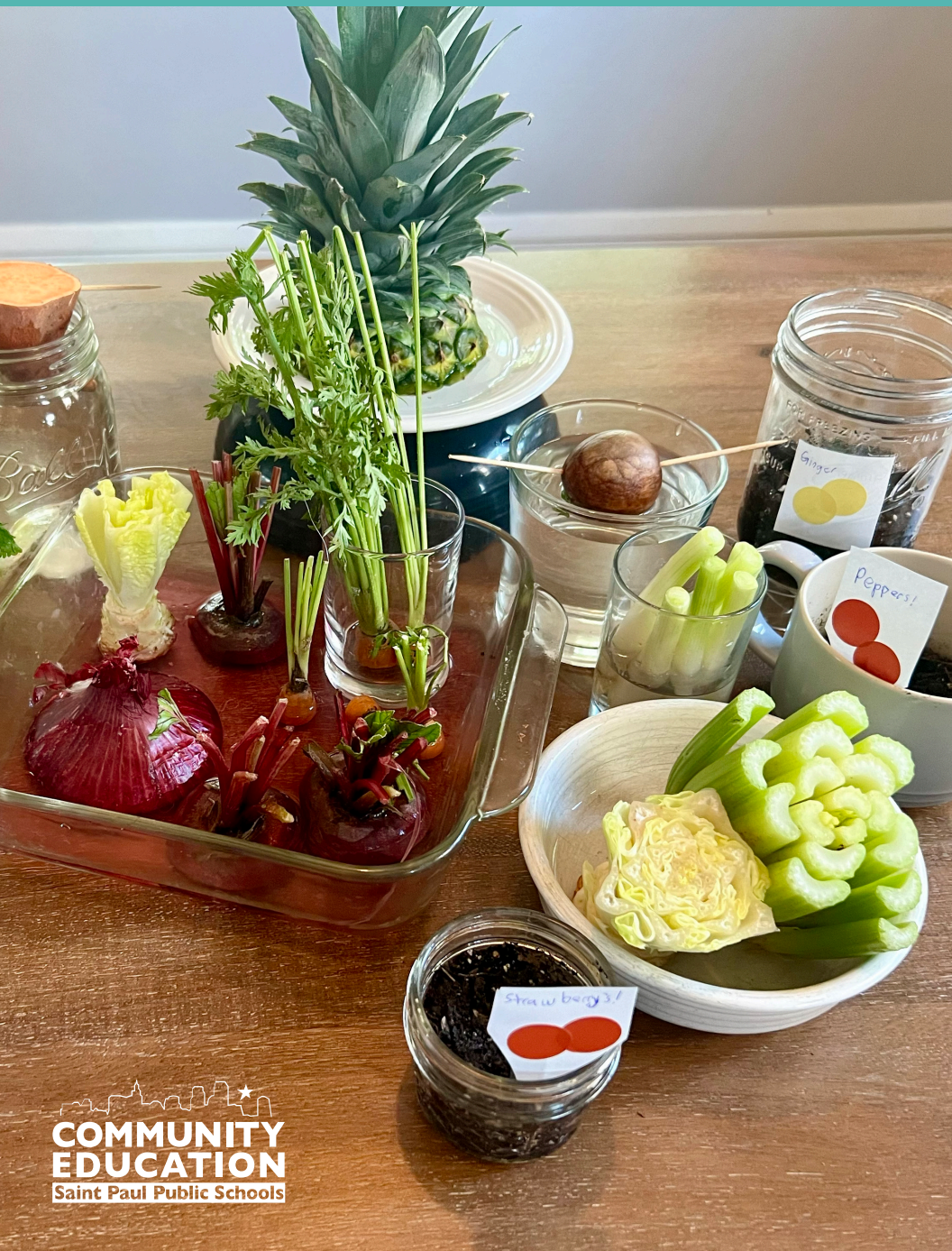
Grow & ReGrow

A gift to you from Saint Paul Public Schools Community Education



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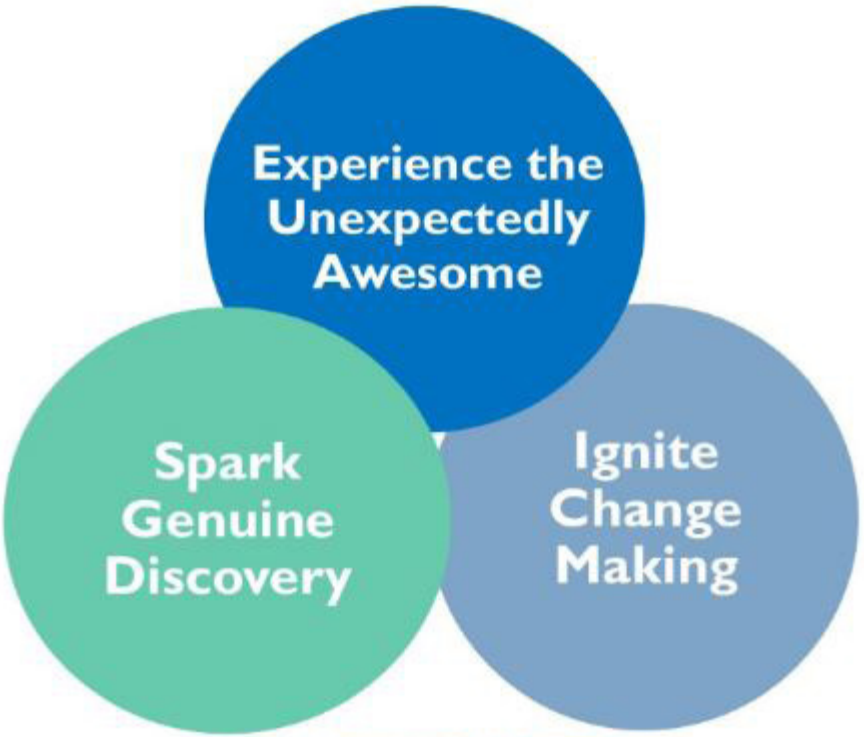


COMMUNITY EDUCATION
Saint Paul Public Schools

Our Mission Statement

Community Education seeks to improve the quality of life by providing lifelong learning opportunities for all members of the community. Lifelong learning is based on the belief that people are learners at every age and are entitled to pursue educational opportunities that are meaningful to them.

Contents

Welcome to Grow & ReGrow!

