



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## TOOLKIT

Created by: Catholic Charities Food For All

Supported by:



# TABLE OF CONTENTS

KERNEL OVERVIEW.....	4	#12 BIKE SAFETY .....	54
PRE-SURVEY .....	13	#13 BUGGING OUT .....	58
POST-SURVEY .....	14	#14 CLOUD READING .....	63
DAILY TALLY SHEET.....	15	#15 COMPANION PLANTING .....	67
SUMMERY KERNEL TRACKING.....	16	#16 CROSS POLLINATION .....	71
PHOTO AND MEDIA RELEASE FORM.....	17	#17 HULA HOOPING .....	74
#1 COMMUNITY GARDEN .....	18	#18 JUMP ROPE .....	78
#2 CONTAINER GARDENING .....	20	#19 TASTE TEST ADVENTURE .....	83
#3 IN THE ZONE .....	23	#20 THE BUZZ ABOUT BEES .....	87
#4 MASON BEES .....	26	#21 TRANSPIRATION .....	91
#5 PARTS OF A PLANT .....	29	#22 TRANSPLANT A TOMATO PLANT .....	94
#6 PLANT A SEED .....	33	#23 YOGA .....	98
#7 POLLINATOR OR PEST .....	36	#24 COMPOSTING .....	101
#8 ROOT DEVELOPMENT .....	38	#25 FUNGI .....	104
#9 SEED BALLS .....	42	#26 LEAVES .....	106
#10 THE WATER CYCLE .....	44	#27 LEGUMES .....	109
#11 SEED MATCH GAME.....	48	#28 MEET THE TUBERS .....	112



# TABLE OF CONTENTS

#29 POTATO PALS .....	116	#46 MARKET DETECTIVE-VITAMIN C .....	184
#30 SEED SAVING .....	119	#47 MY FAVORITE RECIPE .....	188
#31 WHEEL OF KERNEL .....	121	#48 MY PLATE INVESTIGATE .....	190
#32 WHY DO LEAVES CHANGE COLOR?.....	127	#49 SOCCER .....	195
#33 WORM COMPOSTING .....	130	#50 VITAMIN OF THE SUN .....	198
#34 CALISTHENICS .....	135	# 51 HEALTHY WHOLE GRAINS .....	201
#35 CLEAN AND CUT PRODUCE .....	138	#52 BEE DANCE .....	205
#36 CREATE YOUR OWN SUPERHERO .....	142		
#37 DANCE FOR HEALTH .....	145		
#38 EAT A RAINBOW .....	148		
#39 FARMERS MARKET BINGO .....	151		
#40 GIVE A FARMER A HAND .....	163		
#41 GOURDS .....	165		
#42 HOCKEY .....	168		
#43 MARKET DETECTIVE-CALCIUM .....	171		
#44 MARKET DETCTIVE-VITAMIN A .....	176		
#45 MARKET DETECTIVE-VITAMIN B .....	180		

# KERNEL OVERVIEW

## HISTORY:

KERNEL (Kids Eating Right-Nutrition and Exercise for Life) is a youth-oriented nutrition and physical activity program designed to engage children in learning about lifelong healthy eating habits, gardening and exercise.

Catholic Charities Food For All was inspired by the findings from a focus group of WIC (Supplemental Nutrition Program for Women, Infants and Children) families to create KERNEL in the spring of 2015. A common comment by WIC families was they wished that there were more family-oriented opportunities at the farmers markets. These opportunities were seen as creating a more rewarding shopping experience for the parents and their children when they shopped with their WIC benefits at farmers markets.

From these findings and extensive research into children's activities that fit our educational mission, Food For All developed a vision for a fun, engaging program that would focus on a different nutrition and physical activity each week. The program targets kids 5-12 years old but is open to any kids that want to participate.

In partnership with the Washington State Farmers Market Association, Catholic Charities Eastern Washington promotes healthy eating, local farms, and active living for everyone. We help families buy more fresh fruits, vegetables, and other healthy foods at farmers markets through the Supplemental Nutrition Assistance Program (SNAP), WIC and Senior Farmers Market Nutrition Program (FMNP), matching, and other local food access programs. At farmers markets, you learn where their food is from, get inspired by healthy recipes, engage kids in fun, hands-on learning, and meet your neighbors and friends. The KERNEL program is available to any child and designed to foster a love of learning about farm, fresh, healthy foods, and farmers markets.

To find your farmers market, please visit the online "Find A Market" directory at [wafarmersmarkets.org](http://wafarmersmarkets.org)

Created with support from USDA, Food and Nutrition Service. Catholic Charities and the WSFMA are equal opportunity providers.

KERNEL was implemented during the summer of 2015 at the Emerson-Garfield Farmers Market in Spokane, Washington. 233 kids made 354 visits to KERNEL over the twelve-week pilot. In 2018, KERNEL expanded to eleven farmers markets in Eastern Washington with approximately 8,000 kids visiting over 2,769 times during 158 market days. At one market there were over 200 kids that visited in just one day! The KERNEL program continues to grow in activities offered and popularity. In 2023, it is now offered at nine Greater Spokane Farmers Markets, three North East Farmers Markets and has been adapted to make it their own by other farmers markets across Washington State. This is a free curriculum that is constantly changing and growing. Please reach out to Catholic Charities Food For All if you have any comments, critiques or suggestions for new activities.

## REGISTRATION/TRACKING:

- Initial visit/registration.
  - Each year, at the initial visit only, the parent/adult registers all the participating kids on one registration.
  - The registration includes:
    - the market name
    - the survey
    - the number of kids being registered
    - option to do a digital, post-season survey, and email address for the post-season survey to be sent to.
  - Catholic Charities Food For All uses Google Docs to deliver surveys to these families. This is a free survey program & FFA can supply more information if your market is interested. The goal of the Post Season Survey is to measure any effect of the program on a child's eating, shopping, and physical activity behaviors.
- Registration forms should be saved in either a file folder or an envelope. Food For All would like to aggregate the data from the surveys on the registration after the season is completed.
- At each subsequent visit, all registered children will just be counted for the daily tally on the Tally Sheet. This will help track total attendance throughout the season.
  - On the Tally Sheet, the following items will be tallied:
    - The date of the activity
    - The activity
    - Number of newly registered kids
    - Total number of kids participating in the activity (new and returning)
- The number of newly registered kids can be tallied from the number of kids written on each survey for that activity day.
- The total number of kids participating in the activity that day can be tallied in either of two ways: 1) with a handheld tally counter or 2) by using the empty box supplied on the Tally Sheet to track the number of kids during the day and then placing the end of activity total in the appropriate place on the Tally Sheet.
- This data should be reported to Catholic Charities Food For All by the end of the season. For your market, the data collected from your first season will serve multiple functions: it will serve as a baseline to use to compare with future seasons, it can serve as a basis to solicit more funds as well as partners for KERNEL and provides real numbers to provide to current funders to demonstrate the need for and success of your partnership with KERNEL.

## THE ACTIVITY:

- After check-in the child begins the scheduled KERNEL activity. Most activities take between 1-10 minutes. Some involve some hands-on direction from the staff. Others are more self-directed.
- After completion of the activity, each child receives their \$2 KERNEL Kids Cash currency to spend on fruit or vegetables and their KERNEL activity card. If there is more than one child per family, each child will receive separate

\$2 rewards for each activity participated in. However, activity cards may be limited to one card per market day per family at the discretion of the market.

- For some activities, a coloring page is supplied as an alternative for children who are unable to do the activity, usually due to age or physical abilities or who simply prefer to color.

## REDEMPTION REQUIREMENTS:

- Your market should request that vendors redeem the KERNEL Kids Cash currency on a weekly basis so that there will be enough to distribute to kids the following week. You do not want to be short. Set up the redemption process so that it fits in with your current bookkeeping methods of tracking and reimbursement.
- Make sure you have plenty of your currency on hand. For example, if you expect to average fifty kids per week, you should have at a minimum at least three weeks of currency printed. Not all kids will redeem their currency each week and some vendors forget to redeem them with the market in a timely manner.

## COSTS FOR FARMERS MARKET:

- \$2 KERNEL cash currency for each child that attends the market and completes an activity. This cost will need to be covered completely by the Market or Market sponsors.
- The price for Activity Cards sets will vary from year to year, contact FFA for current pricing.
- KERNEL "A" Sandwich Board with Sponsors logos – \$250 or less.
- KERNEL Handbook – Free to Markets
- In 2016, total costs were estimated to be about \$3.25 per kid visit/activity. These costs include the \$2 reward, printing for the banner, activity cards and other printing, materials, such as craft items, as well as the canopy covering where the activities will take place.

## BOOTH LOGISTICS:

**Canopy:** For an outside KERNEL program, it will all start with a sturdy canopy (est. cost of \$60-\$200). Our experience is that canopies on the less expensive side tend to not hold up over the course of a full season. Experienced farmers market staff and volunteers will understand what type of canopy will work best for their market (size, cost, length of season, climate, etc.).

**Weights:** For the safety of market patrons and staff, as well as extending the life of your canopy, please use weights to keep your canopy safely anchored during strong winds. Many things can be used as a weight, like buckets of water, cement blocks, weights created specifically for canopies, etc. We recommend that you meet or exceed the minimum requirements in the market's policies. The Washington State Farmers Market Association (WSFMA) requires their member markets to enforce the policy of having weights of at least 24# each to anchor each leg of a canopy. Good bungee cords or rope is also necessary for most weights.

**Table and chairs:** A table or two is essential for activities. For the table, a nice, washable or wipeable tablecloth is an essential component of an attractive booth. Expect the cloth to get messy from markers, potting soil, cut vegetables, etc. Chairs are optional but can be a nice addition when standing on hard surfaces for many hours.



**KERNEL A Board:** A KERNEL A Board (Sandwich Sign) with the names of sponsors is a great way to attract the attention of potential KERNEL families. An attached but separately printed sponsors section can be attached to the A Board so sponsors can be changed each season. We can create this A Board for you, or you can create one yourself if you have the resources.

Contact us if you would like us to provide images.

**KERNEL Schedule:** Activities should be scheduled in advance and posted at the KERNEL booth, the manager's booth and at other key market and community locations to assist in promoting the program and encouraging traffic to your market.

**KERNEL Activity Bin:** You should have a KERNEL Activity Bin to store all the activity materials needed. The contents of the bin should include:

- Construction paper
- Glue sticks
- Markers and/or colored pencils. (Crayons can melt in the heat).
- Safety scissors.
- Plain white paper.
- The KERNEL Kids Cash
- Adequate number of Registration Forms and Tally Sheets (Page 13 and 14)
- Photo Release forms to use in promoting your KERNEL program with pictures of kids engaged in KERNEL activities (example attached)
- At least two clipboards for the initial registration
- Pens/pencils
- Bungee cords or rope for weights
- The weekly KERNEL Activity Card
- Specific materials needed for one activity
- The alternate activity, coloring page for that week.

## SEASON LENGTH:

The number of weeks you have KERNEL activities is a decision your market will make based upon your goals, vision, and capacity (finances and staffing/volunteers). Some markets decide that a kid's activity is essential component of their market and schedule KERNEL for the whole season. Some markets see kids' activities as a part of their summer season, so they schedule KERNEL for the weeks of summer break for the local school district.

However long you decide your KERNEL season will be, we recommend that KERNEL be open the whole time the market is open, that is, if the market is open 3pm-7pm, KERNEL should be scheduled 3pm-7pm as well. If unable to schedule for the whole market, schedule it for as large a portion of the market time period as possible, keeping in mind your market's peak

attendance times. If KERNEL activity times differ from market hours clearly communicate that to market customers. Food For All staff will be happy to offer insight in the decision-making regarding season length.

**ACTIVITY AUDIENCE:** The target audience for each activity is 5-12 years old, but we encourage you to welcome kids of all ages. Expectations are that there will be more kids below the target range than above. Previous experience shows that very few kids above the age of 12 partake in the activities as teenagers tend to self-segregate themselves from "kids' activities". You can cap the age level for participants if you determine that it is necessary and appropriate.

## **STAFFING:**

Most activities need to be reviewed before hand and often will need additional materials or have demonstrations that need to be prepped overnight. Please have a staff member review each activity description before the market day.

From our experience, KERNEL works best if there are at least two dedicated people staffing the booth each week. Two people also allow one person to take a break. For markets that lack the capacity to staff a KERNEL booth, we have supplied a self-directed option for many, but not all, of our KERNEL activities. KERNEL staff can add insight to how many staff your market may need each week.

There are many ways to staff your market's KERNEL booth. Your market can draw from an in-house pool of volunteers, from staff or volunteers supplied by community partners, or have a paid staff, work-study student or an intern from a college nutrition program, children's education program or other relevant college program.

Some markets are blessed with a pool of extremely dedicated and energetic market volunteers. This can be a great group to utilize in staffing your KERNEL booth as they are familiar with the mission of the market and have demonstrated their passion for the market by becoming a market volunteer. Another positive aspect of utilizing market volunteers is the direct control the market manager and the board have over the implementation of the KERNEL activities because they supervise the market volunteers. In 2016, one market designated one volunteer to successfully manage the KERNEL activities and coordinate the schedule for market volunteers.

In 2016, three Spokane markets used different approaches with their community partners to staff their KERNEL activities.

At one market, a clinic provided a staff to assist w/ the weekly activity for 2-4 hours each week. The staff usually worked in two-hour shifts. This community partner also donated money to the market with a portion dedicated to the KERNEL activities. Lastly this market partnered with the local parent teacher group to supply a parent for one full shift per month. At another market, a neighborhood non-profit hosted the activity in their community center and provided paid staff and volunteers to run the activity. This worked well as this partner was located on the same closed off street as the market. The partner also saw an increase in people accessing their center as well as increase in new members.

A neighborhood library has also provided an outreach specialist and library volunteers to manage the activities each week. The library not only renewed their relationship with KERNEL in 2017 but expanded it from a summer activity at the market to a full season program because it served as a useful outreach tool for them.

## There are certain qualities needed in staffing the booth:

### Consistency

- Staff should have a mutually agreed upon schedule and have reviewed the activity before children arrive for the activity.

**If multiple community partners will be supplying staff for the activities, have your market train a point person from each partner on the expectations of the market for their staff. This point person from community partners can then train their fellow staff.**

- Staff need to consistently show up on time. Inconsistent staff can create a bad impression of your KERNEL activities and the market.

### Engaging staff create successful activities

- Staff should be comfortable speaking with kids and their parents.
- Standing appears receptive. Sitting or using an electronic device can be off putting.
- Kids like interacting with people with energetic personalities.

For everyone's safety, make sure your KERNEL staff/volunteers follow any policies, procedures, and/or guidelines that your market has regarding market personnel working with children. This may include, but not be limited to, performing background checks with a local law enforcement authority and policies about adults not being alone with children in enclosed, out of view locations.

## INCENTIVES:

There are two incentives for kids to participate in KERNEL activities: Entertainment and the \$2 KERNEL Kid Cash currency.

The front and back of the currency: This currency can be spent on fresh produce, like fruit, vegetables, cut herbs and mushrooms as well as vegetable starts.



Besides the obvious benefit of a child having \$2 to spend at the market for something healthy to eat, children are also exposed to opportunities to learn about financial strategies like saving their KERNEL Kid Cash over several weeks and buying something they really wanted or pooling their cash with their brother/sister/friend and making a nice sized purchase to share. Some kids see these opportunities on their own; others have it suggested to them by a parent or a KERNEL staff.

**Examples of these strategies included:**

- One child saved all his KERNEL Kid Cash so he could purchase a 20 lb. box of organic apples at the end of the season.
- One family would pool their KERNEL Kid Cash together each week so they could buy as many strawberries as possible.
- A brother and sister put their money together to purchase a tomato plant for their garden. So then they could spend their future KERNEL Kid Cash on fruit instead of tomatoes.

Some kids enjoy activities so much that they return to the booth after they made their KERNEL Kid Cash purchase and ask if they can do the activity again. The kids should know they will not get another \$2 if they participate in the same activity in the same day, but if they just want to participate and there are enough supplies, we generally encouraged it. Make sure that kids repeating an activity are not interfering with kids engaging in the activity for the first time. The kids that have fun and hang out at the booth tend to be great ambassadors for the activity.

One of the main incentives for folks who staff a KERNEL booth is the interaction they have with the kids. Participants will often return to the booth to show staff what they have purchased with their cash. We have learned that popular purchases are berries, tree fruit, and carrots. Mushrooms, leeks, tomato plants, beets, onions, garlic, hot peppers, and other items have been brought to the booth after being purchased.

**PROMOTION/OUTREACH:**

There are a variety of ways to inform the community about your KERNEL activities. Potential Targets for the promotional materials:

- Where do you find kids and families in your community?
- Who reaches kids/families in your area?
  - For example: schools, childcare centers, libraries, churches, DSHS, community centers
- Where can you reach the age group you are focusing on? (KERNEL is designed for kids 5-12 years of age but younger kids are able to do most of the activities.)

Recommended promotional materials:

To be posted and/or distributed in the community and the market:

- Bookmarks: The bookmarks are colorful, engaging and informative.



- We recommend having them on hand at the market manager’s booth for on-site promotion and having them available at the KERNEL booth as a reminder for families to return.
- Distribute bookmarks to community partners that serve children.
- Libraries, pools, community centers, schools (through the local parent teacher groups at targeted elementary schools or as a general distribution by your local school district to elementary school students), childcare centers, etc.
- Posters: Recommended for sites of willing social service partners that have a high volume of kids or families as well as general community partners like neighboring community minded businesses.
- Schedules: Post schedules at the manager’s booth and the KERNEL booth as a way to inform participants what the upcoming events are. Schedules can provide a “buzz” for the following week.

#### Earned Media: Media friendly activities:

- KERNEL activities can serve as a way to engage the media, whether print, radio or television. For example, Farmers Market Bingo can be co-promoted with Farmers Market Week with the lure for media being kids interacting with farmers.
- Social Media: Pictures! Pictures! Pictures!
- Social media appears to attract/remind folks about the activity.
- The pictures of kids having fun while learning can be used as a marketing tool.
- Community partners with social media accounts will share photos of activities actually happening at your market.
- Make sure your market has a Photo/Media Release form for parents to fill out in order to have permission to use photos of their children.
- Vendors can serve as on the ground KERNEL ambassadors and direct families to the KERNEL booth. Make sure to let your vendors know you will have kid’s activities this year.

## HOW TO USE THE ACTIVITY DOCUMENTS:

**TITLE:** Each activity will have a number and a title. The activity number will be on each activity card. The activities will be arranged in numerical and alphabetical order in this toolkit not by the most appropriate time of the year for the activity. Please think about appropriate timing to implement activities particularly with regards to gardening and when materials needed for the activity are available.

**ACTIVITY DESCRIPTION:** A short description of the activity is found here.

**MATERIALS REQUIRED:** The list of materials necessary to complete the activity properly are detailed here.

**STAFFING NEEDED:** Generally, two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions. If you have a small market, you might be able to get away with just one, if you have a large market or it is a complicated activity you may need 3 or more. Use your best judgment. If a local partner would be a good match to help with this activity this will also be mentioned here. Such as the Master gardener program or a local yoga studio.

**CONCEPTS TO COVER:** This section will cover what concepts are integral to the activity.

**LESSON ACTIVITY:** How to implement the actual activity is explained. There should be step-by-step instructions on set-up (when necessary) as well as the facts to share with participants. Estimated time needed to complete the activity is also included.

**MODIFICATION:** If there is an available modification for the activity, it is listed here.

**ATTACHED DOCUMENTS:** Each activity document has a list of attachments. Other potential attached documents may include, but not limited to: a coloring page, a template, matching game cards, scavenger hunt or bingo cards, specific activity instruction displays, and the spinning wheel display.

# KERNEL Pre-Survey

1. How many kids are participating in the KERNEL activity today? \_\_\_\_\_
2. Is this the first-time your child(ren) participated in KERNEL? Yes \_\_\_\_\_ No \_\_\_\_\_
3. Is this your first-time shopping at a farmers market? Yes \_\_\_\_\_ No \_\_\_\_\_
4. Is this your first-time shopping at this famers market in particular? Yes \_\_\_\_\_ No \_\_\_\_\_
5. How did you hear about the farmers market?  
WIC \_\_\_\_\_ DSHS \_\_\_\_\_ News \_\_\_\_\_ Friend/Family \_\_\_\_\_ Community Center \_\_\_\_\_  
Food Bank \_\_\_\_\_ Social Media \_\_\_\_\_ Flier \_\_\_\_\_ Other (please name) \_\_\_\_\_
6. How did you hear about KERNEL?  
Saw at Market \_\_\_\_\_ WIC \_\_\_\_\_ DSHS \_\_\_\_\_ News \_\_\_\_\_ Friend/Family \_\_\_\_\_  
Community Center \_\_\_\_\_ Food Bank \_\_\_\_\_ Social Media \_\_\_\_\_ School \_\_\_\_\_  
Other (please name) \_\_\_\_\_
7. How many servings of fruits and vegetables does your child(ren) eat per day, on average? \_\_\_\_\_
8. About how many minutes of physical activity does your child(ren) get per day? \_\_\_\_\_
9. Do you feel your child(ren) likes to shop at the farmers market? Yes \_\_\_\_\_ No \_\_\_\_\_
10. What method of payment(s) will you use at the farmers market this year?  
Cash \_\_\_\_\_ Debit/Credit \_\_\_\_\_ EBT/Fresh Bucks \_\_\_\_\_ Senior or WIC FMNP \_\_\_\_\_
11. Do you live in the neighborhood? Yes \_\_\_\_\_ No \_\_\_\_\_
12. Would you be interested in completing a digital survey at the end of the season? Yes \_\_\_\_\_ No \_\_\_\_\_  
If "Yes", please provide your email address: \_\_\_\_\_

# KERNEL Post-Survey

*Sent out as a google survey to email addresses provided by pre-survey.*

**What Market(s) do you shop at? Check all that apply.**

**What did your child(ren) enjoy about the KERNEL program?**

**Please share how we can improve KERNEL for next year:**

**Anything else you would like to share about the program?**

**After participating in KERNEL, my child(ren)'s interest in nutrition has:**

Decreased/ Not changed/ Increased a little/ Increased some/ Increased a lot

**After participating in KERNEL, my child(ren)'s interest in exercise/ physical activity has:**

Decreased/ Not changed/ Increased a little/ Increased some/ Increased a lot

**After participating in KERNEL, my child(ren)'s interest in gardening activities has:**

Decreased/ Not changed/ Increased a little/ Increased some/ Increased a lot

**After participating in KERNEL, my child(ren)'s interest in coming to the farmers market has:**

Decreased/ Not changed/ Increased a little/ Increased some/ Increased a lot

**After participating in KERNEL, our family's consumption of fruits and vegetables has:**

Decreased/ Not changed/ Increased a little/ Increased some/ Increased a lot

**Please check the statement(s) you agree with:**

- KERNEL increases our family's enjoyment of the farmers market.
- I would recommend KERNEL to my family and friends.
- I will bring my child(ren) to the farmers market to participate in KERNEL next year.



### KERNEL DAILY TALLY SHEET

**NAME OF THE MARKET:** \_\_\_\_\_

**DATE OF THE ACTIVITY:** \_\_\_\_\_

**ACTIVITY:** \_\_\_\_\_

**NUMBER OF NEWLY REGISTERED CHILDREN:** \_\_\_\_\_

(This number will come from counting the number of kids registered on today's registrations.)

**TOTAL OF NUMBER CHILDREN PARTICIPATING TODAY:** \_\_\_\_\_

(This number will come from counting the number of all the kids who participated in today's activity. This number can be tracked via tallying each kid in the empty box provided below.)

### KERNEL DAILY TALLY SHEET

**NAME OF THE MARKET:** \_\_\_\_\_

**DATE OF THE ACTIVITY:** \_\_\_\_\_

**ACTIVITY:** \_\_\_\_\_

**NUMBER OF NEWLY REGISTERED CHILDREN:** \_\_\_\_\_

(This number will come from counting the number of kids registered on today's registrations.)

**TOTAL OF NUMBER CHILDREN PARTICIPATING TODAY:** \_\_\_\_\_

(This number will come from counting the number of all the kids who participated in today's activity. This number can be tracked via tallying each kid in the empty box provided below.)

**SUMMARY KERNEL TRACKING AT \_\_\_\_\_**  
(NAME OF MARKET)

<b>DATE</b>	<b>NUMBER OF NEW KIDS REGISTERED TODAY</b>	<b>NUMBER OF KIDS PARTICIPATING TODAY</b>

**PLEASE REPORT THESE NUMBER MONTHLY AND AT THE END OF THE SEASON  
 CATHOLIC CHARITIES FOOD FOR ALL**

# Photo and Media Release

Permission for Use of photo/media contact for use by \_\_\_\_\_

Date: \_\_\_\_\_

- I hereby give permission to \_\_\_\_\_ for the use of photographs of myself and my children listed below for publication or use in print and /or electronic promotional materials including social media platforms such as Facebook and Twitter.
  
- I hereby agree to have contact with communications media. Any information I provide or divulge, I do so voluntarily and without pressure or conditions. I have been informed of and understand the confidential nature of information that relates to my experiences. I release \_\_\_\_\_ from liability and hold harmless in the event that I voluntarily or inadvertently disclose confidential information about myself or others.

**I understand that these consents will remain valid until revoked by me.**

Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Child: \_\_\_\_\_

Child: \_\_\_\_\_

Child: \_\_\_\_\_

Witness signature: \_\_\_\_\_

Witness name/Title: \_\_\_\_\_

# #1 COMMUNITY GARDEN

**ACTIVITY DESCRIPTION:** Learn what a community garden is then make a rock painting to take home.

## **MATERIALS REQUIRED:**

- Clean, smooth palm sized rocks (can collect in nature or purchase in the landscaping section of a hardware store)
- Acrylic paint pens or paints (washable if available)
- Note: For rocks to be weather resistant they need to be sprayed with lacquer or painted again when dry with something like mod podge

## **CONCEPTS TO COVER:**

What is a Community Garden? A community garden is a single piece of land gardened collectively by a group of people. Sometimes people pay to use a garden bed and sometimes they are free.

What is the purpose of a Community Garden? Reduce the impact of food deserts (or areas where it is difficult for people to buy fresh foods), allow greater access to fresh food and access to a place to grow your own food if you don't have a suitable yard where you live.

Why do we need them? They can increase the availability of nutritious foods, strengthen community ties, reduce environmental hazards by utilizing abandoned land, reduce the amount of mile food travels or people travel to get food, create habitat for other creatures and create a more sustainable food system.

## **LESSON ACTIVITY (10-15mins):**

Rock Painting: Decorate rocks with your paint (or paint pens) to make your garden more beautiful or to mark where things are planted. They can be used in your garden or a local community garden. Set up a pile of rocks and 4-6 colors of paint pens. Let the kids pick their rock from a pile of clean, smooth rocks. Rocks can be purchased at hardware stores. Let the final picture dry for 10-15 mins and then take it home to dry overnight.

If parents want to have the rocks last outside, they will need to apply a layer of clear patio paint, mod podge outdoor or other similar product over the top of the painting after it has dried completely. Make sure this is done by a grown up in a well-ventilated area and all the directions that come with the product are followed.

**MODIFICATIONS:** None





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## What is a community garden?

A community garden is a single piece of land gardened collectively by a group of people.

## Why do we need them?

They can increase the availability of nutritious foods, strengthen community ties, reduce environmental hazards by utilizing abandoned land, reduce the amount of miles food travels or people travel to get food, create habitat for other creatures and create a more sustainable food system.



### Kernels of Truth:

- Community gardens have been around in the United States since the 1890s, beginning in Detroit with "Pingree's Potato Patches", in response to hard times.
- Reports estimate that by 1944, between 18-20 million families with victory gardens were providing 40 percent of the vegetables in America.
- Astronauts aboard the ISS are growing lettuce to study outer space gardening techniques. Maybe one day we will have a community garden in outer space!



## Community Garden Salad with Honey Mustard Dressing

### Ingredients

- Lettuce
- Fresh seasonal veggies
- Tomatoes
- Cucumbers
- Carrots
- Any other fresh vegetables you love

### Dressing

- ½ cup of mayonnaise
- 3 tablespoons of yellow mustard
- 2 tablespoons of honey or more if you like sweeter
- 1 tablespoon of vinegar
- ¼ teaspoon of ground black pepper

### Directions

1. Wash and chop all the veggies into bite sized pieces.
2. Layer lettuce on the bottom and other vegetables on top.

**Notes:** A salad can be made with any fresh vegetables you find. The fresher, the better!



# #2 CONTAINER GARDENING

**ACTIVITY DESCRIPTION:** Kids will learn about container gardening. Learning that gardening can be contained to small pots. These can be places on patios, windowsills and balconies making growing your own food more accessible to people without a large traditional garden space.

## **MATERIALS REQUIRED:**

- Pizza herb container garden sample, including oregano, basil, thyme, and rosemary.
- A container without a hole for drainage.
- A plant in a container with drainage.
- *Optional: Easy to grow in Container Plant give away*

**STAFFING NEEDED:** This activity presents an opportunity to engage a community partner like Master Gardeners to supply a volunteer or two.

## **CONCEPTS TO COVER:**

Cachepot: a decorative container that holds a plain, but functional flowerpot.

Drainage: proper drainage in a pot allows excess water to leave the pot.

## **LESSON ACTIVITY (3-5 minutes):**

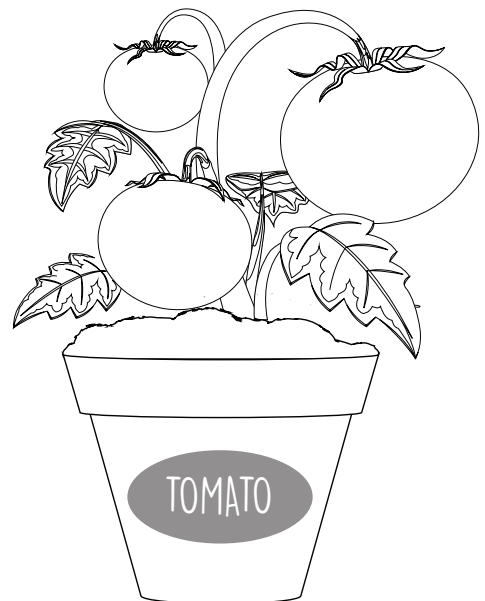
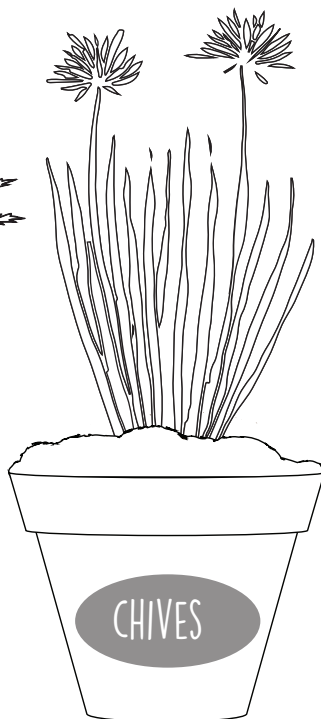
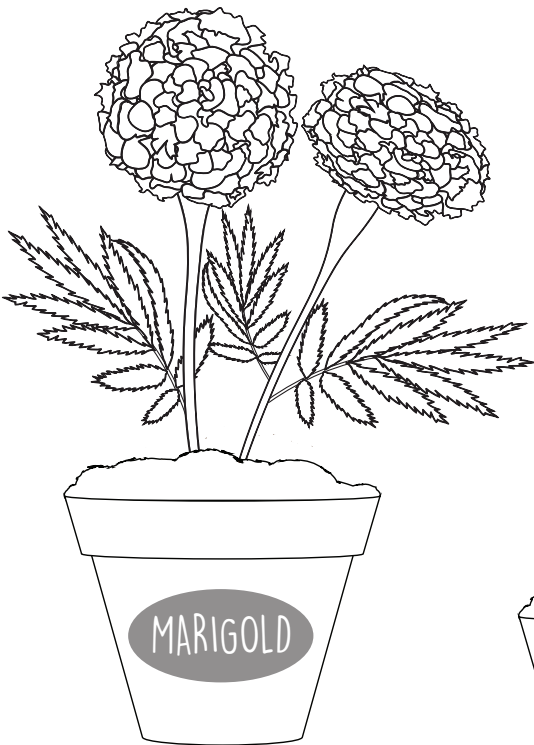
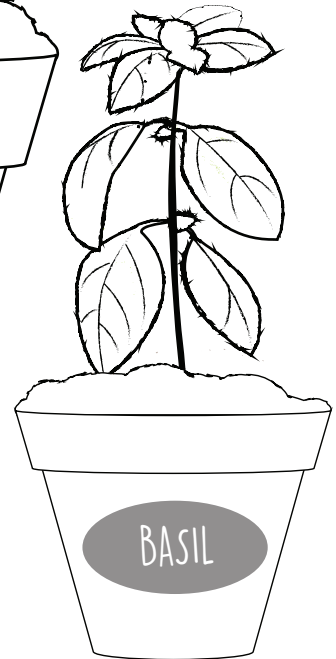
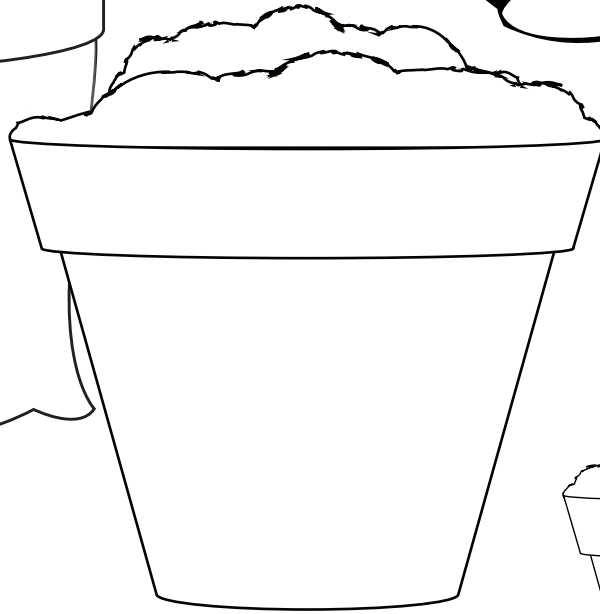
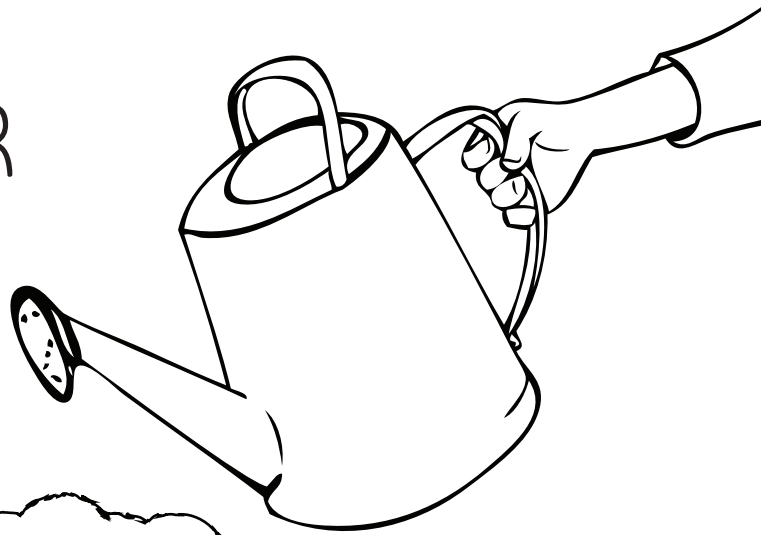
Have demo pizza herb garden ready prior to activity.

Show kids the pizza herb garden as a sample of a container garden. Herbs are basil, oregano, thyme, and rosemary.

## **Important facts for a container garden to tell children:**

- Container size should be appropriate for the plant. For example, a tomato plant would need a much larger container than the pizza garden sample, a container the size of a 5-gallon bucket or larger, dependent upon the tomato plant.
- A container should have at least one hole for drainage on the bottom as drainage is important for plants, especially when growing in a container. Show the kids the example containers.
- The container without a hole can be used as a cachepot.
- A cachepot is usually a decorative container without drainage that houses a plant and its pot that has drainage.
- Pebbles at the bottom of the cachepot can help with drainage, keeping the roots from sitting in water.
- Match plant with appropriate container.
- People use containers to garden on patios, decks, porches, windowsills and other spaces. You don't need a yard to garden!

# BUILD A CONTAINER GARDEN





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

**Container Gardening:** Planting herbs and vegetables in a container is a great way to garden with limited space. By planting in a container, your garden can be mobile, compact and located in a great sunny spot.

You can use pots, half barrel and 5-gallon buckets for your container garden. Some things to remember: it is easier to grow plants in larger pots than smaller ones and the larger the pot the heavier it will be (so plan the location of your container accordingly). Make sure the container has drainage holes, so water doesn't sit at the bottom of the container (it can cause root rot). Use potting soil for your container as regular garden soil can be too dense for container gardening. Fill the container with soil to within 1-2 inches from the top.



## Kernels of Truth:

- Keep a watering schedule that doesn't let the soil dry out completely.
- Fertilize your plants as needed as nutrients may wash away from the plants more quickly in containers.
- Container gardens can be easier to maintain, especially for people who have a hard time bending over, or children.



## Corn Chowder

### Directions

### Ingredients

- 6 ears fresh sweet corn, removed from the cob and cobs reserved for the stock
- 1 teaspoon coconut oil (for vegetables)  
1 tablespoon coconut oil (for stock)
- Kosher salt and freshly ground black pepper
- 6 cups coconut milk
- 2 cups of vegetable or chicken broth
- 1 small onion finely chopped
- 1 small onion, finely chopped
- 1 red bell pepper, finely chopped
- 1 small carrots, grated
- 1 cup potatoes, diced
- 1 sprig fresh thyme or 1 teaspoon dried
- 1 teaspoon chili powder, or to taste
- 1 teaspoon cayenne pepper, or to taste

1. Preheat oven to 475 degrees F.
2. On a baking sheet toss the corn kernels with coconut oil and season with salt and pepper. Roast the corn for 15-20 minutes or until the corn begins to caramelize.
3. Meanwhile, combine the corncobs into a large pot with 4 cups of the coconut milk and 1 cup of the vegetable broth. Bring the stock to a boil and then reduce the heat to a simmer for at least 20 minutes.
4. Melt the coconut oil in a soup pot over high heat and add in the onion and pepper, sauté the vegetables for 2-3 minutes or until soft.
5. Add in the carrots and potatoes and cook for 1 minute longer, season the mixture with salt and pepper.
6. Discard the corncobs from the stock and pour the stock in with the vegetables.
7. Add in the corn, remaining 2 cups of coconut milk, 1 cup of vegetable broth, thyme, and cayenne pepper. Bring the soup to a simmer and cook for 18 minutes or until the potatoes are fork tender.
8. Ladle into soup bowls and serve!



# #3 IN THE ZONE

**ACTIVITY DESCRIPTION:** Learn about Seasonal Produce and planting Zones. Create an art project with produce that grows well in Washington using potato, apple or other vegetable or fruit stamps.

## MATERIALS REQUIRED:

- Apples
- Potatoes
- Acrylic paint
- Plastic yogurt type cups
- Water bucket for rinsing
- Clean towels
- Baby wipes for hands

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## CONCEPTS TO COVER:

Potato & apples grow well in Washington, but other plants do not. How can you know what will grow well were you live? Find out what Zone it grows best in! A hardiness zone often just referred to as Zone is a geographic area with a certain range of climatic (weather) conditions relevant to plant growth and survival. What this means is that different plants grow well in different areas and these areas have been designated as hardiness zones. Unless otherwise specified, "hardiness zone" or simply "zone" usually refers to the USDA scale. For example, a plant may be described as "hardy to zone 10": this means that the plant can withstand a minimum temperature of -1 °C (30.2 °F) to 3.9 °C (39.0 °F). When you purchase trees shrubs, plants, and seeds they will be marked with what Zone the plant will grow best in. On the back of every seed pack, you will see the zone (use a seed pack to demonstrate this). There are many Growing Zones in Washington and across the US. Find out which Zone you are in and let the kids know. Then look at the back of the seed packet to find the Hardiness Zone.



Permission is granted to reproduce this map and copy provided the above copyright information is included.

**Cilantro/Coriander** 1270

Gardener's Hotline: 1-800-283-3400

Annual Herb. The plant is Cilantro while the seeds are Coriander. The leaves have a distinctive flavor and are used as a garnish in salads and soups. The seed is used in meat and seafood dishes, as well as a condiment for flavoring bread, cookies and cakes.

Days to Germination	Planting Depth	Plant Spacing	Plant Height	Preserve By
7 - 10	1/4 in.	6 in.	20 - 28 in.	Drying

May - July  
April - July  
Mar-Apr / July-Aug  
Feb-May / Aug-Sept

Sow directly in full sun after all danger of frost is past. For best results, plant in rows 12 inches apart.

Thin plants to 6 inches apart when 2 inches tall.

**OPEN PACKET TO REVEAL "THE INSIDE STORY."**

**SUGGESTIONS:** Harvest seeds in late summer by cutting seed heads when ripe. Spread seed heads on trays to dry in sun. Thresh by hand and store in jars. The seeds odor dissipates in storage.

0 11192 40225 1

**LESSON ACTIVITY (5-10 mins):**

Prepare potato stamps and Apple stars beforehand. To make a potato stamp use a medium to large potato cut it in half so there is plenty of room to grab on the uncut side. On the cut side draw a shape in the middle. Use a smaller knife cut into the potatoes about a half an inch deep along the image. Then take your knife to the outside of the potatoes the same depth away from the cut end and cut until it meets the edge of your design. Then that outside ribbon of potato should peel away leaving your stamp. To make an apple star stamp use smaller apples and if placing them on a table right side up, with the stem facing the sky, cut in half right in the middle horizontally, through where the apple seeds are contained, revealing the star shape in the middle made by the seeds. Remove visible seeds. You can also use vegetables to make other stamps. Cut off the bottom 3 inches of a bunch of celery and it creates a stamp that looks like a flower! Corn can make an interesting pattern if you roll it. Maybe a kale leaf. A cut pepper. Be creative.

For each stamp have a different color of washable acrylic paint. Kids should be able to use each stamp multiple times before they become too messy. When they become too messy rinse in a bucket of water and dry on a clean towel before returning it to its color.

Let kids make their own creative pictures using the stamps.

**MODIFICATIONS:** None

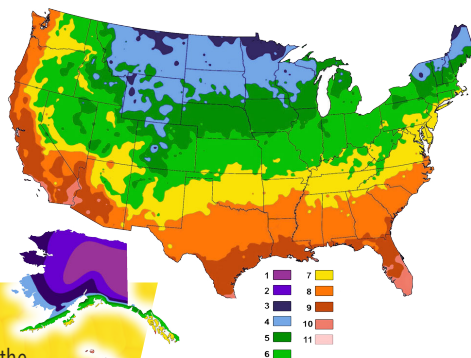


# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## In The Zone!

Potato & apples grow well in Washington, but other plants do not. How can you know what will grow well where you live? Find out what Zone it grows best in! What zone do you live in? What other plant will grow well in your Zone?



### Kernels of Truth:

- The warmest zone in the states (not including Alaska and Hawaii) is the Florida Keys (11b) and the coldest is in north-central Minnesota (3a).
- Zones can vary widely even within a state. Seattle Washington is in Zone 8b/9a while Spokane Washington is in Zone 6b.
- Succulents which include cactus are thought of as desert plants, but they are remarkably versatile. They can survive in desert like areas as well rain wet areas like the Pacific Northwest. An example would be Hens and Chicks a perennial with USDA Hardiness Zones 3 - 11.



## Potato Salad

Watch Video!

[www.youtube.com/watch?v=XTQLtGqY7Sg](http://www.youtube.com/watch?v=XTQLtGqY7Sg)



### Ingredients

- 6 cups potatoes, cubed and cooked
- 3 stalks celery, finely chopped
- ¼ cup diced dill pickle (or sweet)
- ¼ cup red onion, finely chopped
- 3 diced hard-boiled eggs
- ½ cup non-fat, plain yogurt
- ½ cup light mayonnaise
- 1 tbsp mustard
- 1 tbsp vinegar
- 1 tbsp sugar
- Salt and pepper

### Directions

1. Boil 3 eggs for 10 minutes
2. Mix mayonnaise, yogurt, vinegar, mustard, sugar, and salt/pepper together in bowl.
3. Add cooked potatoes, pickle, celery, and red onion.
4. Mix together.
5. Refrigerate until ready to serve.





# #4 MASON BEES

**ACTIVITY DESCRIPTION:** Kids will learn about the Mason bee. Learn that there are bees other than the traditional cultivated honeybee. These other bees are also beneficial to your garden as pollinators. Then make a Mason bee home to take home and attract those friendly pollinators to your yard or garden.

## **MATERIALS REQUIRED:**

- Clean empty 12 oz opaque hard plastic cups (one for each child) that is the same width at the top all the way to the bottom (doesn't taper)
- paper straws
- discarded bamboo
- rolled up scrap paper, and other hollow tube-like structures made out of natural materials.

