planted March 4	Wood chips Peas	Wood chips Onions	Control Peas	Control Onions	Cotton balls Peas	Cotton balls Onions
March 7	Did not sprout	Did not sprout	sprout	Did not sprout	Did Not sprout	Did not sprout
March 8	No sprout	No sprout	Pea one soil has grown est to 1cm	No sprout	No sprout	No sprout
March 11	1 sprouts 4cm	Not sprouted	Sprouts 4 7cm, 14cm,15.7c m,17,6cm	Sprouted 2,0.5, 0.2	Sprouted 3 seedlings 9 cm 10.3cm, 11.5cm	Sprouted 2 one feel to the bottom of the pot 1.1cm
March 13	7.7cm	Not sprouted	17cm, 11.7cm,	1.3cm, 1.1cm,	15cm, 15.5cm, 14cm	1.3cm

			19.1cm, 20.2cm	0.5cm, 0.5cm		
March 15	Average 10cm	Average 2.2cm	Average 22.2cm	Average 1.7cm	Average 22.1cm	Average 4.4cm
March 18	Average 14cm	Average 2.3cm	Average 19.5cm	Average 1.7cmcm	Average 22.2cm	Average 4.9cm
March 19	Average 16cm	Average 2.3cm	Average 19.5cm	Average 1.7cm	Average 23.9cm	Average 5.5cm
March 22	Averages 16.3cm	Averages 0.3cm	Averages 18.8cm	Averages 0.1cm	Averages 21.9cm	Averages 4cm
April 1	Averages 28.03cm	Averages 0	Averages 18.5cm	Averages 0	Averages 27.8cm	Averages 0