Growing your own fruits, vegetables and herbs using seeds you harvest or food scraps is an amazing way to save money, help the planet, and be a hands-on scientist!

This books gives you instructions for some of the things that are easiest to grow with scraps and harvested seeds. The two approaches you will take are:

- propagation - growing new plants from the roots of plants
- germination - growing seeds into seedlings

You'll probably get better results if you start with organically-grown produce since some non-organic produce is treated to prevent sprouting. Also, keep in mind the climate you live in will determine if and when plants started from scraps can be transferred to an outdoor garden.

Everything you plant will not sprout. Check on your plants and if after a

What is something you have grown (or tried to grow) before?

What excites you about trying to grow your own food?

What excites you about trying to grow your own food?

This book belongs to:

_____

This is a drawing of me with my favorite fruit and vegetable:

Tips for using this book!

Start with foods you like

Starting with trying to grow things you already know you like will help you stay motivated while you are waiting for things to grow

Then, try a new food

Once you know you can do it - try growing something you aren't sure you like yet.

Then...experiment

Once you have mastered the methods in this book, take your growing sciences to a new level by experimenting with new methods

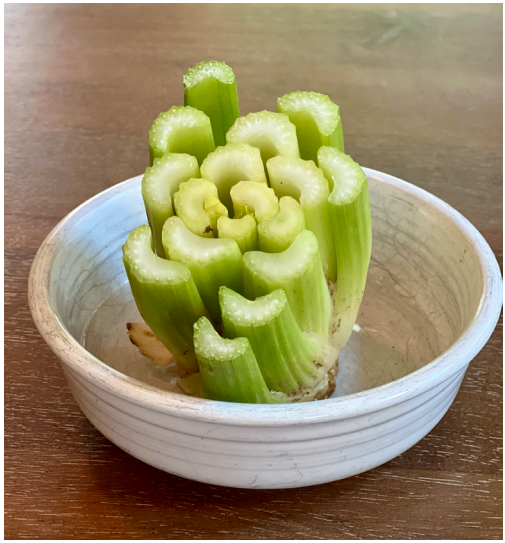
ReGrow: Celery

You can totally grow new stalks of celery from your celery scraps! The central part of the celery contains the nutrients for producing new stalks.

Step 1: Cut stalks off about two inches from the bottom of the celery bunch.

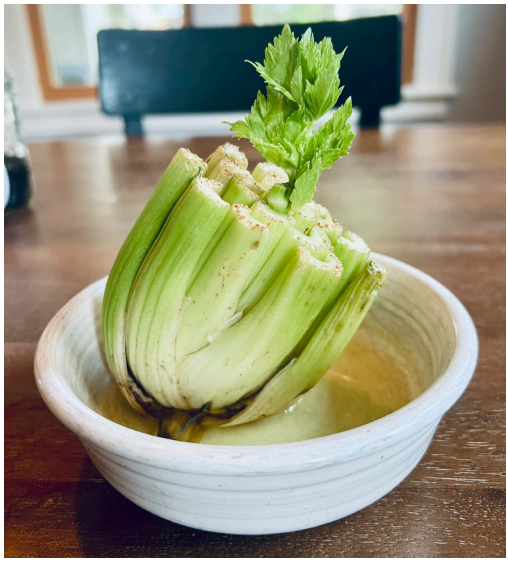
Step 2: Place the white base in a shallow bowl of water. Do not submerge.

Step 3: Change the water every other day to keep the roots fresh.



After several days roots will begin growing from the base and leaves will grow from the top.

Step 4: After about a week, you can plant in soil with only the leaves above the surface.



The plant will continue to grow until you've got a new head of celery to harvest.

For planting outside:
Keep in mind that celery is a cool weather crop, so plant outside in early spring rather than waiting until the hot summer months.

Is this propagation or germination?

Track the progress of your celery with drawings

Day 1

Day 5

Day 10

Day 15

ReGrow: Beet & Carrot Greens

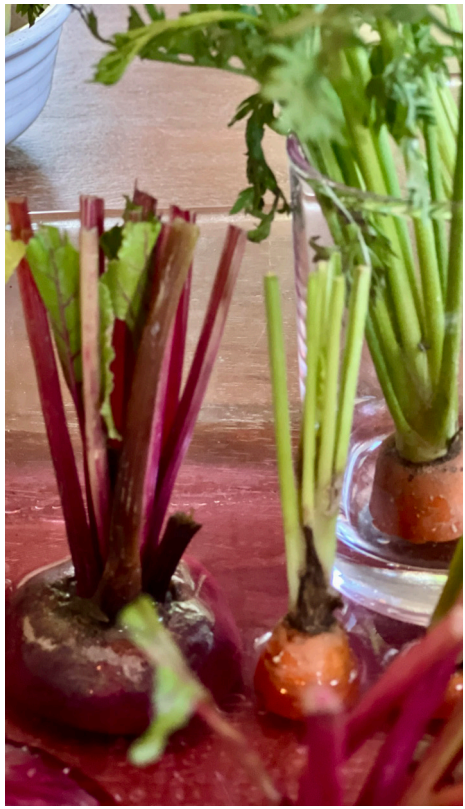
You can regrow the greens of root vegetrable scraps like beets, turnips, carrots, and parsnips. For these veggies, you will not be able to actually regrow the root themselves.

Beet and carrot greens house an enormous amount of the plant's nutrients and carry a notably wide range of uses. You can toss them into a salad, sauté, or add them to a smoothie for a big vitamin boost.

Step 1: Salvage the tops (the part of the vegetable where the leaves come out and about 1 inch of the vegetable still intact.

Step 2: Place in a shallow tray of water (but don't submerge).

Within a few days, you will seenew green tops growing. You can harvest the greens now. Or, once you see roots growing, you can transport them into the ground.



Is this propagation or germination?

Track the progress of your greens with drawings

Day 1	Day 3	Day 6

ReGrow: Garlic

You can grow new garlic or garlic greens with your extra garlic cloves!

For garlic greens, you can grow them in dirt or water.

