

Agriculture in Action!

Agriculture and farming have a long history in Fort Collins and all over the globe. Most of the time we only see the end product, the fruits and vegetables at the grocery store. With this activity, see what happens under the dirt through experimentation with the scientific method!

Follow along through Facebook and Instagram with museum educator Hannah as she demonstrates this experiment in her own home. Happy Farming!



Supplies:

General

- Water
- Indoor space with sunlight
- Sharpie or Marker
- Paper and pencil to record daily observations
- Potting soil and planter (optional)

Growing Produce from Seeds

- Seeds (dried beans, flower seeds, other fruit or vegetable seeds)
- Baking tray or cutting board
- Paper towels
- Spray bottle (optional)
- Ziploc bags

Re-Growing Produce from Kitchen Scraps

- Kitchen Scraps (celery base, lettuce heart, green onion base, yellow onion top)
- Small bowls or containers
- Sharp kitchen knife and adult supervision

Instructions for Ages 3-5:

1. Review what plants and flowers need to grow and walk through the stages of plant growth.
2. The Ziploc bag method can be easily monitored and observed, but we recommend setting up a method together that works best for your household. See procedures below.
3. Ask your young scientist what they think will happen to the produce or seeds? Talk about different plants they have seen and discuss how they grow or where their favorite fruits and vegetables come from.
4. Observe and talk about what is happening to your produce or seeds every day.

Instructions for Ages 6 and up:

1. Review what plants and flowers need to grow and walk through the stages of plant growth.
2. Work through the scientific process before proceeding with the experiment. Decide on an experiment you want to test.
3. Write down your answers for the scientific process and create your method for observation.
4. Depending on your growing method, follow the procedures below.
5. Record your observations every day in an observational chart, farming journal or a photo archive. As your produce grows you can look back on previous days, predict what will happen next and share with family and friends!
6. Follow along with Hannah as she tests her experiment in her home.

Experiment Procedures:

Growing Produce from Seeds

Baking Tray Method

1. On a baking tray or cutting board lay out one layer of damp, but not soaking paper towel. You can use a spray bottle to accomplish this too.
2. Spread and space out the seeds you are using. If you are using different types of seeds be sure to separate them and label them so you remember which seeds are which.
3. Wet another paper towel so it is damp and place it over the top of the beans.
4. Spray or wet the top paper towel every day or when it becomes dry.

Tips & Tricks

- *Depending on the seeds you are using they may need moisture than others. If any seeds become moldy throw them out.*

Ziploc Bag Method

1. Get one sheet of paper towel damp but not soaking. Fold and place inside of a Ziploc bag.
2. Distribute 4-5 seeds evenly into the bag so that they are next to the wet paper towel.

3. Label your bag the type of seed and hang up on or near a window that gets sunlight.
4. Check back every day to observe what is happening to the seeds.

Tips & Tricks

- *The bag should hold the moisture of the paper towel well if the bag is kept closed. Check it every few days to check it is still damp. If it is not, simply add a few drops of water.*

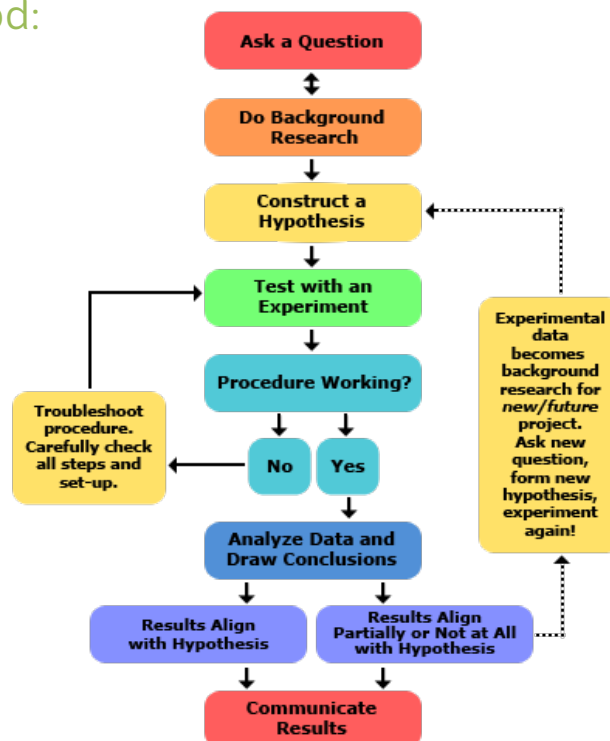
Re-Growing Produce from Kitchen Scraps

1. Save any produce scraps from cooking. (Base of a head of lettuce or celery, root tops of yellow or green onions). If you have other scraps, see if those will regrow too using similar techniques.
2. Cut base of produce to be no taller than 5 inches. Make sure the side of the produce you cut is the side where roots will grow.
3. Place your scraps into a small container with the root side down
4. Fill with water to cover the roots and base of the produce. Do not submerge them in water.
5. Place them in an area where they will receive sunlight. Check every day to add more water in case of evaporation and see if you notice new root or leaf growth.
6. After a week you can place the sprouting produce into a potter with potting soil.

Tips and Tricks

- *Some produce may not need soil to continue growing, like green onions. They grow well just in water.*
- *If produce begins to rot while in the water without little or any sprouting, try transferring them to soil early.*

The Scientific Method:



Observation Chart Templates:

Agriculture in Action Scientific Method	
Ask a Question: <i>What do you want to know?</i>	
Background Research: <i>If you are able, use books or the internet to help you take notes on information regarding your question(s).</i>	
Hypothesis: <i>Using any background research you did, create a "good guess" to what will happen when you test your question.</i>	
Experiment and Procedure: <i>How will you test your experiment? What are the steps or procedure you will use to do this experiment? What time of day and how often will you observe your plants?</i>	
Conclusions: <i>Did your hypothesis match your results? Why or why not?</i>	
Evaluation: <i>If you were to do your experiment again, what would you change? Would you change your questions, or a step in your procedure?</i>	

Agriculture in Action Plant Observations

Name: _____ Date: _____

Produce Name (seed or scrap)	Observations & Notes