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## **CONCEPTS TO COVER:**

Mason bees are a specific type of solitary bee, which means it doesn't live in a hive. They are cavity nesters and often lay their eggs in the hollow part of a stem or in a hole in wood or any little pre-made holes in natural materials. These holes are often made by insects, but people can make them also. Because mason bees are unable to excavate their own nesting cavities, they seem to be quite happy to use whatever location is suitable.

These cavity-nesting bees make up about 25% of the world's bee population. Mason bees are very effective pollinators. Just two or three females can pollinate a mature apple tree! They pollinate close to home and their houses provide habitats for other types of wild bees. Mason bees will also work in cool or rainy weather when honeybees are more likely to take the day off.

Female mason bees emerge in early spring and immediately begin to forage for pollen and nectar, which they collect from fruit trees, berries, flowers, and vegetables. They pack this food into the far end of their nesting cavity until they decide there's enough there to feed a young bee. Then she lays an egg and seals up the cell. This process continues until the bee has filled the entire chamber with a series of pollen/nectar/egg cells. Once the mason bee has completely filled one chamber, she will begin filling another one. This pollen-collecting and egg-laying will continue for four to six weeks, after which the bee will die.

Mason bee larvae hatch just a few days after the eggs are laid. They munch away on the food that's been stored in their cell, which usually lasts them about 10 days. Then the larva spins a cocoon and pupates. By autumn, the insects look like an adult bee, but they remain inside their cocoons throughout the winter. When the weather warms in the spring, the males break through first; the females emerge several days later.

Mason bees actually prefer to make their nests close together. An artificial nesting chamber takes advantage of this trait. To avoid pest and disease problems, artificial nesting boxes should be carefully cleaned or disposed of after one or two seasons of use.

**LESSON ACTIVITY (10-15mins):**

Have the child select from the variety of straw like materials to fill the cup. All the ends should be facing the opening of the cup. Have them roll up pieces of paper cut the same length as the cup they are using tape them into straw shapes and use them to continue to fill the whole cup. Pack any other empty spaces with newspaper so all the straws are secure.

Now you have a mason bee home to draw the cute little pollinators to your home!

Find a sheltered area where the home can securely sit with the holes facing horizontally. Mason bees will pack each straw with food, eggs and mud each year to overwinter and then you will see tiny bees emerge in the spring with many different colors and sizes, often iridescent!

**MODIFICATIONS:** None



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Mason Bees!

Mason bees (genus *Osmia*) are a type of native bee that's quite common throughout most of the U.S. They are usually a little smaller than a honeybee and typically metallic blue or blue-black in color. They get their name from their habit of nest-building, which is to seal off the cells where they lay their eggs, with a mortar-like application of mud.



### Kernels of Truth:

- 90% of the world's 21,000 bee species are solitary like the mason bee, meaning they don't live in a hive.
- Mason bees rarely sting, and their venom is less strong than honeybees.
- Mason bees spend the winter hibernating in their own waterproof cocoons.



## Raspberry Fruit Dip

### Ingredients

- ½ cup raspberries
- 1 tbsp sugar
- 1 cup plain non-fat yogurt
- 3 apples, sliced for serving

### Directions

1. In a small bowl, mash the raspberries with sugar.
2. Stir in the yogurt.
3. Serve with cut apples.



# #5 PARTS OF A PLANT

**ACTIVITY DESCRIPTION:** Kids will learn to identify parts of a plant using common vegetables found at the farmers market. As well as learn that we eat all different parts of a plant.

## **MATERIALS REQUIRED:**

- Obtain one item from each of the six categories mentioned below

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

## **CONCEPTS TO COVER:**

**Root:** part of the plant that is usually underground that brings water and nutrients to the rest of the plant

**Stem:** The stalk, or main body, of a plant that is usually above ground

**Leaf:** Usually a flat part of the plant attached to the stem that is the main part for photosynthesis and transpiration

**Flower:** where the production of seeds normally occurs

**Seed:** part of a plant that when planted can grow into a new plant

**Fruit:** A soft part of a plant that contains seeds. Usually, edible

## **LESSON ACTIVITY (2-5 minutes):**

On hand have the six gathered food items from their respective categories. It may be possible to obtain as donations from vendors. Also, have the coloring page available for demonstration.

Describe the six parts of the plant on the coloring page. Now, hold one of the items. For example, use a carrot. Ask the child(ren), "A carrot is what part of the plant". Then after they answer, let them know the answer ("A carrot is a root"). Then continue until all six categories have been completed.

## **The Six parts of a plant with examples are:**

- Roots: carrot, beet, radish, parsnip
- Stems: celery, asparagus, rhubarb, Swiss chard
- Leaves: spinach, lettuce, kale, cabbage, arugula
- Flowers: broccoli, cauliflower
- Seed: peas, corn
- Fruit: tomato, cucumber, pepper, eggplant, pumpkin FYI: Tubers (like potatoes) are swollen, underground stems.

**MODIFICATION:** You can also pair this activity with reading a children’s book called. *Tops and Bottoms* by Janet Stevens. It’s a fun way to reinforce the concepts of the lesson.

**SELF-DIRECTED ACTIVITY:**

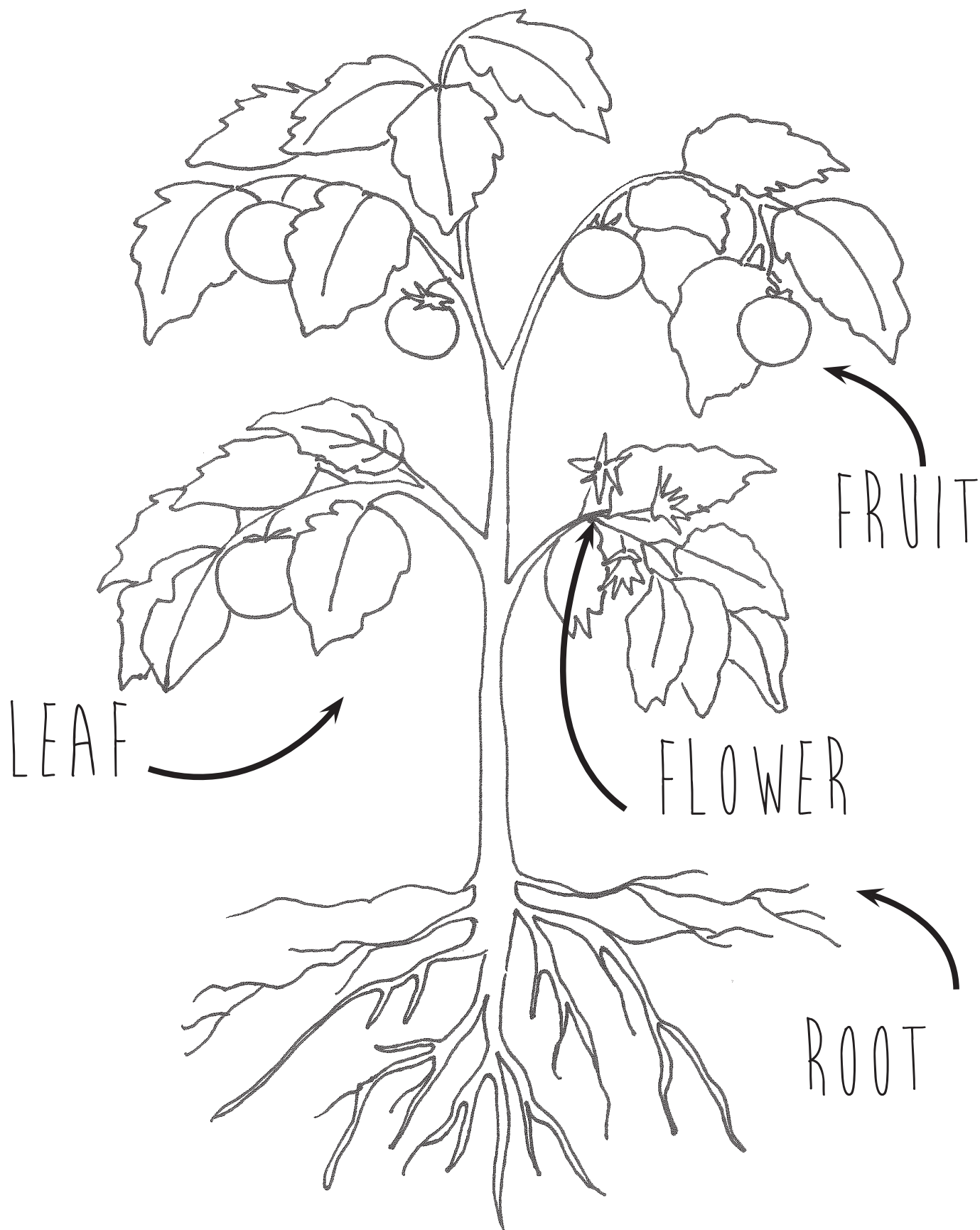
Set up the six items prior to the activity/market’s start time. With each item, place a card that has the name of the item on one side of the card (ie, “A carrot is a...” ) and the name of the category on the other side (...root.”). The cards should have the name of the category facing down.

First, kids register/check-in at market booth. Then, give each child a coloring page that has the parts of the plant listed. Then, each child is directed to the six items to guess what part of the plant each item is before turning the card over. Each child is asked to return and show the instructor when they finish the activity.

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring page

# Parts of a Plants





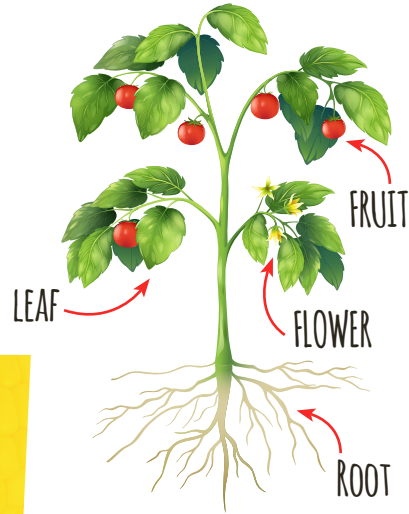


# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Parts of a Plant

The vegetables and fruit you eat are actually different parts of a plant. For example, a carrot is a root and celery is a stem. Broccoli is a flower and lettuce is a leaf. Tomato is the fruit of the plant as it is the fleshy part that contains the seeds while a pea is a seed.



### Kernels of Truth:

- Potatoes are not actually a root or a vegetable, but a tuber. A tuber is a swollen, underground stem.
- Cucumbers and peppers, like tomatoes, are called vegetables, but are really a fruit. One reason they are technically a fruit is because they contain seeds.
- The corn on the cob, or the "kernels", are seeds. Corn is technically a grain, not a vegetable.



## You can make a vegetable pizza at home! Decorate it however you like with your favorite toppings.

### Ingredients

- Pitas or English Muffins
- Pizza sauce
- 1 Tbsp olive oil
- ½ cup chopped cherry tomatoes
- ¼ cup shredded carrots
- ½ cup bell peppers
- Your choice of cheese (feta, parmesan, mozzarella)
- You can add broccoli, onion, or whatever other quick cooking veggies you can find!
- Salt and pepper to taste

### Directions

1. Have an adult help you preheat the oven to 375°.
2. Drizzle olive oil over English muffins on a cookie sheet
3. Add the sauce, veggies, cheese, and salt and pepper to taste.
4. Have an adult put pizzas in oven on cookie sheet for 15 minutes or less until veggies are soft and bread is browned.



# #6 PLANT A SEED

**ACTIVITY DESCRIPTION:** Kids will learn to correctly plant a sunflower seed in a container to take home with guidance. Properly care for the seed and then transplant it in their garden (or container) at home.

## **MATERIALS REQUIRED:**

- Sunflower seeds
- Paper cups
- Potting soil
- Scoops (or measuring cups can work)
- Ruler (or something that is one inch long or marked at one inch) to show kids what one inch depth is
- Markers

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction. Also, this activity provides an opportunity to engage a community partner like Master Gardeners to supply a volunteer or two.

## **CONCEPTS TO COVER:**

**Kernel:** edible part of the seed

**Proper Watering:** soak the soil around your garden plants so that water gets to the root zone. Watering just the top of the soil does not encourage root growth. Making sure your garden receives one inch of water a week, including rain.

## **LESSON ACTIVITY (5-10 minutes):**

Gather materials prior to activity. Make sure the potting soil is moist, but not overly wet, before the activity begins. If able, partner with a Master Gardener volunteer or a vendor to lead the activity.

Instruct and demonstrate as needed how to plant a sunflower seed:

- Each kid will get a cup.
- Kids will decorate their cups with markers.
- Once finished with decorating, each kid will scoop potting soil into their container.
- Instructor will ensure that kids have enough potting soil to plant the seed properly. Try to have the soil come to within one inch of the top of the cup. One inch is approximately the distance from the fingertip to the first joint of an adult's pointer finger.
- Provide each child with a sunflower seed to plant.

- Follow directions provided with the seed packet. Most sunflower seeds are planted to a one-inch depth.
- Kids will place the seed in the hole and fill hole with soil and press soil down firmly.
- Tell kids to water their seed when they get home.
- Give tips on care.
- When kids get home, they should place the cup in a warm, sunny location with a barrier to keep moisture from damaging the surface of a windowsill or furniture.
- Kids should water seed frequently enough to keep soil from drying out, but not getting overly wet either.
- When the seedling has a solid stalk and after the danger of frost has passed, the seedling can be planted in a very sunny location as sunflowers like plenty of direct sun (at least 6-8 hours).
- Plant in a location somewhat sheltered by strong winds, like a fence or a building when available.
- Dig a hole large enough to transplant the seedling.
- Show kids how to gently remove a plant from its original pot and plant in the container.
  - Turn plastic pot upside down and have plant between fingers.
  - Gently squeeze pot from bottom to push plant out.
- Water well.
- After established, water a few inches away from the plant to encourage root growth.
- Can harvest when the back of the sunflower head turns brown.
- Cut stalk about 4 inches below flower head.
- Facts about eating sunflower seeds:
  - The edible part of a sunflower seed is called a "kernel".
  - Good source of Vitamins B1 & B6, copper, magnesium, folate, iron, fiber and zinc.

**MODIFICATION:** None.

# KERNEL

Kids Eating Right-Nutrition and Exercise for Life



## Plant a Seed

### How to care for your sunflower plant:

Transplant from container into soil before roots get too big as this could negatively impact the sunflower's potential growth.

When transplanting the seedling, dig a small hole in your garden space with at least 12 inches of space to give your sunflower seedling plenty of room for its roots to spread out. Water evenly when the soil is dry and weed as fast-growing weeds can harm your seedling.

When the stalk thickens, water about 3-4 inches from the base every other day to stimulate root growth. When the sunflower becomes larger, make sure to water the sunflower deeply about once per week.

Usually, when the back of the flower head turns brown, your seeds are ready to harvest. It is recommended that you cut the stalk about 4 inches below the flower head.



## Nut-Free Trail Mix

### Ingredients

- ½ cup pumpkin seeds
- ½ cup sunflower seeds
- ½ cup dried cranberries
- ½ cup golden raisins
- ½ cup chocolate chips

### Directions

1. Mix all ingredients together and enjoy!



### Kernels of Truth:

- A dried flower head can be saved and set out in winter as a natural bird feeder.
- The edible part of the sunflower seed is actually called a "kernel".
- Sunflower kernels are good sources of Vitamins B1 & B6, copper, magnesium, folate, iron, fiber, and zinc.

# #7 POLLINATOR or PEST

**ACTIVITY DESCRIPTION:** Talk about how butterflies can be either a pollinator or a pest depending on where they are in their life cycle. Make a leaf and caterpillar craft to take home.

## **MATERIALS REQUIRED:**

- Green construction paper
- safety scissors
- markers or colored pencils
- craft pompoms in two small sizes with one being bigger than the other (the larger size being approximately an inch or less)
- Elmer's glue
- small googly eyes.

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

**CONCEPTS TO COVER:** Some creatures can have different roles in the garden depending on where they are in their lifecycle; because of this the same creature can be both good and bad for your garden! Butterflies in particular can be either a pollinator or a pest. Butterflies start as eggs, hatch into caterpillars (also called larvae), go through metamorphosis in a chrysalis (also called a pupa), and then emerge as a butterfly. When butterflies are in their caterpillar stage they gobble up as much food as possible eating the leaves of plants, which those plants need to grow! When they are in their butterfly stage, they only drink using a straw-like appendage called a proboscis. One of the things they drink is nectar from different flowers. Plants manufacture this sweet nectar for butterflies and other insects so the insect will land on one flower, picking up pollen as they do, and then bring that pollen on to the next plant. Without this pollinating help from creatures like butterflies, some plants wouldn't be able to produce fruits or vegetables.

## **LESSON ACTIVITY (10-15mins):**

Have the child draw a leaf shape on half of a piece of green construction paper. Then have them cut out the leaf or cut it out for them. Draw on the veins of the leaf. Then have them choose one larger pompom and 4-5 smaller pompoms. The larger pompom will be the head and the smaller pompoms will be the body. Glue each of the pompoms on to the leaf in a curved line with the head pompom in front and the smaller pompoms closely following for the body. Let it dry for 10 minutes and then glue on the googly eyes. Let it dry for another 10-15 mins.

Now you have a caterpillar crawling on a leaf to take home!

**MODIFICATIONS:** None





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Pollinator or Pest?

Some creatures, such as butterflies, can have different roles in the garden depending on where they are in their lifecycle. That means the same creature can be both good and bad for your garden! In the caterpillar part of their life, they are pests, while during the butterfly part of their life they are great pollinators.



### Kernels of Truth:

- A caterpillar just has one job- to eat! – Caterpillars increase their body mass as much as 1,000 times or more during their lifetime.
- Butterflies taste with their feet.
- Butterflies live on an all-liquid diet. They suck up food with a long tubular structure called a proboscis that is curled up under a butterfly's chin until they need to use it. When its being used it unrolls and functions like a straw.



## Roasted Beets, Apple, and Fennel (butterflies love fennel!)

### Ingredients

- 5 medium beets, quartered
- 5 apples, cored and chopped
- 2 heads fennel, trimmed and thickly sliced
- ½ cup honey
- Dijon salad dressing
- 2 tbsp apple cider vinegar
- 2 tbsp olive oil
- 1 tsp salt
- Black pepper to taste

### Directions

1. Preheat oven to 400 degrees F.
2. Place the beets, apples, and fennel in a large roasting pan.
3. Mix together the honey Dijon salad dressing, apple cider vinegar, olive oil, salt, and pepper in a small bowl.
4. Pour the dressing mixture over the beets, apples, and fennel and mix well.
5. Roast in the oven for 1 hour or until the beets are tender.





# #8 ROOT DEVELOPMENT

**ACTIVITY DESCRIPTIONS:** Kids will be able to identify the difference between a fibrous root system and a taproot system. Then color and take a root growth flipbook home.

## **MATERIALS REQUIRED:**

- Markers/crayons/colored pencils
- Flip book of a sunflower's growth
- Stapler for stapling the edge of the flipbook together after it is cut out
- Safety scissors
- Image of a taproot and fibrous root

*\* You can assemble the flip books before hand or have the kids do it at the activity booth depending of the about of time you have with each child. Adults should use the stapler.*

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

## **CONCEPTS TO COVER:**

Taproot System: One large root that grows downward with small roots growing out of its side.

Fibrous Root System: Has many roots that grow in all directions.

## **LESSON ACTIVITY (3-10 MINUTES):**

Supply each child with a flipbook and coloring supplies (markers, crayons, and/or pencils). Show each child how to make the flip book work. The flipping of the pages should show the growth of a plant from a seed with the focus on the roots.

Discuss difference between fibrous and taproot systems. Ask if they can tell what type the sunflower is (taproot).

## **Mention some of these facts:**

- Roots feed a plant by pulling water and nutrients out of the soil.
  - Some roots are strong enough to break rocks.
  - Fungi work with the roots to help feed the plant.
  - Roots keep soil in place during a rainstorm.

## **ATTACHED DOCUMENTS INCLUDE:**

- Flipping Book Template

**MODIFICATION:**

Have needed materials ready four weeks prior to the activity:

- Potting soil
- 8 clear plastic cups
- 8 paper cups
- 8 seeds (use sunflower seeds)

Four weeks prior to the activity:

1. Fill two plastic cups with topsoil.
2. Plant a sunflower seed in each cup per seed packet directions. Make sure the seed is planted along the side of the cup so it can be observed.
3. Water each seed.
4. Place each plastic cup in a opaque (non-clear) paper cup to ensure that sunlight doesn't damage the roots.
5. Mark each cup with the date.
6. Place in sunlight and water as needed.
7. Repeat Steps 1-6 each week.

On day of activity, you should have at least one sample for each of the four weeks ready for display. Make sure the samples are marked: Week 1, Week 2, Week 3 and Week 4.

Remove the covers so the roots are exposed. If in direct sunlight only remove when being observed.

Supply each child with a flipbook. Show each child how to make the flip book work. The flipping of the pages should show the growth of the sunflower from a seed with the focus on the roots. Discuss difference between fibrous and taproot systems. Ask if they can tell what type the sunflower is (taproot).

While kids observe the roots of each week, discuss some facts listed above in the ACTIVITY section.

Make coloring supplies (markets, crayons, and/or pencils) accessible to kids who want to color.

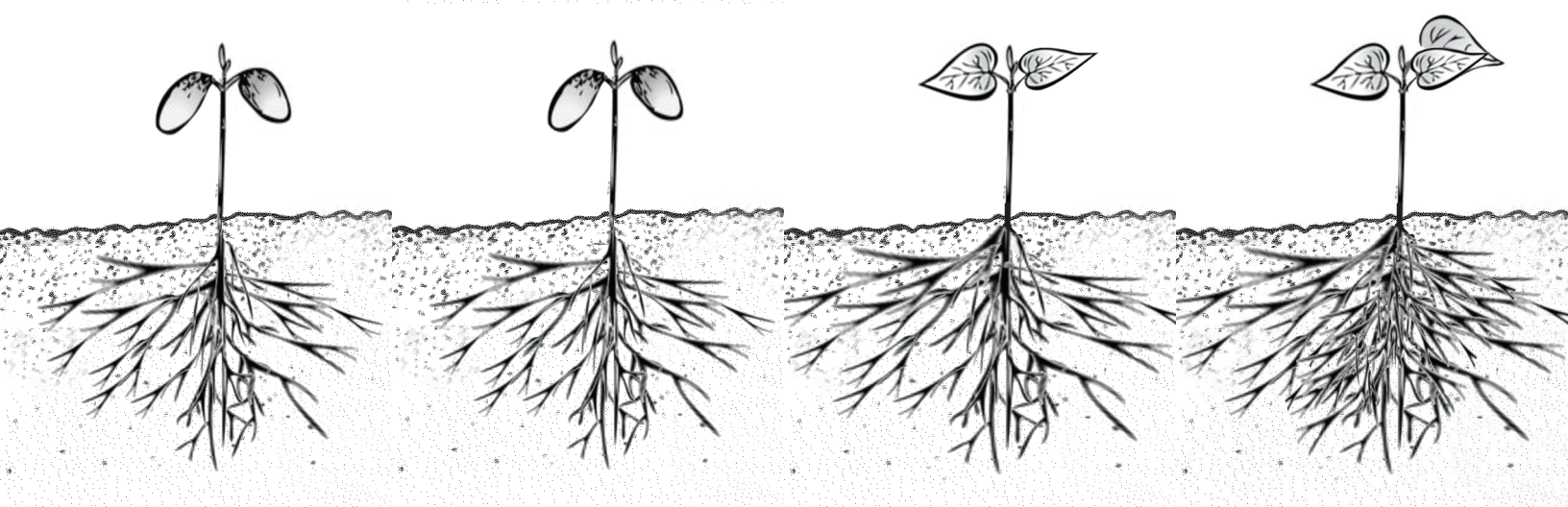
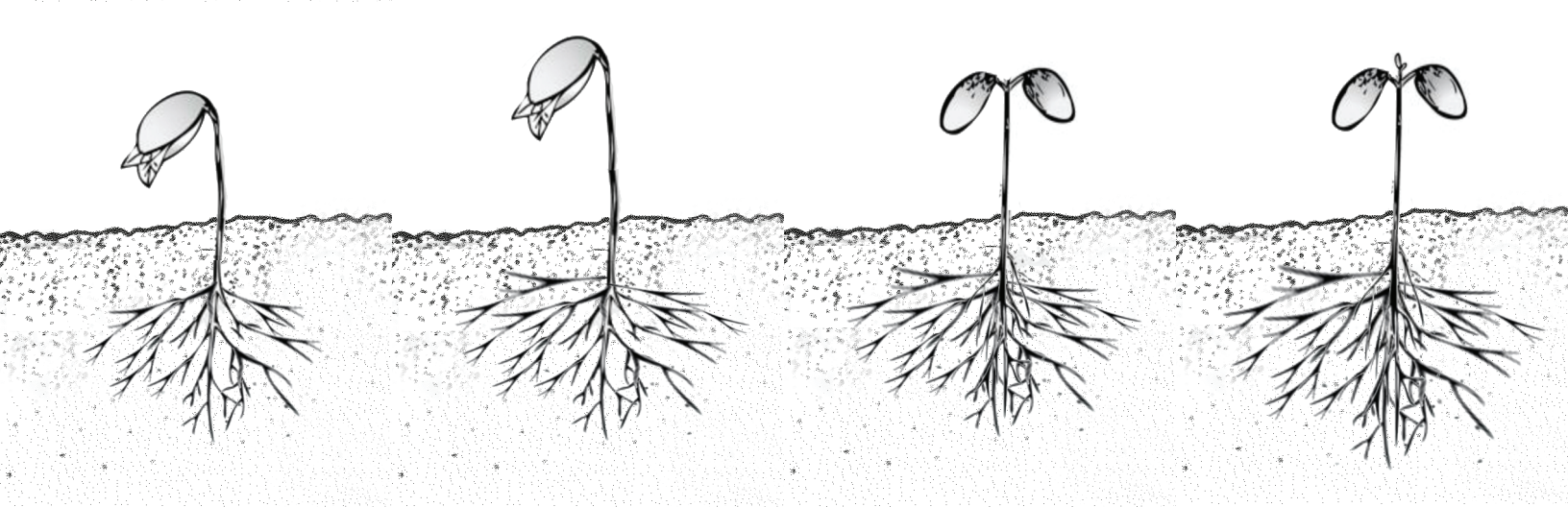
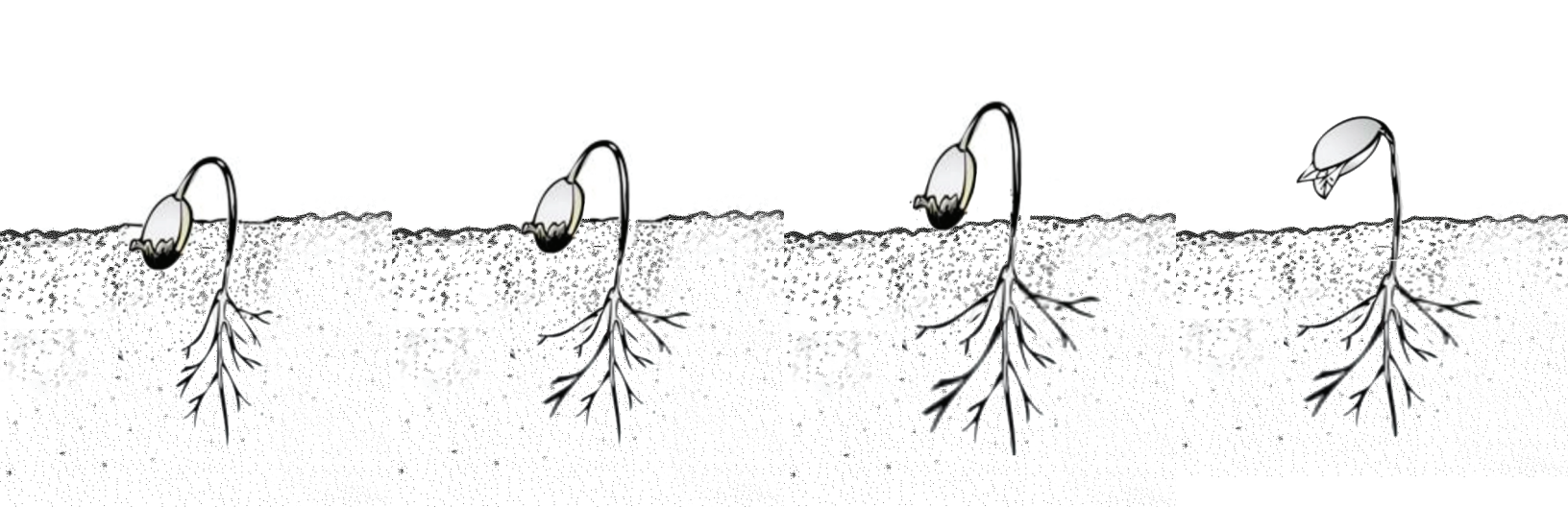
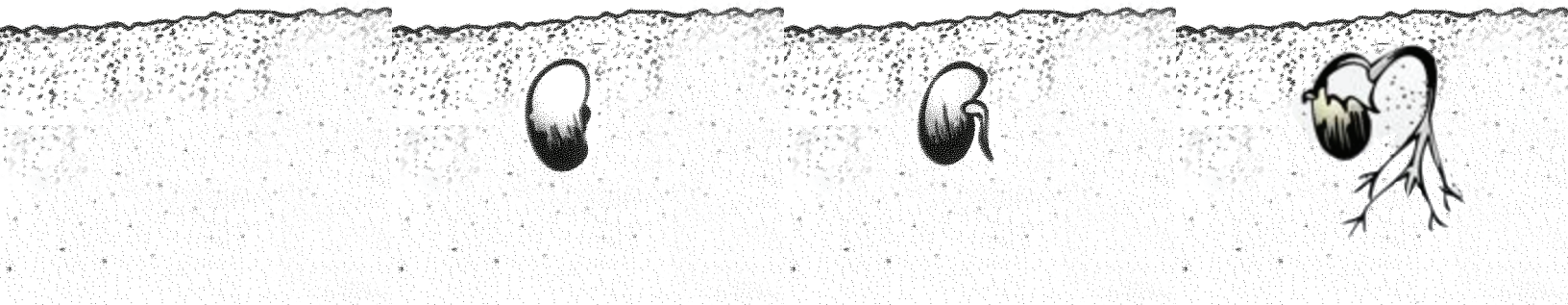
**SELF-DIRECTED ACTIVITY:**

Supply each child with a flipbook and have access to coloring supplies (markets, crayons, and/or pencils). Show each child how to make the flip book work. The flipping of the pages should show the growth of a plant from a seed with the focus on the roots.

Discuss difference between fibrous and taproot systems. Ask if they can tell what type the sunflower is (taproot).

**ATTACHED DOCUMENTS INCLUDE:**

- Flip Book template







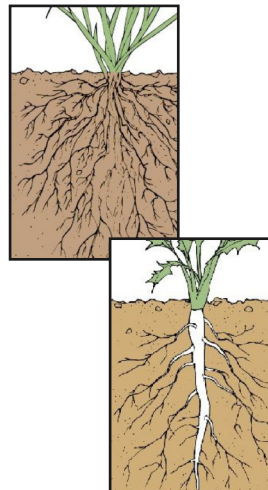
# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Root Development

Roots are important for the health of a plant. The roots feed a plant by pulling water and nutrients out of the soil and by serving as a place to store food for the plant until the plant needs it. Also, the roots anchor a plant in the soil.

There are two types of root systems: taproots and fibrous roots. A taproot system has one large root that grows downward with small roots coming out of it from the side. A fibrous root system has many roots that go in all directions.



### Kernels of Truth:

- Some roots are strong enough to break rocks.
- Fungi in the form of Mycorrhizae form a symbiotic (mutually beneficial) relationship with plant roots increasing the amount of water and nutrients that can be used to help feed the plant.
- Roots can keep soil in place during a rainstorm.



## Zucchini Fritters

### Ingredients

- 2 cups grated zucchini
- 1/2 cup white whole wheat flour, (Optional panko breadcrumbs)
- 3 basil leaves, finely chopped
- 1 egg
- Salt and pepper to taste
- 2 tablespoons canola oil, more if needed
- 1/2 cup fat free Greek yogurt (optional)

### Directions

1. In a bowl, mix the zucchini, flour, basil, eggs, salt, and black pepper.
2. Have an adult add the canola oil into a large non-stick skillet. Over medium-low heat, spoon in 1/4 cup the mixture to form round fritters. Cook until golden on both sides.
3. Serve with a dollop of Greek yogurt on top, if desired.



# #9 SEED BALLS

**ACTIVITY DESCRIPTION:** Kids will learn about the purpose of seed balls. Then make a seed ball to take home.

**MATERIALS REQUIRED:** Native wildflower mix, compost, clay, medium sized plastic tubs to mix in like old 16oz sour cream containers, paper cups for kids to take their seed ball home. Watering can and water. Towels to dry hands after rinsing. Gloves if you would prefer kids and adults don't get their hands dirty.

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## CONCEPTS TO COVER:

What's a seed ball: It's a simple cluster of seeds wrapped in a ball of soil and clay that you can throw—like a ball.

What are some good seeds to use: Native wildflower mixes. What not to use: non-native plants.

What are seed balls used for? Seeds are protected from predators in their mud ball so they can be thrown or even dropped from an airplane exactly where you want it to grow without digging a hole to plant the seed. The seed balls we are creating are usually done for replanting around your neighborhood in places where you find empty soil. Sometimes they are used more professionally for Aerial Reforestation in areas that are hard to get to by roads.

## LESSON ACTIVITY (10-5 minutes):

Set up a station for kids to make seed balls. You need soil or compost, clay, and seeds that are native to the region you will be working in. A seed ball can have a variety of seed mixes. You can try wildflower seeds, necessary for the survival of pollinators (such as bees) on which our ecosystem depends. You can use seeds for herbs or edible plants that grow easily from seed like zucchini. You could make a few different seed mixes, pollinators, native plants, or drought tolerant plants.

Make sure you do not use non-native plants. (Non-native seed species could become invasive crowding out native plants and other plants you love) The exact proportions can be variable, but a ratio of five parts soil/ to three parts clay/ to one-part seeds, is a good rule of thumb.

Give each child a small container and a smaller scoop of soil, clay and seeds (or let them get their own). Then have them use their hands to mix soil, clay, seeds together while you add little bits of water to their container (with a watering can) until it is damp enough to hold together in a few balls. Balls should be about the size of a quarter to make for easy throwing.

Tell the kids to take their ball home in a paper cup and let it dry. To maximize your seeds' chances of sprouting roots, spring and summer are the best times to deploy your seed balls. Pick an empty patch in the garden to throw it and let it grow. Kids will also need to rinse their hands and dry them. You can use the watering can.

**MODIFICATIONS:** None



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## What is a seed ball?

It's a simple cluster of seeds wrapped in a ball of soil and clay that you can throw—like a ball.

**Ingredients for seed ball:**

- Five parts soil
- Three parts clay
- One-part native seed mix





Watch Video!

[www.youtube.com/watch?v=Pd-s8K7QFjI](http://www.youtube.com/watch?v=Pd-s8K7QFjI)



KERNEL

created by Catholic Charities Eastern Washington

**Kernels of Truth:**

- As far back as ancient Egypt, seed balls were used to restore farmland after the Nile's annual spring flood.
- In Japan, they were known as tsuchi dango, or 'earth dumplings.'
- In the 1970's, they were incorporated into the tactics of guerrilla gardening, a movement which seeks to rehabilitate derelict or neglected urban land through direct action.

## Chicken and Dumpling Soup

**Ingredients**

- 2 tablespoons olive oil
- 1 large onion, chopped
- 4 celery stalks, chopped
- 1 garlic clove, finely chopped
- 4 medium carrots, chopped
- 1 teaspoon thyme
- 2lbs boneless skinless chicken thighs or breasts, cut bite sized
- 2 14.5 oz box/cans or 4 cups chicken broth
- 2 cups water
- 1 cup and 2 tablespoons all-purpose flour, divided
- 2 teaspoons baking powder
- 1 teaspoon white sugar
- ½ teaspoon salt
- 1 tablespoon butter
- ½ milk or milk alternative

**Directions**

1. In a large pot, heat oil over medium heat when hot, add onion, celery, garlic, carrots, and thyme.
2. Stir occasionally and cook until onions are fragrant and translucent, about 4-6 mins.
3. Add 2 tablespoons of flour, whisking briskly until combined, and then cook until the flour starts to smell toasted, about a minute.
4. Gradually add chicken broth, whisking consistently, then add water and bring to a boil.
5. Turn down heat to medium low and add the chicken.
6. Cover and cook for 20-30 mins stirring from time to time.

**Make dumpling batter:**

1. In a medium sized bowl, stir together 1 cup all-purpose flour, teaspoons baking powder, sugar, and salt.
2. Mix in butter by hand until crumbly.
3. Stir in milk until it makes soft clumpy dough.
4. Drop by spoonful into soup covering the top of the liquid.
5. Cover and simmer for 15 minutes then serve.





# #10 THE WATER CYCLE

**ACTIVITY DESCRIPTION:** Learn about the water cycle and paint a water cycle diagram with watercolor paints.

## **MATERIALS REQUIRED:**

- Water cycle coloring page on cardstock
- Kids watercolor paints
- Clean small brushes
- Waterproof small cups (2 for each kid)
- Lots of water (large pitcher or beverage cooler with a spigot)
- Rags to dry brushes
- Paper towels to wipe off water color paints if they get messy.

## **CONCEPTS TO COVER:**

Use the cards stock coloring page to describe the water cycle. First explain that water is essential for the survival of all living things. Water regulates the Earth's temperature. It also regulates the temperature of the human body, carries nutrients and oxygen to cells, cushions joints, protects organs and tissues, and removes wastes. 70 % of the human brain is water and a person can live about a month without food, but only a week without water.

**THE WATER CYCLE:** The cycle of processes by which water circulates between the earth's oceans, atmosphere, and land, involving precipitation as rain and snow, drainage in streams and rivers, and return to the atmosphere by evaporation and transpiration.

Evaporation occurs when the sun heats up water in lakes or oceans by radiant energy, causing the water molecules to become so active that some of them rise into the atmosphere as water vapor or steam.

Transpiration occurs when plants take water up through the roots and release it through the leaves, a process that can clean water by removing contaminants and pollution. Another way to think about it is people sweat and plants transpire.

Condensation is when water vapor in the air gets cold and changes back into liquid forming clouds.

Precipitation occurs when so much water has condensed in the clouds that it can no longer stay up in the air. The water falls back to the earth in the form of rain, hail, sleet or snow.

The last step is Collection, after the water falls back to the earth as precipitation, it may fall back in the oceans, lakes or river or it may end up on land. If the water falls to the ground it infiltrates (seeps back into the earth) and becomes "ground water" or it becomes runoff where the water reaches the surface of the soil but doesn't infiltrate. Runoff ends up in streams and rivers eventually running to the ocean.

Then, the whole cycle starts over again!

All the water that we will ever have exists on the planet now. About 97% of the world's water is salt water, another 2% is locked in ice caps, glaciers or in deep ground water. That leaves just 1% for all of humanity's needs – all its agricultural, residential, manufacturing, community, and personal needs.

### LESSON ACTIVITY (5-10 mins):

Paint with watercolors! Using the water cycle coloring page printed on cardstock invite the kids to paint on it with watercolor paints. Have them first write their names on the back in pencil. Then fill up two cups with water. Ask kids to rinse their brush with one cup between new colors and to use the other cup to add clean water to their paints. Make sure you have space to let the paintings dry while kids spend their KERNEL cash. Then they can take their paintings home with them without making a mess. Clean water color paints with paper towels and a little more water between each painting.

**MODIFICATIONS:** Provide small pieces of watercolor paper. Have 4-5 wood boards to tape the paper to, a small washable watercolor paint set for each kid, clean water to get new colors wet, and water that can be used to get dirty. Only have as many kids as you have boards and watercolor paint sets for do the activity at one time. Use masking tape and help the younger kids to tape it down cleanly, think of creating a white boarder along the edges with the tape. When you peel it off you want it to look nice. Direct kids to rinse and dry their brush between each color.

Make sure you provide lots of water and drying towels enough for each kid to do the activity. Let paintings completely dry before removing tape and sending them home. 10 mins or so depending on how wet the painting was.

If you have lots of kids, you can prep the boards ahead of time or have them instead use the coloring page with markers or colored pencils.

**MODIFICATION:** Make paint out of natural materials! Prep before market. For each of these simple recipes, use the least amount of water possible for darker colors while still getting the liquid you'll need as a base for water coloring. You can also draw shapes or pictures on watercolor paper for the kids to color in with the paints if you would like. If you use a sharpie to draw it will not bleed when it is wet.

Red: Dice large beet and add water, muddle a little and mix.

Blue/Teal: Shred red cabbage, muddle with mortar and pestle or other method, add some water and about a teaspoon of baking soda and mix. The longer it sits the more vibrant the blue.

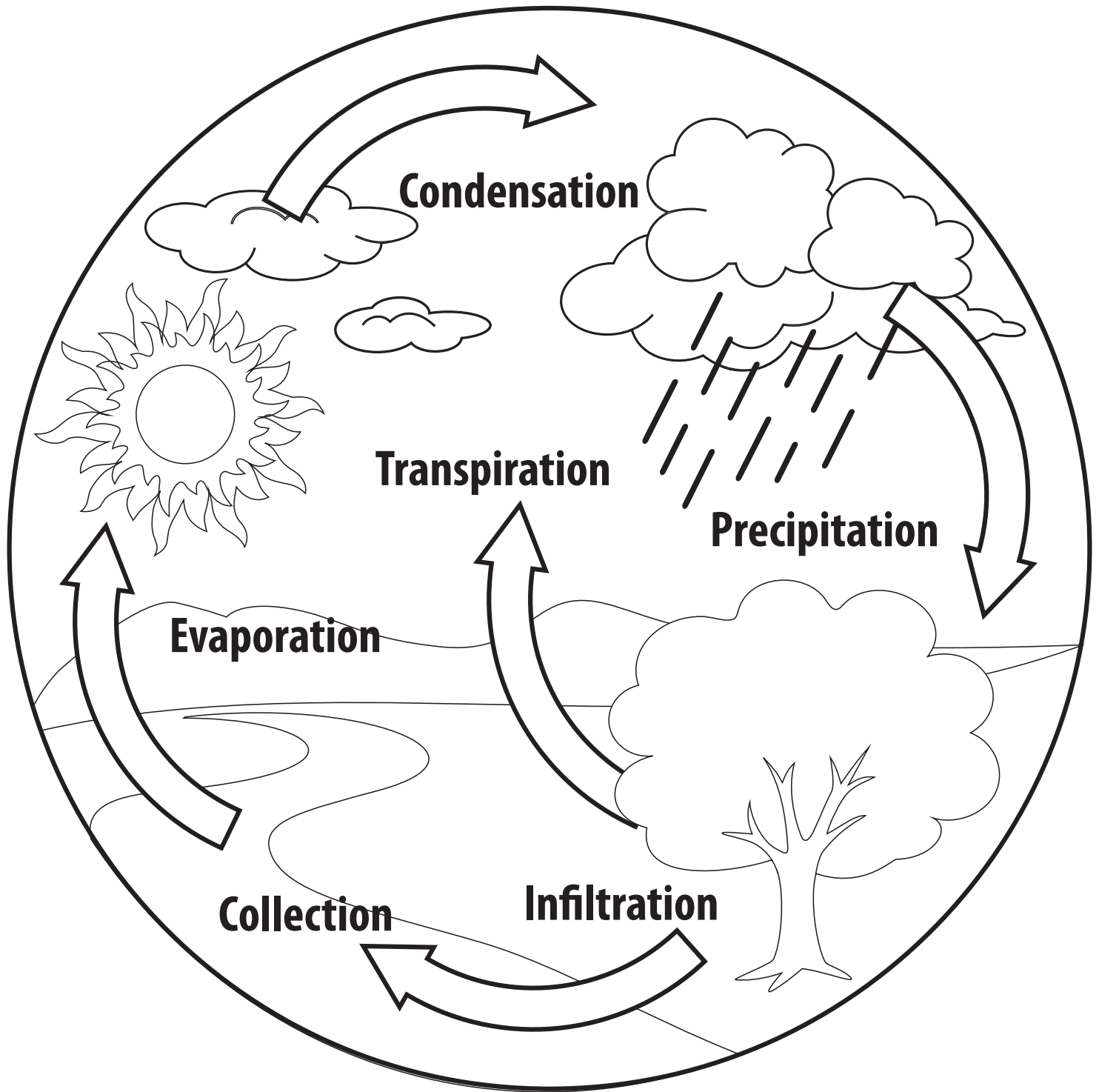
Green: Roughly chop spinach and muddle, add some water, and continue to muddle.

Orange: Add turmeric powder to water and mix right before using. It won't dissolve in the mix, so you must keep mixing as you paint.