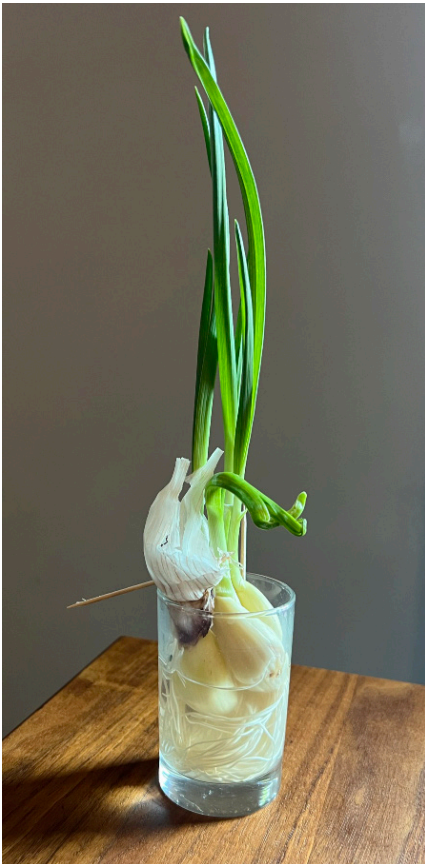
Step 1: Place your leftover garlic roots-side down in a pot with soil or use toothpicks to suspend the garlic scrap with the root side in water.

Step 2: If you are rooting your garlic in dirt, keep the dirt moist. If you are rooting your garlic in water, replace the water every other day.

Garlic greens will start to grow in about a week.

To grow full heads of garlic in the groups, simply take cloves and place them pointy-side up in the ground, 4-6 inches apart. Plant them outside in fall before the first frost, and enjoy fresh garlic the following year.

Is this propagation or germination?



Track the progress of your greens with drawings

Day 1	Day 3	Day 6

ReGrow: Red Onion

You can regrow an onion greens or a whole onion from red onion scraps. You can do this same process in dirt or water, but you can only regrow an onion in dirt.

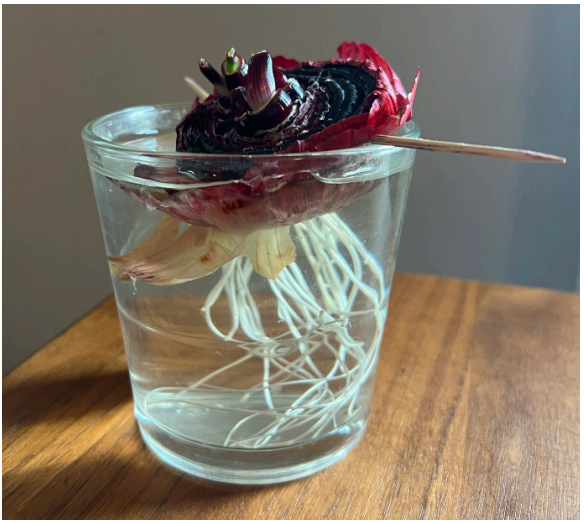
Step 1: Cut off about ½ inch of tthe root end of an onion

Step 2: Place it roots-side down in a pot with soil and cover with a thin layer of soil or use toothpicks to suspend the onion scrap with the root side in water.

Step 3: If you are rooting your onion in dirt, keep the dirt moist. If you are rooting your onion in water, replace the water every other day.

You will see shoots and roots growing in about three weeks. You can harvest the shoots as onion greens. Or, you can plant your rooted onion in the ground to grow new onions.

Is this propagation or germination?



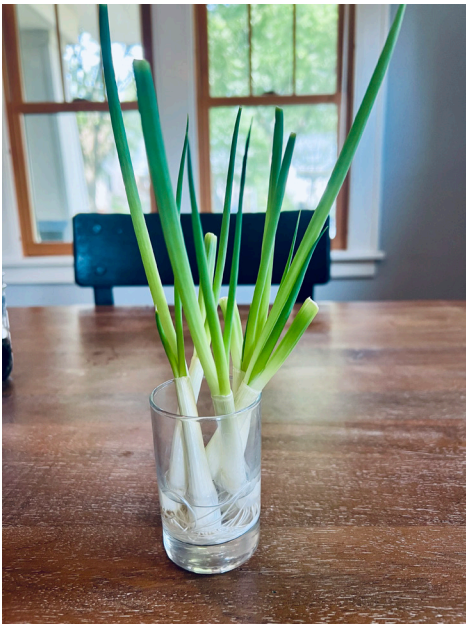
Track the progress of your onion with drawings

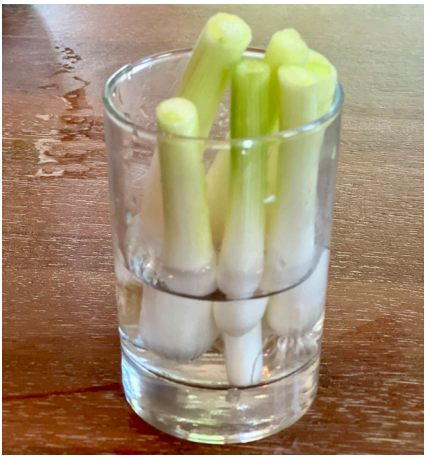
Day 1	Day 3	Day 6

ReGrow: Green Onion

You can regrow the green part of a green onion to use over and over again! You can do this same process in dirt or in water.

Step 1: After you use the green part of the green onion, keep the white bulb part with the roots.





Step 2: Plant the root bulb in dirt with the top part above the dirt line. Or, put the root bulb in a small container of water with the top part above the water line.

Step 3: Put in a sunny window and watch it grow.

Step 4: Harvest your onion greens by cutting off the portion you want to use. The bulb will continue to grow new greens.

Is this propagation or germination?

Track the progress of your onions with drawings

Day 1	Day 3	Day 6

ReGrow: Avocado

It's pretty easy to sprout an avocado seed. After you eat your next avocado, just save the seed and follow these steps!

Step 1: Wash off the seed.

