



Plants in the Pantry

You might be surprised how many plants are hiding in your pantry.

From the banana on the counter to the flour in the cupboard, plants are everywhere in the kitchen! Use the activities in this packet to explore the plants in your own pantry.

GROW YOUR OWN:

Don't throw out those seeds!

Utilize the seeds from the fruits and vegetables in your pantry to grow your own plants. Try sprouting the suggested seeds below or experiment with others you might have.

Tomato

Collect and wash seeds. Plant within seven days of removal. Place in potting soil, water and cover in plastic for 5-7 days. Remove plastic when seeds begin to sprout.

BONUS: You can repeat these steps with pepper seeds!

Lemon

Remove seeds and rinse. Immediately plant seeds in soil about half an inch deep. Water and cover with plastic wrap. Remove wrap when seeds begin to germinate. Place your lemon plant in a bright sunny spot.

Bean

Soak dried beans in water and leave overnight. Drain water and place on damp paper towel. Transfer to soil when leaves begin to appear.

Avocado

Rinse seed and insert toothpicks into the seed to suspend from edge of jar of water. Place in warm area with indirect sunlight. Roots will emerge in about six weeks, then transfer to soil when leaves begin to appear.



Botanical Dye

People have been using natural materials to create colorful dyes for thousands of years! Join in the tradition by creating dyes from plants, some of which you might already have waiting in the pantry.

DYE IT!

What you'll need:

- An adult helper
- A large, metal pot
- Water
- Strainer
- Plant material
- Something to dye!
natural fiber (e.g. cotton, linen)

The process:

1. Place the plant material in the pot with enough water to later submerge your fabric and bring to a boil.
2. Reduce heat to simmer for at least 20 minutes. Often, letting the plant material steep overnight will achieve the best color.
3. Strain the plant material from the dye bath.
4. Still on low heat, add clean fabric and let soak for at least 15 minutes to over an hour. The longer the soak, the brighter the color!
5. Rinse your fabric and dry out of direct sunlight.
6. Care for your dyed fabric with pH-neutral soap.

Hibiscus The dried petals of these showy flowers make a tasty tea as well as a vivid pink dye.	Turmeric This spice produces a vibrant golden-yellow dye. Tip: place turmeric in a tea bag or piece of pantyhose for easy removal from dye bath.	Black Tea Brew an extra strong pot of tea to give your fabric a light tan hue.	Onion Skins Don't throw those away! The papery outer skins of red and yellow onions create colors from gold to ochre.
Black Beans Soak beans in water overnight and simmer this liquid to create a dye that ranges from steel gray to dark blue.	Red Cabbage Boiled cabbage creates a pastel purple dye. Bonus: add vinegar to create pastel pink; add baking soda to create pale blue.	Citrus Rinds Use just the peel of oranges, lemons, and other citrus fruits to make a light yellow color.	What else? Experiment with different items from your fridge, pantry, or backyard. Avocado pits, pine cones, carrot tops... The colors you make may surprise you!

Multicolor projects: Try creating a few dyes and tie-dye or dip-dye with more than one color!





Flavor Taste Test

Using what you have in your home already, do this simple taste test with a partner to see if candy flavors are actually that similar to fruit flavors!

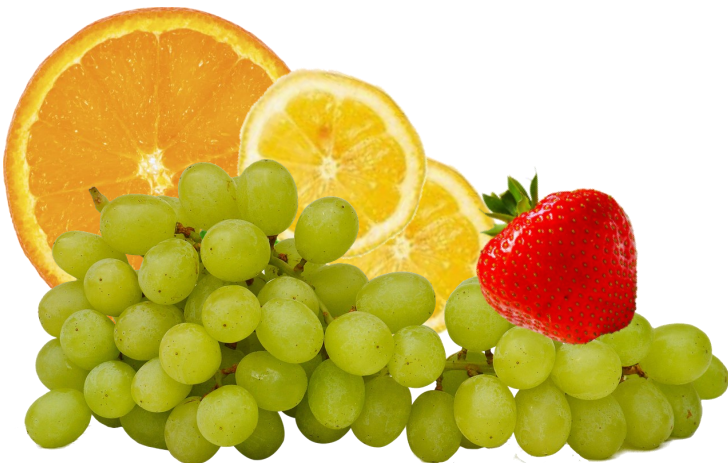
EXPERIMENT:

What you'll need:

- Fruity candy
- Fruit (canned, fresh or frozen)
- Blindfold
- Paper and pencil
- A partner

The process:

1. Choose someone to be the first taste tester, then blindfold them.
2. Give the taste tester one piece of fruit flavored candy and ask them what flavor they think it is.
3. Record on a piece of paper what flavor was given and what flavor the taste tester thought it was.
4. Give the taste tester the real fruit to compare.
5. Repeat these steps until you have tasted all the flavors.