### ATTACHED DOCUMENTS INCLUDE:

- The Water Cycle Coloring Page/ cardstock image for painting

# The Water Cycle



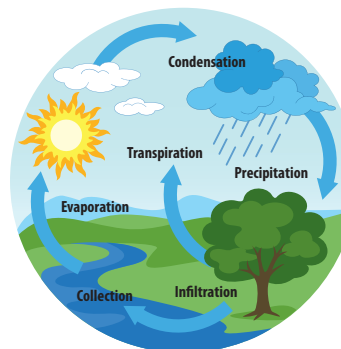


# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## The Water Cycle

All the water that we will ever have exists on the planet now. About 97% of the world's water is salt water, another 2% is locked in ice caps, glaciers or in deep ground water. That leaves just 1% for all of humanity's needs – all its agricultural, residential, manufacturing, community, and personal needs.



### Kernels of Truth:

- A person can live about a month without food, but only a week without water.
- There is the same amount of water on Earth as there was when the Earth was formed. The water from your faucet could contain the same molecules that dinosaurs drank.
- 70% of the human brain is water.

### Watch Video!

<https://www.youtube.com/watch?v=asPeMQbMgYo>



## Red Cabbage Stir-Fry

### Ingredients

- Brown Rice
- 2 teaspoons oil
- 4 cloves of garlic, minced
- 1 cup celery, chopped
- 1 cup chopped onion
- 3 cups shredded and chopped red cabbage
- ½ cup red or orange bell peppers, seeded and chopped
- 1 head broccoli, chopped
- 1 small zucchini, chopped
- 2 tbsp soy sauce (or tamari)
- Salt and Pepper to taste

### Directions

1. Cook brown rice according to package directions (4 servings)
2. Heat oil in large skillet over medium-high heat
3. Add garlic, celery, and onion.
4. Cook 4-7 minutes until soft.
5. Add cabbage, bell pepper, broccoli, zucchini, salt/pepper, soy sauce.
6. Cook for 5-10 minutes, stirring often.
7. Serve immediately mixed or over brown rice add sesame seeds for garnish if desired.



# #11 SEED MATCH GAME

**ACTIVITY DESCRIPTION:** Kids will learn about different parts of the seed. See a variety of different looking seeds. Then learn that seeds come from flowers and the fruit of the plant like watermelon or zucchini. Then kids will play The Matching Game!

## **MATERIALS REQUIRED:**

- Set(s) of The Matching Game cards that have seven different seeds and seven different fruits/ flowers

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

## **CONCEPTS TO COVER:**

Endosperm: location where food is stored that the seed will use to grow.

Embryo: lies inside the endosperm and is the part that will eventually grow into a plant.

## **LESSON ACTIVITY (2-5 minutes):**

Prior to the activity, determine how many sets of cards you want and then print them. Two seems to be a good number as you can have two kids going while talking to them about seed facts. Give a set of cards to the kids with the seed cards and the fruit/flower cards in separate piles. Older kids should manage fine by themselves while smaller kids may need assistance from an adult or KERNEL staff. All answers are on the back of the card.

Discuss some seed facts with kids:

- Tell them what an endosperm is as well as an embryo.
- Even if a seed is planted upside down, it will grow the correct way because of gravity.
- Most seeds remain dormant until they are exposed to water.
- The oldest seed scientists were able to grow was 32,000 years old.
- The largest seed in the world is a palm tree seed. It is about twelve inches long and can weigh up to forty pounds.

## **AS A SELF-DIRECTED ACTIVITY:**

After the kids register/check-in at market booth, they can be handed the cards and asked to match the seed with the flower. Let them know that the names of the plant are on the back of each matching card. Then, direct the kids to return the cards when they finish the game. Kids unable to read should be able to do this with an accompanying adult or older child's assistance.

When handing the cards to the kids, relay a seed fact to them. Ask them to return the cards when finished.

## **ATTACHED DOCUMENTS INCLUDE:**

- Matching Game cards





calendula



calendula



zucchini



zucchini





pumpkin



pumpkin



peas



peas





red runner beans



red runner beans



watermelon



watermelon







# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## What is a seed?

A seed is the very beginning of a new plant.

Seeds come in all shapes, sizes, colors, and textures. Like an eggshell for a chicken egg, seeds are protected by a seed coat. Within this protecting coat is something called endosperm, where food is stored that the seed will use to grow. Inside the endosperm lies an embryo, which will grow into a plant. The embryo is like a baby plant, as it has everything it needs to become a healthy adult plant, including the primary roots, cotyledons, and embryonic leaves. If you look closely at a seed, you can see the Micropyle, which is a small pore in a seed that allows water absorption during germination and growth.

### Kernels of Truth:

- Even if a seed is planted upside down it grows up because it can feel gravity!
- The largest seed in the world is a palm tree seed. About 12 inches long and weighs up to 40 lbs.
- Most seeds remain dormant (asleep) until they are given water.
- The oldest seed scientists were able to grow was 32,000 years old!  
Named: *Silene stenophylla*



## Roasted Pumpkin Seeds!

### Ingredients

- One pumpkin

### Directions

1. Seed the pumpkin: Preheat the oven to 300 degrees F.
2. Using a spoon, scrape the pulp and seeds out of your pumpkin into a bowl.
3. Clean the seeds: Separate the seeds from the stringy pulp, rinse the seeds in a colander under cold water, then shake dry. Don't blot with paper towels; the seeds will stick.
4. Dry them: Spread the seeds in a single layer on an oiled baking sheet and roast 30 minutes to dry them out.
5. Add spices: Toss the seeds with olive oil, salt and your choice of spices. Can be savory or sweet! Return to the oven and bake until crisp and golden, about 20 more minutes.





# #12 BIKE SAFETY

**ACTIVITY DESCRIPTION:** Kids will learn about bike safety. Specifically, how to use hand signals when they ride their bikes (stop, left turn, right turn). As well as learn the proper way to fit a bike helmet.

**MATERIALS REQUIRED:**

- Several sized bike helmets for demonstration purposes

**STAFFING NEEDED:** Two staff are needed. One person will manage the registration/check-in and the post-activity process and the other will lead the activity instruction.

**CONCEPTS TO COVER:**

Road Safety: Hand signals for turning and stopping

How to Fit a Bike Helmet: the 2V1 Rule

**LESSON ACTIVITY (3-5 minutes):**

Prior to the activity, find various sized bike helmets for kids, whether borrowed or donated. Demonstrate to kids how to fit a helmet. Always wear a helmet that fits and make sure you buckle the straps. When fitting a helmet, remember the 2V1 rule:

- There should be no more than two fingers width between the top of your eyebrows and the bottom of the helmet.
- The ear straps should form a "V" shape just below each ear.
- You should be able to stick one finger between your chin and the chin strap.

The helmet should be strapped and shouldn't wobble when you shake your head "no" or nod "yes". The helmet should also pull down on your head when you open your mouth wide like a yawn.

**Go over the following safety tips:**

- To be safe, follow the same rules of the road that cars do.
- Stop for pedestrians and at stop signs.
- Be on the right side of the road.
- Use your hand signals:
  - Left arm/elbow is parallel to the ground and left forearm/hand pointing up is "turn right".
  - Left arm/elbow is parallel to the ground and left forearm/hand pointing down is "stop".
  - All of left arm is parallel to the ground means "turn left".

**MODIFICATION:**

If space allows, set up a bike course for bikes away from vendors and shoppers. The course would need some orange cones, chairs, or other objects to demarcate the safe riding area.

Here, the instructor can demonstrate the hand signals and then kids can use the bike hand signals they just learned.

Promote this activity at the market the week prior so kids know to bring their bikes. Can also use social media to promote this as well.

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring page



Be  
Safe!



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Bike Safety

Riding a bicycle is a fun way to be active and healthy. Wearing a certified and properly fitting bicycle helmet is a very important part of staying safe during this activity! The helmet should be strapped and shouldn't wobble when you shake your head "no" or nod "yes". The helmet should also pull down on your head when you open your mouth wide like a yawn.

### When fitting a helmet, remember the 2V1 rule:

- There should be no more than two fingers width between the top of your eyebrows and the bottom of the helmet.
- The ear straps should form a "V" shape just below each ear.
- You should be able to stick one finger between your chin and the chin strap.

### Kernels of Truth:

- Orville and Wilbur Wright built their airplane in a small bicycle repair shop they operated in Dayton, Ohio
- In the United States, less than 1% of all urban commutes are by bicycle, while in the Netherlands 30% of all trips are by bike.
- Studies show that the use of a helmet while biking reduces the risk of a head injury by 85%.



## Blueberry Breakfast Cookies

### Ingredients

- ¾ cups mashed ripe banana (about 2 medium bananas)
- cup quick-cooking oats, uncooked
- ¼ cup blueberries
- pinch of cinnamon
- tbsp. honey

### Directions

1. Have an adult preheat oven to 350°F.
2. In a large bowl, combine all ingredients.
3. Using a spoon, drop batter on greased baking sheet
4. Bake at 350 degrees for 10-12 minutes or until the bottom is golden brown.



# #13 BUGGING OUT

**ACTIVITY DESCRIPTION:** Kids learn that insects can provide benefits to one's garden by pollinating flowers or driving away/eating pests. Learn that most insects are non-threatening to one's garden, but some insects are pests and can be harmful to plants. Then kids will make their own ladybug creation out of construction paper to take home.

## **MATERIALS REQUIRED:**

- Scissors
- Glue sticks
- Red construction paper
- Black construction paper
- Markers
- Googly eyes
- Lady Bug template (see below)

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

## **CONCEPTS TO COVER:**

Beneficial Insects: insects that perform functions that benefit gardeners, like pollination and pest control.

## **LESSON ACTIVITY (5-10 minutes):**

Prior to the activity, print out the templates for the ladybug and cut out the template. The templates are a circle that is used for the body and a partial circle that is used for the two wings. Cut out the body and wings prior to the market.

- Use the circle template to trace on the black construction paper. Then cut out the circle. This is the body.
- Use the partial circle template to trace on the red construction paper. Cut out the partial circle. Then cut the form in half to make the wings
- Keep tracings close together to save paper.

During the activity, explain the concept of beneficial insects to kids as well as discuss what some of these insects are and what they do:

- Lady Bugs adults (or Lady Beetles) will eat more than 5,000 aphids during their lifetime
- Ground beetles are voracious predators of slugs, snails, cutworms, cabbage maggots, and other soil pests. One beetle larva can eat more than 50 caterpillars.
- Green Lacewings Larva (Aphid Lion) can eat up to 200 pests a week.



- Praying Mantis is a ferocious general predator, it will attack just about any insect in its path!
- Bees pollinate flowers so the plant can put forth fruit.

To do the activity, kids take two red wings and paste them to the black body of the ladybug.

- The wings can be together or offset to look like the ladybug is in flight.
- The flat portion of the wings should be placed so there is a space next to it to glue googly eyes.
- Kids can use a marker and put dots on the lady bug's wings.

**MODIFICATION:** None.

**AS A SELF-DIRECTED ACTIVITY:**

Make and leave an example(s) of what the ladybug can look like.

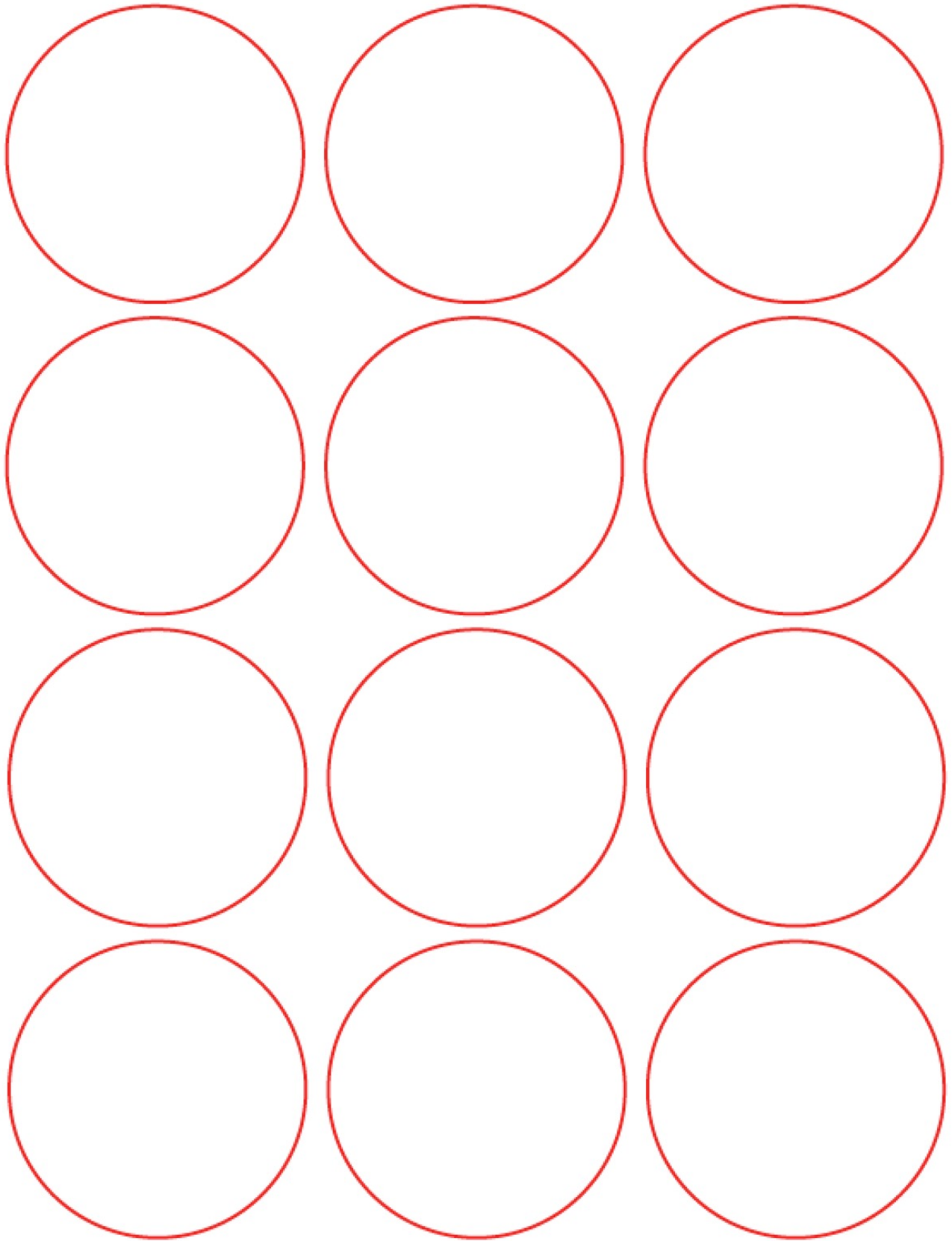
When the market opens, kids will register/check-in at market booth. Then, direct the kids to the activity area and tell them about the example. Ask the kids to return when they finish the activity.

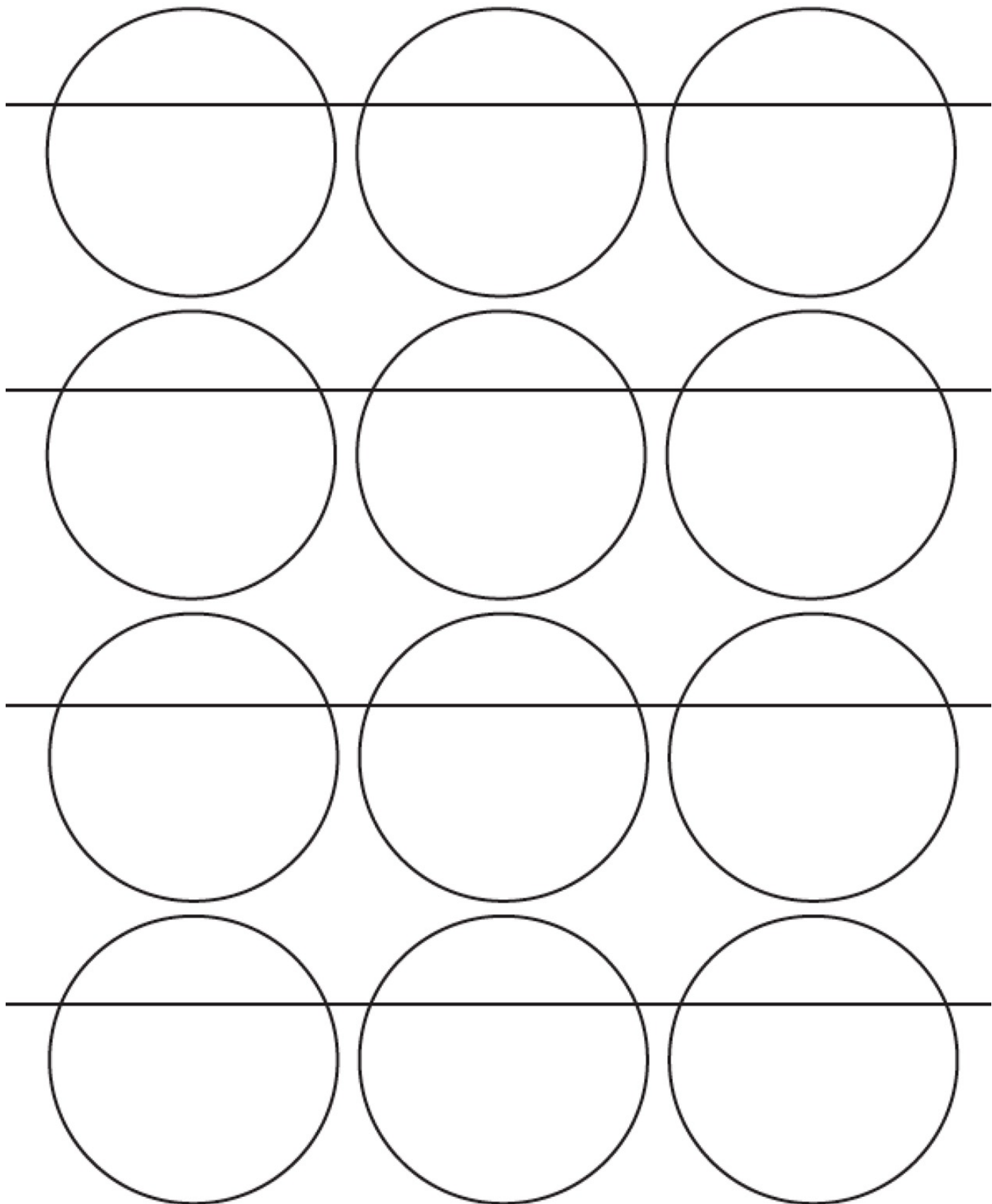
Have all of materials ready and available for the kids:


- Glue sticks
- Googly eyes
- Pre-cut wings
- Pre-cut bodies
- Markers

**ATTACHED DOCUMENTS INCLUDE:**

- Lady Bug Template







# KERNEL


## Bugging out...not all bugs are bad!


Insects get labeled as "pests" when they start causing harm to people or the things we care about like our gardens. But out of nearly one million known insect species, only about 3 % are ever considered pests! What about the rest of them? Some insects even help us by eating pests in your garden & pollinating plants!

Kids Eating Right-Nutrition and Exercise for Life

Watch Video!

<https://www.youtube.com/watch?v=FeE7K-71698&t=2s>







KERNEL

created by Catholic Charities Eastern Washington


Be on the lookout for these Garden Friends




Ladybug Adult



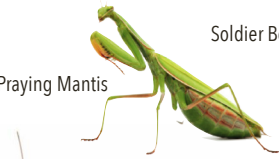
Ladybug Larva




Nocturnal Ground Beetles




Mealybug Destroyer




Praying Mantis



Soldier Beetles



Green Lacewing



Green Lacewing Larva (Aphid Lion)

## Peach Smoothie

Ingredients

- 2 ripe peaches or nectarines, quartered, pits removed
- 1/2 frozen banana (peeled before freezing)
- 1/4 cup fresh orange juice
- 1/2 cup milk or milk substitute of choice

Directions

1. Add all ingredients to a blender. Have an adult help you blend.



Kernels of Truth:

- Ladybug adults will eat more than 5,000 aphids during their lifetime.
- Praying Mantis is a ferocious general predator. It will attack just about any insect in its path!
- Green Lacewings Larva (Aphid Lion) can eat up to 200 pests a week.
- Ground Beetles are voracious predators of slugs, snails, cutworms, cabbage maggots, and other soil pests. One beetle larva can eat more than 50 caterpillars.

# #14 CLOUD READING

**ACTIVITY DESCRIPTION:** Kids learn what a rain cloud looks like and the names of rain clouds, learn some fun facts about rain clouds and rain. Then make a rain cloud to take home.

## **MATERIALS REQUIRED:**

- Cardstock
- A variety of blue string colors cut to about 3-4 inches
- Few 10-inch pieces of string for hanging
- Elmer's glue
- Cotton balls
- Scissors

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## **CONCEPTS TO COVER:**

Nimbus is an ancient Latin word meaning "rainstorm." Rain or nimbus clouds tend to appear dark gray because their depth and/or density of large water droplets obscure sunlight. Depending on temperature, nimbus clouds may precipitate hail or snow instead of liquid rain. Clouds are white because they reflect light from the sun. Gray clouds become so filled with water that they don't reflect light. Masses of clouds form shadows, which can also cause the clouds to look gray. The prefix "nimbo-" or the suffix "-nimbus" designate two prominent kinds of rain clouds, "nimbostratus" and "cumulonimbus," although rain sometimes falls from other cloud varieties.

Rain clouds, or nimbus, produce everything from drizzle to downpours; more violent relatives of theirs may unleash rain as part of intense thunderstorms.

Rain or "nimbus" clouds may appear as low, sheeted "stratonimbus" producing sprinkles or steady drizzle or as tall "cumulonimbus" clattering with thunder and flashing with lightning. The cumulonimbus's forerunner, cumulus congestus, may also drop rain.

## Fun information about rain:

Raindrops are shaped more like hamburger buns. As a rain drop falls, it becomes less spherical in shape and becomes more flattened on the bottom like a hamburger bun. And guess what?

Rain does have a smell. Petrichor is the word that describes the scent of rain. Rain occurs on other planets in our Solar System, but it is different to the rain we experience here on Earth. For example, rain on Venus is made of sulfuric acid and due to the intense heat, it evaporates before it even reaches the surface!



**LESSON ACTIVITY (10-15mins):**

Make a cloud craft with rain. Using card stock, draw a cloud shape. Have the kids be creative with the shapes, if you have time and the kids are old enough, let the kids cut out the shapes. If not, have the instructor do it. Have kids pick out a variety of pre-cut blue string. Staple or glue lots of blue string pieces to the bottom of the cut-out cloud shape (these will be your rain), then take one of your longer strings and glue or staple it in the middle near the top of your cloud shape, so it can be used to hang the cloud. If you have a lot of kids, you can do this step first. Next, let kids glue on cotton balls in layers covering their entire cloud shape and the ends of the strings on the cloud shape. Let them feel free to use lots of cotton balls. Let dry for 10-15 mins. The end result should be a cloud on a string you can hang on the wall with the rain strings hanging down. Hang some clouds from the side of your craft booth to dry and show off the kids work.

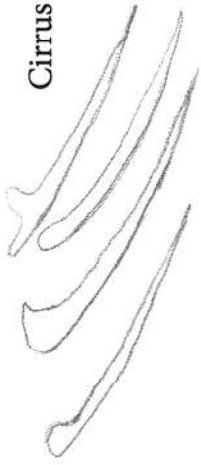
You can use duct tape or masking tape if staples or glue don't work but it might be less permanent. You can also just do a coloring page if this is too time consuming.

**MODIFICATIONS:** None

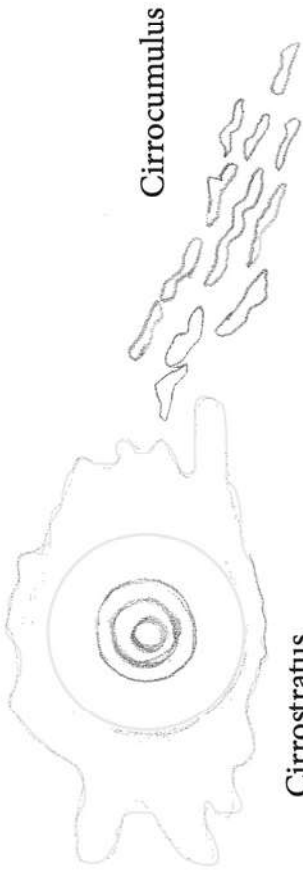
**ATTACHED DOCUMENTS INCLUDE:**

- Cloud Reading Color Page

# Cloud Reading



Cirrus

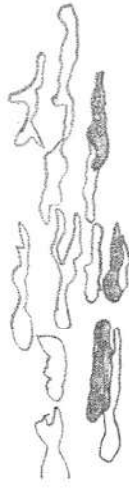


Cirrostratus

Cirrocumulus



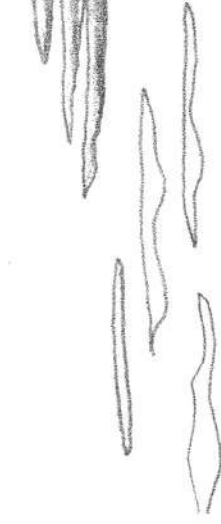
Altostratus



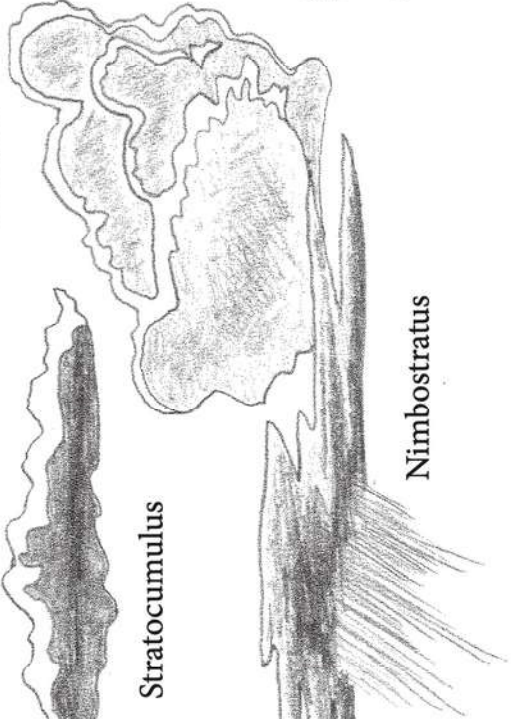
Altostratus



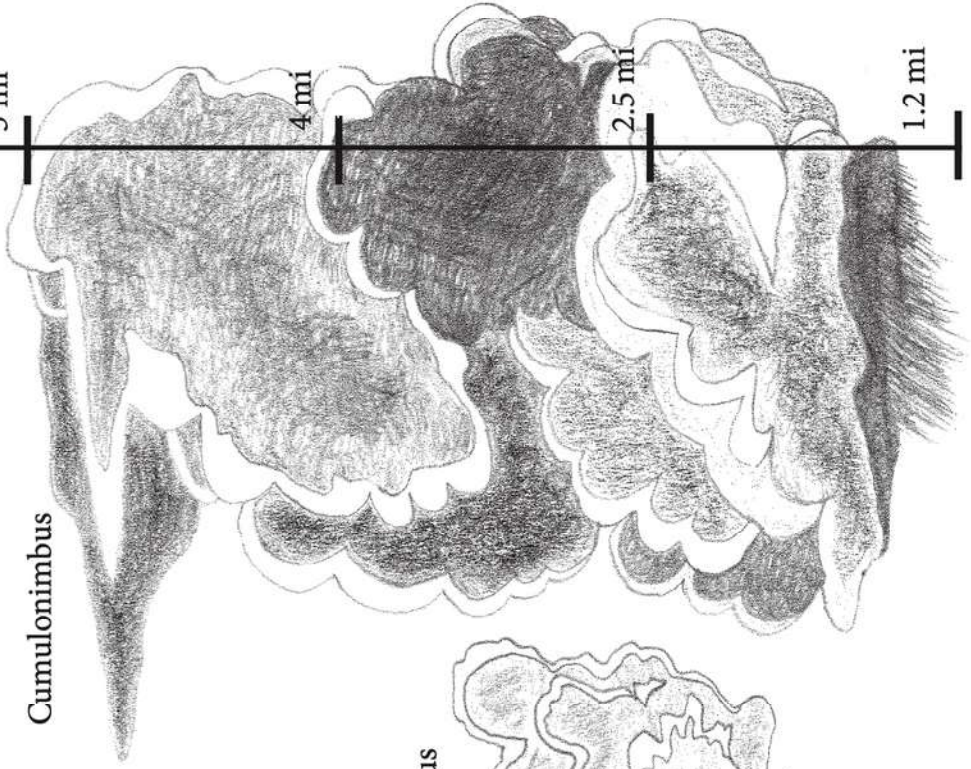
Stratocumulus



Stratus



Nimbostratus



Cumulonimbus

6 mi

5 mi

4 mi

2.5 mi

1.2 mi

Cumulus



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Rain Cloud

The prefix "nimbo-" or the suffix "-nimbus" designate two prominent kinds of rain clouds, "nimbostratus" and "cumulonimbus," although rain sometimes falls from other cloud varieties. Rain clouds produce everything from drizzle to downpours; more violent relatives of theirs may unleash rain as part of intense thunderstorms. Rain or "nimbus" clouds may appear as low, sheeted "stratonimbus" producing sprinkles or steady drizzle or as tall "cumulonimbus" clattering with thunder and flashing with lightning.



**Watch Video!**

<https://youtu.be/bd9yY0C4Oc4>

### Kernels of Truth:

- Other planets in our Solar System have clouds. Venus has thick clouds of sulfur-dioxide, while Jupiter and Saturn have clouds of ammonia.
- Clouds look like they weigh little more than a tuft of cotton, but they're heavier than they look. Your average cumulus (fair weather) cloud can weigh more than a million pounds, and a vivacious thunderstorm can pack billions (if not trillions) of pounds of water in one tiny part of the sky.
- Raindrops fall at a speed of 5 to 18 miles per hour depending on the size of the raindrops



## Fluffy German Pancakes with Fresh Fruit

### Ingredients

- 6 large eggs
- 1 cup milk (or milk alternative)
- 1 cup all-purpose flour
- Dash of salt
- 1 teaspoon vanilla extract
- 5 tablespoons butter
- 2 cups of fresh or frozen fruit
- Maple syrup



**Strawberries, raspberries or blueberries work great!**

### Directions

1. Preheat the oven to 425 degrees F.
2. Mix eggs, milk, flour, salt, and vanilla in a bowl with a whisk, fork, or spoon.
3. As the oven preheats, put the butter in an un-greased 9x13 inch baking dish and place in the oven until just melted then take out of oven.
4. Pour batter into the baking dish.
5. Put back in the oven.
6. Bake for 22-27 minutes or until edges are golden brown and fluffy.
7. Chop fresh fruit or heat up frozen fruit in a small saucepan.
8. Cut up pancakes into single servings and serve with fresh fruit and a little maple syrup on top



# #15 COMPANION PLANTING

**ACTIVITY DESCRIPTION:** Kids will learn about the concept of companion planting; with basil and tomatoes. Then take a basil plant home and transplant it properly. As well as learn how to properly care for a basil plant, including pinching leaves and tips before they flower.

## **MATERIALS REQUIRED:**

- A basil plant for each child, as supplies last. (Donated plants are optimal.)
- An appropriate container to hold potting soil (2 or more if you expect many children attending at once). A recommended container is a deep wash basin to simulate planting in a garden bed. If unavailable, an appropriately sized pot will work.
- Potting soil for the container. (Donation for a garden or recycling center, or a grower.)
- A garden trowel for each container.
- A "practice" plant for each container. A practice plant can be a hardy plant, not necessarily a basil plant.
- A "demo" plant for the instructor. Works best if basil has tips that aren't flowering yet.

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction. This activity can serve as a means to engage a community partner like Master Gardeners to supply a volunteer or two.

## **CONCEPTS TO COVER:**

Transplanting: Is planting a seedling or young plant from a small pot to a larger pot or in the ground.

Companion plants: Are planted near another plant to provide a benefit. Some plants repel pests; others lure them from their companion. Some companions provide nutrients to the soil that are beneficial to other plants.

Pinching off the basil plants smallest inside leaves before flowering: Will promote extra growth from the basil plant, resulting in a bigger harvest of basil leaves. Tips also need to be pinched before they flower or else it could cause the basil to lose its flavor and turn bitter.

## **LESSON ACTIVITY (3-5 minutes):**

Discuss the concept of companion plants and include some facts for basil.

- Companion plants are plants that are beneficial to another plant.
- Basil is a companion plant to the tomato plant.
- A companion plant repels harmful pests. For instance, basil is known to be helpful in repelling thrips, even flies and mosquitoes



- When basil is planted near a tomato plant, the plant can yield up to 20% more tomatoes.
- Some plants that benefit from growing near basil include potatoes, marigolds, oregano, beets, beans, and asparagus.
- Demonstrate how to transplant basil. Kids will practice.
- Instructor will make a hole in in the soil in the container to transplant the “demo” basil.
- When ready to transplant the basil, make sure the soil in the container is moist before removing the plant from the container as this will help keep soil attached to the roots upon removal.
- Show kids how to gently remove a plant from its original pot and plant in the container.
- Turn plastic pot upside down and have plant between fingers.
- Gently squeeze pot from bottom to push plant out.
- Make sure plant is not root bound.
- Put plant in hole and fill hole with soil. Press soil down firmly.
- Kids can replicate these steps with their “practice” plant in the container. Give tips on care.
- Basil loses flavor when it flowers, so pinch off tips before it flowers. Inform how to pinch off tips before they flower. Show on the “demo” basil without actually pinching off the tip.
- Harvest larger leaves first. Can harvest basil by pinching off leaves. Show kids how to do this on the “demo” plant without actually pinching off.
- If you harvest or cut back the plant every few weeks, it delays flowering. Can also trim back plant to a few inches from the ground to get another crop.
- Plant about a foot away from other basil plants but can plant within 10 inches of a tomato plant.
- Easy to grow indoors in a sunny location.
- Do not plant near rue or sage.

Kids pick out their basil plant and then receive their activity card and \$2 reward.

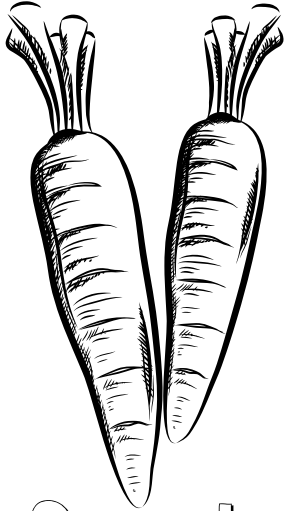
**MODIFICATION:** None.

**ATTACHED DOCUMENTS INCLUDE:**

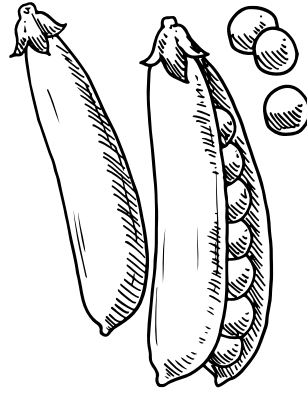
- Coloring page



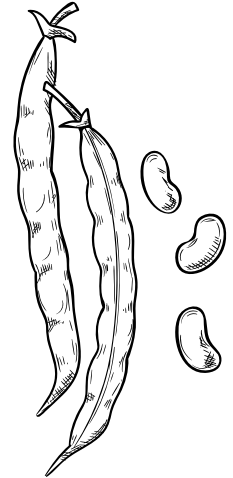
# Companion Plants



Carrots



Peas



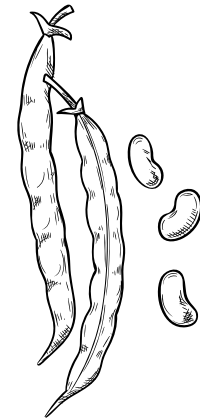
Beans



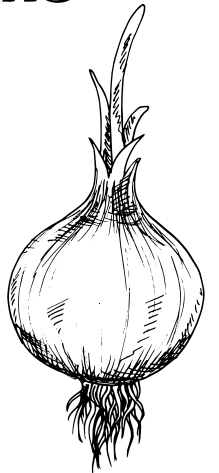
Beets



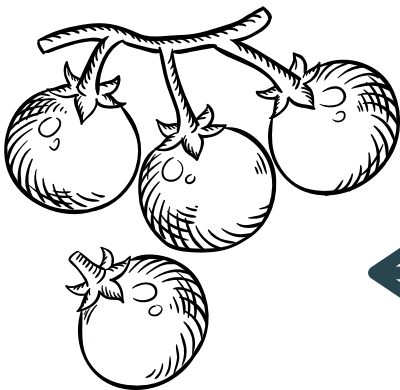
Lettuce



Beans



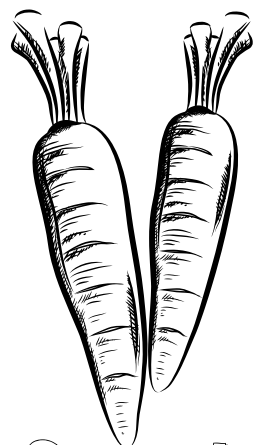
Onions



Tomatoes



Basil



Carrots



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Companion Planting

**How to care for your Basil plant:** Transplant your basil plant when it has at least 2 sets of true leaves. When harvesting, harvest the larger leaves first. To keep a good flavor and produce more basil leaves don't let your basil plant flower. Instead pinch off the tips (smallest inside leaves) every few weeks. It will also promote extra growth from the basil plant, resulting in a bigger harvest of basil leaves.

Plant about a foot away from other basil plants but can plant within 10 inches of a tomato plant. Easy to grow in a container indoors in a sunny location.



### Kernels of Truth:

- A companion plant repels harmful pests. For instance, basil is known to be helpful in repelling thrips, even flies and mosquitoes.
- When basil is planted near a tomato plant, the plant can yield up to 20% more tomatoes.
- Some plants that benefit from growing near basil include potatoes, marigolds, oregano, beets, beans, and asparagus. Do not plant near sage.



## Basil, Tomato and Fresh Mozzarella Sandwich

### Ingredients

- Bread
- 1 large Tomato sliced
- 1 small bunch of fresh Basil
- ½ pound of fresh mozzarella, sliced
- Balsamic vinegar

### Directions

1. Have an adult slice the tomato and the fresh mozzarella (and the bread if necessary).
2. For each sandwich add 1-2 slices of tomato, a slice of fresh mozzarella cheese and 2-3 leaves of fresh basil to one slice of bread.
3. Splash on balsamic vinegar and add the second slice of bread.
4. Now you have a tasty sandwich for any time of day!



# #16 Cross Pollination

**ACTIVITY DESCRIPTION:** Kids will learn about the concept of cross pollination. Then practice being a pollinator!

## **MATERIALS REQUIRED:**

- Coloring Sheet
- Markers or color pencils
- 3 different colors of thin chalk for each kid.
- 1 cotton ball for each kid.

## **CONCEPTS TO COVER:**

### Cross Pollination:

What is Pollen? Pollen is a powdery substance made of pollen grains which are the male gametes of a plant. What is Cross-Pollination? Pollination is the movement of pollen with male genetic material from the anther of a single flower to the stigma of another. It then travels through the stigma and down the style to the Ovary of the flower where it the pollen grain and the ovary combine to make a seed! Which can then turn into a new plant if planted with traits from both flowers!

## **LESSON ACTIVITY (3-5 minutes):**

Discuss the concept of cross pollination while the kids do the activity.

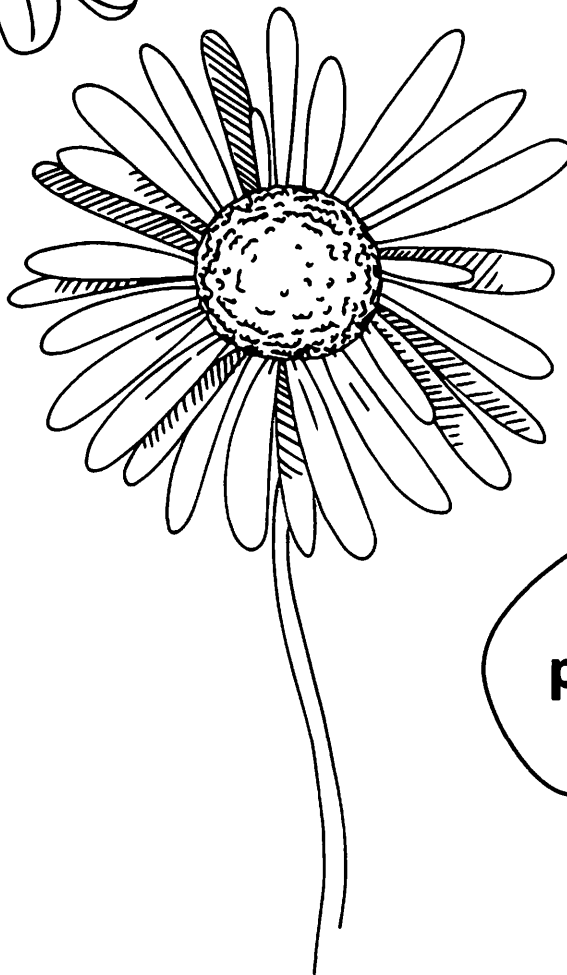
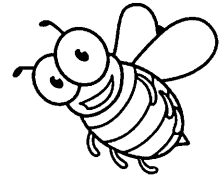
- Have the kids color the coloring page with markers or color pencils but leave the center of the flower blank.
- When they are done give them 3 different colored chalk pieces and instruct them to color the center of each flower with a different color of calk, encourage them to get it good and dusty. This will be the pollen.
- Then give them a cotton ball and tell them to pretend it is a bee! Have them land their "bee" on the first flower to get nectar and get good and dusty. Then have them go to the next flower and drop off some of that pollen and get some new pollen.
- Have them keep buzzing their bee around until all the flowers are pollinated.

**MODIFICATION:** None.

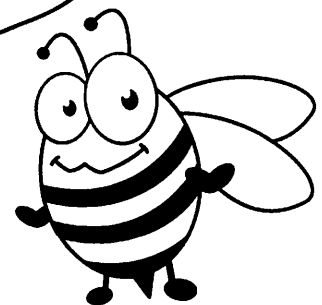
## **ATTACHED DOCUMENTS INCLUDE:**

- Coloring page

# Bee a Pollinator!



**Help me  
pollinate!**





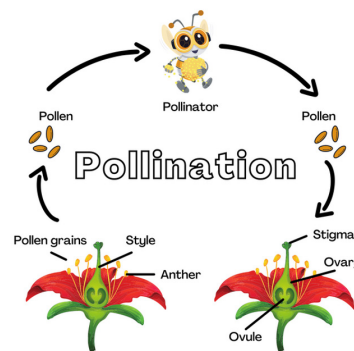


# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Cross Pollination

**What is Pollen?** Pollen is a powdery substance made of pollen grains; which are the male gametes (or reproductive cells) of a plant. **What is Cross-Pollination?** Pollination is the movement of pollen with male genetic material from the anther of a single flower to the stigma of another. It then travels through the stigma and down the style to the ovary (female part) of the flower where the pollen grain and the ovary combine to make a seed! This seed then has everything it needs to grow into a new plant with traits from both parent flowers.



### Kernels of Truth:

- Honeybees do more pollination than any other insects.
- Many creatures are pollinators such as ants, beetles, butterflies, moths, birds, and bats!
- 75 % of flowering plants depend on pollinators for fertilization.

### Watch Video!

<https://youtu.be/rxZWbPwuc0w>



## Summer Veggie Ragu

### Ingredients

- 1 pound of eggplant
- 1 sweet onion diced
- 2 tablespoons olive oil
- 5 cloves garlic peeled and minced
- 28 ounces of either canned or whole tomatoes
- (optional) fresh basil and grated Parmesan cheese for garnishing



### Directions

1. In a large skillet, heat oil over medium heat.
2. Add eggplant and onion, and season with salt and pepper.
3. Cook until eggplant is lightly browned, and onions are translucent, about 10 minutes.
4. Stir in garlic, and cook, stirring constantly, for 30 seconds.
5. Add tomatoes and stir to combine.
6. Lightly crush tomatoes against the side of the skillet.
7. Cook, stirring occasionally, until tomatoes are warm, about 3-4 minutes.
8. Serve over pasta or polenta, and garnish with fresh basil and Parmesan just before serving.

# #17 HULA HOOPING

**ACTIVITY DESCRIPTION:** Kids will learn different ways to have fun and exercise with a hula hoop. See hula hooping as a potential lifelong activity and that physical activity is important and fun!

## **MATERIALS REQUIRED:**

- At least 3 hula hoops to engage more than one child. Some children may want to try more than one hoop at a time as well.
- Make sure you have enough space for several kids to hoop at one time.

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction. *Engaging an expert hooper to lead this activity is an option if they are willing to volunteer their time (or pay them for their time if funding allows).*

## **CONCEPTS TO COVER:**

Core Muscles: The core is usually defined as the torso. Muscles of the abdomen, pelvis, lower back and hips make up most of the core muscle groups. When core muscles are strong and work together, your body may suffer fewer injuries.