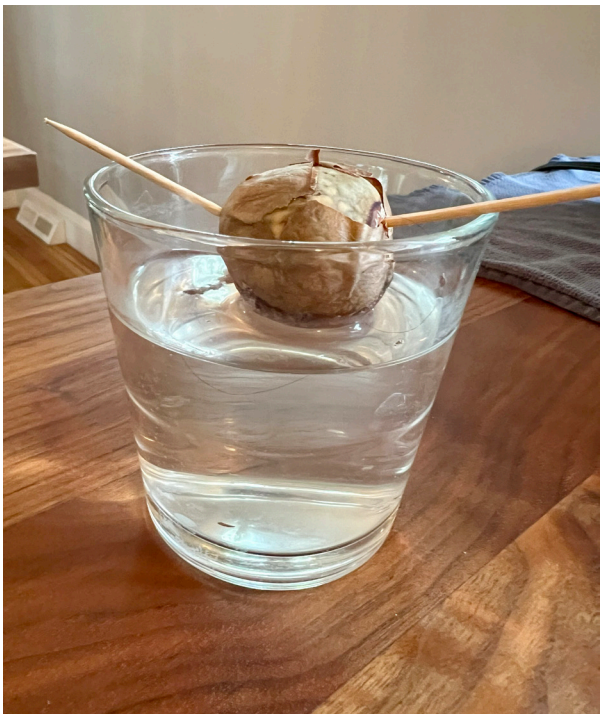
Step 2: Determine the top and bottom of the seed. The top is usually tapered and the bottom is flatter.

Step 3: Stick 3-4 toothpicks into the avocado seed along the center line so that the top and bottom do not have toothpicks in them. The center line isike where the equater would be if your avocado seed was the earth.

Step 4: Place the avocado seed, bottom-end down, over a jar or glass filled with water, held in place by the toothpicks. Fill the jar with water so that about an inch of the seed is submerged. Leave the top end of the seed open to the air.

Step 5: Place the glass somewhere warm but away from direct sunlight, adding water so there's always about 1 inch of water covering the bottom end of the seed.

Step 6: Every four or five days, completely change the water in the jar to get rid of bacteria that might be growing.



In a few days, you will start to see roots grow out of the top of the seed. In about eight weeks, you should see a sprout emerge from the top of the seed. If you do not get a sprout, toss it and try again.

Step 7: When the seedling reaches 6 or 7 inches tall, cut the stem in half, or about 3 inches tall. This helps the plant put its energy into new growth.

Step 8: When the seedling has several leaves and thick roots, plant the seed in potting soil in a 10-inch-wide pot that has drainage holes. Leave the top half of the seed exposed above the soil line.

If you are in a climate where avocado trees can grow outside, you can eventually transplant your avocado into the ground.

Track the progress of your avocado with drawings

Week 1	Week 6	Week 12

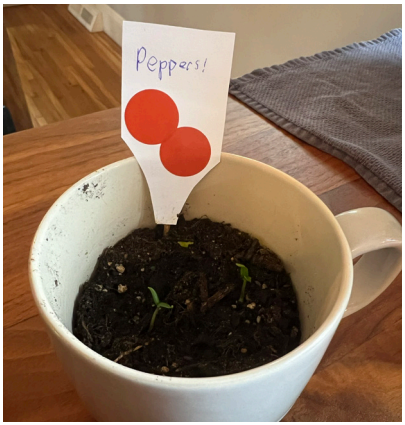
ReGrow: Bell Peppers

Save the seeds from your next bell pepper to grow a new plant.

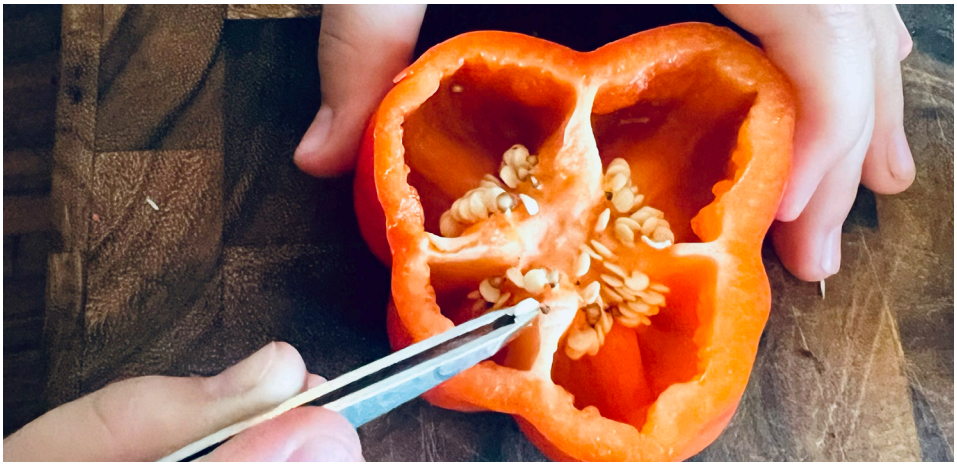
Step 1: Harvest the seeds using your fingers or a tweezers.

Step 2: Plant the seeds directly into soil, and water them regularly.

Once a new plant emerges, transplant it to a larger container or outdoors, where it will thrive best in direct light and warm temperatures.



Is this propagation or germination?



Track the progress of your bell pepper with drawings

Day 1	Day 6	Day 12

ReGrow: Tomatoes

The next time you are eating a tomato - save the seeds. You can use any type of tomato to regrow a plant from it's seeds.

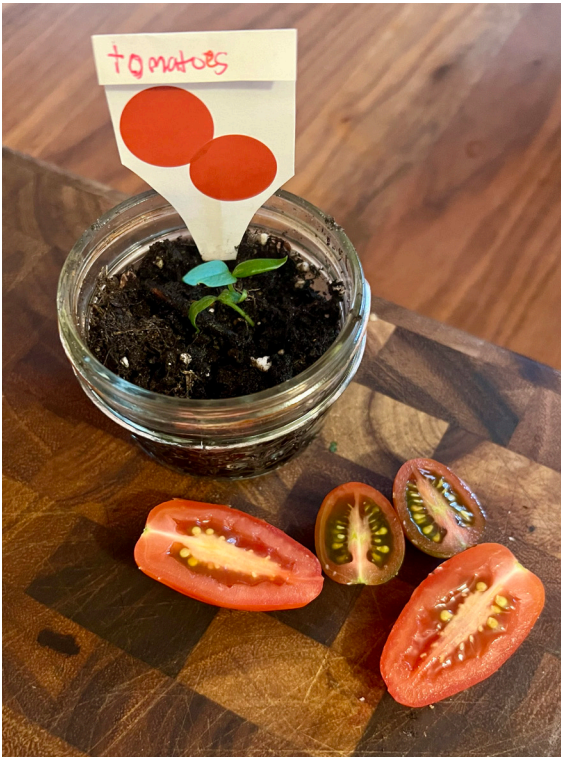
Step 1: Harvest the seeds using your fingers or a tweezers.

Step 2: Plant the seeds directly into soil, in as direct sunlight as possible, and water them regularly.