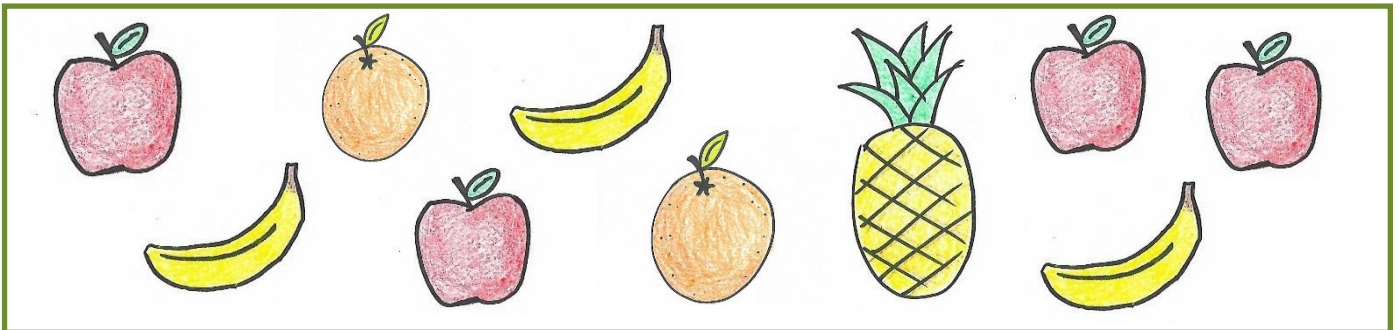
Questions to Consider:

- Did the candy taste like the real fruit?
- Which flavor of candy was most similar to the matching fruit?
- Of all the candy and fruit you tried, which was your favorite?



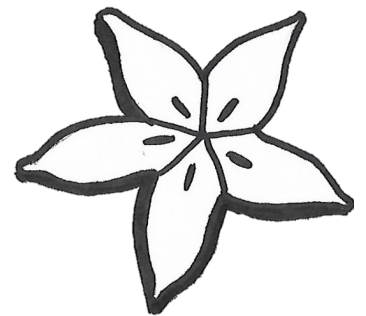
Fruit Fractions

Math is everywhere in nature - from patterns, to symmetry, to geometry, and more! Use fruits to practice fractions in the questions below.



1. How many pieces of fruit are there in the box above? _____
2. What fraction of the fruits are apples? _____
3. What fraction of the fruits are oranges? _____
4. What fraction of the fruits are bananas? _____
5. What fraction of the fruits are pineapples? _____
6. What fraction of the fruits are NOT apples? _____
7. Which fruit has the largest fraction? _____
8. Which fruit has the smallest fraction? _____

Can you shade in $\frac{2}{5}$ of the starfruit?



CRITICAL THINKING:

What fraction do bananas and oranges make up together? _____

If you ate half the apples, what fraction of the remaining fruits would be apples? _____

Try practicing fractions with fruits in your own fridge. Learning is more fun with snacks!



Chocolate Chat

Have you ever wondered where the delicious chocolate we all love comes from?

Chocolate is made from the seeds of the Cacao tree, *Theobroma cacao*, which means 'food of the gods'.

The Cacao tree is native to the tropical rainforests of Central and South America.

The cacao seeds are processed and made into cocoa powder, which has a bitter taste.

White chocolate contains no cocoa powder, while dark chocolate contains the most which is why it tastes more bitter.



TASTE AND BAKE!

Conduct your own chocolate taste test by gathering white, milk, dark and extra dark chocolate chips.

- Taste each chocolate and evaluate it based on sweetness, smoothness and bitterness.
- Which chocolate was your favorite?
- Use your favorite chocolate chips in the recipe on the next page with an adult to bake some delicious cookies!



How Chocolate is Made: From Pod to Bar



DID YOU KNOW?