## **LESSON ACTIVITY (3-5 minutes):**

These facts can be shared before, during or after hooping:

Hula hooping exercises over 30 core muscles

Explain what a core muscle is.

Hooping can improve balance, flexibility, dexterity, and coordination.

Demonstrate (Verbally and/or physically) basic technique in using a hula hoop around the waist. (All skill levels are acceptable, no need to be an expert.)

- Kids can try using the hoop around their arm and even one on each arm, if appropriate.
- Kids may try hooping around the waist arms and leg, if possible, appropriate depending upon the number of hoops and kids.
- Kids may attempt to use the hoop like a jump rope.

## **MODIFICATION:**

1. For children physically unable to hula hoop around the waist (ie, in a wheelchair or on crutches), hooping around an arm is an acceptable modification.
2. An addition to this activity if your market has funding or donated materials is to have a hula hoop maker lead kids in making their own hoops and then trying them out.

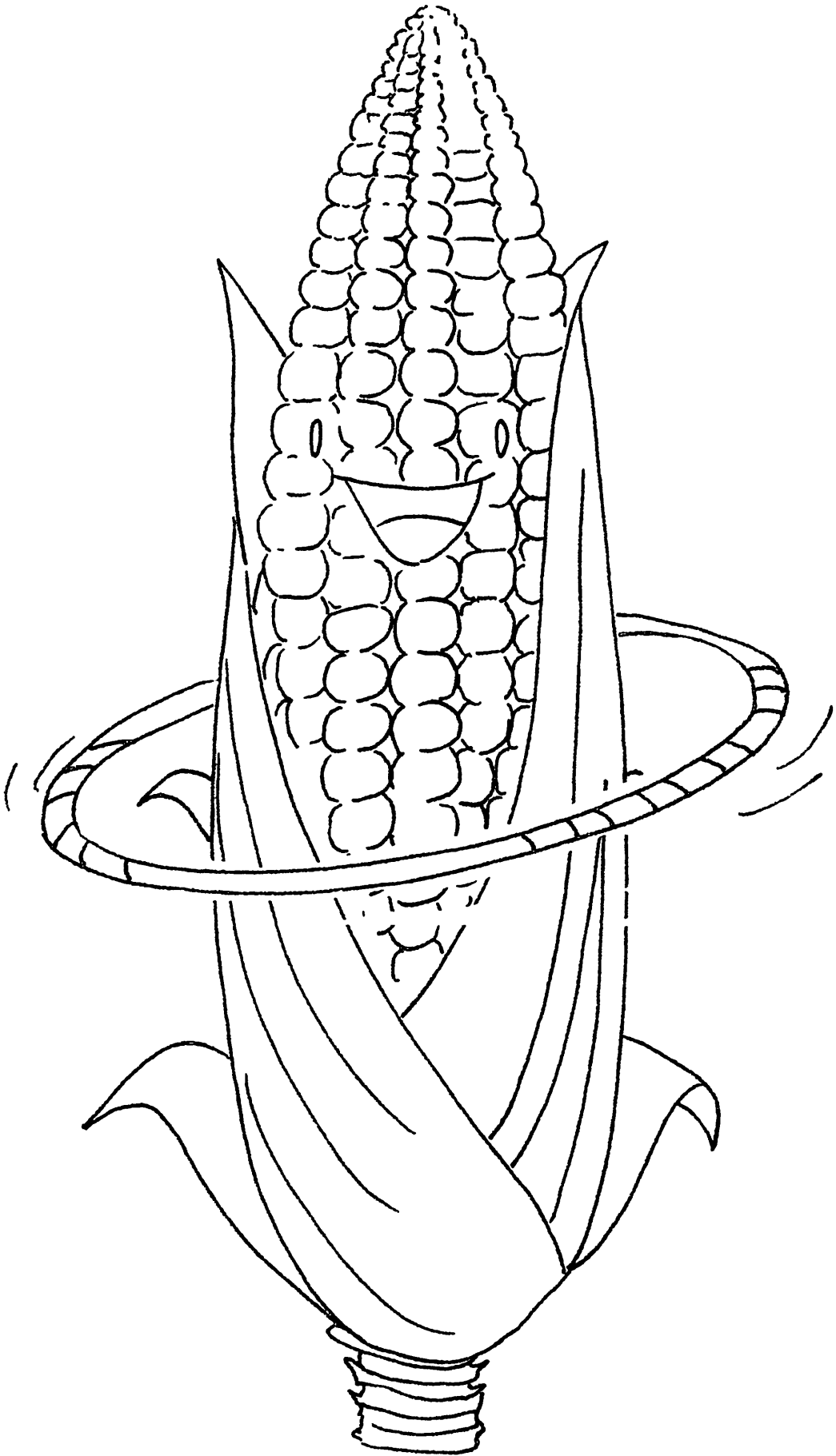
**SELF-DIRECTED OPTION:**

Before the activity starts, place the hoops in the hula hooping area.

When market starts, kids will first register/check-in at market booth. Then, direct the kids to the hula hooping area and ask them to try hooping around their waist, arms, legs and use the hoop as a jump rope. Ask them to return when they finish the activity.

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring page







# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Hula Hooping

Hoopng exercises over 30 core muscles and improves balance, flexibility, dexterity, and coordination. It's also a whole lot of fun! When a workout is something, you enjoy and look forward to you are more likely to stick with it and motivated to keep improving.



### Kernels of Truth:

- The term "Hula Hoop" came from British sailors who thought the "Hula Hoop" resembled the hula dancing they had seen in the Hawaiian Islands.
- Jemez Pueblo Indian hoop dancer Tony White Cloud became known as the "founder of the modern Hoop Dance". He made a cameo appearance in Valley of the Sun, starring Lucille Ball in 1942 and danced in Apache Country, starring Gene Autry in 1952.
- Over 100 million Hula Hoops were sold by Wham-O in its first year of production in 1958.



## Citrus Kale Salad

### Ingredients

- 1 bunch kale
- 1 Tablespoon lemon juice
- ¼ cup olive oil
- Salt and pepper to taste
- 2 teaspoons honey or brown sugar
- 1 can mandarin oranges (drained)
- Sunflower seeds (optional)



### Directions

1. Wash and tear kale into bite sized pieces, massage with olive oil so it's easier to eat.
2. Mix lemon juice, salt and pepper, and honey or brown sugar together before adding it to the kale salad.
3. Top with mandarin oranges and sunflower seeds. If you want to make some now and save some for later, keep the dressing and salad ingredients separate.



### Notes:

You could add mango or pineapple instead of mandarin oranges.

# #18 JUMP ROPE

**ACTIVITY DESCRIPTION:** Kids will learn the proper way to size a jump rope then complete a jump rope obstacle course. Learn different ways to have fun and exercise with a jump rope. See jump roping as a potential lifelong activity and learn that physical activity is important and fun!

## **MATERIALS REQUIRED:**

- 2 seven-foot jump ropes (for those up to 4'10")
- 1 eight-foot jump rope (for those 4'11"-5'4")
- 1 nine-foot jump rope (for those 5'5"-5'11")
- 4 lengths of rope without handles (6'-7')

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

## **CONCEPT(S) TO COVER:**

Cardiovascular: relates to the heart. As a cardiovascular activity, jumping rope increases the heart rate.

## **LESSON ACTIVITY (5-10 minutes):**

Demonstrate how to properly fit a jump rope.

- Place one foot on the middle of the rope.
- When you lift the handles, the tips of the handles should be at your armpit level.
- For beginners, try a beaded rope as it is easier to control than a cloth or vinyl rope. Inform what jumping rope is good for:
- A good cardiovascular workout means it is good for your heart.
- 10 minutes a day can improve your health with benefits including bone and muscle strength and flexibility
- Helps with athleticism (good for kids who are athletes), including coordination, speed, balance, timing, and rhythm.

**Set up a jump rope obstacle course with 5 stations for each child to complete according to their abilities:**

1. Skip a Rope to Start: Each child skips a rope according to their ability (suggest 1-10 skips as appropriate to age and/or skill level).
2. Tightrope: this rope (without handles) is on ground in a straight line. Child walks across the rope like it is a tightrope with one foot placed directly in front of the other.

3. Hop In, Hop Out: This rope (without handles) is shaped as a circle. The child jumps in and out of the circle on one leg two times, with one set on right leg and the other with the left leg.
4. Hop Like a Frog: Place this rope (without handles) in a straight line. Each child hops across this rope like a frog. Suggest "how far can you hop?" Then, kid can turn around and see if they can hop back across the rope.
5. Walk in a Circle: This rope (without handles) is shaped as a circle. With one foot in the circle and the other out, walk around the rope one time quickly. Then try one time around backwards.
6. Skip a Rope to Finish (Return to Station 1): Suggest that the child "beat their record" from the first "Skip a Rope" station.

### **MODIFICATION:**

If on a hard surface, the four lengths of rope can be replaced by using sidewalk chalk to draw large enough circles and lines for stations two through five.

For station four, kids can try again, except this time they can stand next to rope sideways and try jumping across the rope.

For station five, kids can try again, except this time tip toeing instead.

If a child experiences difficulty jumping a rope, have two people on each side and have the child jump it while twirling rope. Or, child can twirl rope overhead, let it hit the ground and then the child can walk or jump over it before moving rope again.

If a child is on crutches or in a wheelchair, have them try station five.

- On crutches, they can walk in a circle with one foot inside the circle.
- If in a wheelchair, see if the child can move around the circle with one wheel inside the circle.

### **SELF-DIRECTED OPTION:**

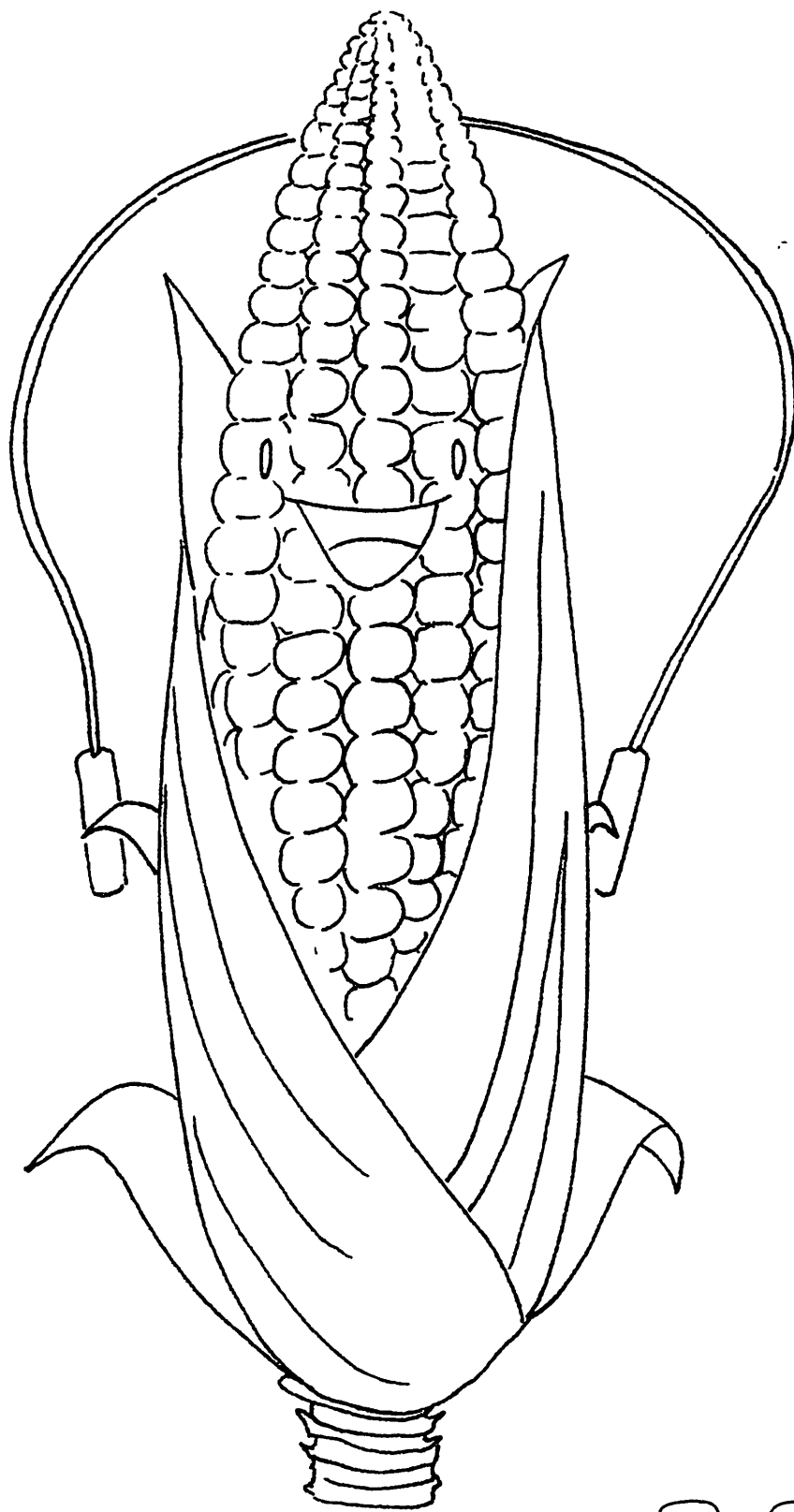
Set up the five stations prior to the activity/market's start time.

At each station place the jump rope as per instructions for that station and post the instructions for the activity of that station.

First, kids register/check-in at market booth. Then, they are directed to the jump rope course and asked to return when they finish the course.

### **ATTACHED DOCUMENTS INCLUDE:**

- Coloring page
- Station Instructions



Let's JUMP

## Station Instructions:

### STATION 1 AND 6: SKIP A ROPE

START AND FINISH HERE

FIRST, FIND A ROPE THAT FITS YOU IN THREE EASY STEPS:

Hold a jump rope handle in each hand.

Place one foot on the middle of the rope.

When you lift the handles, the tips of the handles should be at your armpit level. If not, try another jump rope.

This is the first and last jump rope station.

At this station you will jump rope as many times as you can according to your skill level. One time is acceptable.

If this is your first station, proceed to Station 2: TIGHTROPE after completion. If this is your last station, please proceed to the market booth to receive your KERNEL Kid Cash.

### STATION 2: TIGHTROPE

Imagine that this is a tightrope at the circus, and you are an acrobat. Start at one end of the rope and start walking like an acrobat by placing one foot directly in front of the other the whole length of the rope. Do your best to maintain your balance and not fall off.

When you finish, raise your hands in the air and say, "Ta-dah!" Please proceed to Station 3: HOP IN, HOP OUT after completion.

### STATION 3: HOP IN, HOP OUT

See the circle? Stand on one leg and hop into the circle and then hop back out. Do this two times. Finished? Now, switch legs and hop in and out of the circle two more times.

Please proceed to Station 4: HOP LIKE A FROG after completion.

### STATION 4: HOP LIKE A FROG

Stand facing the line. Next, bend down on your legs like a frog and then see how far across the line you can hop. Then, turn around and hop back across the line again.

For an added challenge, stand next to the line sideways and try jumping across the line sideways. Then jump back across the line sideways again.

Please proceed to Station 5: WALK IN A CIRCLE after completion.

### STATION 5: WALK IN A CIRCLE

Straddle the circle with one foot in and one foot out. Next, walk the circle as quickly as you can one time while keeping one foot in the circle and the other outside.

Next, try walking the circle backwards one time while keeping one foot in the circle and one outside.

Then, for an extra challenge, try walking the circle again with one foot inside and one foot outside the circle, but this time, on your tip toes!

Please proceed to Station 6: SKIP A ROPE after completion.





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Jump Rope!

To find a properly fitting jump rope, place one foot on the middle of the rope. When you lift the handles, the tips of the handle should be at your armpit level. For beginners, try a beaded rope as it is easier to control than a cloth or vinyl rope.



### Kernels of Truth:

- Skipping rope just 10 minutes a day can improve your health, with benefits including improved cardio fitness, bone and muscle strength, and flexibility.
- Skipping rope can improve your athleticism by coordination, speed, balance, timing, and rhythm.
- The world record for speed jumping is 332 jumps in one minute



## Salsa

### Ingredients

- 1 pint cherry tomatoes
- 2 jalapeños or pick a hotter pepper, finely chop removing ribs and seeds (the insides)
- 1 teaspoon cumin
- 2 Tablespoons lemon or lime juice
- Salt and pepper to taste

### Directions

1. Have an adult chop the tomatoes in half and finely chop the jalapeños.
2. Combine and mix ingredients in a bowl. Make sure to wash your hands after mixing because the jalapeño juices can sting.
3. Enjoy with chips or top a taco salad!

**Notes:** You could also add fresh garlic, onions, or cilantro from your farmers market.



# #19 TASTE TEST ADVENTURE

**ACTIVITY DESCRIPTION:** Kids will sample a variety of fruits and vegetables. The goal is to empower kids to try a variety of fruits and vegetables.

## **MATERIALS REQUIRED:**

- Die to assemble (Template provided. See below.)
- Glue Sticks
- A variety of six different fruits and vegetables.
- Food event permit, if required by your local health regulatory agency.
- Food handlers' permit, if required by your local health regulatory agency.
- A tray for each prepped variety. Or cookie/baking sheets, flats used for berries, etc.
- Small paper sample cups, 1 ounce.
- Toothpicks
- Food handler gloves
- Hand washing station, if mandated by health regulations.
- A knife
- A cutting board

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

## **CONCEPTS TO COVER:**

Sampling New Foods: Tasting new foods is an adventure. It can be normal to not like a new food when you first try it. Just try it again and again. Sometimes, it takes 10 or more tries to like a new food like broccoli, spinach, or cauliflower. So, try it again another day. Maybe next time with something you like.

## **LESSON ACTIVITY (5 minutes for the box, 2-3 minutes to sample):**

Acquire the six different fruits and vegetables:

- Try to use produce that is currently in-season and available at the farmers market the market. Produce can be obtained from the market's growers or by purchase or donation from a non-farmers market source, if appropriate.
- Fruits like strawberries, apples, pears, blueberries, peaches, blackberries, currants
- Vegetables like cucumbers, broccoli, cauliflower, spinach, cherry tomatoes, bell peppers.

- Try to include at least one product that most people don't commonly eat, for example, a currant
- In place of an uncommon fruit or vegetable, you could try two varieties with different colors like an orange carrot vs a purple carrot, or a yellow cherry tomato vs a red cherry tomato, or a green bell pepper vs a red bell pepper.

Prepare the produce for the activity:

- Prepare produce according to local health department food safety regulations. In many jurisdictions this requires a food event permit unless the market already has one and this can be added to it as an amendment.
- A food handler's permit may be required by the individual(s) serving the samples.
- Dependent upon health regulations, your samples may need to be prepared in a commercial kitchen. If so, then the samples will be prepped before the market.
- Keep one of each product that needs to be cut as a sample of what it looks like whole.

Kids use markers to draw the 6 fruits and vegetables individually on each of the six squares on their die. The die should remain flat until kids are finished with their art.

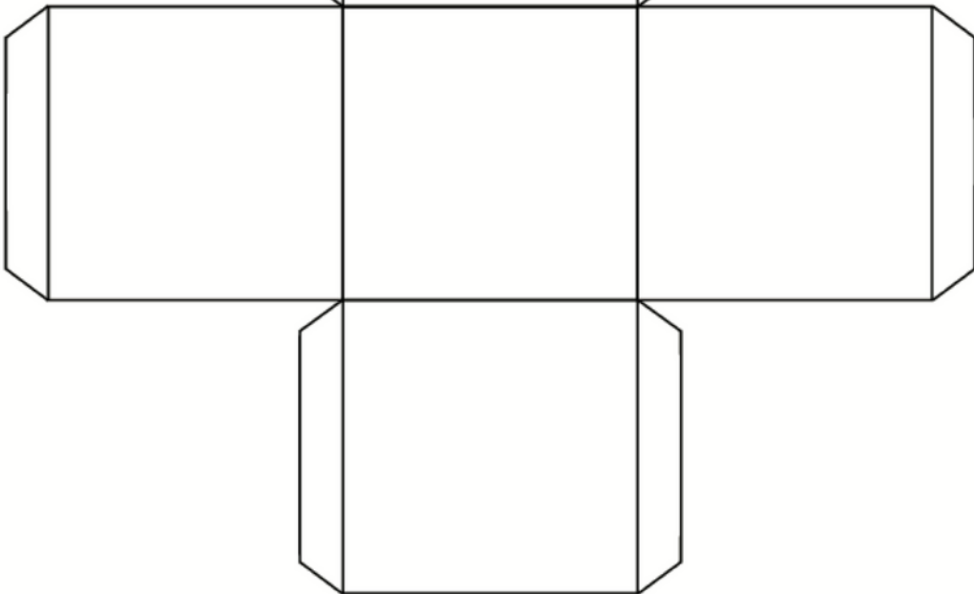
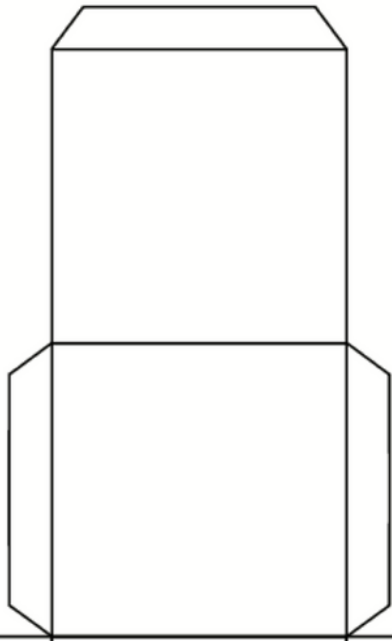
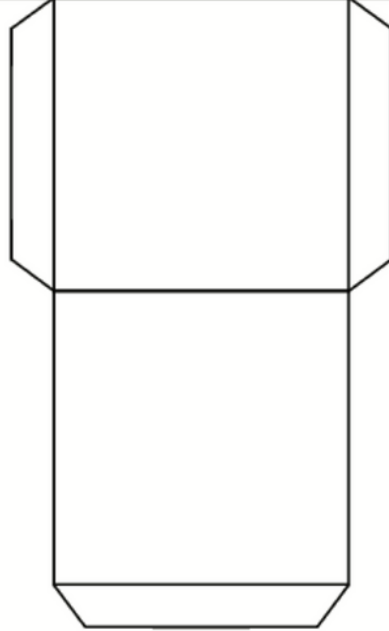
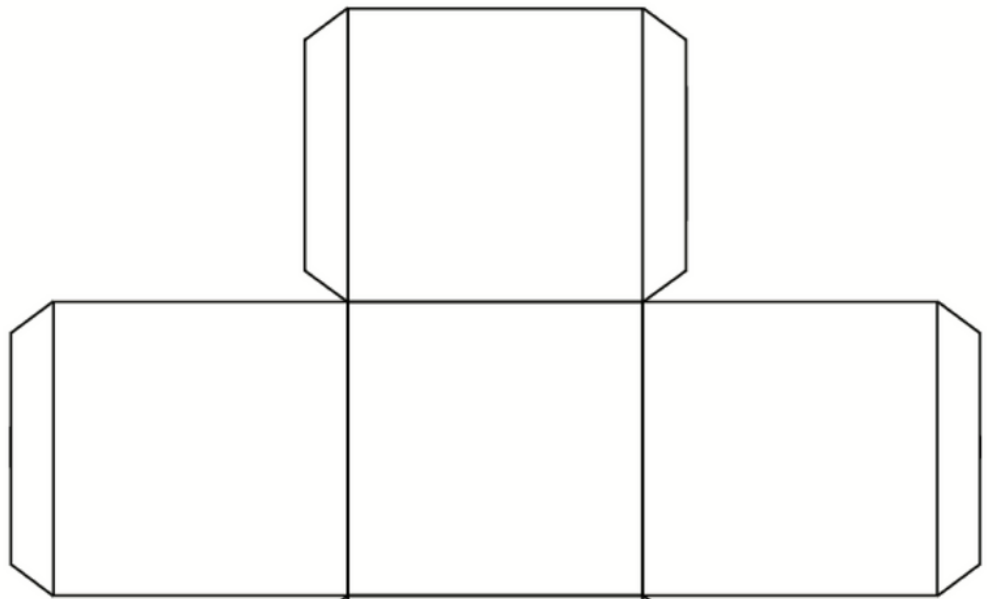
After the drawing is completed, the die is then assembled into its final die form. Glue the tabs to form the die.

Each kid then rolls their die one time to see what fruit or veggie they sample first. Then they can choose what order they sample the remaining five. Remind kids about sampling new foods and to try a new food over and over as it occasionally takes time to like a new flavor.

**MODIFICATION:** None.

**ATTACHED DOCUMENTS INCLUDE:**

- Dice template





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Taste Test Adventure

Trying a new food is an exciting part of any taste test adventure. Sometimes, one bite is not enough when you try a new food because it is so delicious. Other times, the new food is not a flavor you enjoy. However, don't give up as it is a natural reaction to not like the taste of some foods when you first try it. Just try it again and again. Sometimes, it takes 10 or more tries to like a new food. Next time, make a plan and try it with something you know you'll enjoy, like a dip.



### Kernels of Truth:

- Your tongue has thousands of taste buds!
- You have five types of taste: bitter, salty, savory, sour, and sweet.
- Your vision and sense of smell can greatly influence your sense of taste.



## Greek Yogurt Ranch Dip and Vegetables

### Vegetables

- 1 head of broccoli
- 1 cucumber
- 1 carrot
- Any other vegetables you like to dip

### Directions

1. Thoroughly combine all ranch dip ingredients in a large bowl.
2. Cover bowl and put in the refrigerator overnight for best flavor.
  - a. If you cannot wait, then refrigerate for at least two hours.

### Ranch Dip

- 1 cup of plain Greek yogurt
- 1/3 teaspoon of dried chives
- 1/2 teaspoon of dried parsley
- 1/8 teaspoon of dried dill weed
- 1/8 teaspoon of dried garlic powder
- 1/8 teaspoon of dried onion powder
- Salt and pepper to taste



**Notes:** Try dipping mushrooms, sugar snap peas, radishes, peppers, jicama, asparagus, cherry tomatoes and green beans.



# #20 THE BUZZ ABOUT BEES

**ACTIVITY DESCRIPTION:** Kids will play The Pollinator Game! Kids will learn about lots of pollinating creatures, not just bees!

**MATERIALS REQUIRED:**

- Set(s) of The Pollinator Game cards that have six pollinators and six flowers

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

**CONCEPTS TO COVER:**

Pollination: transfer of pollen between flowering plants of the same species that eventually results in seeds.

Different types of pollinators and what kinds of plants they are attracted to. Plants flowers are designed to attract a certain type of pollinator, they just happen to be something people also think are beautiful. Some plants coloring is even in the ultraviolet spectrum to attract those special pollinators a spectrum of light humans can't see!

**LESSON ACTIVITY (1-2 minutes):**

Prior to the activity, determine how many sets of cards you want and then print them. Two seems to be a good number as you can have two kids doing the activity while talking to them about pollination.

Ask kids if they know what pollination is and if they can name a pollinator. Let them know that without pollination we would not have many of the foods we need to survive.

Also, tell kids that there is an interesting fact about bees. Bees actually see differently than humans. Bees see in ultraviolet.

**HOW TO PLAY THE POLLINATOR GAME:**

Give a set of cards to the kids with the pollinators and the flowers in separate piles. Play a matching game to figure out which flowers attract which creatures. Flowers are pollinated by not only bees, but other insects, birds, bats, and even wind!

- Kids will match pollinator with the plant
- Pick a creature card
- Read the pollination facts on the back. Younger children may need this read to them.
- Match the creature with its favorite plant

**SELF-DIRECTED OPTION:**

After the kids register/check-in at market booth, they can be handed the cards and asked to match the pollinator with the flower. Let them know that clues are on the back of the pollinator card and the answer is located on the back of the flower card. Then, direct the kids to return the cards when they finish the game. Kids unable to read should be able to do this with an accompanying adult or older child's assistance. When handing the card to the kids, let them know that a variety of creatures pollinate the flowers that we enjoy for not only their beauty, but for the food they provide.

**ATTACHED DOCUMENTS INCLUDE:**

- The Pollination Game cards



ultraviolet vision



people vision



bee pollinated



butterfly pollinated



bat and moth pollinated



bat and moth pollinated





Bee-pollinated flowers can be variable in their size, shape, and coloration. Some bee-pollinated flowers tend to be yellow or blue, often with ultraviolet nectar guides and scent.

Butterfly-pollinated flowers tend to be larger and showy, pink or lavender in color, frequently have a landing area, and usually have a scent.

Beetle-pollinated flowers are usually large, greenish, or off-white in color, and heavily scented. Scents may be spicy, fruity, or similar to decaying organic material. Most beetle-pollinated flowers are flattened or disk shaped, with pollen easily accessible, although they may include traps to keep the beetle longer.

Bat-pollinated flowers tend to be large and showy, white, or light colored. They open at night and have strong odors, often large and bell-shaped. Sight, smell, and echolocation are used to initially find the flowers, and excellent spatial memory is used to visit them repeatedly.

Hummingbirds are the most familiar nectar-feeding birds for North America. Flowers attractive to hummingbirds tend to be large and red or have orange tubes. Since birds do not have a strong response to scent, they tend to be odorless.

One of the most important moth pollinators is the Hawk Moth. They act similar to hummingbirds: they hover in front of flowers with rapid wingspreads. So, moth-pollinated flowers tend to be white, night-opening, large and showy and produce a strong, sweet scent in the evening, night, or early morning.



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## The Buzz About Bees:

Bees are famous for two things: making honey and pollinating plants. Bees also see differently than humans, they can see in ultraviolet! Flowers have all kinds of beautiful patterns to attract bees that we can't see, because ultimately it is not our attention they need to attract, but that of insects, the perfect pollinators.



What a bee sees in ultraviolet!



### Kernels of Truth:

- Some pollinators are vertebrates like bats, birds, and small animals.
- Pollinator syndromes are the characteristics or traits of a flower that appeal to a particular pollinator. Such as bloom color, scents, nectar, nectar guides, pollen, and flower shapes.
- Nectar guides are visual clues, like patterns and darker colors in the center of the flower, that lead pollinators to nectar or pollen. Some can only be seen by ultraviolet light.



## Nasturtium Salad

### Ingredients

- Fresh nasturtium flowers
- 2 cups lettuce mix
- ¼ cup fresh basil
- ¼ cup olive oil
- 1 Tablespoon vinegar (can use balsamic vinegar)
- 1 Tablespoon lemon juice
- Salt and pepper to taste

### Directions

1. Toss nasturtium, lettuce, and basil together.
2. Mix olive oil, vinegar, lemon juice, salt, and pepper together to make a salad dressing.
3. Top salad with dressing.



# #21 TRANSPIRATION

**ACTIVITY DESCRIPTION:** Kids will learn about the process in plants called transpiration with a coloring page and a food coloring + flower or celery experiment.

## **MATERIALS REQUIRED:**

- Food coloring: green, blue, red, yellow
- Five glass jars ½ pint or pint
- Five stalks of celery with leafy tops or five carnations with white petals
- Markers and/or crayons
- Transpiration coloring page

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

## **CONCEPTS TO COVER:**

Transpiration: The process of water moving from the roots of a plant to its leaves where it ends with evaporation through the leaves.

Evaporation: The process of water changing from a liquid to a gas.

## **LESSON ACTIVITY (3-10 minutes):**

The food coloring portion needs to be prepared 24 hours ahead of time. Four jars will include a different color and a flower. The fifth jar will just contain water and a flower and will serve as the control for the experiment.

Use the coloring page to explain transpiration and evaporation to each child. Then show them each of the flowers in the jars to show how the food coloring added to the water has changed the color of the flower. Then let them color the page at the booth or take home.

**MODIFICATION:** None

## **SELF-DIRECTED OPTION:**

Set up the five glasses prior to the activity/market's start time.

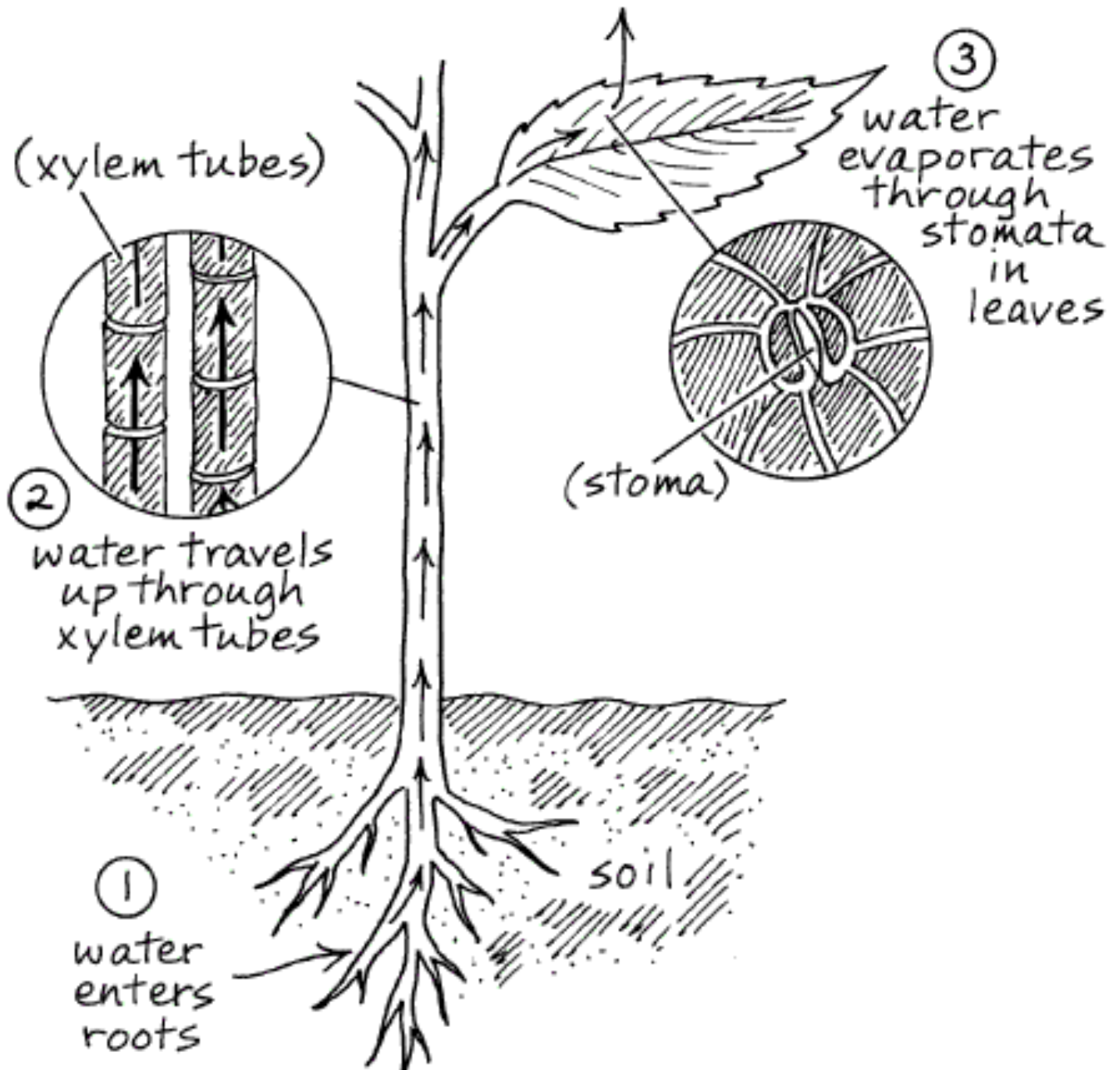
Then, kids register/check-in at market booth. Then, they are given a coloring sheet about transpiration, given a few seconds information about the experiment, then directed to the experiment, and asked to return when they are done looking at the flowers.

## **ATTACHED DOCUMENTS INCLUDE:**

- Coloring page



# Transpiration Process





# KERNEL

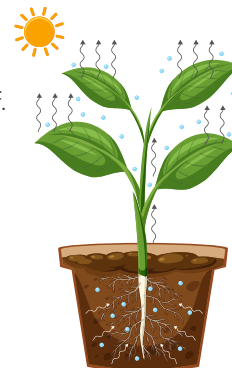
Kids Eating Right-Nutrition and Exercise for Life

## Plants Love Water!

TRANSPIRATION is when water is pulled up the stem of a plant from root to leaf. Water is sucked in at the roots and evaporates out the leaves. You can see this when you put a plant in colored water and after the plant sucks the water up, the plants stem and even the tips of the flower petals or leaves are colored.

Plants don't just move water. In the water are nutrients (plant food) from the soil that the plant needs to survive.

That continual flow of water and nutrients keeps the plant's cells firm. If the cells become short of water, they lose firmness, and the plant starts to wilt.



### Kernels of Truth:

- Plants absorb nutrients through a process called transpiration.
- Plants also need water to absorb nutrients (plant food) in the soil.
- Professional florists make plain flowers more interesting by using dyes to enrich the original color or to give blooms a new shade. Sometime through the process of Transpiration.

### Watch Video!

<https://www.youtube.com/watch?v=TR0rNWEN-kY>



## Watermelon Blueberry Mint Salad

### Ingredients

- 4 cups fresh watermelon chunks (The picture used a melon baller, but square chunks work fine too)
- 1-pint fresh blueberries
- Juice of ½ lemon
- About 10 mint leaves

### Directions

1. Cut up a medium watermelon into small cubes until you have about 4 cups
2. Rinse blueberries and add to watermelon
3. Squeeze ½ of a fresh lemon over the fruit and toss to coat
4. Tear or slice mint leaves into small pieces and mix into fruit
5. Cover and keep chilled until ready to eat!



# #22 TRANSPLANT A TOMATO PLANT

**ACTIVITY DESCRIPTION:** Kids will learn about transplanting a tomato, properly caring for a tomato plant and take a tomato plant home.

## **MATERIALS REQUIRED:**

- A tomato plant for each child. (Donations from growers are optimal.)
- An appropriate container to hold potting soil (2 or more if you expect many children attending at once). A recommended container is a deep wash basin to simulate planting in a garden bed. If unavailable, an appropriately sized pot will work.
- Potting soil for the container(s) (Donation for a garden or recycling center, or a grower)
- A garden trowel for each container
- A "practice" plant for each container. A practice plant can be a hardy plant, not necessarily a tomato plant.
- A "demo" tomato plant for the instructor.

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction. Also, this is a good activity to engage a community partner like Master Gardeners to supply a volunteer or two.

## **CONCEPTS TO COVER:**

Transplanting: is planting a seedling or young plant from a small pot to a larger pot or the ground. Determinate: tomatoes tend to produce all of their fruit at the same time and tend to have easily manageable growth with make them a better option in a container.

Indeterminate: tomatoes generally need staked, caged, and or pruned to manage their growth and keep them upright. Indeterminate tomato plants can grow up to ten feet tall. Produce season long once they attain fruiting stage.

## **LESSON ACTIVITY (3-5 minutes):**

Discuss finding the right place to plant a tomato plant and how to prepare the soil.

- Find a sunny location at home to plant a tomato plant as tomatoes need at least 6 hours of sunlight per day.
- Can be planted in garden, raised bed or a container. If in a container, make sure there is plenty of room for root development in container. Container should be large.
- Add organic matter, like compost, to prepare the soil before transplanting. Demonstrate how to transplant the tomato plant. Kids will practice.
- Instructor will dig a hole in the soil in the container.

- When ready to transplant the tomato plant, make sure the soil in the container is moist before removing the tomato plant from the container as this will help keep soil attached to the roots upon removal.
- Show kids how to gently remove a plant from its original pot and plant in the container.
  - Turn plastic pot upside down and have plant between fingers.
  - Gently squeeze pot from bottom to push plant out.
- Make sure plant is not root bound.
- Pinch off excess bottom leaves, if any.
- Plant tomato a little deeper than the root ball so tomato will grow out more roots, better root structure
- Fill the hole with soil. Press soil down gently so as not to harm the roots.
- Kids can replicate these steps with their "practice" plant in the container.
- Inform kids to water the plant frequently and fertilize as needed.
- If time allows, relay some tomato facts.
- Good source of Vitamins A & C, copper, as well as potassium.
- Pick or purchase tomatoes with shiny, bright skins and firm flesh.
- Tomatoes taste best if stored at room temperature. Make sure you store your harvested tomatoes out of direct sunlight.

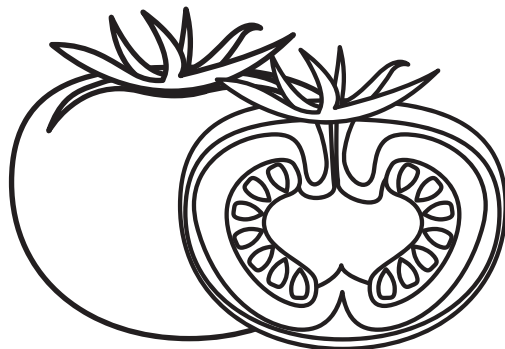
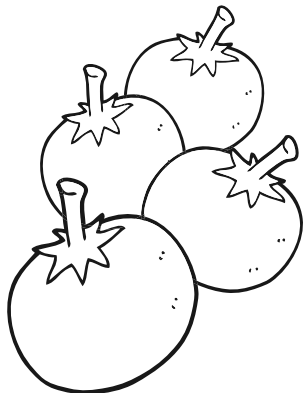
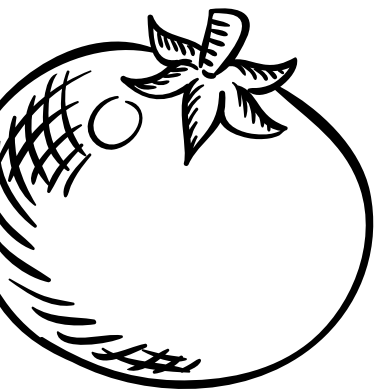
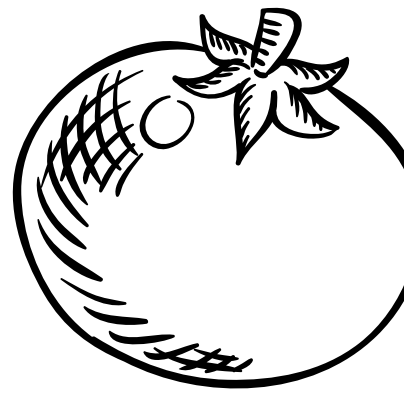
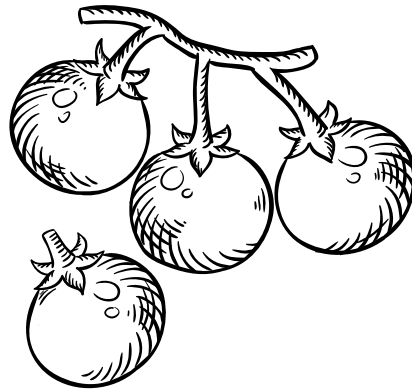
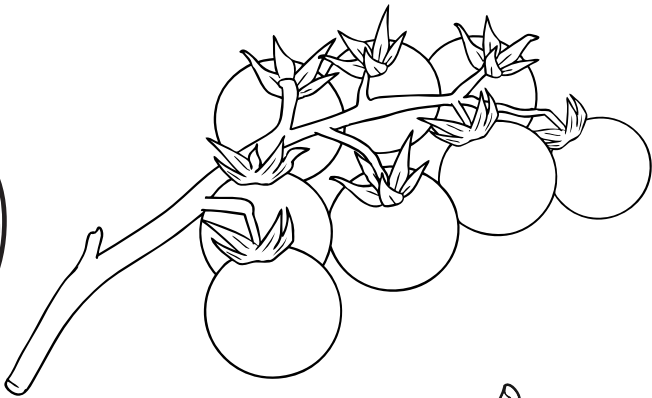
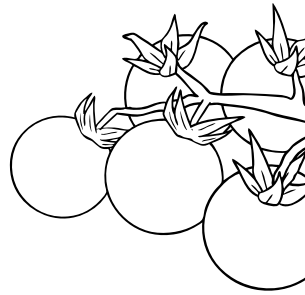
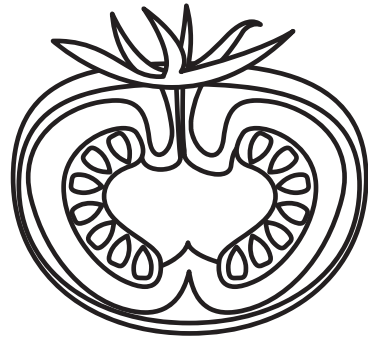
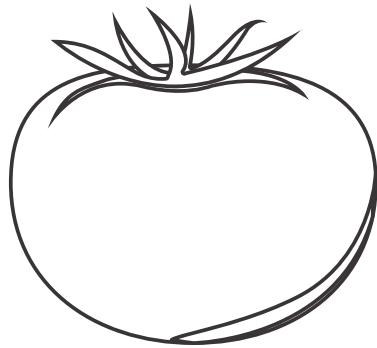
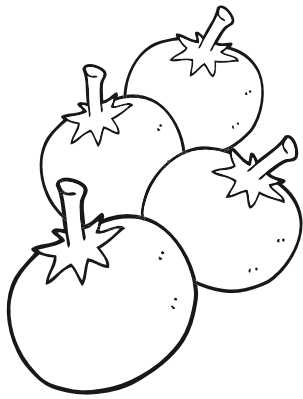
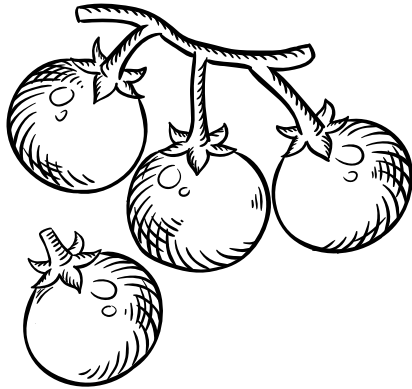
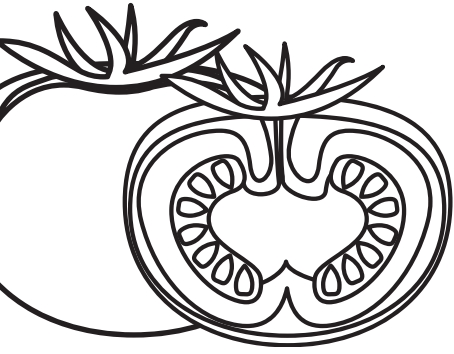
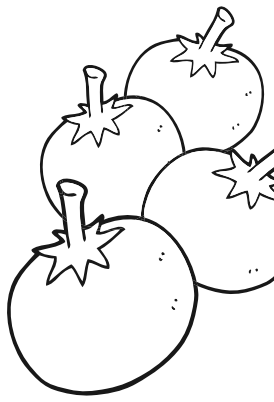
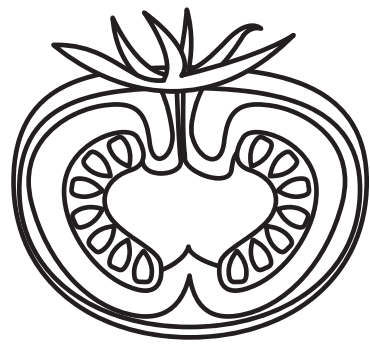
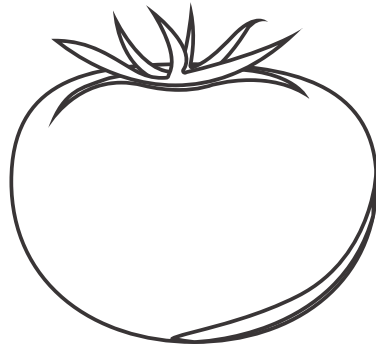
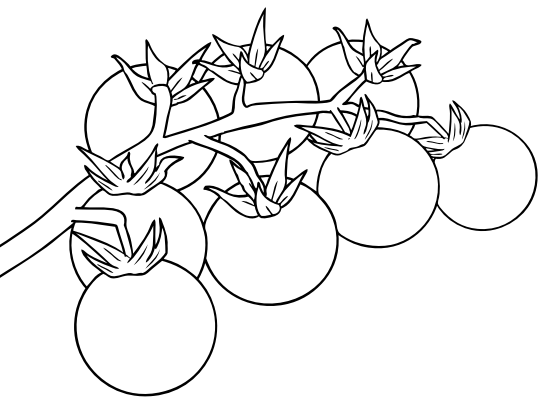
Kids pick out their tomato plant and then receive their activity card and the \$2 reward.