A new plant will grow from your harvested seeds. Wait until the new plant reaches several inches tall.

Step 3: Transplant it to a larger container or outdoors after the last frost has passed.

Is this propagation or germination?



Track the progress of your tomatoes with drawings

Day 1	Day 6	Day 12

ReGrow: Strawberries

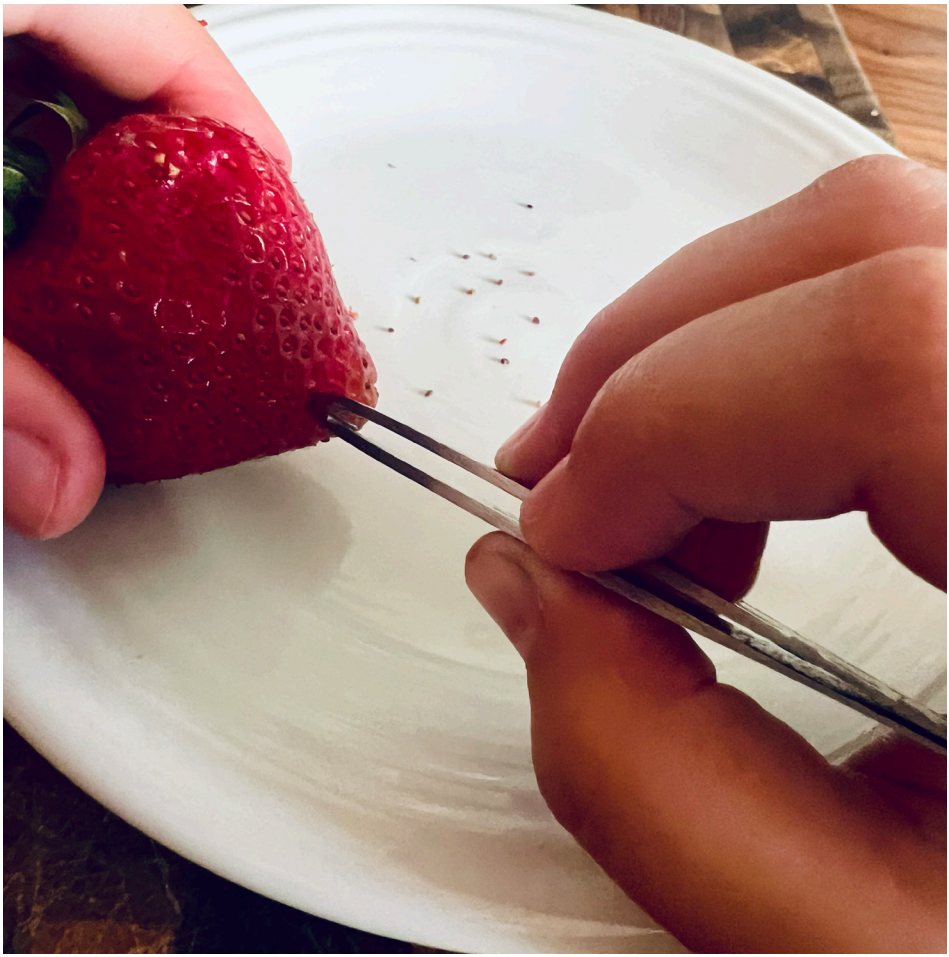
You can regrow many things by harvesting and replanting the seeds. Strawberries work well because their plants are smaller than things like a blueberry or raspberry bush.

Step 1: Harvest the seeds from a strawberry by carefully cutting the outer skin (containing the seeds) off the berry or use a tweezers to remove the seeds.

Step 2: Place the skin or seeds in a container with soil, cover with soil, place in a sunny spot and water regularly until sprouts emerge.

Step 3: Transplant the sprouts to a strawberry pot or outside garden in the springtime.

Is this propagation or germination?



Track the progress of your strawberries with drawings

Day 1

Day 5

Day 10

Day 15

ReGrow: Ginger

If you've got more ginger root than a recipe calls for you can plant it to grow more ginger root.

Step 1: Put the root in moist potting soil with the newest buds facing up.

Step 2: Place your container in a warm spot indoors because ginger is a tropical plant.

Green shoots will come up out of the soil and the roots will spread out. After a few months, you can harvest pieces of the root, covering it up with soil again when you've taken what you need so that it can continue growing.

Is this propagation or germination?

Track the progress of your ginger with drawings

Day 1	Day 6	Day 12

ReGrow: Jalapeños

Save the seeds from your next jalapeño and you can grow your own new plant.

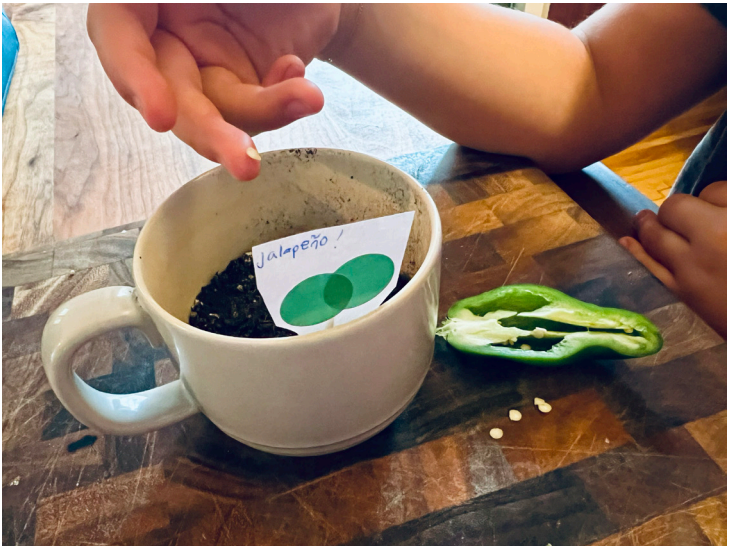
Step 1: Harvest your jalapeño seeds using a tweezer. If you use your fingers, make sure to wash them afterwards so that you don't get jalapeño juice in your eyes (it might burn).

Step 2: Plant your seeds directly into soil.

Step 3: Keep them in a sunny window and water them regularly.

When your new plant grows you can keep it in a pot indoors or replant it into the ground in the Spring or Summer.

Is this propagation or germination?