- Chocolate was once so valuable that it was used as a form of currency.
- Chocolate has a melting point of 86-90° F, which is why it melts in your mouth.
- **The Botanical Garden has a Cacao tree! Be sure to find it next time you visit the Garden.**



Chocolate Chip Cookies

one bowl-small batch

INGREDIENTS

- ¼ cup butter, softened
- ¼ cup brown sugar
- 2 tbsp white sugar
- 1 egg yolk
- ½ tsp vanilla
- ½ cup + 1 tbsp flour
- ¼ tsp salt
- ¼ tsp baking soda
- ¼ cup chocolate chips
(dark, milk or white)

Notes:

Store baked cookies in airtight container on counter for up to one week. You can freeze dough in pre-scooped portions and bake them straight from the freezer. Bake for 12-13 minutes if frozen.

INSTRUCTIONS

1. Heat oven to 350 degrees. Line baking sheet with parchment paper and set aside.
2. Cream together butter, brown sugar and white sugar until smooth with a handheld or standing mixer.
3. Once creamy, add egg yolk and vanilla until combined.
4. Shift mixture to one side of the bowl. Add flour, salt and baking soda and gently mix.
5. Use a spoon to stir dry ingredients into wet to fully combine. Fold in your desired chocolate chips.
6. Place into freezer for about ten minutes to keep your cookies from spreading too much.
7. Remove from freezer and use a cookie scoop to spoon dough onto lined baking sheet.
8. Bake for 9-11 minutes or until lightly brown on edges.
9. Remove and allow to cool completely. Enjoy!





Food Tracker

How many plants do you eat in one day? Counting the apple you had for an afternoon snack is easy, but what about the grain in your breakfast cereal or crust of your pizza? Those come from plants too!



Tacos:

- Seasonings: pepper, garlic, paprika
- Tortilla—flour or corn
- Fillings: rice, beans
- Toppings: lettuce, salsa, guacamole
 - Salsa— tomato, onion, pepper, cilantro, lime
 - Guacamole— avocado, tomato, onion, pepper, cilantro, lime

JOURNAL:

Record everything you eat for one entire day. Then track the foods you ate back to the plants from which they came.

Have a parent help you if you're not sure, as some of them can be tricky!

Questions to Consider:

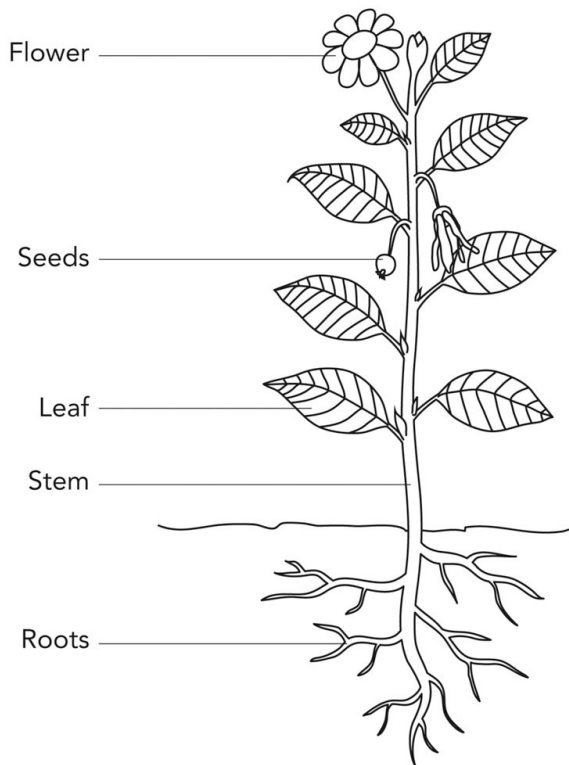
- How many different plants did you eat today?
- Did you eat multiple food items from one plant?
- In which meal of your day did you eat the most plants?





Pantry Play

Have you ever eaten a leaf of a plant? What about a stem? A flower?
We often eat all parts of a plant without even knowing.



Plant Parts:

Flower: Attracts pollinators in order to make seeds and reproduce. Cauliflower is a flower we eat.

Fruit: Part of the plant that has seeds inside, like apples.

Seeds: Grow into a new plant. Beans are seeds.

Leaf: Make food for the plant through photosynthesis. Many herbs like mint are leaves of a plant.

Stem: Moves water and nutrients throughout the plant and holds it up. Celery is a long stem that we eat.

Roots: Absorb water and nutrients from the soil. Hold the plant firmly in the ground. Carrots are roots.

TRY IT!

Sort plastic fruit and vegetables or real food items from your pantry based on what plant part they are.

Questions to Consider:

- Where can this food item be found?
- Does this food item look like a plant part I know, like a leaf?

Next try sorting the items by color, size or shape!