**MODIFICATION:** None.

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring Page







# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Transplant A Tomato Plant

**How to care for your tomato plant:** Find a sunny location for your tomato plant as tomatoes need at least 6 hours of sunlight per day. Add a little compost, to prepare your soil before transplanting. When transplanting your tomato plant, make sure the soil in the container is moist before you remove it from the container, this will help keep soil attached to the roots. Be as gentle as possible so as not to harm the roots.

Pinch or snip off any leaves near the bottom of the plant, but do not tear the leaf off so as not to injure the skin of the stem. Place your plant in deep (covering some stem) in the hole and then fill the hole with soil. Gently pack in the soil. Remember to water your plant frequently and fertilize your plant as needed.



### Kernels of Truth:

- Tomatoes are high in Vitamins A & C and a good source of potassium.
- Pick or purchase tomatoes with shiny, bright skins and firm flesh. Also make sure you store your harvested tomatoes out of direct sunlight.
- Tomatoes taste best if stored at room temperature, not in the fridge.



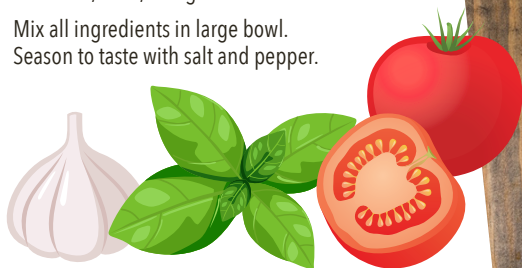
## Tomato Basil Salsa

### Ingredients

- 3 pounds ripe tomatoes, chopped
- ¾ chopped fresh basil
- 3 tbsp. lime juice
- 2 garlic cloves, minced
- ¾ tsp. ground cumin or spice of choice

### Directions

1. Have an adult help you chop the tomatoes, basil, and garlic cloves.
2. Mix all ingredients in large bowl. Season to taste with salt and pepper.



# #23 YOGA

**ACTIVITY DESCRIPTION:** Kids will learn and demonstrate several yoga poses. See yoga as a potential lifelong activity and learn that physical activity is important and fun!

**MATERIALS REQUIRED:**

- Optimal to have a soft surface for the activity area. Yoga mats or grass would be good options.

**STAFFING NEEDED:** One to two staff needed. Two or more would be optimal with one person from the registration/check-in and the post-activity process, the other for leading the activity. This person could be an actual yoga instructor!

**CONCEPTS TO COVER:**

Coordination: using different parts of the body together to accomplish a task effectively and efficiently

Flexibility: Range of motion. Ease of the body to move without causing injury, especially the movement of muscles around the joints.

**LESSON ACTIVITY (5-10 minutes):**

This activity would need some space. We recommend using poses that do not have kids on the ground. This is an activity that can be enhanced with the assistance of a yoga instructor. If no yoga instructor available, then use several of these simple yoga poses listed below. For more in-depth written instructions, search the Internet images and descriptions of each pose.

- Airplane pose
- Mountain pose
- Star pose
- Tree pose
- Triangle pose
- Warrior pose

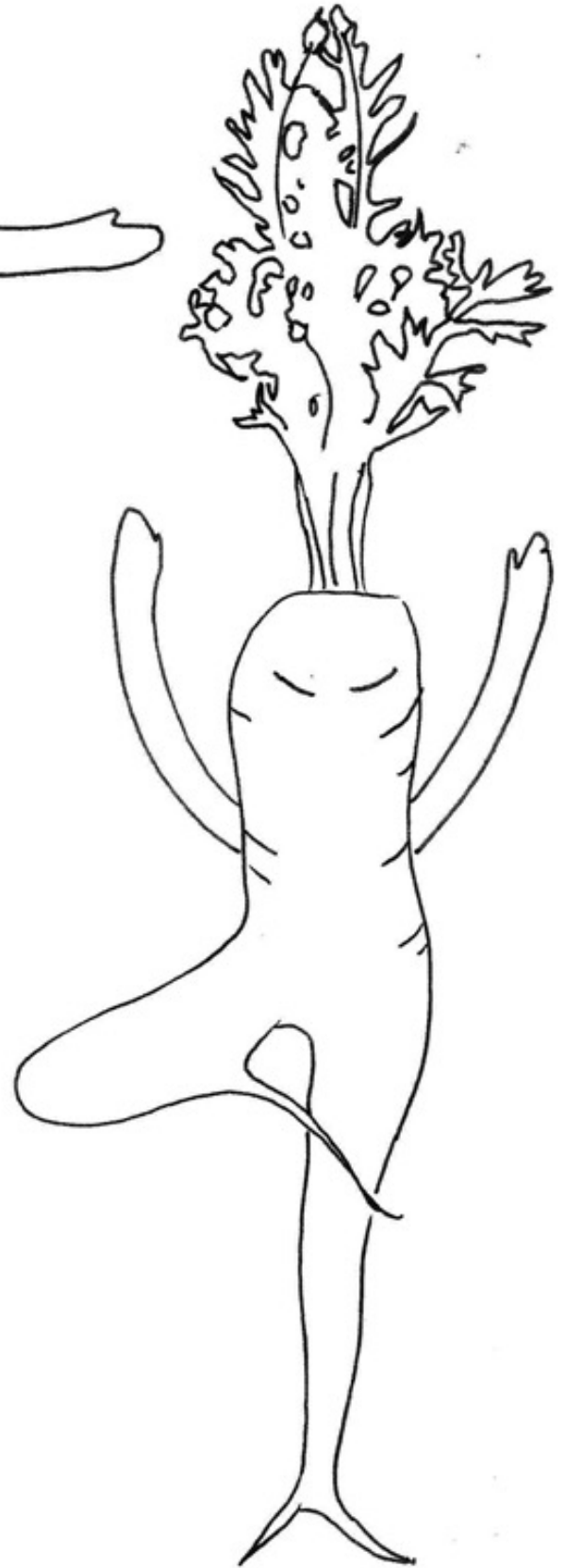
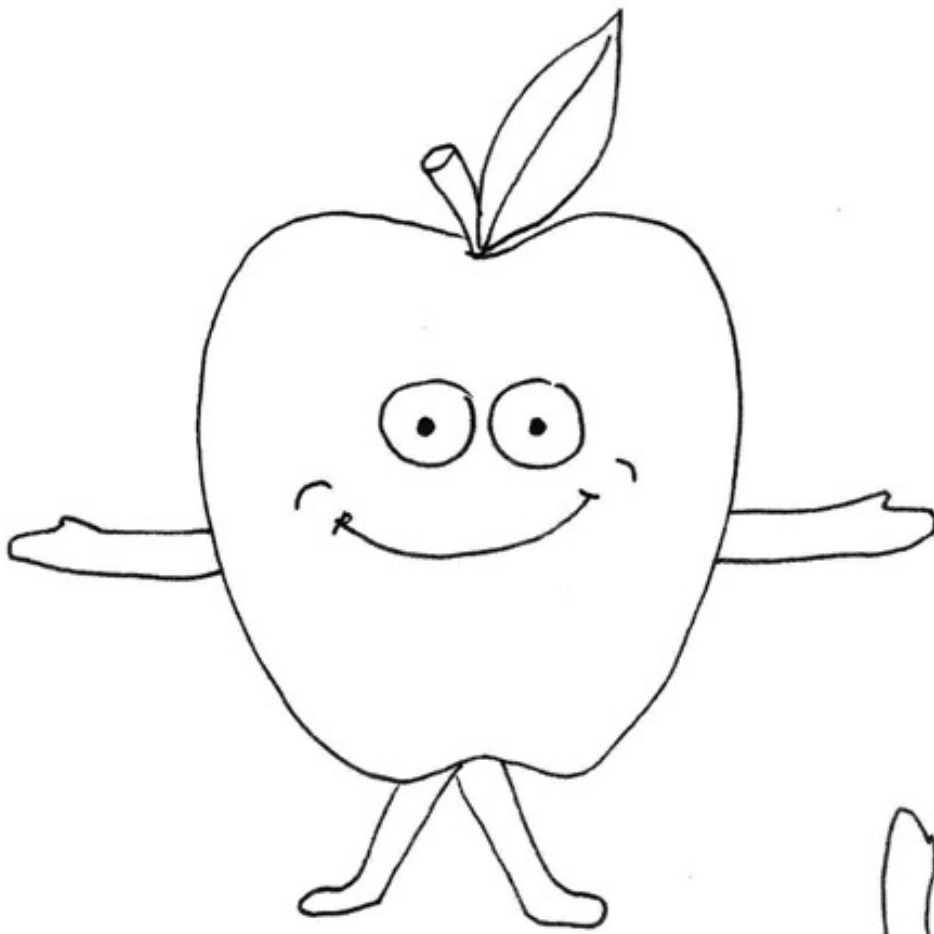
**Some facts for the activity:**

- Yoga means "join together". The purpose of yoga is to join together mind, body, and spirit.
- Yoga can help with concentration, body awareness and how to calm the mind while also improving flexibility, strength, and coordination.
- Yoga is the practice of moving your body into different positions. These poses are a combination of stretching, balancing, breathing and meditation.
- Some believe that yoga can boost confidence and create a sense of general well-being.
- Yoga can be practiced at home.
- Yoga started in India 3,000-5,000 years ago.

**MODIFICATION:** None.

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring page



Yoga





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Yoga

Yoga means "join together". This is because the purpose of yoga is to join together mind, body and spirit. Yoga can help with concentration, body awareness and how to calm the mind while also improving flexibility, strength, and coordination. Yoga is the practice of moving your body into different positions. These poses are a combination of stretching, balancing, breathing and meditation.



### Kernels of Truth:

- Some believe that yoga can boost confidence and create a sense of general well-being.
- Yoga can be practiced at home.
- Yoga started in India 3,000-5,000 years ago.



## Caprese Salad

### Ingredients

- 2 large Tomatoes, chopped
- 1 small bunch Basil
- ½ pound Mozzarella, diced
- Olive oil
- Salt and pepper to taste

### Directions

1. Have an adult chop all the ingredients.
2. Combine and mix ingredients in a bowl.
3. Can serve as a side or an afternoon snack, it's delicious on top of spaghetti!

**Notes:** You can add other Italian seasoning like thyme, oregano, or parsley! You can even make little caprese skewers. Put a cherry tomato, basil leaf, and mozzarella on a toothpick.



# #24 COMPOSTING

**ACTIVITY DESCRIPTION:** Kids will learn about composting and learn how to build a compost pile at home. Learn the C/N Ratio of 30:1 and understand the difference between brown and green materials. They will also know what materials to keep out of a compost pile. As well as learn some benefits of compost like building up the soil, adding nutrients for plants, and water retention.

## **MATERIALS REQUIRED:**

- Green materials in a container for display
- Brown materials in a container for display
- New compost pile for display
- Finished compost in a container for display

**SPECIALTY STAFFING:** This may be a good activity for engaging an expert to provide the instruction. This could be a Master Composter volunteer or an employee of a composting company. Your local Master Composter or Master Gardener program may have composting brochures available for you to distribute.

## **CONCEPTS TO COVER:**

Carbon/Nitrogen ratio: The recommended C/N ratio to start the pile is 30:1.

Carbon Materials: Are called the "brown" materials. Common materials include leaves, dried grass clippings, hay, straw, dried garden waste, newspaper.

Nitrogen Materials: Are called the "green" materials. Fresh grass clippings, kitchen waste/scrap (like vegetable peelings, apple cores, coffee grounds, etc.), fresh garden waste, manures (like cow, chicken, but do not use pet wastes from animals like cats, dogs, etc.).

## **LESSON ACTIVITY (5-10 minutes):**

Prior to the activity, if possible, enlist the services of a Master Composter (or Master Gardener) to lead the instruction portion of the activity. These individuals are looking for volunteer educational opportunities. Ask them to present this basic material to teach kids about building a compost pile, what are the components of the pile, and the benefits of compost.

Gather materials prior to the activity (see below). No need to get special containers to hold the display materials. Anything will do as long as the kids can see the different items that are greens versus browns. In one display have a compost pile. This can be a small pile that is in a bowl or bucket, but shows the greens and browns mixed together. This pile should be moist in the wrung-out sponge state.

During the activity, these facts should be covered:

- Compost requires two types of materials, green and brown.
- Brown materials are carbon sources and include: dried leaves, wood chips, newspaper, sawdust and pine needles. Wood Chips, sawdust and pine needles should be used in small amounts and distributed well among the pile

- Green materials are nitrogen sources and include: grass clippings, kitchen scraps, coffee grounds and manures from animals like cows and chickens.
- Manures can be high in nitrogen and are considered "hot".
- You want to keep in mind about a 2:1 ratio. 1 part Green to 2 part Brown. \*These ratios can vary
- Keep the following out of your compost: bones, meat, grease, milk, cheese, pet droppings, oils, diseased plants, weeds, and fat. These materials can be bad for the composting process and/or attract pests.
- Vermicomposting, or vermiculture, is composting with worm
- Compost can improve soils, add nutrients for plants and reduce the need for fertilizers and water.
- Compost can be a home for a variety of creatures like worms, sow bugs, millipedes and centipedes. For a fun project, track what bugs you find in your compost pile.

To make your own compost at home, in a container 3'x3'x3' add:

- 1 part green (like grass, kitchen scraps, coffee grounds)
- 2 parts browns (like dried leaves, straw, shredded paper)
- Mix thoroughly all materials
- Add water so it is as moist as a wrung-out sponge
- Turn weekly and add water as needed.
- The container should have air flow.
- Watch nature do its thing!

**MODIFICATION:**

- Demonstrate how to make a real compost pile. The materials you would need for this:
- 3x3x3 bin (or a similar size). Options include:
- A commercially available compost bin.
- Joining four pallets together (usually can find for free)
- Chicken wire and four posts
- A garden fork for turning the pile
- A tarp at least 5'x7'. For explanation, these are usually used for covering boats, etc. and the most popular color is blue.
- Have a variety of greens and browns in separate containers.

On the tarp, add browns and greens together with the ration 1 parts green to 2 part brown. This combination usually leads to a good C/N ratio. A good way to mix is with the fork, but you can also grab an end of the tarp and gently flip the materials this way. You can walk one end to the other which turns the pile as you go, then when you get to the other end walk this end back. Go to the other end and pick it up and walk it back to the other.



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Composting ingredients:

Compost requires two types of materials, green and brown.

**BROWN MATERIALS** are carbon sources and include: dried leaves, wood chips, newspaper, sawdust and pine needles.

**GREEN MATERIALS** are nitrogen sources and include: grass clippings, kitchen scraps and coffee grounds.

**Keep the following out of your compost:** bones, meat, dairy, oils, and fats.



### Kernels of Truth:

- Vermicomposting, or vermiculture, is composting with worms!
- Compost can improve soils, add nutrients for plants and reduce the need for fertilizers and water.
- Compost can be a home for a variety of creatures like worms, sow bugs, millipedes, and centipedes. For a fun project, track what bugs you find in your compost pile.



## Composting

### In a container 3'x3'x3' add:

- 1 part green (like grass, kitchen scraps, coffee grounds)
- 2 parts browns (like dried leaves, straw, shredded paper)
- Mix thoroughly all materials
- Add water so it is as moist as a wrung-out sponge
- Turn weekly and add water as needed.

Watch nature do its thing!





# #25 FUNGI

**ACTIVITY DESCRIPTION:** Kids will learn some basic facts about fungi as well as learn that mushrooms can be a sign of a healthy garden. Understand that some mushrooms/fungi can be dangerous and will not pick or eat a mushroom without adult supervision. Learn that mushrooms help other plants get food.

**MATERIALS REQUIRED:** Mushrooms for visual to show the fruiting cap.

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

## CONCEPTS TO COVER:

Hyphae: threads of a fungus that weave throughout the soil.

Mycelium: made up of many hyphae.

## LESSON ACTIVITY (2-5 minutes):

Share a few of these facts:

- Mushrooms are a sign of a healthy garden.
- Some mushrooms may be poisonous. Kids-please do not pick or eat without adult guidance.
- Hyphae are threadlike strands from a fungus that weave throughout the soil.
- Mycelium is a bunch of hyphae joined together.
- The mycelium extends the roots of trees, shrubs, and other plants to increase their effectiveness in collecting nutrients.
- The oldest mushroom in the world is 90 million years old.
- There are 30 species of mushrooms that glow in the dark.
- Fungi (mushrooms) recycle plants after they die and turn them into rich soil.
- Without fungi, the earth would be buried in dead wood and other plants.
- A single portabella mushroom can contain more potassium than a banana.

**MODIFICATION:** None.



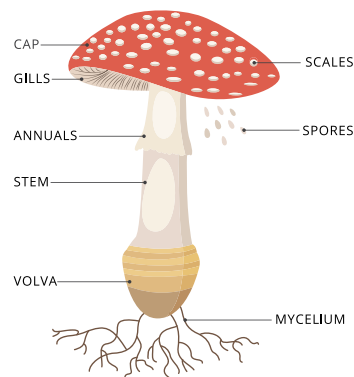
# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Fungi are so interesting!

They come in so many shapes, sizes, and colors! Some even can glow in the dark. Mushrooms (or Fungi pronounced Fun-Guy) can be harmful to you or your pets (don't ever pick and eat a mushroom) but they are great for your plants and trees.

The part we see of a mushroom is just the fruiting cap. The fruiting cap is where the seeds are, but in mushrooms, seeds are tiny grains called spores. Spores are so small they blow in the wind. Most of a mushroom is underground with a ton of threadlike strands weaving all throughout the soil. These threads are called hyphae and a whole bunch of them are called mycelium. They extend the roots of trees, shrubs, and pretty much all other plants to collect and move food to the plants that need them.



## Black Bean Mushroom Sloppy Joes

### Ingredients

- 1 Tbsp olive oil
- 1 cup fresh mushrooms, chopped
- ½ cup chopped onion
- ½ cup chopped sweet pepper
- 1 can black beans, rinsed and drained
- 1 8-oz can tomato sauce
- 1 tsp chili powder
- Salt and pepper to taste
- 4 hamburger buns

### Directions

1. In a large skillet have an adult help you combine all ingredients and for 15 minutes cook on medium heat until thick enough for Sloppy Joe sandwich.
2. Put Sloppy Joe topping on hamburger buns and make sure to have a napkin nearby!

(Can also add brown sugar, Worcestershire sauce, or mustard to recipe)



### Kernels of Truth:

- A single Portabella mushroom can contain more potassium than a banana.
- There are 30 species of mushroom that glow in the dark.
- Fungi (mushrooms) recycle plants after they die and turn them into rich soil.
- If not for fungi the earth would be buried in dead wood and other plants.
- The oldest mushroom in the world is 90 million years old.

# #26 LEAVES

**ACTIVITY DESCRIPTION:** Kids will see a variety of different leaves. Learn that leaves feed a plant and that some of these plants, even their leaves, feed us as well. Then complete a fun leaf rubbing craft.

## **MATERIALS REQUIRED:**

- A variety of leaves, recommend different sizes and shapes from trees (apples, oaks, maples, etc.), shrubs (lilacs, rhododendrons, etc.) and garden plants (raspberry, tomatoes, kale, etc.)
- White paper
- Crayons (work better with paper off so you can use the sides)

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

## **CONCEPTS TO COVER:**

**Photosynthesis:** the process that produces food for plants (glucose) from carbon dioxide, water, and sunlight.

**Chlorophyll:** is a green substance that absorbs energy from sunlight to assist in the production of food for the plant.

## **LESSON ACTIVITY (3-5 minutes):**

Prior to the activity, collect a variety of leaves with several specimens for each variety on hand due to heavy usage by the kids. Tree varieties like maple, oak, apple, pear, plum are good ones. Other leaf ideas include raspberry, kale, tomato, lilac, etc.

Kids will do leaf rubbings by placing a leaf or leaves under a piece of paper and then rubbing the crayon over the paper showing the outline of each leaf as well as the veins. Kids can use as many different crayons as possible to make whatever designs they wish. Point out to kids that they can do this project at home as well. They can find leaves in their garden or in the park.

While kids are doing the leaf rubbings, share some facts about leaves.

- Point out the veins in a leaf or in the rubbing of the leaf.
  - Ask kids if they know what a vein does for a plant.
  - Explain that the veins carry water, minerals and sugars between a leaf and the rest of the plant.
- Some leaves are edible.
  - Edible leaves like spinach, lettuce, and kale, to name a few, are full of nutrients.

- For instance, one serving of kale has 180% of the Recommended Daily Allowance (RDA) of Vitamin A, 45% RDA of Vitamin C and 15% RDA of calcium.
- Not all leaves are edible, like a rhubarb leaf. Please ask a responsible adult before eating an unfamiliar leaf or plant.
- The main purpose of a leaf is to make food for the plant.
  - Photosynthesis is the process that produces food for plants (glucose) from carbon dioxide, water, and sunlight.
  - Chlorophyll is a green substance that absorbs energy from sunlight to assist in the production of food for the plant.
  - Chlorophyll makes a leaf green.
  - In the fall, the decrease in sunlight and the drop in temperature leads to chlorophyll breaking down and a change of leaf color.
- Waxy leaf surfaces decrease water loss

**MODIFICATION:** None.





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Leaves

The main purpose of a leaf is to make food for the plant. Photosynthesis is the process that produces food for plants (glucose) from carbon dioxide, water, and sunlight. The veins in a leaf carry water, minerals and sugars between a leaf and the rest of the plant.

Chlorophyll is a green substance that absorbs energy from sunlight to assist in the production of food for the plant. Chlorophyll makes a leaf green. In the fall, the decrease in sunlight and the drop in temperature leads to chlorophyll breaking down and a change of leaf color.



### Watch Video!

<https://www.youtube.com/watch?v=A3U2jMKfYS8&t=1s>



### Kernels of Truth:

- Waxy leaf surfaces decrease water loss.
- Edible leaves like spinach, lettuce, and kale, to name a few, are full of nutrients. For instance, one serving of kale has 180% of the Recommended Daily Allowance (RDA) of Vitamin A, 45% RDA of Vitamin C and 15% RDA of calcium.
- Not all leaves are edible. Please ask a responsible adult before eating an unfamiliar leaf or plant.

## Easy Sautéed Greens

### Ingredients

- 1 handful of rainbow chard
  - 1 handful of purple kale
  - 1 handful of curly kale
  - 1 handful of collard greens
- (Any of these greens can be substituted with a leafy green of your choice, my recommendation is to pick whatever is in season!)
- 3 cloves of garlic peeled and minced
  - 1-2 tbsp of olive oil or butter
  - Salt and pepper to taste
  - 2-3 tbsp of red wine vinegar (or vinegar of your choice)

### Directions

1. Thinly chop all greens and remove any thick stems. Smash, peel, and mince garlic.
2. Add oil and garlic to a frying pan on med-high heat. Let garlic cook for about 1-2 minutes, or until aromatic.
3. Add all chopped greens into the pan and wait for them to cook down. Pour red wine vinegar over the cooking greens.
4. Cook until greens have reduced in size and are starting too lightly brown.



### Watch Video!

<https://www.youtube.com/watch?v=nYxMfUuLM3Q>



# #27 LEGUMES

**ACTIVITY DESCRIPTION:** Kids will learn the definition of a legume, why they are good for the soil (about nitrogen) and make a legume mosaic craft to take home.

## **MATERIALS REQUIRED:**

- Small paper plates
- Lots of Elmer's glue
- Variety of colorful legumes such as: dried peas, beans, and lentils.
- Bowls for each of the dried legumes.

**STAFFING NEEDED:** Two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## **CONCEPTS TO COVER:**

What is a legume? A legume is a plant in the family Fabaceae, the fruit or seed of the plant is called a pulse. Some examples of legumes are alfalfa, clover, peas, chickpeas (garbanzo beans), and lentils. One of the things that makes legumes special is that most of them have a symbiotic (mutually beneficial) relationship with a nitrogen-fixing bacteria contained in their root system specifically in structures called root nodules. Instead of having to feed a plant nitrogen the plant can produce its own! Some legumes even leave nitrogen in the soil, or they can be chopped up and incorporated into soil to benefit next year's crop. Because of this, some legumes play a key role in crop rotation.

Why is nitrogen important? Nitrogen is so important to plants because it is a major component of chlorophyll, the compound by which plants use sunlight energy to produce sugars from water and carbon dioxide (i.e., photosynthesis). It is also a major component of amino acids which are the building blocks of proteins. Without proteins, plants wither and die.

Symbiotic relationship: An intimate relationship between two or more species, which may or may not be beneficial to either organism. In the case of legumes is a relationship that benefits both, plants get a form of nitrogen they need to survive, and bacteria get a safe home.

Nitrogen-fixation: A process where nitrogen in the air is converted into ammonia, which most plants can then use to create food through photosynthesis and essential amino acids to make proteins plants need to live and function.

Crop Rotation: Different crops of plants use up different nutrients from the soil. Some plants give nutrients back to the soil. By planting the first type one year and the second type the next year (or rotating crops), you help make sure the soil continues to have it also helps reduce pathogens and pests that may be in the soil attracted by having the same crop multiple years.

**LESSON ACTIVITY (15-20 mins):**

How to make a legume mosaic:

First draw a simple picture on the center of the paper plate. Then glue beans over the picture starting in the middle of the image and moving outwards. Try to cover the whole area. Encourage kids to use a lot of glue to make sure the beans stay on the image after it has dried.

Have them use different colors, sizes or shapes of legumes to create an interesting and beautiful design! Use different legumes in your design to indicate eyes ears or make a cool pattern. Let dry for at least 15 mins before they take it home and leave flat overnight.

**MODIFICATIONS:**

Don't use glue. Have a few larger images drawn on poster board and have the kids work together to make the image beautiful by covering the image with a variety of different colored and shaped legumes. After the images is made remove the legumes trying your best to keep some separated to use the next time. Or just have some extra to keep adding to the supply.



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Super Legumes

A legume is a plant like alfalfa, clover, peas, chickpeas (garbanzo beans), and lentils. One of the things that make legumes special is that most of them have a symbiotic (mutually beneficial) relationship with nitrogen-fixing bacteria. This bacteria is contained in root system in structures called root nodules. Instead of having to feed a plant nitrogen, the plant can produce its own!



### Kernels of Truth:

- Legumes are the 3rd largest family of flowering plants.
- Legumes range in size from small plants to large woody trees, such as the black locust tree which grows well in Spokane.
- Legumes instead of just taking nutrients from the soil give it back by fixing nitrogen from the atmosphere.



## Cowboy Caviar

### Ingredients

- 3 medium diced tomatoes
- 2 ripe diced avocados
- 1/3 cup diced red onion
- 15 oz can black beans rinsed and drained
- 15oz can of black-eyed peas rinsed and drained
- 1 ½ cups fresh or frozen sweet corn
- 1 colored bell pepper
- 1 jalapeno seeded and finely chopped (or less to make it less spicy)
- 1/3 cup chopped cilantro

### Dressing

- 1/3 cup olive oil
- 2 tablespoons lime juice
- 2 tablespoons red wine vinegar
- 1 teaspoon sugar
- ½ teaspoon salt
- ½ teaspoon pepper
- ¼ teaspoon garlic powder
- Bag of Tortilla chips



### Directions

1. In a large bowl mix, tomatoes, avocado, onion, black beans, black eyed peas, corn, bell pepper, jalapeno, and cilantro.
2. Whisk together olive oil, lime juice, red wine vinegar, sugar, salt, pepper, and garlic powder.
3. Pour dressing over the top of the veggies and mix well, serve with tortilla chips.



### Watch Video!

[https://www.youtube.com/watch?v=oy\\_YFbJDIk8](https://www.youtube.com/watch?v=oy_YFbJDIk8)



# #28 MEET THE TUBERS

**ACTIVITY DESCRIPTION:** Kids will learn about vegetables that are tubers and roots. As well as learn through the sense of touch that some vegetable items feel very similar.

## **MATERIALS REQUIRED:**

- One of each item: potato, sweet potato, carrot, and parsnip (If possible, solicit donations from farmers)
- A box, like a shoe box size or larger, with its lid
- Blindfold (optional: offer to kids if they would like to try it blindfolded). A night sleeping mask can be purchased for about \$5 or purchase a tie from a vintage clothing store.

**STAFFING NEEDED:** At least 2 staff are needed, with one person for the registration/ check-in and the post-activity process and the other for the activity instruction.

## **CONCEPTS TO COVER:**

Root vegetables: draw nutrients and moisture from the soil for the rest of the plant. Carrots, parsnips, and beets are a few examples of root vegetables.

Tubers: store nutrients and can reproduce a clone of itself. Potatoes and sweet potatoes are tubers.

## **LESSON ACTIVITY (1-2 minutes):**

A week prior to the activity, solicit potential donations from farmers for the week of the activity. If not, purchase needed produce items.

Find appropriate box. Cut a hole in the center of the lid that will allow an average adult's hand to fit inside. This will make it easy to demonstrate how to do the activity to kids, if needed, and it will allow enough space for the child to maneuver the item through the hole. Also, decorate the box, if desired, to make more visually appealing.

During the activity, tell the child about tuber and root vegetables from concepts above. Remind them that some of the foods they eat grow underground.

Place one of the items in the box without anyone seeing and have a child stick their hand in to feel the item. Ask them what they think they are feeling. When they guess, have them pull the item out. If they are blindfolded, they can remove the blindfold to look.

Discuss what nutritional value the item selected has:

- Sweet potatoes are high in Vitamins A and C.
- Potatoes are high in Vitamin C and potassium.
- Carrots provide valuable amounts of Vitamins A and C.
- Parsnips are a great source of Vitamin C, fiber, and folate.

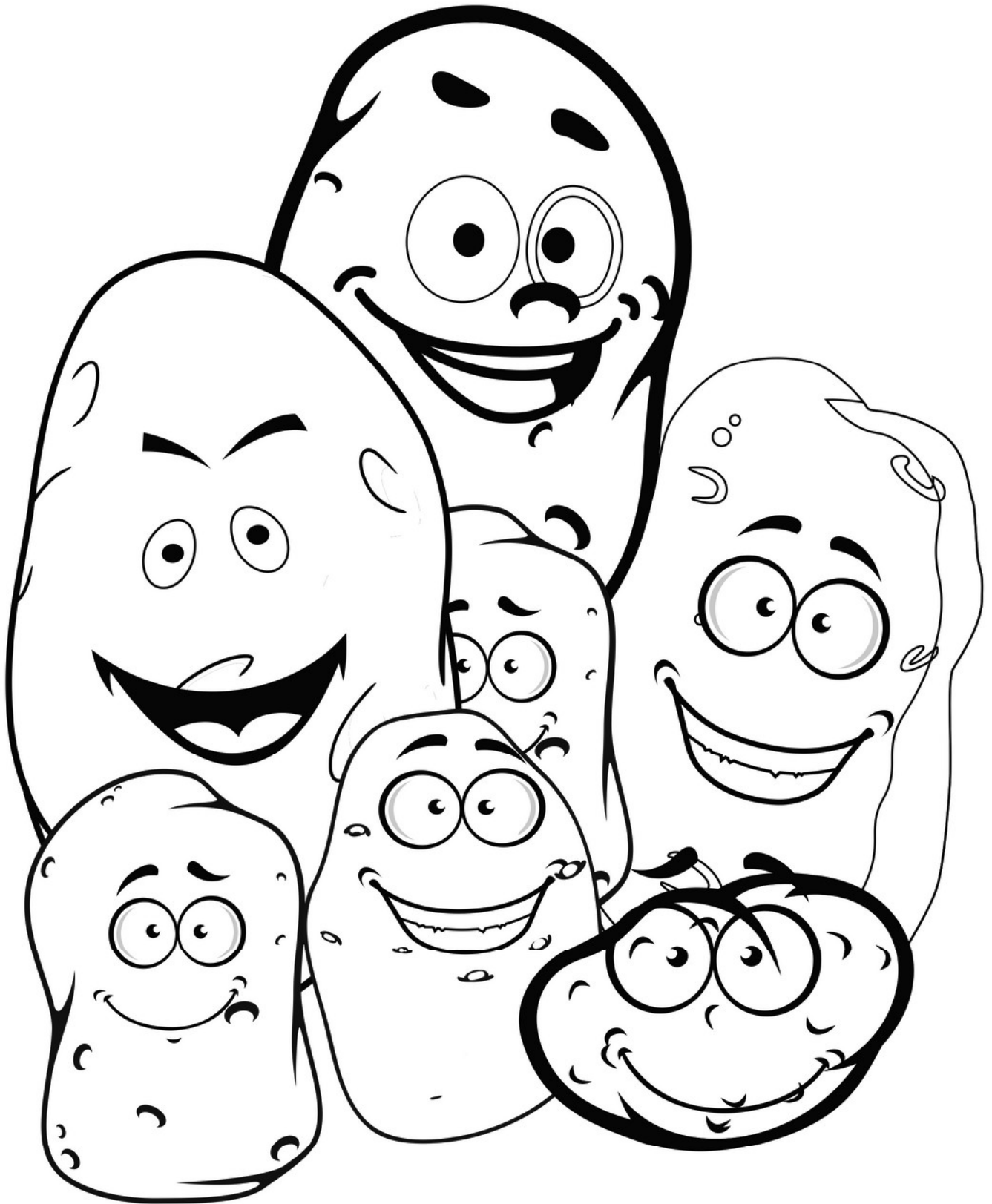
Give each child at least two tries to identify items in the box. If staff has time and inclination, staff can mention one or more of the KERNELs of truth while the kids try to guess the items.

**MODIFICATION:** None

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring page

# Meet the Tubers





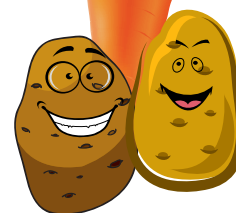
# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Meet the Tubers

Some vegetables grow underground and are called root vegetables. Examples are: carrots, beets, parsnips. Others are called tubers: like potatoes and sweet potatoes. Root vegetables draw nutrients and moisture from the soil while tubers store nutrients.

Many are high in nutrients; sweet potatoes are high in Vitamins A and C. Potatoes are high in Vitamin C and potassium. Carrots provide valuable amounts of Vitamins A and C. Parsnips are a great source of Vitamin C, fiber, and folate.



Meet Carrot - your friendly root vegetable and her friends, The Tubers!



### Kernels of Truth:

- Roots and tubers were first highly valued for their nutrients and high carbohydrate content.
- Roots and tubers can be relatively easy to store, and this ability is what led to the invention of the root cellar.
- In Europe, parsnips were used as a source of sugar until the availability of beet and cane sugar.

## Oven-Roasted Sweet Potato Wedges

### Ingredients

- 3 small to medium sized sweet potatoes (about 2 pounds)
- 2 tablespoons of olive oil
- ½ teaspoon of sea salt
- ½ teaspoon of freshly ground black pepper
- ¼ teaspoon of paprika
- ¼ teaspoon of garlic powder



### Directions

1. Preheat oven to 450 degrees.
2. Peel sweet potatoes. Cut each sweet potato into about 8 wedges.
3. Put olive oil in a large bowl. Add wedges and stir to coat well. Sprinkle remaining ingredients over the now well-coated wedges.
4. Place one layer of wedges on baking sheet and put into oven for 25-30 minutes, or until lightly browned and soft. Turn the wedges after first 15 minutes.
5. Allow to cool a few minutes prior to serving.



**Notes:** You can add other veggies like parsnips or carrots!



# #29 POTATO PALS

**ACTIVITY DESCRIPTION:** Kids will learn a few facts about the nutritional value of potatoes. As well as how to properly purchase and store potatoes. Then create and take home their very own potato pal!

## **MATERIALS REQUIRED:**

- Glue Sticks
- Toothpicks
- Cherry tomatoes
- Potatoes
- Carrots
- Zucchini
- Pipe cleaners (optional)
- Googly eyes (optional)
- Knife (Only used by staff)
- Cutting board
- Construction paper (optional)
- Other available and interesting fruits and vegetables!

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction. Can be done with one person.

## **CONCEPTS TO COVER:**

Nutritional Value of Potatoes: Potatoes have more potassium than a banana (21% of recommended intake), more vitamin C than an orange (45% of recommended intake) and more fiber than an apple with only 100 calories. 20% of a potato's nutrition is contained in or near its skin. So, eat the skin when appropriate.

How to Shop for and Store Potatoes: Purchase potatoes without soft spots, discolorations, or cracks. If your potato has any green areas, please peel those away. The green area tastes bitter and can make a person sick. Store your potatoes in a cool, dark place with good air circulation to prevent them from turning green.

## **LESSON ACTIVITY (3-10 minutes):**

Zucchini, carrots and other appropriate fruits and vegetables should be cut prior to the start of the activity.

Before, during and after each participation, interject a few of the facts from the Concepts to Cover section.

Out of the supplied craft materials and vegetable products, kids can make a head or creature out of a potato.

Toothpicks are used to attach cherry tomatoes to potato as arms, sliced carrots or zucchini can be feet.

Construction paper cut be cut in a strip and then made into a circle, gluing the ends together. This can serve as a "stand" for the potato or as some sort of hat for the potato head. (Glue may not work on the potato).

Pipe cleaners can be used as belts, antennae, and other things.

**MODIFICATION:** None

**SELF-DIRECTED OPTION:**

Set up a crafting area with all of the supplies that are easily accessible.

First, kids register/check-in at market booth. Direct kids to the crafting area; gently ask them to only use a few of the items because there is a limited supply, so they need to share with others. Then, ask them to return when they finish with their potato creation.





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Potato Pals

Potatoes have more potassium than a banana, more vitamin C than an orange and more fiber than an apple with only 100 calories! But 20% of that potato's nutrition is contained in or near its skin so eat the skin too!

When buying potatoes they shouldn't have soft spots, discolorations, or cracks. If your potato has any green areas, please peel those away. The green area tastes bitter and can make a person sick. To keep your potatoes from sprouting, rotting, or getting green, store in a cool, dark place with good air circulation.



### Kernels of Truth:

- Potatoes originated in the Andes Mountains of Peru and Bolivia. They were first cultivated by the Inca Indians.
- About half of United States potato production is in Idaho and Washington.
- Potatoes were the first vegetable to grow in space.

### Watch Video!

[https://www.youtube.com/watch?v=Ln\\_\\_Gp0\\_Nx8](https://www.youtube.com/watch?v=Ln__Gp0_Nx8)



## Potato Leek Soup

### Ingredients

- 3 tbsp of butter
- 3-4 leeks
- 4-6 potatoes
- 3 cloves of garlic
- 6-7 cups of broth (vegetable or chicken)
- 2-3 sprigs of thyme
- 1 cup of half and half or cream
- salt and pepper

### Directions

1. Wash, peel, and cube potatoes. Cut off leafy tops of leeks and chop into small pieces. Thoroughly wash the chopped leeks.
2. Turn stovetop on med. Put butter in pot with leeks and garlic. Cover pot with top and let cook for about 10 minutes.
3. Add potatoes, broth, thyme, salt, and pepper. Turn the heat on high until it comes to a boil. Cover pot and turn heat down to low. Simmer for 15 minutes or until the potatoes are soft.
4. When the potatoes are soft, pull-out sprigs of thyme. Then, use potato masher to break down the potatoes.

**If available:** use immersion blender to blend mixture or stand blender and blend in batches



### Watch Video!

<https://www.youtube.com/watch?v=pq3ggM-o-5Y>



# #30 SEED SAVING

**ACTIVITY DESCRIPTION:** Using a few common plants, let kids collect seeds from the plants and take them home. Kids will learn there are lots of different looking seeds. Learn that there some flowers and vegetables seeds that are easy for kids to harvest by themselves to grow a new plant that looks just like the old plant. Kids will also go home with a labeled coin envelope of seeds. They will also be introduced to the concepts of cross pollination, and open pollination versus hybrid seeds.

## **MATERIALS REQUIRED:**

- Paper coin envelopes
- dried plants heads like calendula, marigolds, beans, peas, or sweet peppers.

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## **CONCEPTS TO COVER (depending on age):**

Cross pollination: Cross pollination is when one plant pollinates a plant of another variety. The two plants' genetic material combines and the resulting seeds from that pollination will have characteristics of both varieties and is considered a completely new variety.

Open pollination: Plants grown from open-pollination seeds will look like the parent plants.

Hybrid Seeds: Hybrid seeds are produced from a previous cross-pollination and Hybrid seeds will not produce plants resembling the parent plants. They will be a completely new combination of the good and bad traits of the plants from the initial cross pollination. Who knows what you're going to get!

## **LESSON ACTIVITY (5-10 mins):**

Collect and/or prepare seeds for kids to harvest. Calendula, marigolds, beans, or peas can be dried on the plant and then harvested. Peas and beans can also be dried in the shells after harvesting and sweet peppers cut open and dried. Most plant heads or pods will need to be purchased or removed from the plant at least 2 weeks before the activity.

Using coin envelopes label (or have the kids label them) the outside of the envelope first then harvest 3-5 seeds of their choice to put in their envelope. (If you have more, kids can harvest more).

**MODIFICATIONS:** None





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Seed Saving

Once flowers begin to fade at the close of the season, most dried flower seeds, peas, beans, and peppers seeds are ready to harvest. Seed harvesting should be done on a dry and sunny day. Always harvest seeds from your healthiest plants and use only paper bags, as seeds can spoil in plastic. Store seeds in a cool and dark spot for the winter. Use your extra seeds to share and trade with friends, give as gifts, or start a seed library or seed exchange.



### Kernels of Truth:

- Each apple seed produces offspring that are individuals, quite unlike their parent. So, you never know what you're going to get with saved seeds. Humans share this tendency, but to a much lesser extent.
- Many fruits and vegetables you see look nothing like their ancestors from thousands of years ago.
- There is a global seed vault, saving seeds from all over the world located in Norway.