Track the progress of your jalapeños with drawings

Day 1	Day 6	Day 12

ReGrow: Romaine Lettuce

The next time you're using romaine to make a salad or sandwich keep the base and you can grow new lettuce from it!

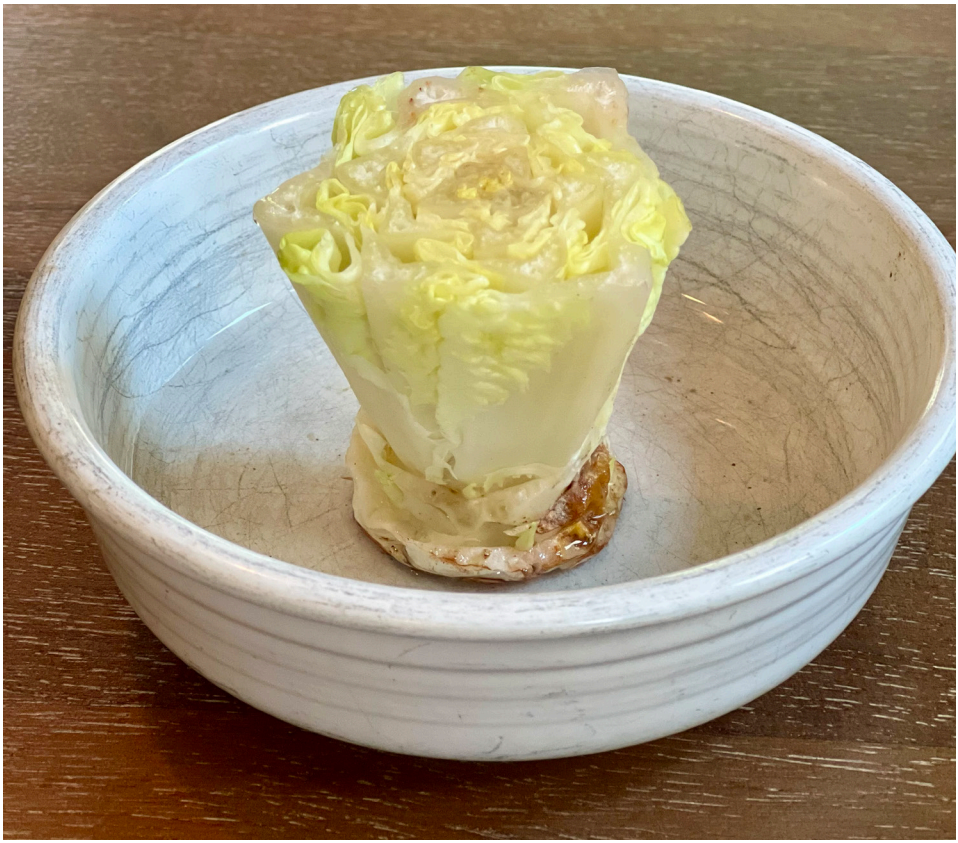
Step 1: Leave a couple of inches of the base of your romaine

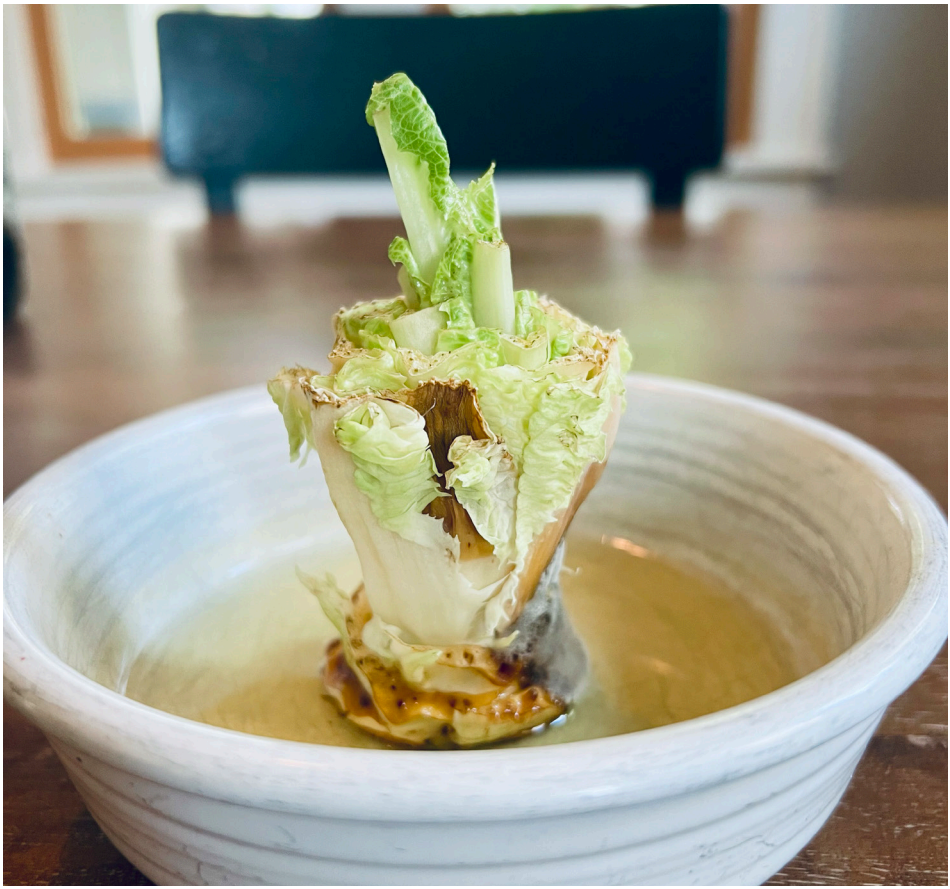
Step 2: Place this romaine heart in water. Change the water daily to try to pre vent mold from growing. New leaves will start to grow from the center.

Step 3: Remove outer leaves as they start to die.

You can harvest these tender small leaves and use them in salads or on sandwiches. Or, you can eventually plant your romaine in soil and watch it continue to grow bigger leaves.

Is this propagation or germination?





Track the progress of your romaine with drawings

Day 1	Day 6	Day 12

ReGrow: Herbs

Re-growing herbs is fairly easy to do. Basil, mint, cilantro, parsley and similar herbs will grow new roots in water so that you can grow a new plant.

Step 1: Cut a stem about four inches long.

Step 2: Place it into a glass of water. Be sure that the leaves are not submerged in the water.