## Chia Seed Pudding

### Ingredients

- 2 ¼ cups milk or other milk alternative
- ¼ cup maple syrup
- ¼ cup cocoa powder
- ½ cup chia seeds
- Fresh fruit
- Granola



### Directions

1. In a medium bowl combine all the ingredients.
2. Whisk to combine.
3. Cover and refrigerate for 30 minutes stirring once after 15 mins.
4. Stir again before serving.
5. Top with fresh cut fruit and granola.



Enjoy this inexpensive, healthy dessert!



# #31 WHEEL OF KERNEL

**ACTIVITY DESCRIPTION:** Kids will spin the Wheel of KERNEL and answer questions about KERNEL topics. Regular attendees will review KERNEL topics, while intermittent attendees or newly registered kids will learn facts from a variety of KERNEL topics.

**MATERIALS REQUIRED:**

- Wheel of KERNEL
  - Printed out wheel
  - Game spinner
- Question and Answer (Q & A) sheet

**STAFFING NEEDED:** Easily done with one. Two is optimal with one person for the registration/check-in and the post-activity process and the other for the activity.

**CONCEPTS TO COVER:** None

**LESSON ACTIVITY (2-3 minutes):**

This activity is designed to be used as the last KERNEL activity for the season as it is used as a review of seven KERNEL topics used over the course of the season.

Each Q & A sheet will have:

- Questions derived from each of the nine chosen topics for inclusion on the Q & A sheet.
- Answers taken from the curriculum sheet for each topic, or from the KERNEL activity card for that topic.
- An "easy" question for each topic for younger kids and those who are unfamiliar with the topic.
- During the activity, each child will get three spins.
- If multiple children, have them take turns when it seems appropriate.
- When the child spins, ask a question from that category. Select one that seems appropriate and reword to their level of understanding if necessary.
- There is no need for them to answer correctly. Just make sure they are having fun and learning.
- If a child spins and gets a category a second time, have them spin again so they get a variety of topics.
- Children too young to answer can still spin for fun.
- After a child has their three spins, they start the checkout process.

**MODIFICATION:** None.

**ATTACHED DOCUMENTS INCLUDE:**

- Spinning Wheel
- Question and Answer sheet



# WHEEL OF KERNEL QUESTIONS AND ANSWERS

## 1. EAT A RAINBOW

1. True or False: Skins in many fruits and vegetables are edible. True.
2. Is eating a rainbow of different fruits and vegetables unhealthy? No.
3. True or False: Orange or yellow produce usually contains beta carotene. True.
4. True or False: Beta Carotene can lower risk for some diseases and vision problems. True.
5. Can the color of a fruit or vegetable usually tell you what nutrients are in that fruit or vegetable? Yes.
6. Do the skins of vegetables and fruit contain any nutrients? Yes.
7. Are fruits and vegetables so good for you that you can eat them before washing them? No.
8. Have you ever eaten a purple (or substitute another color) carrot? Answers may vary. (If a farmer(s) has purple (or other unusual colored carrots for sale, point that out to the kids.)

## 2. BEE DANCE

1. Bees are the best pollinators. True.
2. Many foods we eat are the result of pollination. True.
3. Does a bee communicate where to find food by dancing? Yes.
4. Is a "waggle" part of the bee dance? Yes.
5. Do bees have a great sense of smell? Yes.
6. Do bees have poor vision? No, they have excellent vision!
7. Does honey taste sweet? Yes.
8. Can you dance in a figure eight like a bee? Answers may vary.

## 3. FUNGI

1. True or False: Mushrooms are a sign that your garden is sick. False. It is a sign of a healthy garden!
2. Can mushrooms be poisonous? Yes, some mushrooms may be poisonous. Please do not pick or eat mushrooms without adult guidance.
3. Do fungi recycle plants? Yes, they turn dead plants into rich soil.
4. True or False: Mycelium extends the roots of plants to increase their access to nutrients. True.
5. How old is the oldest mushroom in the world? 90 million years old.
6. Do any mushrooms glow in the dark? Yes, there are 30 species of mushrooms that actually glow in the dark!
7. True or False: a single portabella mushroom may contain more potassium than a banana. True.
8. Do mushrooms have a cap? Yes.

## 4. BUGGING OUT

1. True or False: Lady Bugs like to eat aphids? True. Up to 5,000 in a lifetime!
2. True or False: Ground Beetles are voracious predators of slugs. True. One larva can eat up to 50 caterpillars!
3. Can a Green Lacewings Larva eat up to 200 pests in one week? Yes.
4. True or False: A Praying Mantis does not eat other insects. False.
5. Are all bugs bad for the garden? No.
6. Are bugs that eat your plants in the garden called pests? Yes.
7. Name your favorite insect? Any insect answer is acceptable.
8. What bugs have you seen in your garden or at a park? Answers may vary.

## 5. FARMERS MARKET BINGO

1. What can you buy at a farmers market? Fresh fruit and vegetables (and honey, bread, meat and dairy).
2. True or False: The average food purchased in the United States travels over 1500 miles to get to your plate.  
True
3. Does buying locally help preserve local farmland? Yes.
4. Are fruits and vegetables sold at farmers markets? Yes.
5. Do farmers talk to their customers at farmers markets? Yes.
6. What is your favorite vegetable to buy at the farmers market? Answers may vary.
7. Do you have a farmer you like to visit at the farmers market? Answers may vary.
8. Have you ever visited a farm? If so, what kind? Answers may vary.

## 6. SEED MATCH

1. True or False: A seed planted upside down will grow the correct way because of gravity. True.
2. True or False: Watermelon seeds are the largest seeds in the world. False. A palm tree seed is about twelve inches long and can weigh up to forty pounds!
3. How old was the oldest seed scientists were able to grow? 32,000 years old!
4. True or False: most seeds remain dormant (asleep) until they are exposed to water. True.
5. True or False: An embryo is like a baby plant. True.
6. True or False: a small pore in a seed that allows water absorption during germination and growth is called a kernel groove? False. It is called a micropyle.
7. Name your favorite seed to plant. Any seed answer is acceptable.
8. True or False: Seeds only come in one color. False.



## 7. JUMPING ROPE

1. Can skipping rope be fun? Yes. (No is OK as well.)
2. Should the tips of a properly fitted rope come up to you kneecaps? No, the tips of a properly fitted rope should be at armpit level when you stand on the middle of the rope with one foot.
3. Are beaded ropes easier to use than vinyl ropes? Yes.
4. Can skipping ropes 10 minutes a day help improve your health? Yes.
5. True or False: The world record for speed jumping is 332 jumps in one minute. True.
6. Is a cardiovascular workout good for your heart? Yes.
7. Can jumping rope help with athleticism? Yes.
8. Are all jump ropes the same size? No. You should find a rope that fits you.



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Wheel of KERNEL

KERNEL (Kids Eating Right-Nutrition and Exercise for Life) is a youth-oriented nutrition and physical activity program designed by Catholic Charities of Eastern Washington's Food For All program to engage children in learning about lifelong healthy eating habits, exercise, and gardening.



### Kernels of Truth:

- Vegetables, fruit, and physical activity are important parts of a healthy, active lifestyle.
- KERNEL was first piloted at the Emerson-Garfield Farmers Market in Spokane, Washington in 2015 with funding from the USDA SNAP-Ed program.
- You can find out more information about KERNEL and Catholic Charities Eastern Washington Food For All at: [www.cceasternwa.org/foodforall](http://www.cceasternwa.org/foodforall)



## Healthy Snack Ideas



### Smoothies

Blend together frozen fruit like strawberries and peaches with milk or yogurt



### Caterpillar Kabobs

Put raw veggies like zucchini, cucumber, sweet peppers, and tomatoes on a skewer



### Veggie Dip

Mix plain yogurt with herbs and garlic and serve with raw broccoli and carrots



### Ants on a Log

Use celery, cucumber, or carrot sticks as the log and add peanut butter and dried fruit

# #32 WHY DO LEAVES CHANGE COLOR?

**Activity description:** Learn why leaves change color in the fall and make a fun craft using local leaves.

## Required Materials & Attached Documents:

- Leaves from outside
- Glue (and tape and if leaves are not sticking to paper)
- Googly eyes
- Sharpies/Permanent marker
- Piece of paper

## Lesson Activity:

Before the activity the instructor should go outside to collect the most interesting leaves they can find. Try to pick a variety of sizes, shapes, and colors.

## Concepts to Cover:

Leaves make the energy or food a tree needs to survive through a process called *photosynthesis*. To do this leaves need sunlight, air, water, and chlorophyll molecules. That food the plant makes is in the form of sugars. In the summer leaves get lots of light and make lots of food but as the light gets less each day in the fall the leaves stop making food to start getting ready for winter.

The *Chlorophyll* which makes that green color fades away and the leaves other colors begin to show. These colors are the brilliant reds, yellows, oranges and browns that make fall such a beautiful time of year. Each leaf is like a gorgeous abandoned factory until it crumbles back into the soil.

All leaves are also colors other than green (like reds, and oranges) and when the chlorophyll fades because it's no longer being used to produce food for the plant the leaves' "true colors" show. More specifically the other chemicals left in the leaves become more visible so the leaves appear bright brilliant colors. When the leaves fall to the ground and begin to decompose those colors will fade as well. *Carotenoids* create bright yellows and oranges (and is what make carrots orange and bananas yellow!) *Anthocyanins* add red color to plants (and is what makes strawberries and cherries red!).

## Activity Description:

With all their beautiful colors and shapes doesn't it seem fall leaves have a life of their own? Make some fall leaf creatures!

- Let the kids select 3-4 leaves from your previously collected pile of interesting leaves. Once you have your leaves picked out, you can begin to assemble your leaf creatures!
- Attach the leaves to the piece of paper either using glue or tape (whatever is the most effective or whatever you have readily available).
- Then, glue the googly eyes onto the leaves and draw noses and mouths onto the leaves to make a face.
- You can also use the leaf as a fish shape and draw fins and gills or puppy and draw floppy ears and a tail on your leaf creature. Get creative, and make any type of leaf creature you want!

## ATTACHED DOCUMENTS INCLUDE:

- Why Do Leaves Change info sheet

# Why Do the Leaves Change Color?

**Chlorophyll** is what makes leaves green and how plants convert sunlight into food. When it begins to get colder and there is less sunlight the plant produces less chlorophyll revealing colors the green was covering up.

**Carotenoids** create bright yellows and oranges (and is what makes carrots orange and bananas yellow!)

**Anthocyanins** add red color to plants (and is what makes strawberries and cherries red!)



**All leaves have Chlorophyll**



**Maple leaves turn red (and a whole range of colors!)**



**Oak leaves turn red, brown, or russet**



**Birch leaves turn bright yellow**





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Why do leaves Change Color?

Leaves make all the energy or food a tree needs to survive by taking in sunlight, air and water into chlorophyll molecules through a process called photosynthesis. Chlorophyll makes leaves look green, but all leaves also have other colors; brilliant reds, yellows, oranges, and browns and when the chlorophyll fades the leaves' "true colors" show.

With all their beautiful colors and shapes doesn't it seem fall leaves have a life of their own?



### Kernels of Truth:

- Fallen leaves are an essential part of a forest ecosystem, providing protection for tree seeds to germinate over the winter.
- Dead leaves make excellent mulch, put them on top of your garden beds in the fall to add some extra nutrient-holding capacity and to keep the soil moist and weeds down.
- Leaf color depends on the tree species. Maples turn an orange/ red, and aspens tend to turn golden.



## Roasted Beets & Sweet Potatoes

### Ingredients

- 1 lb. Beets
- 1 lb. Sweet Potatoes
- 2 tablespoons of honey
- 1 tablespoon balsamic vinegar
- 1 tablespoons of olive oil
- a pinch of salt and pepper

### Directions

1. Chop the beets and sweet potatoes into similar sized chunks.
2. Preheat the oven to 400 degrees.
3. Combine the honey, balsamic vinegar, olive oil, and salt and pepper into a cup and mix together.
4. Put the beets and sweet potatoes into a bowl and pour the ingredients that you mixed in the cup, mix well.
5. Coat a baking sheet with a bit of olive oil, vegetable oil, or butter.
6. Put the beets and sweet potatoes onto a baking sheet and roast them for 35-40 minutes or until you can easily pierce them with a fork.



# #33 WORM COMPOSTING

**ACTIVITY DESCRIPTION:** Kids will learn the basics of worm composting (vermiculture) through seeing a worm bin with worms, bedding, and compostable materials. Understand more about composting.

## **MATERIALS REQUIRED:**

- Bin for worms
- Bedding and compostable materials
- Worms
- Make sure there is enough space for kids to gather around the presentation area.

**STAFFING NEEDED:** This activity can be similar to a self-directed activity if the program is able to have a Master Composter or vermiculture expert volunteer to lead the activity. Your local Master Composting program may have vermiculture brochures to hand out. You can have these available for anyone who wants one. They may also have a worm bin you can use for display.

## **CONCEPTS TO COVER:**

Compostable materials: Kitchen waste, like peelings from fruits and vegetables, overripe fruits and vegetables, crushed eggshells, and coffee grounds.

Bedding: Good bedding material for a worm bin includes shredded leaves or paper and coir (a coconut fiber).

Non-compostable materials: Dairy, fats, meats, and oils. It is recommended that you do not add citrus to your worm bin as citrus can make worms sick.

## **LESSON ACTIVITY (2-5 minutes):**

Discuss how to make a worm bin:

- Worm bins can be purchased.
- Worm bins can be made at home. Buy a plastic bin with a lid so worms do not escape. Put holes in bin to promote airflow.

Discuss how to prepare bedding:

- Add bedding material as mentioned above, but also say how grit needs to be added to the bedding in order for worms to digest their food. This material includes sand, topsoil, and rock dust.
- Bedding needs to remain moist with the moisture level of that of a wrung-out sponge. If too wet, will promote bad smells.

**Discuss what to add:**

- Best worms for the bin are red wigglers. They are a worm that lives near the surface of the soil. The more popular night crawlers live deeper in the soil and will not thrive in a bin. It is usually recommended that for every 1 pound of waste to be generated each week you should have two pounds of worms.
- Handling worms is not recommended for the health of the worms, but kids do enjoy touching the worms. The worms seem to recover afterwards. If kids are to handle worms, ask them to be very gentle.
- Discuss compostable versus what is not compostable.
- Do not add too much. Place compostable materials in a different section of bin each time so worms have time to eat it and then move on.

**SELF-DIRECTED OPTION:**

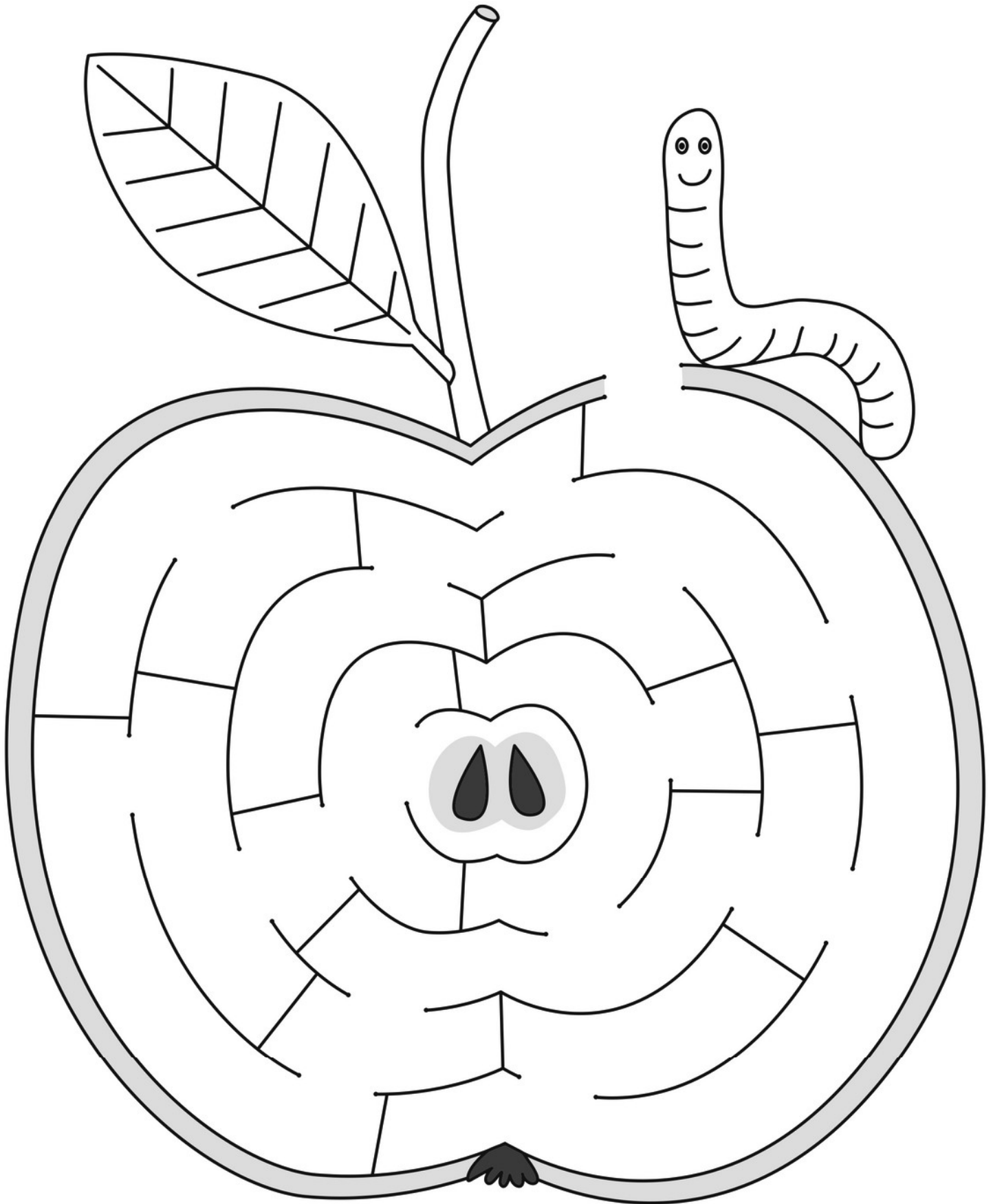
Provide a working worm bin for kids to look at. Also, provide small containers as demos of what materials can go into the bin. Have containers with different types of bedding: shredded paper, shredded leaves, and coir as well as a container with compostable materials.

Also, have a small display page with information from the lesson activity as 3rd attachment.

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring page
- Display for self-directed option

**Can you help the worm find his way to the apple core?**





## How to make a Worm Bin!

A worm bin is a great way to compost your kitchen scraps. All you need are a bin, worms, bedding, and compostable materials.

A worm bin can be purchased or made at home. To make your own worm bin, first buy a plastic bin with a lid so worms do not escape. Put some holes in the bin to promote airflow.

Next add bedding to the bin. Good bedding material for a worm bin includes shredded leaves or paper and coir (a coconut fiber). Then, add grit to the bedding in order for worms to digest their food. Material that can serve as grit includes sand, topsoil, and rock dust. Then add water to the bedding as worms need to stay moist to stay alive.

Bedding needs to remain moist with the moisture level of that of a wrung-out sponge. If the bedding is too wet, the compostable materials can rot and promote unpleasant smells.

Now, add your worms. The best worms for the bin are red wigglers as they are a worm that lives near the surface. The more popular night crawlers live deeper in the soil and will not thrive in a bin. It is usually recommended that for every 1 pound of waste to be generated each week you should have two pounds of worms.

Now, add your compostable materials. Compostable materials include kitchen waste, like peelings from fruits and vegetables, overripe fruits and vegetables, crushed eggshells, and coffee grounds. Place compostable materials in a different section of bin each time so worms have time to eat it and then move on. Non-compostable materials for the worm bin include dairy, fats, meats, pet wastes, and oils. It is recommended that you do not add citrus to your worm bin as citrus can make worms sick.



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

**A great way to make compost for your garden is to let worms do it for you!**

**ALL YOU NEED ARE:**

- A bin with holes to allow for airflow, and some recommend drainage holes as well.
- Bedding includes materials like shredded newspaper, leaves, or coir (a coconut fiber).
- A supply of food that includes kitchen waste, like vegetable trimmings, crushed eggshells, coffee grounds, etc.
- Gritty substances are needed in order for worms to digest their food. These substances can include topsoil, rock dust, sand, or powdered (not slaked or hydrated) limestone, also known as calcium carbonate.
- Worms, of course! Red wigglers are the best worms for worm bins.



**Kernels of Truth:**

- Bedding needs to be kept moist for worms to survive but not too wet. As moist as a wrung-out sponge.
- Do not add oils, fats, meat, dairy products or a lot of citrus to your worm bin.
- Worm composting is called vermiculture.



## Spinach Parmesan Zucchini Pasta

**Ingredients**

- 3 medium zucchinis
- 2 tablespoons butter
- 2 cups packed spinach
- 1/4 cup freshly grated Parmesan cheese
- Salt and black pepper, to taste



**Directions**

1. Have an adult help you peel the zucchini into small, noodle-size strips.
2. Place a large skillet over medium-high heat. Melt the butter and add the zucchini noodles and spinach.
3. Gently toss and cook until spinach leaves are wilted, about 2-3 minute
4. Stir in 1/4 cup of the Parmesan cheese and toss until zucchini noodles are coated in the parmesan cheese.
5. Season with salt and pepper or herbs of choice, to taste.
6. Remove from heat and serve.

**Notes: Be careful not to overcook the zucchini noodles and spinach or they will get soggy.**



# #34 CALISTHENICS

**ACTIVITY DESCRIPTION:** Kids will be guided to learn different calisthenics exercises. Then learn that regular exercise is good for lifelong health (Kids 6-17 should exercise at least 60 minutes daily.) Understand that being physical active can be enjoyable and easy and doesn't require expensive equipment.

**MATERIALS REQUIRED:** None

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## **CONCEPTS TO COVER:**

Calisthenics: Calisthenics are exercises that have a need for no or minimal equipment. Some examples are squats, jumping jack, push-ups, chin-ups, pull-ups, sit-ups, lunges, planks, shuttle runs, and can include running and yoga.

Squats: Stand with your arms at your side and your feet hip width apart with feet slightly turned outward. Then, bend your knees and squat down like you are sitting in your chair. While squatting down reach your arms out. Then, stand back up straight and bring your arms back to your side.

Jumping Jack (Star Jump): To do this exercise, stand with your feet together and your arms at your side. Then, jump with your legs moving to the side while your arms move to a position where your hands meet over your head.

Lunges: Stand with your arms at your side and your feet hip width apart. Then, take a big step forward with your right foot so the heel hits the ground first. While keeping your torso straight and erect, lower your body so your right leg is parallel to the ground and your right shin is perpendicular to the ground. Then push back to the starting position and then do the same with your left leg.

## **LESSON ACTIVITY (3-5 minutes):**

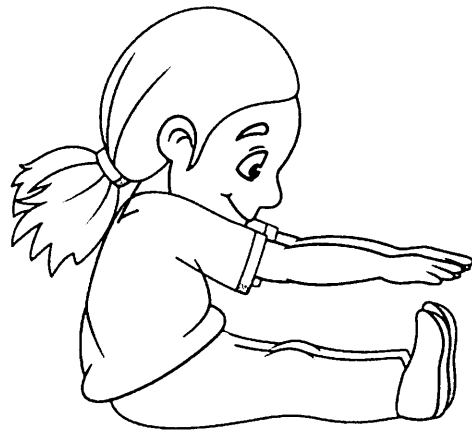
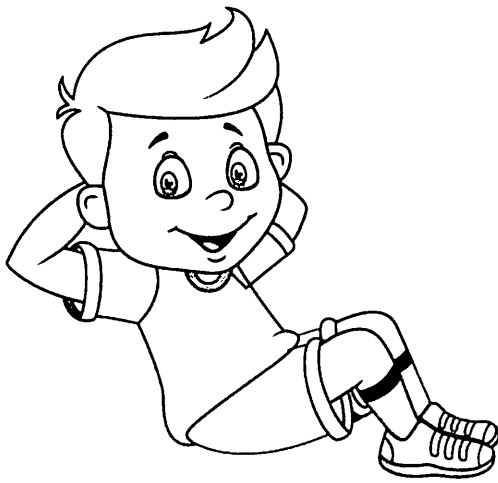
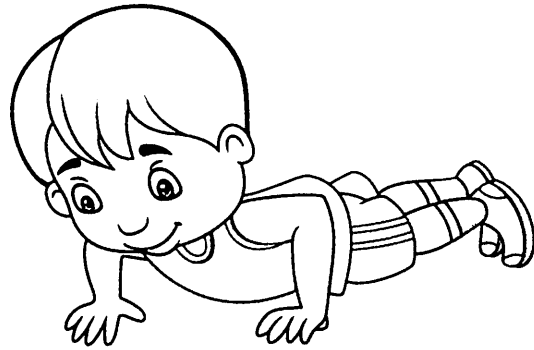
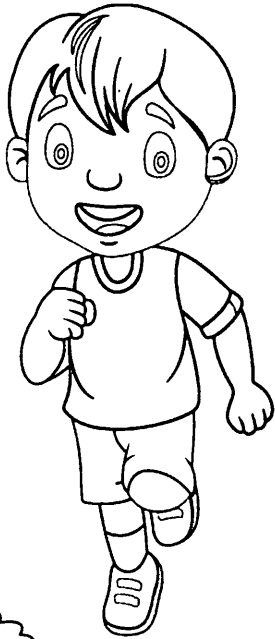
Ensure that you have adequate space to demonstrate at least one of the calisthenics exercises mentioned above. Demonstrate the selected exercise(s). Share that kids need 60 minutes of exercise daily.

**MODIFICATIONS:** None

## **ATTACHED DOCUMENTS INCLUDE:**

- Coloring page

# Let's exercise







# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Calisthenics

Calisthenics are an easy way to exercise without equipment. A 'jumping jack' or 'star jump', is an example of a calisthenics exercise that can be performed without any equipment. To do this exercise, stand with your feet together and your arms at your side. Then, jump with your legs moving to the side while your arms move to a position where your hands meet over your head. Some other common types of these exercises include squats, sit-ups, push-ups, chin-ups, planks, lunges, shuttle runs, and pull-ups.



### Kernels of Truth:

- On a daily basis, children ages 6-17 should engage in 60 minutes of moderate to vigorous physical activity for a healthy lifestyle.
- The word 'calisthenics' was created from the Greek words 'kallos' for beauty and 'sthenos' for strength.
- Some of these exercises are used by the military to evaluate physical fitness.



## Easy Roasted Butternut Squash

### Ingredients

- 1 butternut squash
- 2 Tablespoons olive oil
- 2 cloves of garlic
- Salt to taste Pepper to taste
- Parsley to garnish

### Directions

1. Preheat oven to 400 degrees F.
2. Rinse, peel, and seed the butternut squash before cutting into one-inch cubes.
3. Mince garlic and add to a large bowl with the olive oil.
4. Add the squash cubes to the large bowl and toss. Then season with salt and black pepper.
5. In a single layer, place the squash on a baking sheet and roast in the preheated oven for 25-35 minutes until lightly browned and tender. Test tenderness by piercing cube with a fork.
6. Add parsley and serve.





# #35 CLEAN AND CUT PRODUCE

**ACTIVITY DESCRIPTION:** Kids will learn how to clean and cut produce as well as learn why it is important that produce should be clean before eating. Replicate safe knife handling skills at home with adult supervision.

## **MATERIALS REQUIRED:**

- Extra table for cutting
- Washing station (if possible)
- Colander
- Sample vegetables/fruit to wash (For example, potatoes, lettuce, apples, berries carrot)
- Vegetable scrub brush
- Cutting board
- Damp towel
- Knife for activity lead
- For kids, we recommend either reusable plastic knives or disposable knives.
- Vegetables and fruit to cut (dated from vendors)
- Play doh
- Cutting surface for kids

**STAFFING NEEDED:** At least 2 staff are needed, with one person for the registration check-in and the post-activity process and the other for the activity instruction. This activity presents an opportunity for developing a partnership with your local health department, a nutrition or dietetic organization, or a chef and/or culinary instructor.

## **CONCEPTS TO COVER:**

Contamination: Foodborne illnesses can be prevented by handwashing, washing produce, and keeping utensils and prep area clean.

Pathogens: Microorganisms that can cause disease.

Safety: Always have adult permission and supervision when using knives in the kitchen.

Claw grip: The hand holding a fruit or vegetable while it is being cut should have the fingers in a curled (claw-like) position.

**LESSON ACTIVITY (5-10 minutes):**

First fact, let kids know that before after cleaning and cutting produce at home, their hands should be washed with warm, soapy water for at least 20 seconds. A good way to time this is to sing the ABC song.

Cleaning Produce: Optimal set-up will have a washing station with running water and a sprayer nozzle. If this is not possible, then the activity lead can simulate the cleaning action.

Properly cleaning your produce, your hands, your prep area, and your utensils minimizes the chances of getting a potential foodborne illness from pathogens. This includes washing fruit and vegetables with skins or rinds you are not intending to eat because the knife can transfer potential pathogens when cutting through the outside part of the fruit or vegetable to the inside portion you are about to eat.

For leafy greens like lettuce or cabbage, the outer leaves should be discarded first. Then separate all the leaves before washing individually under cool, running water. Excess moisture should be removed from your greens by either placing in a salad spinner or patting dry with a paper towel. (For this demo, have a head of lettuce ready. Have some outside leaves removed and some of the inner leaves removed as well. Use an inner leaf to demonstrate/simulate how to clean the leaf under running water, whether running water is available or not.)

Berries, like blueberries, raspberries, etc. should be placed in a colander and either run under cool running water or sprayed with cool water from the kitchen sink sprayer. The colander should be turned in a way that all the berries are washed well. Washed berries should be eaten shortly after being washed, but berries can be placed on a paper towel to air dry. (If no water, the lead can still demonstrate how to hold a colander under water and move the colander in a way to get all of the berries washed properly.)

For firm vegetables and fruits like melons and potatoes, one can use a vegetable scrub brush to gently remove dirt particles from your produce while under running water from your tap. (If no water available, the lead can demo this by showing how to gently rub a potato, or melon.) These items can be dried with a paper towel when necessary.

For example, for products like apples and peaches, show how these items can be placed under running water while using your fingers to gently loosen dirt particles. These items can be dried with a paper towel when necessary. (Without a water source, the lead can simulate gently rubbing an apple to remove any potential dirt particles.)

When finished with each example, kids can handle the produce and wash it as modeled previously by the lead.

**Cutting Produce/Basic Knife Skills:**

The lead may use a chef's knife on a cutting board and some extra product to demonstrate how to cut items like a carrot and an apple. Kids should be supplied with play doh and an appropriate cutting utensil as mentioned above.

Remind kids that they should only use knives with adult permission and supervision. Also, they should always cut on an appropriate surface and never in their hand.

**Grip:** An easy grip for kids is to ask them to hold their knife like the handlebars of their bike. In this way, the hand will be on top of the knife handle and not under it. The kids can safely hold their play doh "vegetable" with a claw like grip. This entails the fingers being curled into the item, so the fingertips are safely away from the knife.

Now the kids can learn how to cut. The tip of the knife should stay in place on the cutting area and the handle of the knife should supply the cutting action by being moved up and down.

Next, have kids roll their play doh into a long cylinder like item, like a carrot so they can practice their cutting technique.

For cutting a "carrot", a crosswise cut can be utilized first to put a carrot into a manageable cutting size. Then a lengthwise cut so then the carrot can be sliced into half-moons. In the lengthwise cut, the non-knife holding hand will be over the knife to hold the carrot with the fingers curled. Then after the carrot is halved, the flat side can face the cutting board and the kids can cut the half- moon slices. Make sure the kids remember to curl their fingers into the claw grip when holding the "carrot" or whatever vegetable or fruit they are cutting.

To cut an apple, kids can roll their play doh into a ball. Using their cutting technique, they can halve the apple with the stem side down. Now, they can put both halves with the flat sides facing the cutting surface. Take one half and halve it again so it is now quarters. Then, using the claw grip, keep the whole half together before cutting each quarter again. Repeat on the other half.

Then, lay each individual slice flat and cut off the edge that would be seed and stem portion to have completely sliced apple.

**MODIFICATION:** None



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Clean and Cut Produce

**How to clean produce:** Wash your hands with soap and water before and after washing your produce. It is always best to clean produce to reduce the risk of getting a foodborne illness. Wash produce before you peel it by running it under water and gently rubbing it with your fingers. A clean vegetable brush can be used to clean more firm produce, like melons and potatoes.

**How to safely cut produce:** Always use a knife that is proper for the job. Secure your cutting board so it doesn't slip. One way to do this is by placing a damp cloth under the cutting board. Cut your produce with the flat side down. If rounded, then cut off edges to "square" your produce or cut in half. To safely hold the produce, hold the produce with your hand in a claw like position. This helps keep your fingers safely away from the blade.



### Kernels of Truth:

- Dull knives can be dangerous so make sure your knife is sharpened properly.
- Always cut away from your body.
- There is no need for a produce wash solution as plain old tap water does the job just as well.



## Ranch Roasted Carrots

### Ingredients

- 1lb carrots
- 2 tbsp olive oil
- 1 tsp parsley
- 1/2 tsp garlic powder
- 1/2 tsp onion powder
- Salt and pepper to taste

### Directions

1. With adult supervision preheat oven to 400 degrees F.
2. With adult supervision, slice off carrot tops and slice carrots in half, lengthwise.
3. Combine the parsley, garlic, onion, salt, and black pepper into a small bowl. Add in olive oil.
4. Generously brush carrots with the olive oil seasoning mix.
5. Place carrots on baking sheet so that they are close but not touching.
6. Bake for about 15-18 minutes (depending on size of your carrots) or until carrots are tender but still remain crisp. Serve immediately.



# #36 CREATE YOUR OWN SUPERHERO

**ACTIVITY DESCRIPTION:** Kids will demonstrate their personal perspective and knowledge of nutrition when they create their own veggie superhero.

## **MATERIALS REQUIRED:**

- Paper
- Markers, colored pencils
- Googly eyes
- General art supplies like construction paper, scissors, glue sticks
- Super Powers document

**STAFFING NEEDED:** 1-2 staff needed. Two or more would be optimal with one person for the registration/check-in and the post-activity process and the other for activity oversight.

## **CONCEPTS TO COVER:**

Nutrients: fruits and vegetables provide nutrients that lead to a strong and healthy you.

## **LESSON ACTIVITY (5-10 minutes):**

Discuss with kids the “superpowers” that fruits and vegetables have.

Examples include: carrots help your vision; tomatoes and broccoli fight cancer; apples protect your brain, heart, and bones; beets purify blood; strawberries fight inflammation.

Kids will take writing materials and/or craft items and fashion a Super Hero with super Powers modeled after the supplied Fruit and Vegetable Super Powers list.

## **MODIFICATION:**

- Challenge older participants to write some descriptive words about their Super Hero, or possibly a poem or a paragraph

## **ATTACHED DOCUMENTS INCLUDE:**

- Fruit and Vegetable Super Powers document



# Fruit and Vegetable Super Powers

**Apples**-protect brain cells; can protect your heart; can protect bones

**Beets**-purifies blood

**Blueberries**-may help improve memory and learning; may protect against stroke; may be cancer fighter

**Broccoli**-cancer fighter

**Cantaloupe**-vision; skin & bone health; immune system

**Carrots**-vision; skin & bone health; immune system

**Garlic**-reduces high blood pressure and fights cancer

**Grapes**-Heart & lung health; fight inflammation & cancer

**Green beans**-eye and bone health; aids in digestion; immune system booster

**Kale**-Strong bones

**Peaches**-lung health, eye health, cancer protection, fights inflammation

**Peas**-maintain glucose levels to keep energy levels steady; promotes bone and cardiovascular health; protects body from cell damage

**Potatoes**-can help fight bone loss

**Pumpkins**-vision; skin & bone health; immune system

**Red peppers**-fight cancer; heart health

**Spinach**- vision; skin, heart & bone health; immune system

**Strawberries**-fight inflammation, bad cholesterol and cancer

**Sweet potato**-strong bones

**Tomatoes**-fight cancer; heart health

**Watermelon**-fight cancer; heart health





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Create your own Superhero

Fruits and vegetables provide a variety of nutrients that lead to a strong and healthy you! Eating your recommended amount of fruits and vegetables each day can supply you with super powers like good vision, a strong heart, healthy skin and bones, a good memory, and a strong immune system. Eat your fruits and vegetables daily for a healthy life of super adventures!



### Kernels of Truth:

- One cup of broccoli contains about 130% of your recommended daily intake of Vitamin C.
- Eating up to 45 Bing Cherries a day can decrease your risk for tendinitis and arthritis.
- A super amazing tomato plant at the Epcot Center in Disney World in Florida produced over 32,000 tomatoes in one year.



## Steamed Super Sesame Broccoli

### Ingredients

- 1 head of broccoli
- 2 cloves of garlic, minced
- 1 tbsp soy sauce or tamari (reduced sodium variety is okay)
- 1/2 tsp dark sesame oil
- 1/4 tsp crushed red pepper flakes (if you do not mind the heat)
- 1 tbsp toasted sesame seeds (Add, if desired, for crunch.)



### Directions

1. Wash and then cut broccoli into small florets similar in size so they cook at the same rate.
2. Mince the garlic.
3. Add about 1/2 inch to one inch of water to a small sauce pot and bring to a boil. Make sure the water will not cover the florets.
4. Place the broccoli and minced garlic in the sauce pot when the water boils. If available, a steaming basket is a good option. Cover the pot with a lid.
5. Remove after about 5 minutes, the broccoli will be bright green & ready to eat.
6. Combine soy sauce, red pepper flakes, and sesame seeds in a large bowl.
7. Add the broccoli to the bowl and toss in the mixture to coat.
8. Serve your super, power packed broccoli!



# #37 DANCE FOR HEALTH

**ACTIVITY DESCRIPTION:** Kids will learn dancing as an easy, fun, simple, and healthy physical activity. Learn that dancing can be fun, whether they know actual dance moves or not. Learn that getting physically active can be easy and doesn't necessarily involve hard work, pain, exercise equipment, or boring and repetitive activities.

## **MATERIALS REQUIRED:**

- The activity requires a music playing device. Preferably, the ideal device would be a portable Bluetooth speaker with a computer or device that has CD playing capability or can access a music streaming service
- A playlist with kid-friendly dance music, that's available on a commercial CD, or possibly on a playlist on the music playing device or accessed from a music streaming service
- Enough space for multiple people to dance
- Access to electric
- Optional: scarves for interpretive dance

**STAFFING NEEDED:** The activity only requires one or two people, with two or more staff being optimal. With two staff, one person can focus on the registration/check-in and the post-activity processes and the other lead the activity that includes keeping a close eye on the music to make sure songs are appropriate and playing. This activity can serve as a partnership opportunity with a volunteer with dance instruction experience.

## **CONCEPTS TO COVER:**

Low Impact exercise: Cardiovascular activity that places a minimal amount of stress upon the parts of the body, especially joints, that are more susceptible to injury.

## **LESSON ACTIVITY (3-10 minutes):**

For activity set-up, secure an area for dancing with the market manager. Ensure the area reserved for dancing has access to electric for the speaker and the music playing device and is free of tripping hazards. Check that the volume needed for kids to hear the music does not interfere with market transactions or other market entertainment, like musical performers.

For this activity, the focus is to provide a comfortable space for kids to dance and move. Encourage the kids to show off their dance moves. Part of the encouragement may be to show them one of your own dance moves! Don't hesitate to say, "You don't need to know any dance moves. Dancing is all about having fun, moving to the music, and getting active." Don't be afraid to invite parents to participate.

## **MODIFICATION:**

If a child is unable to physically dance, suggest moving their arms or head to the beat. Scarves may also be provided so kids can engage in an interpretive dance from a wheelchair.

## **ATTACHED DOCUMENTS INCLUDE:**

- Coloring page



Ballet

Salsa



# Let's Dance!

Rock'n Roll



Breakdance







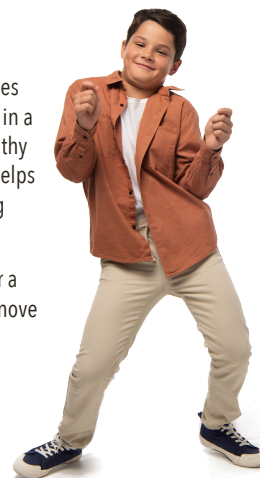
# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Let's Dance!

People all over the world use dance to stay in shape and stay healthy. Studies show that besides being a bundle of fun, dancing can increase your health in a number of ways. It can boost your memory, keep your heart and lungs healthy and in shape, relieve stress and ease the symptoms of depression. Dance helps people maintain a healthy weight and improve balance while also building muscle and bone strength.

You don't need to be good at dancing, go to an official dance, or sign up for a class to achieve the health benefits of dancing. Just play some music and move to it in whatever way that makes you feel good!



### Kernels of Truth:

- Depending on how intense you move, you can burn 5-10 calories a minute from dancing
- A dance club in Rotterdam, The Netherlands is home to the world's first "sustainable" dance floor. The kinetic energy of the dancers powers the LED lights of the dance floor.
- To plan a dance is called choreography, and it is done by a choreographer.



## Colorful Quinoa Summer Salad

### Ingredients

- 2 ½ cups of spinach
- 1 ½ cup of quinoa
- 1 teaspoon of olive or vegetable oil
- 2 cups of halved cherry tomatoes
- ⅓ cup of almonds
- ¼ teaspoon of pepper
- ⅛ teaspoon of salt
- ¼ cup of balsamic vinegar
- 2 cups of white beans
- ½ teaspoon of garlic
- ½ tablespoon or maple syrup or honey

### Directions

1. Boil water in a small to medium saucepan and then add the quinoa. Let the quinoa boil for 30 seconds and then turn down the heat, cover, and let simmer for 15 minutes.
2. While the quinoa cooks, heat oil in a skillet on medium heat. Add tomatoes and cook for 5 minutes until tomatoes begin to burst. Add the spinach and cook until wilted for about 5 to 7 minutes, stirring constantly.
3. In a large bowl, stir together the quinoa, vegetables, beans, and almonds.
4. In a small bowl, add vinegar, maple syrup, garlic powder, salt, and pepper and then whisk them together.
5. Pour the dressing over the other ingredients and stir it all together.





# #38 EAT A RAINBOW

**ACTIVITY DESCRIPTION:** Kids will search the farmers market for fruits and vegetables of different colors in a scavenger hunt format. Kids will learn that eating fruits and vegetables in a variety of colors is a healthy way to eat. Also learn to try new foods because of their color.

**MATERIALS REQUIRED:**

- Golf pencils (usually sold in a box of 144)
- Printed Eat a Rainbow Scavenger Hunt cards (can be just 1 per child or family)

**STAFFING NEEDED:** 1 is what is needed at a minimum to check in/register and for the reward process at the end. This activity is mostly a self-directed activity for the child.

**CONCEPTS TO COVER:**

Phytochemical: A chemical found in plants that is not necessary for nutrition but can aid humans in preventing diseases.

Antioxidant: Substances that may delay or prevent cell damage when eaten in fruits and vegetables. (Note: At this time, there is no evidence that supplements with antioxidants show the same benefit.)

**LESSON ACTIVITY (3-10 minutes, dependent upon the size of the market):** Inform the kids that the easiest way to get more phytochemicals and the nutrients necessary for a healthy lifestyle is to eat a rainbow of fruits and vegetables (between 5-9 servings daily).

Explain what phytochemicals are (definition above). Then give one example of a phytochemical:

- Beta-carotene that is found in foods such as carrots, apricots, and sweet potatoes. Beta-carotene serves as an antioxidant, in that it protects cells from free radicals that can cause cell damage. In our bodies, beta-carotene can be converted into Vitamin A, which is good for healthy vision. Are usually yellow or orange in color.
- Lycopene can be found in the red skin of tomatoes as well as in watermelons and pink grapefruit. Lycopene has been shown to have anti-cancer properties. Lycopene is a stronger antioxidant than beta-carotene.

Each child (or family) is given a pencil and an Eat a Rainbow Scavenger hunt card. Each card has a rainbow with several products on each color. Ask kids to find at least one product per color before returning to the booth. They are not required to find at least one product per color to receive the \$2, but they should be encouraged to try.

**MODIFICATION:** None.

**ATTACHED DOCUMENTS INCLUDE:**

- Eat a Rainbow Scavenger Hunt card

# Eat a Rainbow

**Scavenger Hunt Card**  
When you find the item at the market, circle it on the card.



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Eat a Rainbow

The color of fruits and vegetables usually demonstrates what nutrients the fruit or vegetable contains.

To ensure good health, eat a food rainbow of fruits and vegetables to get the nutrients you need.