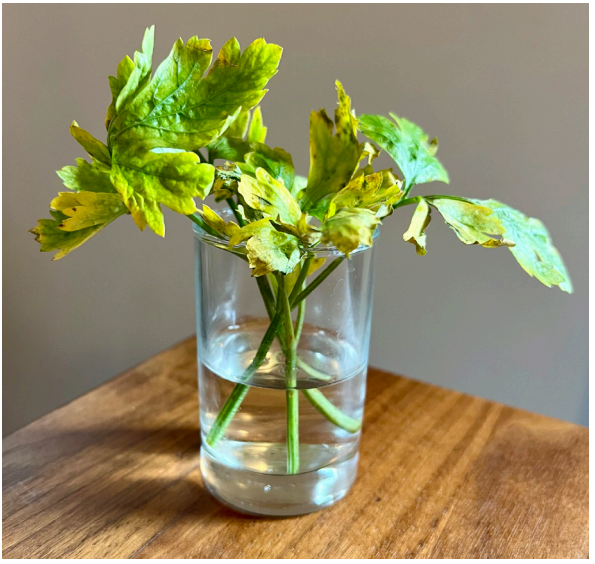
Step 3: Place your stem in a bright area, but out of direct sunlight.

In 10-15 days, you should see roots forming.

Step 4: Once the roots are about an inch long transplant them into soil.

In no time you will have your very own flourishing herb garden.

Is this propagation or germination?



Track the progress of your herbs with drawings

Week 1	Week 2	Week 3

ReGrow: Sweet Potatoes

One way to grow sweet potatoes is to just plant the whole sweet potato in the ground and it will grow more sweet potatoes. But, it's a little more entertaining to get to watch one root in water.

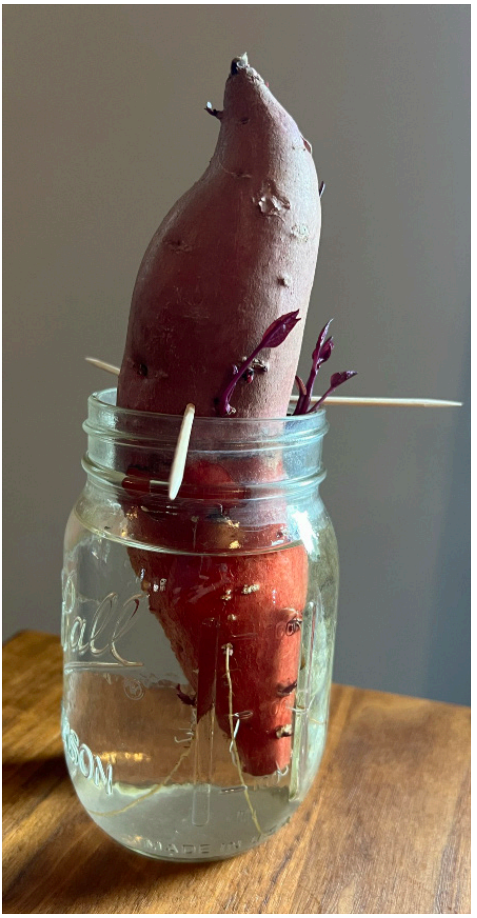
Step 1: Use a whole sweet potato or use a scrap end off the next sweet potato you eat (cut the scrap end off before you cook it).

Step 2: Use three toothpicks to suspend your sweet potato over a glass of water.

Roots will begin to grow in a few days.

Step 3: Once the sprouts are about four inches long, just twist them off and place them in a container of water.

Step 4: When the roots from this container reach about an inch in length, you can plant them in soil in a garden or large container.



Is this propagation or germination?

Track the progress of your sweet potato with drawings

Week 1	Week 2	Week 3

ReGrow: Sprouts

You can grow sprouts from lots of things to put on sandwiches or in salads. The steps below will work for sprouting lentils and beans.

Step 1: Put ½ cup of dry lentils or beans in a jar with 1 cup of cool water f

Step 2: Cover the top of the jar with a cheescloth or washcloth. Secure with a rubber band.

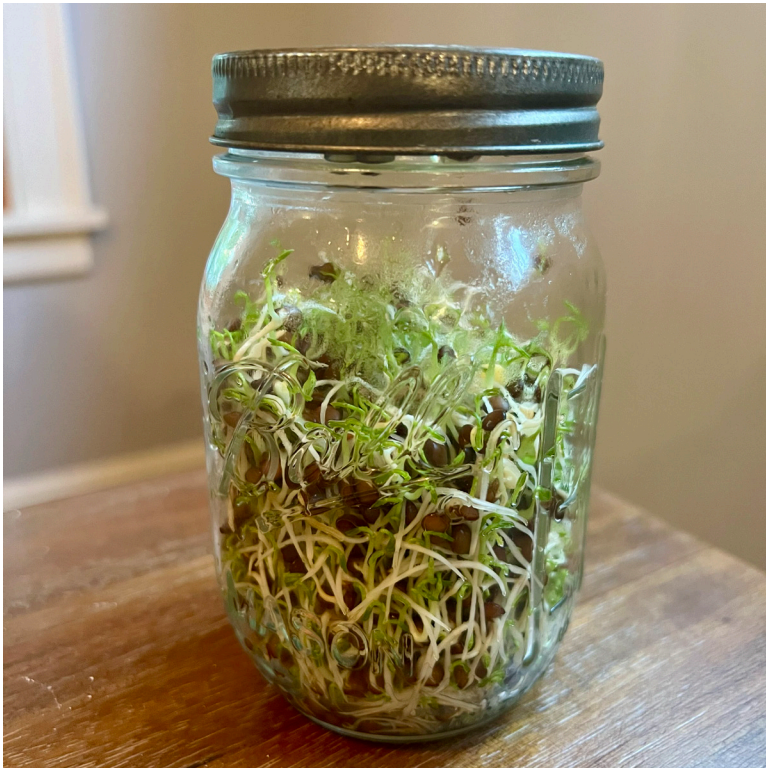
Step 3: Soak the lentils or beans for 8-12 hours.

Step 4: Drain off the water you used for soacking and do not soak again.

Step 5: Keep your sprouts of of sunlight. Rinse and drain 1 or two times a day.

On the third day or forth day you will have sprouts and they are ready to eat! You can keep them in the refridgerator in a covered jar.

Is this propagation or germination?



Track the progress of your sprouts with drawings

Day 1

Day 2

Day 3

Day 4

ReGrow: Pineapple

Although it takes months or sometimes years to grow a pineapple, the wait is worth it! Next time you buy a pineapple - you can use the top scrap to try to grow your own. This fruit is one of the easiest to grow on your patio in the summer and inside your house in the winter.

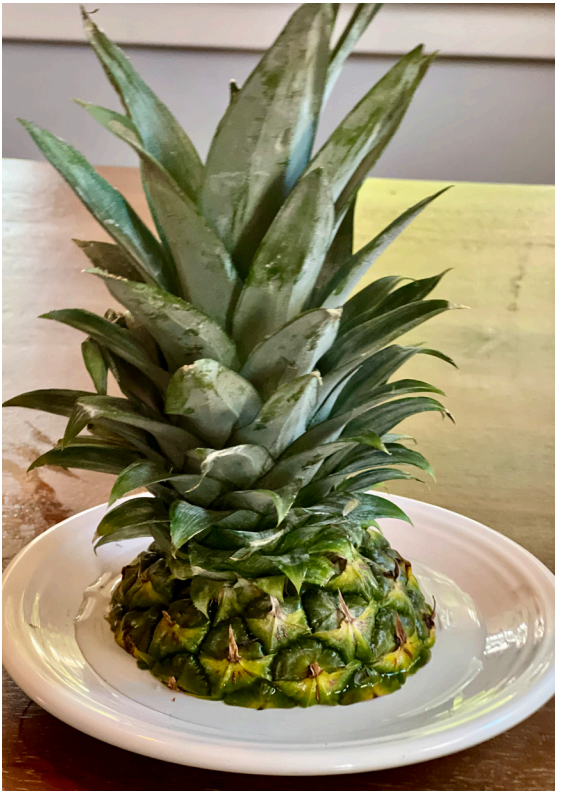
Step 1: Carefully make very thin slices horizontal to the bottom of the crown until you see a ring of brownish dots at the bottom. These are the root buds. You want to be able to see these, but be careful not to cut off any more of the plant than necessary to expose them.

Step 2: After you expose the root buds, leave the crown out to dry for a day or two. This will help the leaf scars heal and prevent rotting.

Step 3: Once the bottom is dry, put your pineapple crown in shallow water to soak. Put your pineapple crown inside of a sunny window.

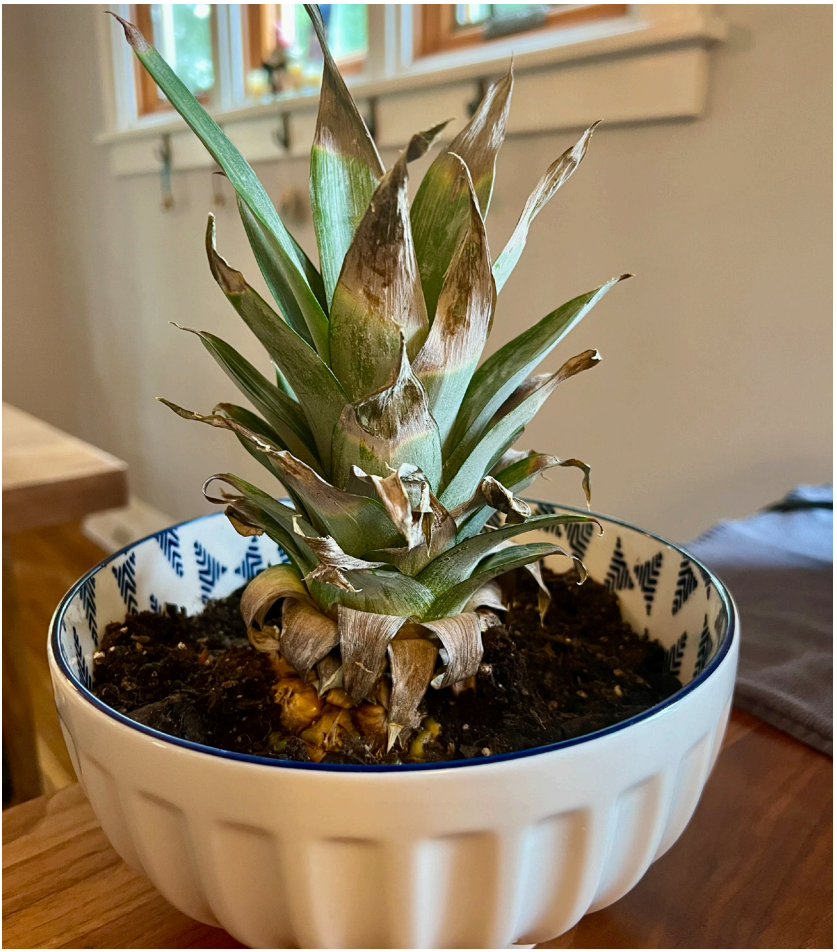
Step 4: Replace the water every couple of days to prevent mold. In about 2 weeks you should have your roots. They should be 2-3 inches long before you transplant your pineapple plant.

Step 5: When the crown has thick roots, plant it in potting soil in a 10-inch-wide pot that has drainage holes. Leave the top half of the seed exposed above the soil line. Water the soil until water runs out of the bottom of the pot.



Continue to water your plant and hopefully it will grow you a new pineapple.

Is this propagation or germination?



Track the progress of your pineapple with drawings

Week 1	Week 12	Week 20

Compost Tea

Plants love to drink compost tea! (You won't like it because you aren't a plant). You can make your own compost tea with yard waste and feed it to your plants. You can also use it in your experiments to see if things germinate or propogate differently with compost tea versus water.

Step 1: Fill a jar about ¾ full with distilled water (or let tap water sit for a day so that chemicals like chlorine can evaporate)

Step 2: Fill the rest of the jar with cut up yard waste (leaves, weeds, grass)

Step 3: Cover with breathable lid (with holes in it or cover with a washcloth and binder).

Step 4: Let your concoction sit outside for two day to two weeks.

Step 5: Strain your tea. Put the plant waste in the compost and use the tea to water your plants.

Remember on page 4 we suggested you experiment with other methods? Track your experiments here.

Day 1

_____

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Remember on page 4 we suggested you experiment with other methods? Track your experiments here.

Day 1

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Remember on page 4 we suggested you experiment with other methods? Track your experiments here.

Day 1

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