### Kernels of Truth:

- Skins in many fruits and vegetables are edible.
- Orange or yellow produce usually has beta carotene. This nutrient can help improve immunity and lower risk for some diseases and vision problems.
- Skins of fruits and vegetables usually contain a high concentration of important nutrients



## Rainbow Roasted Vegetables

### Ingredients

- 1 medium or large red onion; Cut into 1/2 inch wedges
- 3 cups broccoli, cut into bit sized pieces
- 2 yellow squashes, cut into 1/2 inch pieces
- 4 large orange carrots, cut into 1/2 inch pieces
- 2 large red bell peppers cut into 1/2 inch pieces
- 1 teaspoon Sea Salt
- 1 teaspoon of garlic powder
- 1/2 teaspoon of cumin
- 1/4 teaspoon black pepper
- 3 tablespoons vegetable oil
- 1 cookie sheet

### Directions

1. Preheat oven to 400 degrees F.
2. Chop all veggies but keep them separate
3. Toss onion and 1/2 teaspoon of oil in a large bowl then lay them on one end of the cookie sheet, then do this with each veggie only using a full teaspoon with the broccoli. Tossing each veggie in oil then laying them each on the cookie sheet in this order: onion, broccoli, yellow squash, carrots, and red pepper.
4. Mix all the seasonings together in a small bowl then sprinkle evenly over the whole tray.
5. Cook for 20-25 minutes or until they are just beginning to brown, and the carrots are fork tender.
6. Then you will have a beautiful side dish in the colors of the rainbow.



**\*Note:** Add cooked sausage or other protein to make it a meal! :)

# #39 FARMERS MARKET BINGO

**ACTIVITY DESCRIPTION:** Kids will interact with farmers at the farmers market during National Farmers Market Week in a Bingo meets scavenger hunt activity.

**ACTIVITY OBJECTIVE:** Participating children will meet the farmers who grow their food. Be encouraged to ask farmers questions about their food. Learn that buying locally is good for the local environment and economy how to be more engaged shoppers at the market. Take the first step toward developing their shopping skills and feeling more connected to the market.

## **MATERIALS REQUIRED:**

- Bingo cards (printed)
- Posters for farmers (8 1/2" x 11")
- Tape (packing tape)

**STAFFING NEEDED:** 1-2 staff are needed.

## **CONCEPTS TO COVER:**

Farmers Markets: Provide shoppers with an easy way to meet the people who grow their food.

## **LESSON ACTIVITY (5-15 minutes, depending upon farmer conversations and size of the market):**

This activity is intended to be used during National Farmers Market Week to celebrate farmers and farmers markets as well as provide farmers the opportunity to interact with the next generation of farmers market shoppers.

Prior to the activity:

- Between two to four weeks before the activity, recruit farmers into participating in this activity. A farmer participates by picking a fruit or vegetable from the card that their farm expects to sell the week of the activity and is willing to discuss it. Suggest farmers have a few interesting facts or talking points for their chosen product. For example, some kids were surprised that pickles are made from cucumbers.
- Give the appropriate poster to each participating farmer. This poster can be taped to the pole at each farmer's booth.
- Inform farmers to mark the appropriate square when a child visits the booth. Suggest they prompt kids to ask questions, but kids are not required to ask a question in order to have their box marked.

Give each kid a Bingo card and explain the different way they can get Bingo (point to the display) before returning to the KERNEL booth. Explain how to do the activity:

- Visiting the booths and talking with farmers are good ways to shop and decide how to spend the \$2 in KERNEL Kid Cash they will get upon completing the activity.
- Tell them to find the poster that matches the product on the square.
- When the kid visits the farmer, the farmer will check the appropriate box.

Also, share 1-2 of these items with a child:

- Farmers markets are great way to buy and eat locally while being good for the environment as well as the local economy.
- Many people shop farmers markets not only because the food is fresher and tastes better but because the shopper can ask the farmer questions about the product they are selling.
- Farmers expect to be asked questions about what they are selling and enjoy discussing what they grow.
- Talking with farmers is not only educational, but fun.

Ways to get Bingo:

- Three in a Row: whether up and down, across or diagonal. The free space counts.
- Blackout, or Coverall: The kid gets each of the eight squares filled.

**MODIFICATION:**

If the market has less than eight participating farmers, then a few farmers can represent two fruits or vegetables. If the market has more than eight farmers who would like to participate, some farmers can have the same product. That is, have two farmers who represent tomatoes, two cucumbers, etc.

**ATTACHED DOCUMENTS INCLUDE:**

- Bingo Card
- Bingo Posters

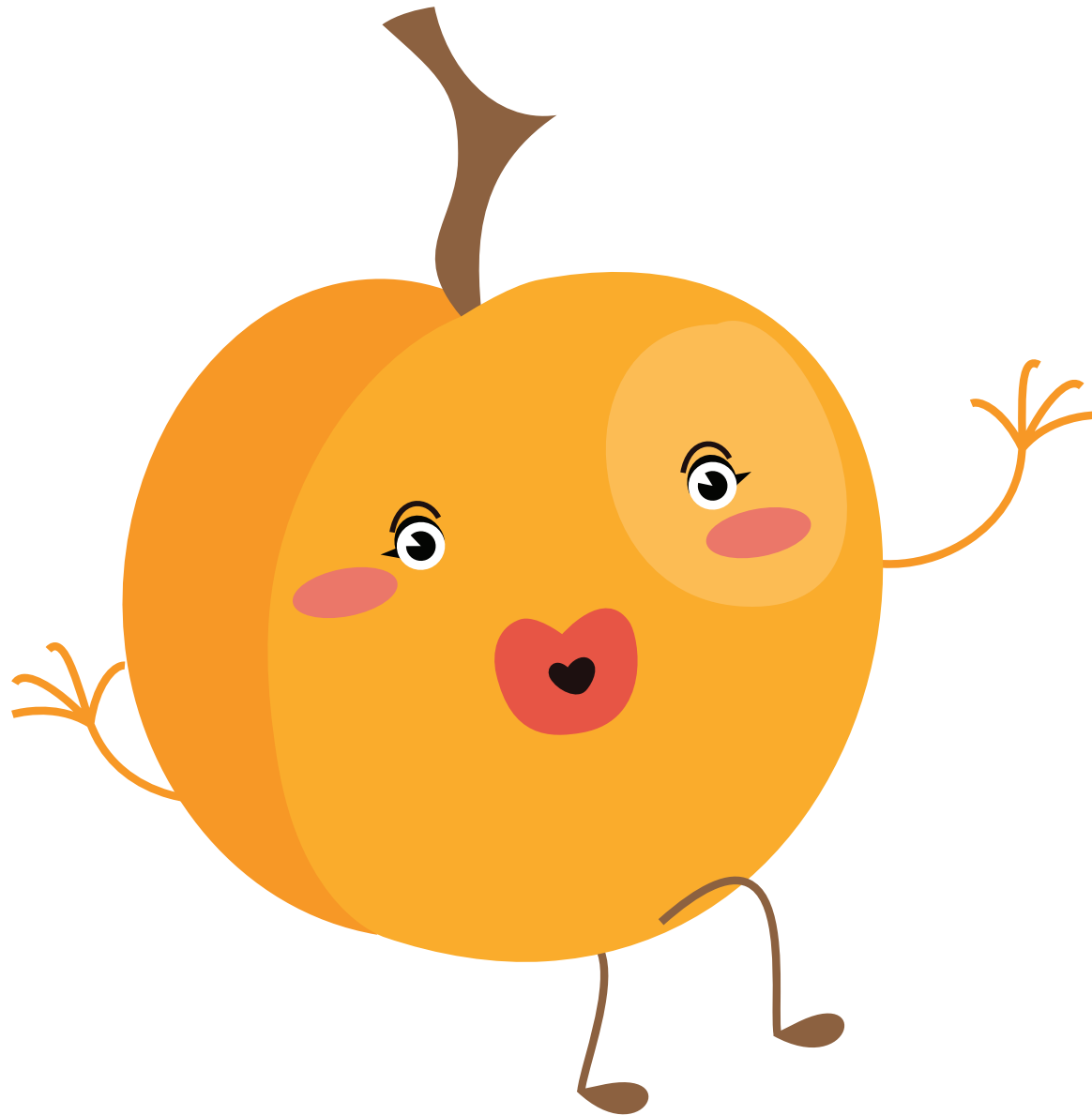




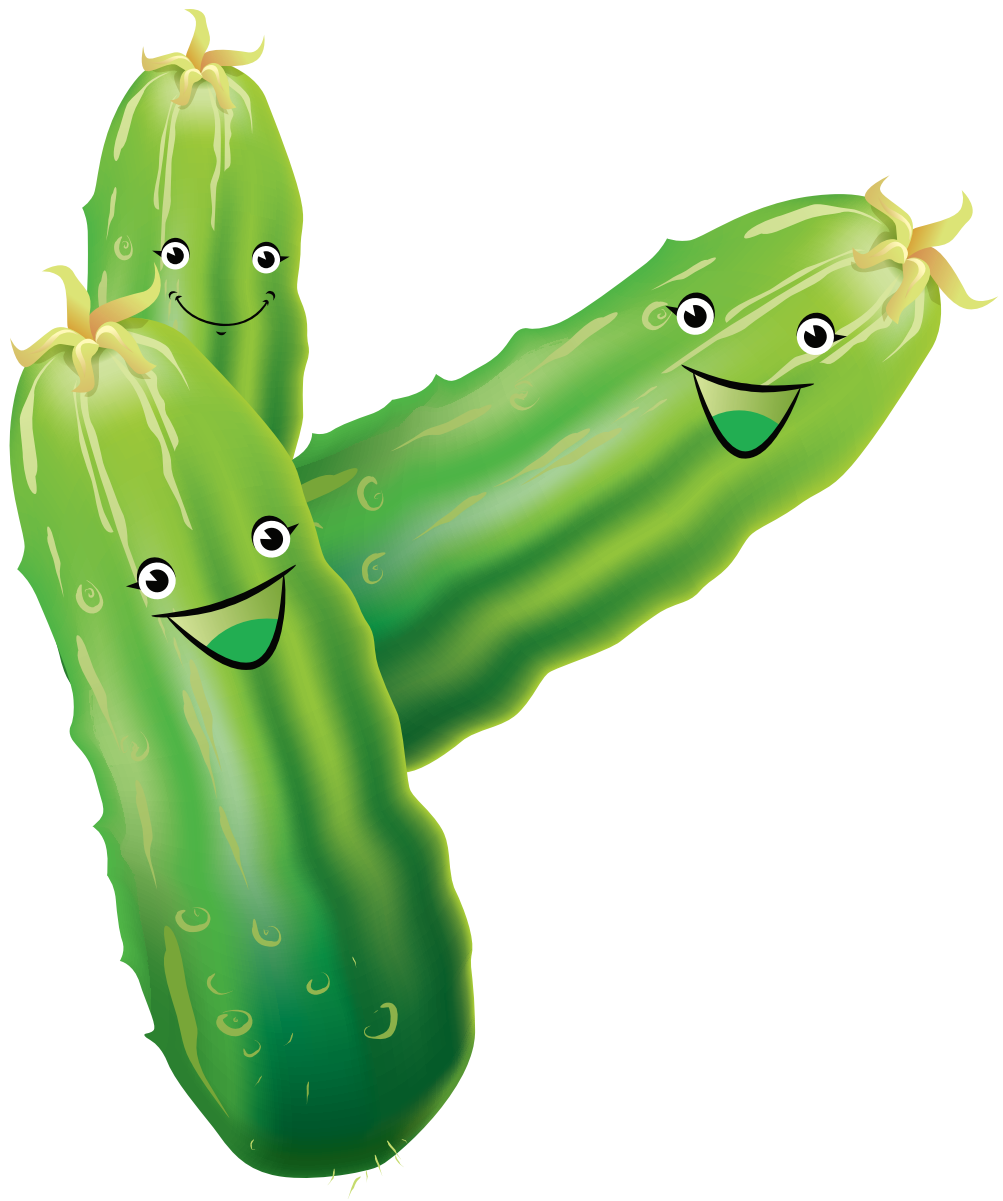
**tomato**



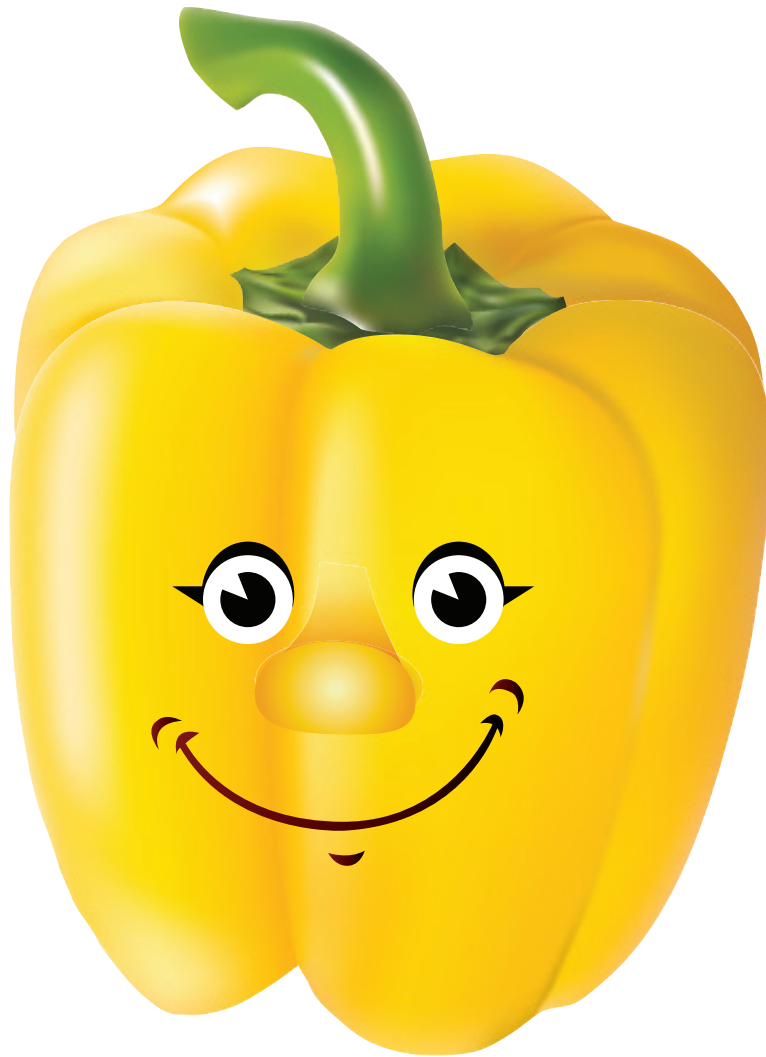
peaches



# cucumbers

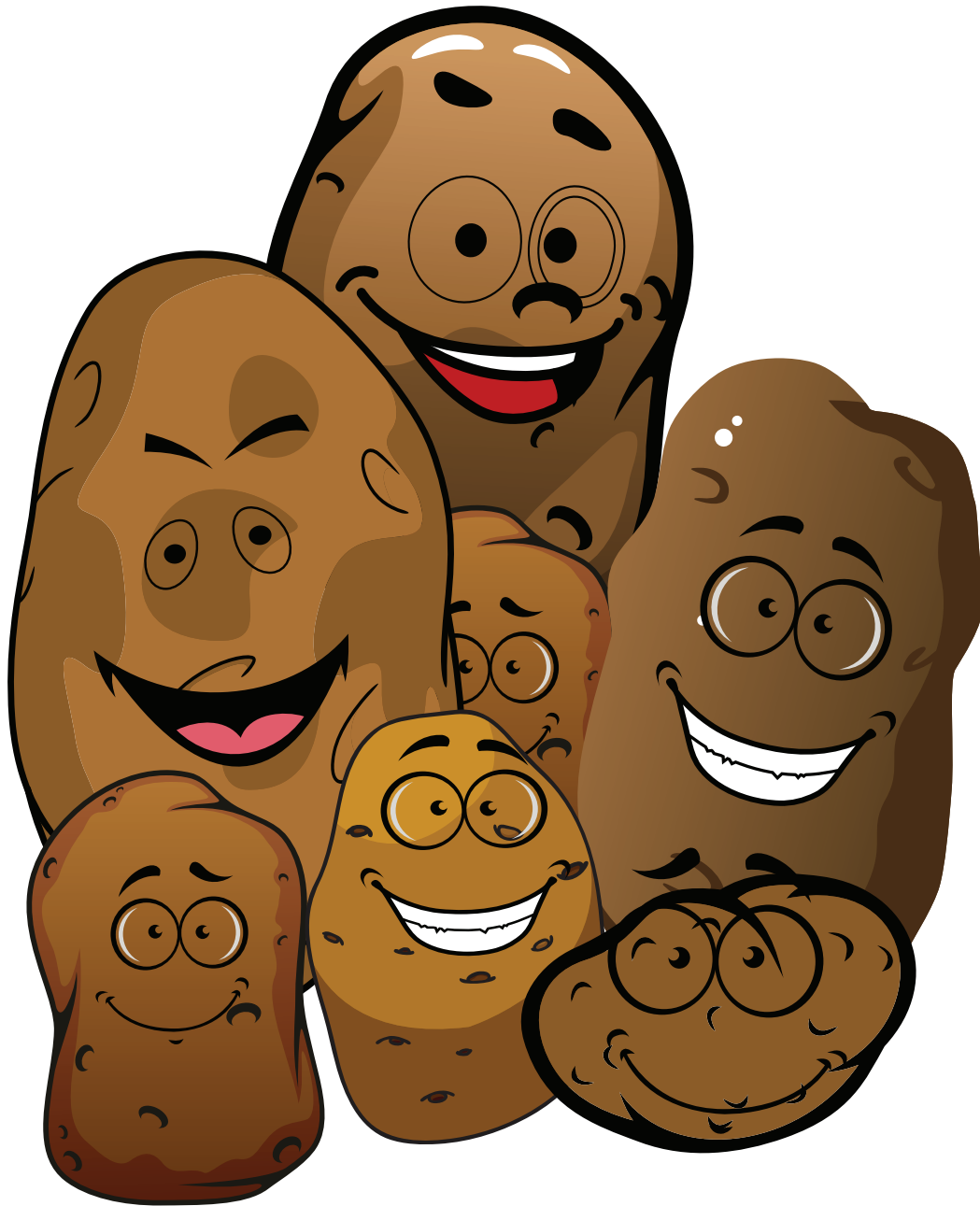


**pepper**

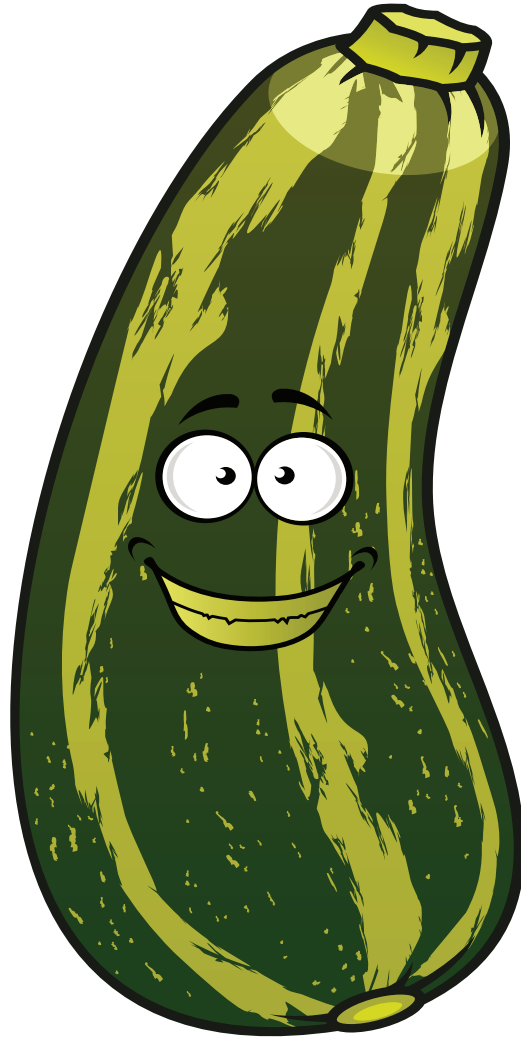




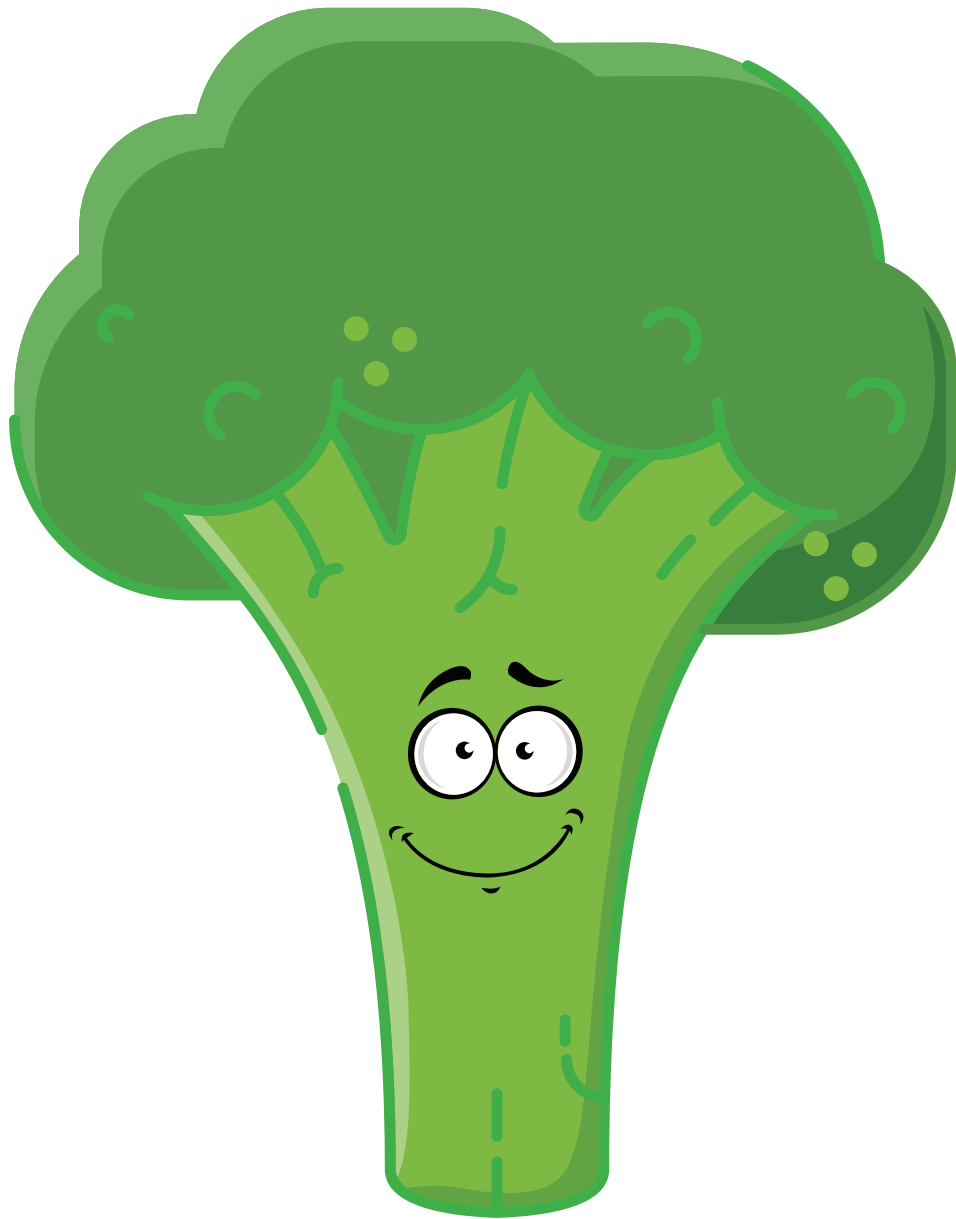
# potatoes



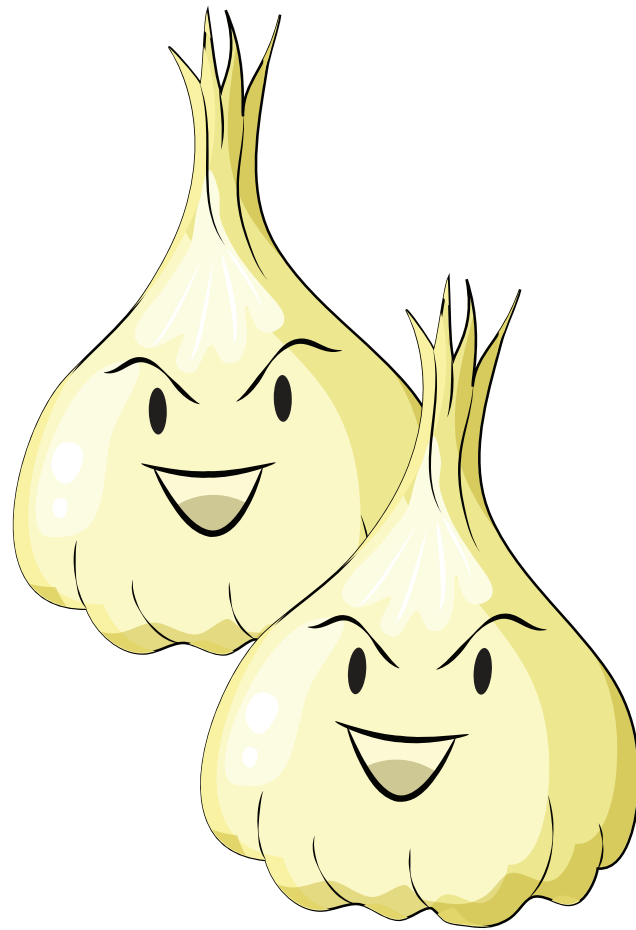
**zucchini**



**broccoli**



**garlic**





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Farmers Market Bingo

Farmers Markets provide shoppers an easy way to meet the people who grow their food. A person can find a variety of fresh fruits and vegetables at a farmers market, even some items not easily found at grocery stores like purple carrots and heirloom tomatoes.



### Kernels of Truth:

- Farmers often have great recommendations on how to cook their products!
- Buying at a farmers market is good for the environment because it is grown locally. Did you know that the average food purchased in the United States travels 1500 miles before it reaches your plate?
- Buying locally helps preserve local farmland.



## Fresh Vegetable Stir Fry

### Ingredients

- 1 medium carrot
- 1 bunch kale
- 1 head broccoli
- Bunch of cherry tomatoes
- 1 small hot pepper
- 1 clove garlic
- 1 pint cherry tomatoes
- 1 TBLS tahini paste
- 1 TBLS brown sugar
- 3 TBLS olive oil
- 1/2 teaspoon ground ginger

### Directions

1. Rinse and chop broccoli. Peel, rinse, and chop carrot. Rinse and mince hot pepper. Peel and finely chop garlic. Rinse cherry tomatoes.
2. Rinse kale then remove the hard stems and stack leaves on top of each other. Use knife to slice kale leaves into 1/4-inch strips.
3. In small bowl, mix together tahini, brown sugar, and 1 Tablespoon olive oil. Add 1 teaspoon of minced hot pepper (add more to taste). Mix.
4. In medium skillet over medium-high heat, heat remaining 2 Tablespoons olive oil. Add ground ginger and stir. Add chopped veggies. Stir frequently.
5. Cook until veggies are tender, about 6-7 minutes. Add tomatoes last.
6. Add tahini mixture. Bring to a boil. Reduce heat. Simmer about 2 minutes.



**Note:** Variations include adding cubed extra firm tofu or chicken. Serve over brown rice, couscous, or quinoa. If don't have hot pepper, could use Sriracha hot sauce.



# #40 GIVE A FARMER A HAND

**ACTIVITY DESCRIPTION:** Kids will make a craft to show appreciation for farmers. (Could be used as a National Farmers Market Week activity.)

## **MATERIALS REQUIRED:**

- Construction paper
- Pencils
- Scissors
- Markers
- Stickers, if available/desired
- Tape

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## **CONCEPTS TO COVER:**

Farmers grow our food and feed the world.

Farmers grow many different crops.

Farming is hard work.

## **LESSON ACTIVITY (3-5 minutes):**

One week before activity, ask vendors if they want to be included in this activity of appreciation. Make a hand for each of the participating vendors prior to the market. Tape the pre-cut hands-on canopy poles of participating vendors so that kids know which vendors are okay with having hands taped to their poles.

With a pencil, each child traces their hands on construction paper. Each child can make several hands (if you have enough supplies). Each hand is cut out with scissors and the child can decorate the hands with markers, pencils, and stickers if available. While children are preparing their hands, staff can discuss the concepts mentioned above and also ask what they like to buy from their favorite farmers, or where they would get food if there were no farmers. When finished, the kids get a piece of tape for each hand to place at their favorite vendors' booths

**MODIFICATIONS:** Kids can make thank you cards for the farmers. You can make a template or just provide a variety of paper, markers, and colored pencils. As well as safety scissors. Kids often have special and touching things to say to their farmers and will spend a lot of time making a nice card.



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Give a Farmer a Hand

Farmers who sell direct to consumers at farmers markets benefit the community in a multitude of ways. They grow and sell a wide variety of great tasting, fresh and local produce that leads to healthier, happier communities. Farmers and Farmers Markets impact the economy by creating local jobs while providing a community gathering place, making for more vibrant communities.



### Kernels of Truth:

- A 2016 study by the University of California-Davis found that for every \$1 million in revenue generated by direct to market farmers 32 jobs are created.
- According to the USDA, 150,000 farmers, ranchers, and other agricultural entrepreneurs surpassed 1.5 billion in sales at farmers markets.
- Many farmers donate unsold produce to programs that serve low-income individuals and families. In Spokane farmers markets donate unsold produce directly to low-income housing communities!



## Simple Grilled Cheese & Tomato Sandwich

### Ingredients

- ½ stick of softened butter
- 8 slices of bread
- 2 medium tomatoes sliced
- 8 slices of cheese of your choice (Cheddar, Swiss, Monterey Jack, Fontina, Pepper Jack, etc.)
- Optional: 8-12 leaves of Basil

### Directions

1. Spread softened butter on one side of each slice of bread while heating skillet on medium/medium-high heat.
2. Place four slices of bread butter side down on the skillet. On each slice of bread, add a slice of cheese followed by two slices of tomatoes, 2-3 basil leaves (if desired), and another slice of cheese.
3. Then top with another slice of bread with buttered side facing up.
4. Proceed to grill until bread is golden brown on each side (2-4 minutes each side).



# #41 Gourds

**ACTIVITY DESCRIPTION:** Kids will learn that some plants can be used for things other than food. Then make a musical instrument similar to a maraca made from a gourd.

## **MATERIALS REQUIRED:**

- Paper plates (white and economy constructed so it is easily folded in half) or two paper cups.
- Markers
- Some gourds for display (donated or on loan from a vendor, if possible)
- Stapler and staples (or duck tape if using cups)
- Beans or rice (noise making part)
- Optional materials: Stickers, Craft paper or crepe paper, Glue sticks.
- If possible, have an actual gourd instrument(s) on display. Also, gourd dippers and gourd birdhouses are appropriate to be displayed as well.

**CONCEPTS TO COVER:** Learn that gourds can be used to make instruments as well as many other useful items. Learn that they have been used to do this for over 4,000 years.

## **LESSON ACTIVITY (5 minutes):**

These facts can be shared during the activity:

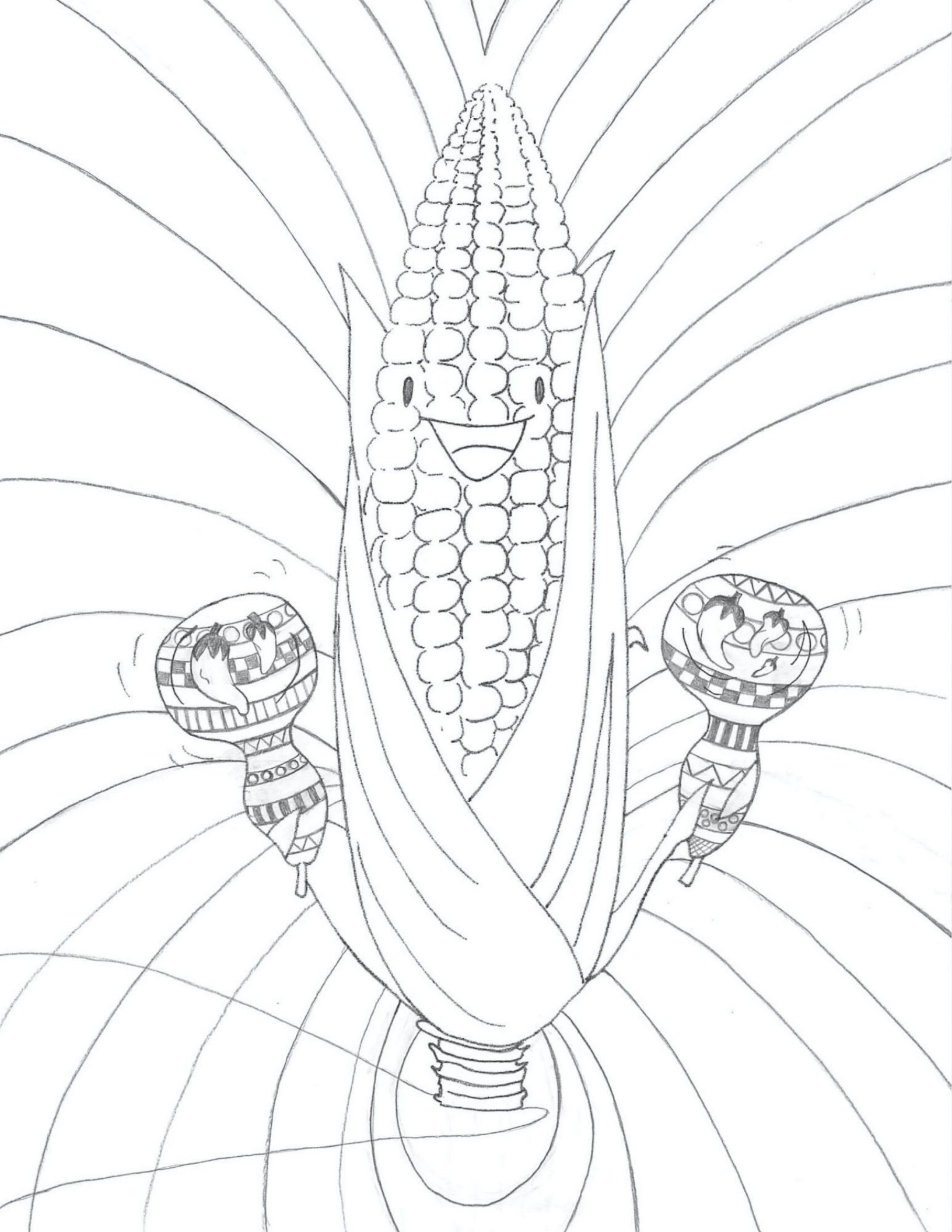
- Banjos were first made from gourds
- Gourds have been made into birdhouses, bowls, dippers for drinking water, musical instruments, utensils, ornaments, and storage containers.
- Gourds are a member of the squash family and have been cultivated for over 4000 years.
- Gourds can last several years when cured properly

## **How to do the activity:**

1. Supply each child with one paper plate to decorate or two paper cups. Child can use markers, stickers or crepe paper and glue.
2. When a child completes decorating their plate, fold the plate in half and then staple about two thirds to three quarters of the plate together. Staples should be spaced so that the beans or rice added won't fall out. If using paper cups fill one cup and then use colorful duct tape to tape the second cup to the top of the first.
3. If using a paper plate at the open end of the folded over and partially stapled plate, add enough beans or rice to make noise when the plate is shaken.
4. Finish stapling the plate shut.

## **MODIFICATION:**

This activity can be paired with a Kid's Concert. Hire a musician or band to play kids' songs. The kids can use their instruments to play along.







# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Gourds

To use a gourd, you first need to dry it. Small gourds may take 1-2 months, while large gourds may take 6 months or longer. Gourds dry best fully mature and on the vine. If you want to dry or "cure" your gourd inside, here are some easy steps to follow.

Clean the skin thoroughly with water mixed with a little vinegar to kill bacteria. Do not scrape the skin or cut any holes in your gourd. Place gourds on a table or screen not touching one another and out of direct sunlight. Make sure the area has good air flow. Check every few days and wipe off any moisture. Fungus is okay, but if soft spots develop on a gourd, dispose of that gourd. When you hear seeds rattle inside, the gourd is completely cured. Gourds can last several years when cured properly.



### Kernels of Truth:

- The banjo, as many other musical instruments, was first made out of a gourd.
- Gourds can also be used as dippers for drinking water, utensils, bowls, birdhouses, storage containers, or as ornaments.
- Gourds have been in cultivation for over 4000 years and are a member of the squash family.



## Sweet Potato & Mac and Cheese

### Ingredients

- 2 sweet potatoes
- 2 cups macaroni elbows
- 4 Tbsp butter
- 4 Tbsp flour
- 2 cups whole milk
- 1 tsp dijon mustard
- ¼ tsp brown sugar
- ¾ cup parmesan
- 1 ½ cups sharp cheddar cheese
- Salt & pepper to taste



### Directions

1. Preheat oven to 400 degrees F. Put on large pot of water to boil, add salt, cover with lid to boil faster.
2. Peel and cut sweet potatoes into roughly 1-inch cubes. Add sweet potatoes to boiling water and cook for 10 minutes or until they are soft.
3. Scoop sweet potatoes out of water with a slotted spoon, then lightly mash with a fork or potato masher. Save potato water for cooking pasta.
4. In another saucepan, gently melt the butter and add the flour, whisking to form a roux. Then take the pan off the heat, slowly whisk in the milk and when it is all combined and smooth, put back on the heat. Exchange your whisk for a wooden spoon and continue to stir until your gently bubbling sauce has lost any floury taste and has thickened. Add mustard, salt, and pepper until combined.
5. Cook the macaroni elbows in the saved sweet potato water for about 6 and a half minutes, then drain pasta.
6. Add macaroni to the mashed potatoes, folding them in until combined. Then add in the parmesan dispersing evenly.
7. Pour in the white sauce, stirring until combined. Then, stir in the cheddar. Add additional seasoning, if desired.
8. Spoon macaroni mixture into rectangular oven safe baking dish. Sprinkle extra cheddar over top. Bake for 20 minutes and serve.



# #42 HOCKEY

**ACTIVITY DESCRIPTION:** Kids will learn a new way to exercise and get their heart rate up using a hockey stick. Learn to hold a stick, shoot a goal! Do some basic calisthenic exercises with a hockey stick. Guess how long a hockey stick is in various vegetables.

**MATERIALS REQUIRED:**

- A hockey stick or two, a ball
- some various fresh fruits and vegetables
- sidewalk chalk to mark off a goal.

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

**CONCEPTS TO COVER:**

Hockey stick Exercise #1: Hold the hockey stick in the middle with 2 hands. Both hands and feet shoulder length apart. Lift the hockey stick out in front of you. Do 5-10 squats.

Hockey stick Exercise #2: Now hold it above your head with the same hand positioning and do 5-10 squats.

Hockey stick Exercise #3: Hold it in front of you again lift your left foot then your right. Hold up each foot for a count of 5, if you can, then switch. Do it 5-10 times for each foot.

How to hold a hockey stick: Its personal preference which hand goes on top. Pick a top hand place the V of your hand (between the pointer finger and thumb) with your palm facing down along the center of the shaft near the top of the stick. Put your bottom hand about one hand distance below the other hand the opposite side of the stick as your top hand also palm facing down.

Try to shoot a goal: Draw a hockey goal with chalk. Just draw two posts 72 in apart somewhere where it will be easy to retrieve the ball and not into traffic! Have the kids hit the ball lightly through the drawn goal lines.

Additional activity or for younger kids or for kids with mobility limitations: Get a few different fruits and vegetables. An example would be a cucumber, have the kids guess how many cucumbers long a hockey stick is.

**LESSON ACTIVITY (10- 20 mins):**

Draw the goal posts, gather a few fruits and vegetables before the kids arrive and find out how many of each equal a Hockey Stick. Try the three exercises and holding the hockey stick properly so you know how to demonstrate for the kids. Then when kids arrive lead them through the exercises 1-3 using a hockey stick.

Show them how to hold a Hockey stick and then let them try to score a goal. High fives all around whether they make it or not.

Then let them guess how long the hockey stick is in various fruits or vegetables.

**MODIFICATIONS:** None

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring page





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Hockey

Hockey is fun exciting way to get 60 minutes or more of aerobic exercises a day! Aerobic exercise needs lots of air, so you breathe hard when doing it; aerobic exercise is good for your heart. There are many types of hockey, including ice hockey, field hockey, roller hockey, sledge hockey, and a favorite among kids of all ages - street hockey.



### Kernels of Truth:

- Before the 1960's hockey sticks were straight.
- If the teams' goalies are injured during the game, the rules state that anybody can play the position - including a fan from inside the arena!
- The first puck used during outdoor hockey in the 1800's was made of frozen cow dung!



## Good Morning Muffins

### Ingredients

- 2 cups all-purpose flour
- 1 ¼ cups white sugar
- 2 teaspoons baking soda
- 2 teaspoons ground cinnamon
- ¼ teaspoon salt
- 2 cups shredded carrots
- ½ cup raisins
- ½ cup pecans
- ½ cup unsweetened flaked coconut
- 1 apple - peeled, cored, and shredded
- 3 eggs
- 1 cup vegetable oil
- 2 teaspoons vanilla extract

### Directions

1. Preheat oven to 350 degrees F. Grease 12 muffin cups, or line with paper muffin liners.
2. In a large bowl, mix together flour, sugar, baking soda, cinnamon, and salt. Stir in the carrot, raisins, nuts, coconut, and apple.
3. In a separate bowl, beat together eggs, oil, and vanilla. Stir egg mixture into the carrot/flour mixture, just until moistened. Scoop batter into prepared muffin cups.
4. Bake in preheated oven for 20 minutes, until a toothpick inserted into center of a muffin comes out clean.



# #43 MARKET DETECTIVE-CALCIUM

**ACTIVITY DESCRIPTION:** Kids will craft a magnifying glass and mustache disguise. Then learn about fruits and vegetables that contain Calcium and why Calcium is important for a healthy life. Then search the market for items that are high in Calcium.

## **MATERIALS REQUIRED:**

- Card stock for printing
- Craft sticks
- Scissors
- Markers
- Colored Pencils

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## **CONCEPTS TO COVER:**

- Calcium is an essential mineral for strong bones and teeth, blood clotting, nerve impulse transmissions, and maintenance of a normal pulse rate.
- Lack of calcium during childhood can lead to a child not reaching their maximum adult height.
- Calcium can be found in many different foods like milk, cheese, tofu, dried beans, and leafy vegetables like spinach, collard greens, turnip greens, kale, beet greens, mustard greens, and Bok choy.
- Your bones and teeth contain 99% of the calcium found in your body.
- Routinely engaging in weight bearing exercises like walking, dancing, and weightlifting can help maintain bone density throughout your life. You are able to build bone density with calcium until you are about 30 years old. After that, any bone loss is permanent.

## **LESSON ACTIVITY (5 minutes):**

Magnifying and mustache template should be printed on card stock. Either pre-cut them out, or supply kids with scissors. Tape the mustache to the craft stick so they can hold it up to their face while searching the market. While kids are coloring their magnifying glass, discuss why Calcium is important and which foods are high in Calcium.

Stress vegetables that contain calcium that are available at the market. When the kids have finished coloring, ask them to go through the market and see how many of the items containing Calcium they can find with their magnifying glass. Suggest they can ask farmers for help in their search. When they complete their search, they can return to the booth.

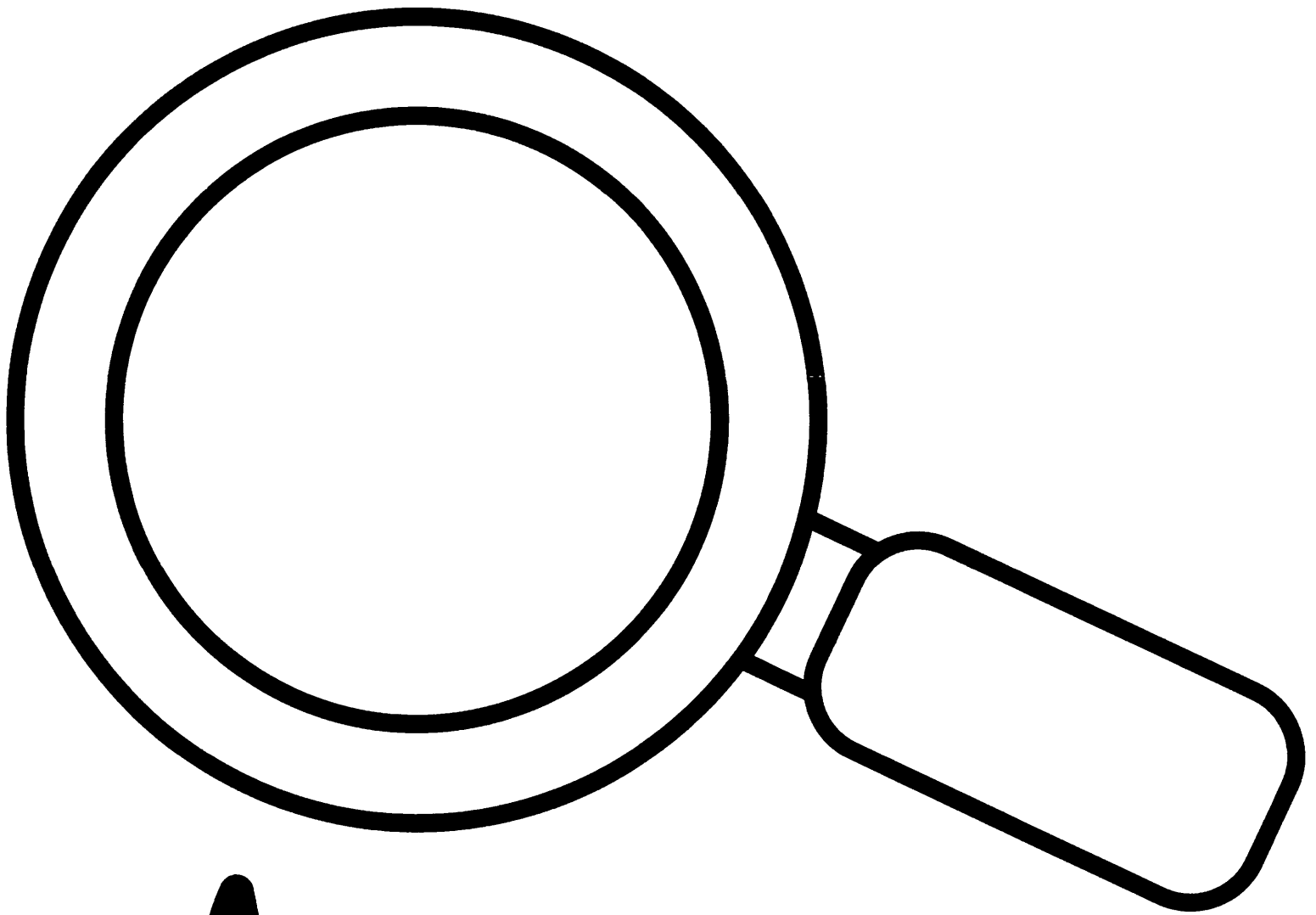
**MODIFICATION:**

A staff or someone with nutritional expertise (WIC case manager, chef, or dietitian) will lead a tour through the market showing items that are high in calcium. Please inform kids why calcium is important for a healthy life.

**ATTACHED DOCUMENTS INCLUDE:**

- Mustache and Magnifying Glass template
- Info Page





# Calcium in

# PLANT

# Foods



LIVE LOVE FRUIT



Broccoli



Pumpkin seeds



Bok Choy



Okra



Collards



Kale



Turnip Greens



Avocado



Butternut Squash



Almonds



Green Beans



Coconut Meat



Kholrabi



Brazil Nuts



Artichoke



Spinach



Asparagus



Brussels Sprouts



Sesame Seeds



Chia Seeds



Cabbage



Mulberries



Celery



Onions



Goose Berries



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Market Detective: Calcium!

Calcium is a mineral that is essential for strong bones and teeth, blood clotting, nerve impulse transmissions, and maintenance of a normal pulse rate. Lack of calcium during childhood can lead to a child not reaching their maximum adult height!

Calcium can be found in many different foods like milk, cheese, tofu, dried beans, and leafy vegetables, including spinach, collard greens, turnip greens, kale, beet greens, mustard greens, and bok choy.



### Kernels of Truth:

- Your bones and teeth contain 99% of the calcium found in your body.
- You are able to build bone density with calcium until you are about 30 years old. After that, any bone loss is permanent.
- Routinely engaging in weight bearing exercises like walking, dancing, and weightlifting can help maintain bone density throughout your life.



## Simple Lentil Chili

### Ingredients

- 3 cloves garlic, chopped
- 1 medium onion, chopped
- 2 medium carrots, chopped
- 2 cups chopped fresh tomatoes (or 14.5 oz can)
- 5 oz kale
- 1 green pepper, chopped
- 4 cups vegetable stock (or water)
- 1 cup dry brown lentils
- 1 tsp sea salt 2 tsp cumin
- 2 tsp paprika
- ¼ tsp cayenne powder
- ¼ tsp ground black pepper

### Directions

1. In a large pot, add garlic, onion, carrots, tomatoes, green pepper, vegetable stock (or water), lentils and bring to a boil.
2. Add salt, cumin, paprika, cayenne powder, and pepper.
3. Stir and cook over medium-high heat for 35 minutes.
4. Cook for another 10 minutes.
5. Add the kale and stir a few minutes before chili is finished cooking.
6. Remove from heat and stir.





# #44 MARKET DETECTIVE-VITAMIN A

**ACTIVITY DESCRIPTION:** Kids will craft a magnifying glass and mustache disguise. Then learn about fruits and vegetables that are high in Vitamin A and why Vitamin A is important for a healthy life. Then search the market for items that are high in Vitamin A.

## **MATERIALS REQUIRED:**

- Card stock for printing
- Scissors
- Markers
- Colored Pencils

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

## **CONCEPTS TO COVER:**

Vitamin A is a nutrient that helps keep your vision, skin, immune system, and bone growth.

"High in Vitamin A"-20% or higher Daily Value of Vitamin A: apricots, collard greens, sweet potatoes, carrots, winter squash, cantaloupe, leaf lettuce, romaine lettuce, bell peppers, spinach, broccoli tomatoes, watermelon, hot chili pepper.

## **LESSON ACTIVITY (5 minutes):**

Magnifying glass and mustache template should be printed on card stock. Either pre-cut or supply kids with scissors. Tape the mustache to the craft stick so they can hold it up to their face while searching the market. While kids are coloring their magnifying glass, discuss why Vitamin A is important and which foods are high in Vitamin A.

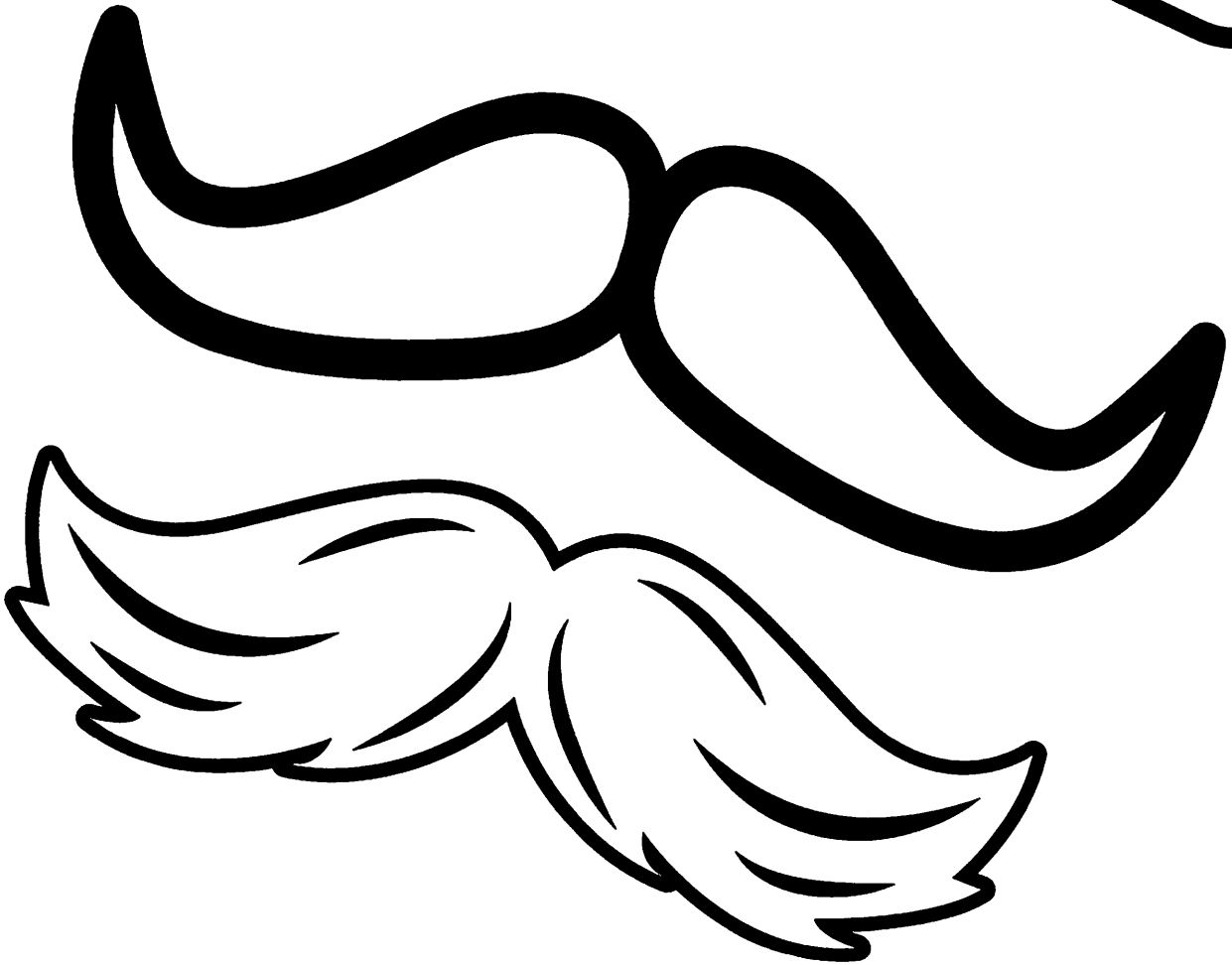
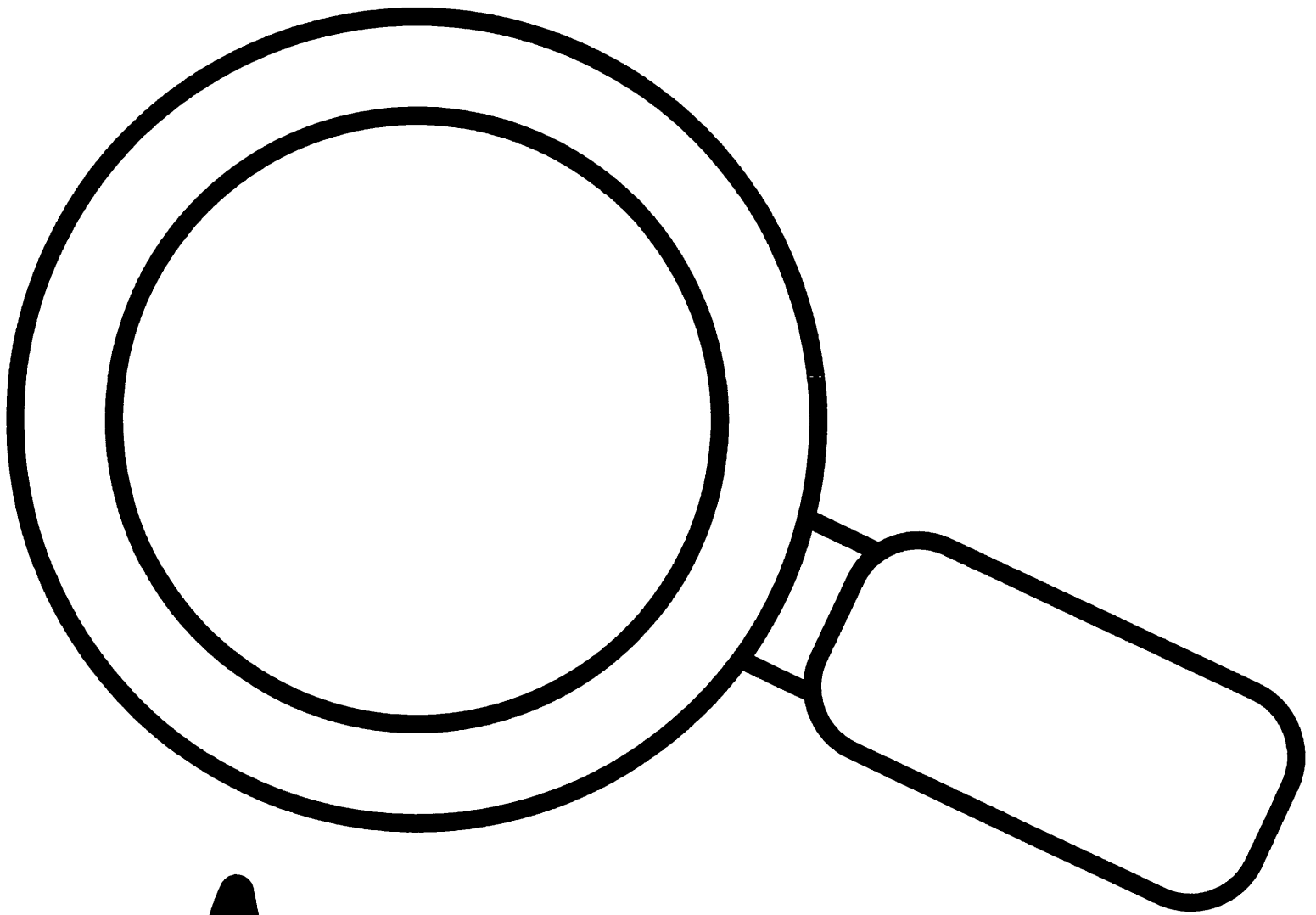
Stress ones that are available at the market. When the kids have finished coloring, ask them to go through the market and see how many of the items containing Vitamin A they can find with their magnifying glass. Suggest they can ask farmers for help in their search. When they complete their search, they can return to the booth.

## **MODIFICATION:**

A staff or someone with nutritional expertise (WIC case manager, chef, or dietitian) will lead a tour through the market showing items that are high in Vitamin A. Please inform kids why Vitamin A is important for a healthy life.

## **ATTACHED DOCUMENTS INCLUDE:**

- Vitamin A Market Detective magnifying glass template
- Info Page





# OPEN YOUR EYES TO Vitamin A



Pumpkin



Cantaloupe



Acorn Squash



Sweet Potato



Red Bell Pepper



Apricot



Broccoli



Papaya



Kale and other dark green leafy vegetables



Mango



Carrot

**VeganStreet.com**  
patreon.com/veganstreet



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Market Detective: Vitamin A!

Vitamin A is an important nutrient that helps you have excellent vision, promotes bone growth, and creates white blood cells to boost your immune system.

These fruits and vegetables are considered high in Vitamin A: apricots, collard greens, sweet potatoes, carrots, winter squash, cantaloupe, leaf lettuce, romaine lettuce, bell peppers, spinach, broccoli, tomatoes, watermelon, hot chili pepper.



### Kernels of Truth:

- Meat, like liver, has what is called preformed Vitamin A and is absorbed by your body as retinal.
- Vitamin A in plants we consume are called carotenoids, like beta-carotene, that your body converts into retinal.
- A cup of sautéed vegetables has more Vitamin A than a cup of raw vegetables because the cooked vegetables would weigh more.



## Acorn Squash with Butter and Brown Sugar

### Ingredients

- 1 medium acorn squash
- 1 tablespoon oil
- 2 tablespoon salted butter
- 2 Tablespoons brown sugar (or maple syrup)

### Directions

1. Cut the squash in half then scoop out the seeds a plum with a large metal spoon.
2. Heat your oven to 400 degrees F.
3. Cover the squash inside and out with oil.
4. Place squash cut side down on a cookie sheet. (this keeps them moist)
5. Bake for 30- 40 minutes until the back is soft when pushed on with a spoon.
6. Flip to the cut side facing up (to make little boats). Fill each with butter and then brown sugar.



# #45 MARKET DETECTIVE-VITAMIN B

**ACTIVITY DESCRIPTION:** Kids will craft a magnifying glass and mustache disguise. Then learn about fruits and vegetables that are high in Vitamin B and why Vitamin B is important for a healthy life. Then search the market for items that are high in Vitamin B.

**MATERIALS REQUIRED:**

- Card stock for printing
- Craft sticks
- Scissors
- Markers
- Colored Pencils

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

**CONCEPTS TO COVER:**

There are many types of B Vitamins, including B1, B2, B3, B5, B6, B7, B9, and B12. B Vitamins are essential to the functioning of a healthy nervous system.

Good Sources of the B Vitamins are animal-based products like meat, pork, poultry, eggs, and dairy as well as plant-based foods like potatoes, carrots, legumes, grains, squash, asparagus, broccoli, leafy greens. Vitamin B12 is only available through animal-based foods.

**LESSON ACTIVITY (5 min):**

Magnifying glass and mustache template should be printed on card stock. Either pre-cut or supply kids with scissors to cut out the template. Tape the mustache to the craft stick so they can hold it up to their face while searching the market. While kids are coloring their magnifying glass, discuss why Vitamin B is important and which foods are high in Vitamin B.

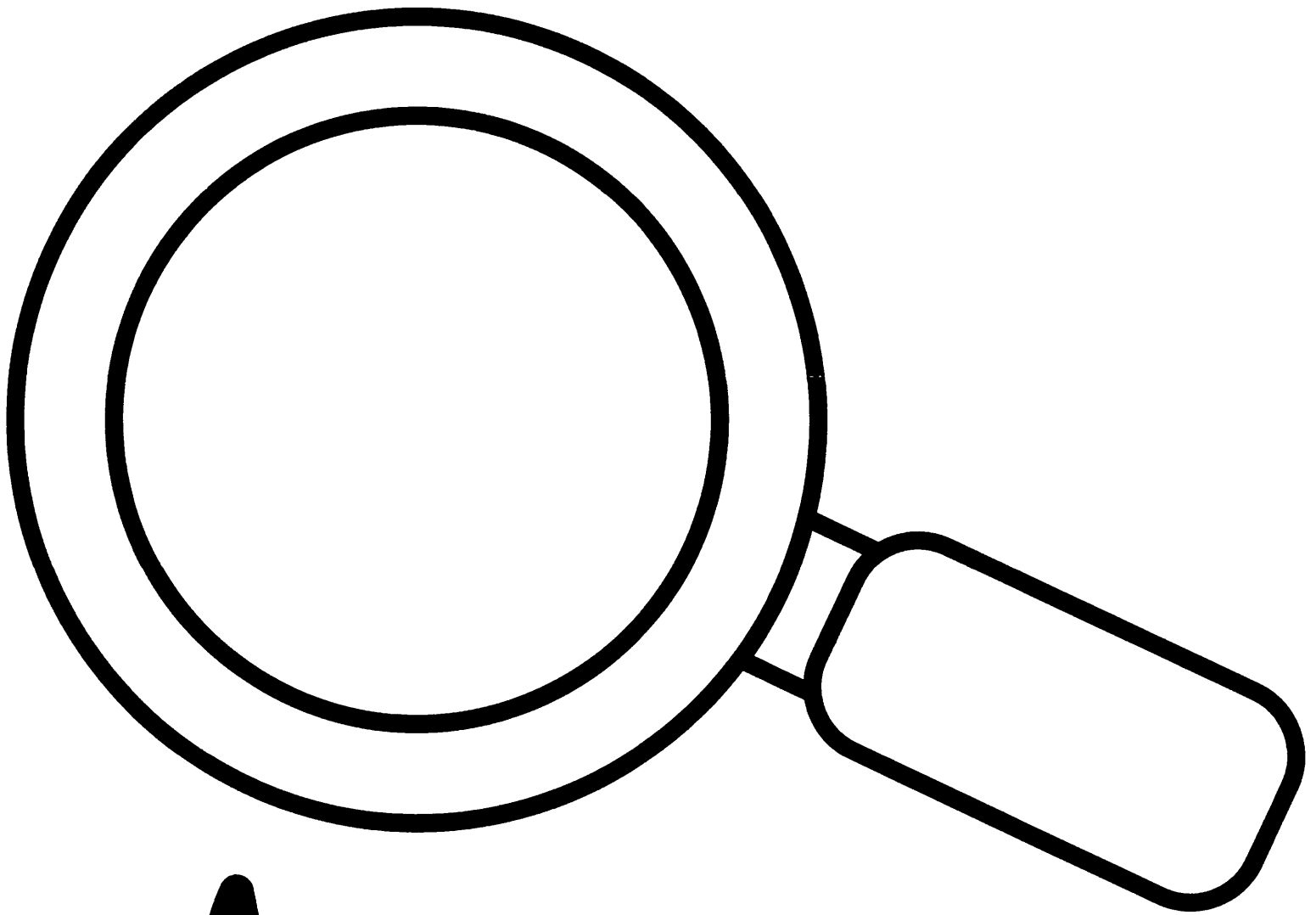
Stress ones that are available at the market. When the kids have finished coloring, ask them to go through the market and see how many of the items containing Vitamin B they can find with their magnifying glass. Suggest they can ask farmers for help in their search. When they complete their search, they can return to the booth.

**MODIFICATION:**

A staff or someone with nutritional expertise (WIC case manager, chef, or dietitian) will lead a tour through the market showing items that are high in Vitamin B. Please inform kids why Vitamin B is important for a healthy life.

**ATTACHED DOCUMENTS INCLUDE:**

- Vitamin B Market Detective magnifying glass template
- Info Page





# FOODS HIGH IN VITAMIN B



Meats (pork, beef, chicken, and turkey)

Seafood (tuna and salmon)



Eggs

Dairy products



Legumes

Leafy greens



Avocados



Citrus fruits (oranges, clementines, and lemons)



Whole grains

Fortified cereal



Clean Food<sup>®</sup>  
CRUSH





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Market Detective: Vitamin B!

The B Vitamins are important to the healthy functioning of the nervous system as well as other functions like proper red blood cell formation, protein metabolism, and immune function to name a few.

Good sources of the B Vitamins are animal-based products like meat, pork, poultry, eggs, and dairy as well as plant-based foods like potatoes, carrots, legumes, grains, squash, asparagus, broccoli, leafy greens.



### Kernels of Truth:

- Vitamin B is a complex of eight different nutrients: B-1, B-2, B-3, B-5, B-6, B-7, B-9, & B-12
- Many of the B Vitamins are not storable by the body, so it is essential to include foods rich in B Vitamins in your regular diet.
- Vitamin B12 is only available through animal-based foods like meat, pork, poultry, eggs, and dairy products or through supplements.



## Beef and Broccoli Stir-Fry

### Ingredients

- 2 tablespoons cornstarch
- 2 tablespoons water
- 1 pound of boneless round steak, flank steak, or chuck steak
- 1 tablespoon of vegetable or sesame oil
- 3 cloves of garlic, minced
- 4 cups of broccoli florets
- 1 small onion cut into strips
- 1 bell pepper cut into strips

### Sauce

- 1/3 cup of soy sauce
- 1/3 cup of water
- 1 tablespoon of brown sugar (or honey)
- 1 teaspoon of ground ginger
- 1 teaspoon of corn starch

### Directions

1. In a bowl, combine 2 tablespoons cornstarch, 2 tablespoons water until smooth. Add the beef and mix until fully coated. Set aside for 2 minutes.
2. Heat 1 tablespoon of oil in a large skillet or wok over medium-high heat. Add beef and stir-fry for 3-5 minutes or until it's no longer pink. Remove from pan and set aside. Keep warm.
3. In the same pan, stir-fry garlic, broccoli, onion, and bell peppers in the remaining oil, for 3-5 minutes. Return beef to pan.
4. In a small bowl combine soy sauce, brown sugar, ginger and remaining 1 tablespoon cornstarch and 1/2 cup water until smooth; add to the pan.
5. Cook and stir for 2-3 minutes.
6. Serve over rice or noodles.



# #46 MARKET DETECTIVE-VITAMIN C

**ACTIVITY DESCRIPTION:** Kids will craft a magnifying glass and mustache disguise. Kids will then learn about fruit and vegetables that are high in Vitamin C and why Vitamin C is important for a healthy life. Then search the market for items that are high in Vitamin C.

## **MATERIALS REQUIRED:**

- Card stock for printing
- Craft sticks
- Scissors
- Markers
- Colored Pencils
- Craft stick for mustaches
- Duck tape

## **CONCEPTS TO COVER:**

Vitamin C is essential for growth, development, and repair of all body tissues. Vitamin C is important for body functions like the immune system and maintenance of bones and teeth.

One cup of cantaloupe or cooked broccoli supplies the daily recommended amount of Vitamin C. These fruits and vegetables are high in Vitamin C (20% or higher Daily Value): Apricots, bell pepper, blackberries, broccoli, Brussels sprouts, cabbage, cantaloupe, cauliflower, collard greens, hot chili pepper, honeydew melon, okra, onion, potato, radishes, raspberries, rutabagas, spinach, summer squash, strawberries, sweet potatoes, tomatoes, watermelon.

## **LESSON ACTIVITY (5 minutes):**

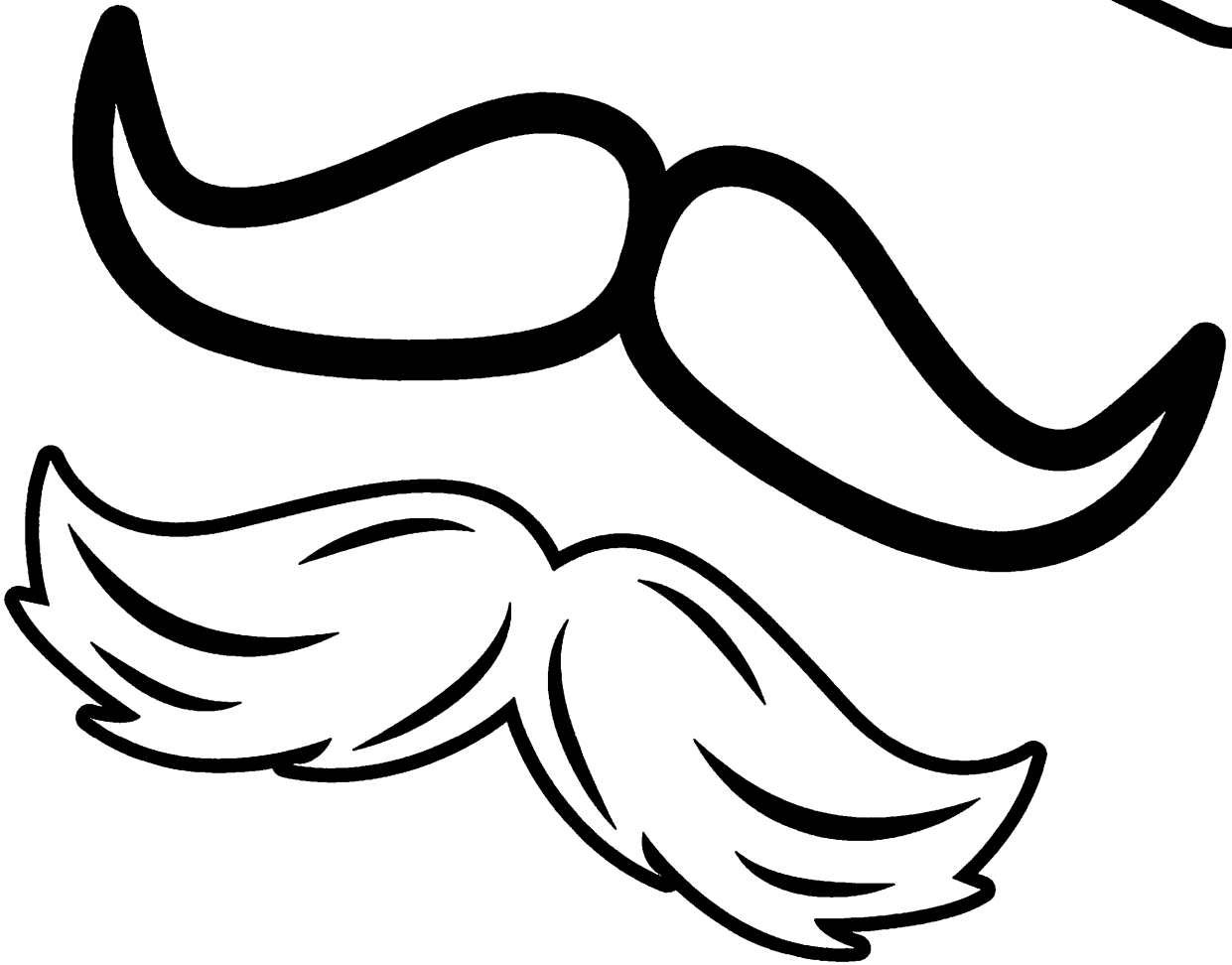
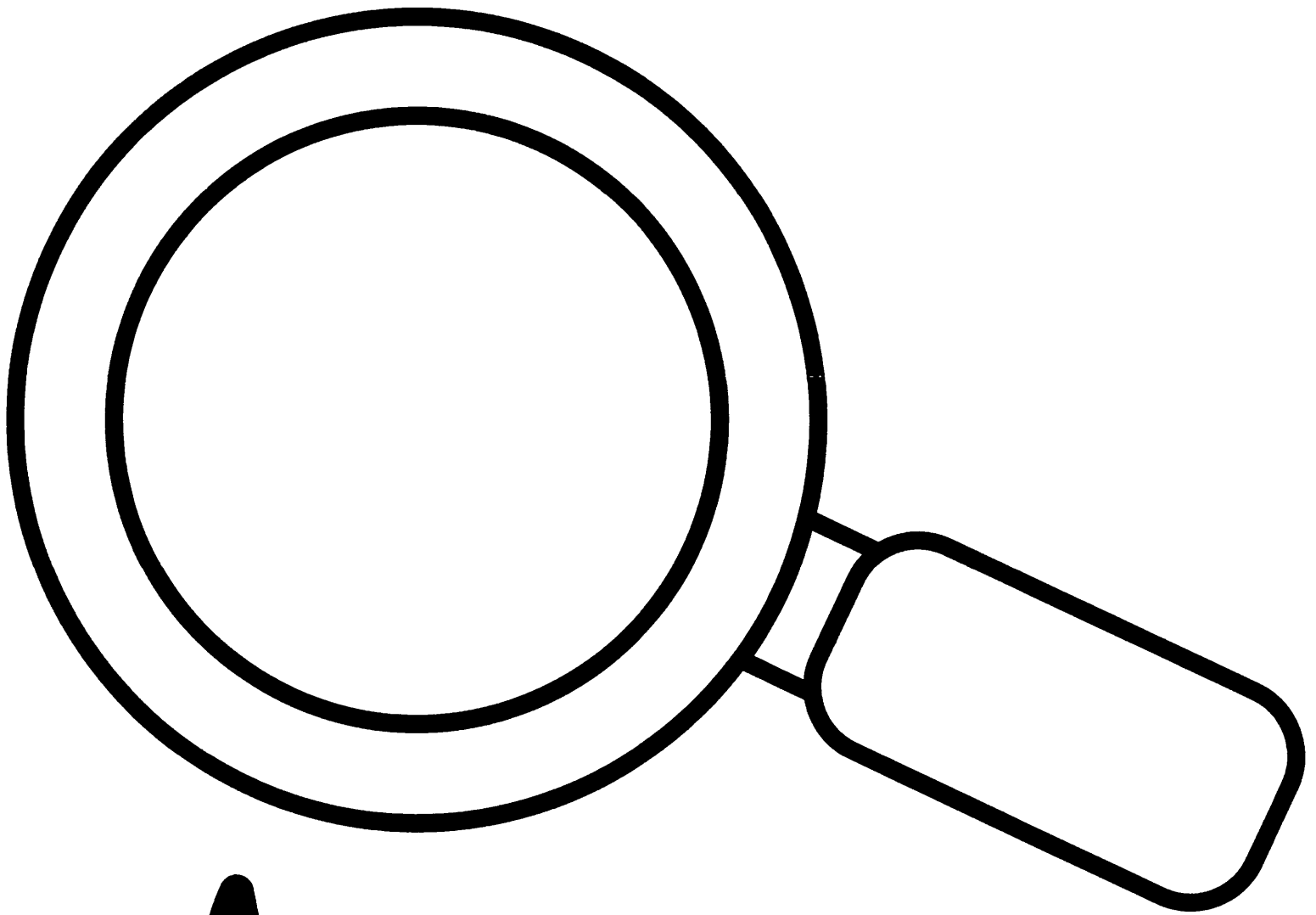
Magnifying glass and mustache template should be printed on card stock. Either pre-cut or supply kids with scissors to cut out the template. Tape the mustache to the craft stick so they can hold it up to their face while searching the market. While kids are coloring, discuss why Vitamin C is important and which foods are high in Vitamin C. Stress ones that are available at the market. When the kids have finished coloring, tape a craft stick to the back of one side of one mustache cutout. Then ask them to go through the market in disguises holding the mustache up to their face and using the magnifying glass to search for items containing Vitamin C. Suggest they can ask farmers for help in their search. When they complete their search, they can return to the booth.

## **MODIFICATION:**

A staff or someone with nutritional expertise (WIC case manager, chef, or dietitian) can lead a tour through the market showing items that are high in Vitamin C. Please inform kids why Vitamin C is important for a healthy life.

## **ATTACHED DOCUMENTS INCLUDE:**

- Vitamin C Market Detective magnifying glass template
- Info Page



# Vegetables High In Vitamin C



Cabbage



Lemon



Red Chilli



Chard



Mint



Mustard spinach



Garlic



Green Peas



Kohlrabi



Chives



Brocoli



Spinach



Bell Pepper



Welsh Onion



Parsley



Red Cabbage



Brussels Sprouts



Jalepino



Water Cress



Cauliflower



Mustard Greens



Zuchinni



Collard Greens



Kale

Read The Full Article @ [lifestylingspace.com](http://lifestylingspace.com)





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Market Detective: Vitamin C!

Vitamin C is an important nutrient in maintaining a healthy lifestyle because it is essential for growth, development, and repair of all body tissues as well as some body functions like the immune system and maintenance of bones and teeth. Some studies suggest that Vitamin C can help reduce the risk of stroke or the effects of aging.

Fruits and vegetables with a Daily Value 20% or higher are considered "High in Vitamin C. Some of these include: Apricots, bell pepper, blackberries, broccoli, cabbage, cantaloupe, cauliflower, collard greens, onion, potato, radishes, raspberries, spinach, summer squash, strawberries, sweet potatoes, tomatoes, and watermelon.



### Kernels of Truth:

- Vitamin C may not cure the common cold, but it can reduce the risk for complications related to colds and the flu like pneumonia.
- Vitamin C is needed to form collagen, a protein that binds tissues.
- You can easily get your recommended daily amount of Vitamin C by eating one cup of cantaloupe, cup of red or green peppers, or one cup of cooked broccoli.



## Summer Explosion Fruit Salad

### Ingredients

- 2 nectarines
- 2 peaches
- 3 apricots
- 1 cup of cut strawberries
- 1 cup of raspberries
- 1 cup of blueberries
- 2 teaspoons of honey
- ½ cup of orange juice
- 2 teaspoons of lemon juice
- Chopped fresh mint leaves

### Directions

1. Halve, pit, and slice the nectarines, peaches, and apricots.
2. Combine the fruit and the honey. Toss together.
3. Add the orange juice and lemon juice and toss.
4. Let sit at least 15 minutes before serving.
5. Add mint leaves right before serving.
6. If you refrigerate, please remove 30 minutes prior to serving.





# #47 MY FAVORITE RECIPE

**ACTIVITY DESCRIPTION:** Kids will draw their favorite meal and think about what raw whole ingredients go into making it.

**MATERIALS REQUIRED:**

- Paper plates
- Markers, colored pencils
- General art supplies like construction paper, scissors, glue sticks

**CONCEPTS TO COVER:**

Recipe: a set of ingredients with instructions on how to prepare a specific dish.

Whole Foods: Foods that are either not processed at all, or processed minimally. Examples include whole grains like brown rice or wheat (used to make bread or pasta), beans and fresh fruits and vegetables.

**LESSON ACTIVITY (5-10 minutes):**

Discuss with kids what a recipe is and guide them to think what their favorite dish is.

Give them a cheap paper plate and coloring materials.

Ask kids to draw their favorite dish. Then have them think about what whole foods went into their favorite recipe. Ask them what they think the whole food ingredients are and if they know how it is prepared. Then ask them if they ever purchase any of the items needed for this dish at the farmers market?!

**MODIFICATION:** None.



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## My Favorite Recipe

There are many forms people use to communicate about food: cooking shows, magazine articles, newspaper columns, photographs, and blogs are just a few. You can also learn about food from picture books.

A popular form of communicating about food is the cookbook. Cookbooks are full of recipes that give very specific directions on how to prepare a particular food or dish. What's your favorite recipe?



### Kernels of Truth:

- Applesauce was the first food eaten in space.
- Broccoli contains more protein than a steak!
- Carrots didn't start off orange in fact carrots were purple and yellow until the 1500s.



## Zucchini Chips

### Ingredients

- 1 large zucchini, cut into inch slices
- ½ cup breadcrumbs
- ½ cup parmesan cheese
- Salt and pepper to taste
- 3 Tablespoons milk

### Directions

1. Preheat oven to 425 degrees F and grease a cookie sheet.
2. Combine breadcrumbs, parmesan cheese, salt, and pepper in a small mixing bowl.
3. Dip zucchini slices in milk, dip both sides in breadcrumb mixture, and place zucchini slices on cookie sheet.
4. Bake for 20 minutes or until browned and crisped.
5. Add mint leaves right before serving.
6. If you refrigerate, please remove 30 minutes prior to serving.



# #48 MY PLATE INVESTIGATE

**ACTIVITY DESCRIPTION:** Kids will be introduced to the USDA MyPlate recommendations for kids that include the various food groups and the recommended amounts for different age groups. Learn they should eat plenty of vegetables and fruit, during the day and at each meal.

**MATERIALS REQUIRED:**

- Paper plates
- Markers

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

**CONCEPTS TO COVER:**

Fruit: Berries, apples, peaches, etc., as well as 100% fruit juices.

Vegetables: Broccoli, potatoes, spinach, tomatoes, etc.

Dairy: Cheese, milk, yogurt, etc.

Grains: Rice, oats, pasta, breads, etc.

Proteins: Beef, chicken, fish, turkey, tofu, hummus, black beans, etc.

**LESSON ACTIVITY (5-10 minutes):**

Give kids paper plates and ask them to draw what they had for dinner last night or their favorite meal.

**Facts to share:**

Make half your plate fruits and vegetables for a healthy lifestyle.

- Eat a variety of fruits and vegetables. For example, vegetables come in different categories like (Give at least one example for each category):
  - Dark, leafy greens-spinach, broccoli, kale
  - Red and orange vegetables-sweet potatoes, tomatoes, winter squash, carrots
  - Starchy vegetables-potatoes, corn
  - Legumes-dry peas and beans (black beans, kidney beans, etc.)
  - Other vegetables-cauliflower, cucumbers, green peppers, summer squash, onions

- A healthier eating style can reduce your risk of diseases like diabetes, cancer, and heart disease.
- Any kid between four and eight years old should have the following daily:
  - 1-1.5 cups of Fruit
  - 1.5 cups of Vegetables
  - 2.5 cups of Dairy
  - 5-ounce equivalents of Grain (1 ounce equivalent= 1 slice of bread, or 1 pancake, or 1 small muffin, or ½ cup of cooked rice or pasta, or 1 small tortilla)
  - 4-ounce equivalents of Protein (1 ounce equivalent = 1-ounce cooked lean beef, or 1 once cooked turkey or chicken without the skin, or 1 egg, or ¼ cup of cooked beans, or ¼ cup of tofu, or 2 Tablespoons of hummus)
- Check out the Choose MyPlate website for more information.

For kids not in the four to eight years old category, here are their recommendations:

Any kid aged two or three years old should have the following daily:

- 1 cup of Fruit
- 1 cup of Vegetables
- 2 cups of Dairy
- 3-ounce equivalents of Grain
- 2-ounce equivalents of Protein

Any girl between nine and thirteen years old should have the following daily:

- 1.5 cups of Fruit
- 2 cups of Vegetables
- 3 cups of Dairy
- 5-ounce equivalents of Grain
- 5-ounce equivalents of Protein

Any boy between nine and thirteen years old should have the following daily:

- 1.5 cups of Fruit
- 2.5 cups of Vegetables
- 3 cups of Dairy
- 6-ounce equivalents of Grain
- 5-ounce equivalents of Protein

**MODIFICATION:**

Add a display of how much of each food group a child should eat per day. Any kid between four and eight years old should have the following daily:

- 1-1.5 cups of Fruit
- 1.5 cups of Vegetables
- 2.5 cups of Dairy
- 5-ounce equivalents of Grain (1 ounce equivalent= 1 slice of bread, or 1 pancake, or 1 small muffin, or ½ cup of cooked rice or pasta, or 1 small tortilla)
- 4-ounce equivalents of Protein (1 ounce equivalent = 1-ounce cooked lean beef, or 1 once cooked turkey or chicken without the skin, or 1 egg, or ¼ cup of cooked beans, or ¼ cup of tofu, or 2 Tablespoons of hummus)

To make the displays, have five bowls and five different varieties of beans or marbles.

In each bowl, place a measured amount of the beans to represent a category. In front of each bowl, place a card that has the category and the amount labeled "for kids 4-8 years old".

**SELF-DIRECTED:** None

**ATTACHED DOCUMENTS INCLUDE:**

- My Plate Info Page



**A child between four and eight years old should have the following daily:**

1.5 cups of Vegetables

**A child between four and eight years old should have the following daily:**

2.5 cups of Dairy

**A child between four and eight years old should have the following daily:**

5-ounce equivalents of Grain (1 ounce equivalent= 1 slice of bread, or 1 pancake, or 1 small muffin, or ½ cup of cooked rice or pasta, or 1 small tortilla)

**A child between four and eight years old should have the following daily:**

1 to 1.5 cups of Fruit

**A child between four and eight years old should have the following daily:**

4-ounce equivalents of Protein (1 ounce equivalent = 1-ounce cooked lean beef, or 1 once cooked turkey or chicken without the skin, or 1 egg, or ¼ cup of cooked beans, or ¼ cup of tofu, or 2 Tablespoons of hummus)



# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## My Plate Investigate

The United States Department of Agriculture (USDA) has a program called MyPlate: MyPlate serves as a reminder that you can create your own healthy eating style. Remember, everything that you eat and drink matters. So, focus on the amount you eat and drink, provide yourself with a variety of healthy food and beverage options that supply you with nutrients to build a healthy body.

Small, gradual changes are the best way to build your foundation of healthier eating. Your healthy plate will include portions of fruit, vegetables, whole grains, protein, and dairy.



For more information on how to choose a healthier eating style, investigate the MyPlate website at: [www.choosemyplate.gov](http://www.choosemyplate.gov)

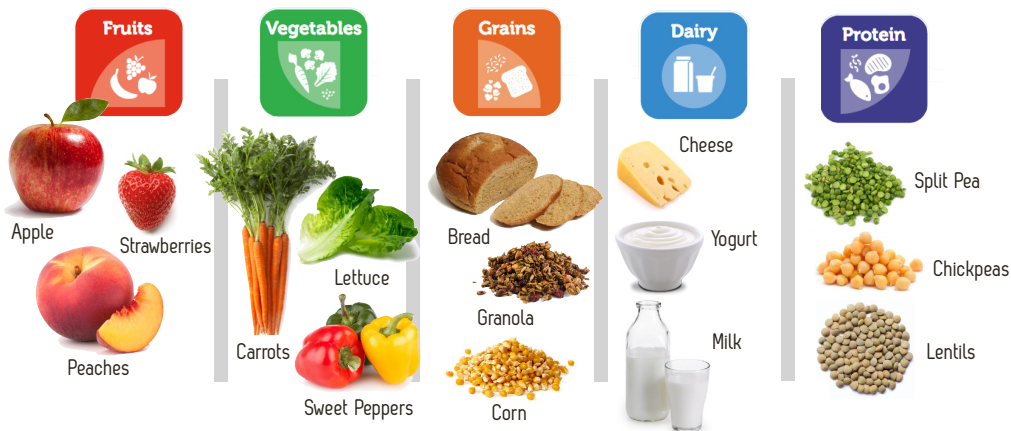
### Kernels of Truth:

- Some examples of 1 oz equivalents for proteins are: 1 oz of meat cooked, 1/4 cup of cooked beans/cooked peas/baked beans/tofu, 1 egg
- Some examples of 1 oz equivalents for grains are: 1/2 cup cooked oatmeal, 1/2 cup of cooked rice 1/2 cup of cooked pasta, 1 pancake, 1 small muffin, 1/2 English muffin, 1 slice of bread, 3 cups of popcorn popped, 1 small flour tortilla (6" diameter)
- Physical activity is an important part of a healthy lifestyle. Children 6 years old and older should have at least 60 minutes of physical activity per day.



## Mix and match the following farmer's market/ locally available foods to make a complete meal using MyPlate!

For example, a child aged 4 years to 8 years old with a healthy eating lifestyle would eat 1-1.5 cups of fruit, 1.5 cups of vegetables, 2.5 cups of dairy, 5-ounce equivalents of grains, and 4-ounce equivalents of protein daily.



# #49 SOCCER

**ACTIVITY DESCRIPTION:** Kids will learn basic soccer skills. First kids will learn some beginner soccer foot skills. Then hopefully see soccer as a potential lifelong activity and learn that physical activity is important and fun!

**MATERIALS REQUIRED:**

- Soccer balls, optimal to have a soft surface for the activity area

**STAFFING NEEDED:** two staff are needed. One person will manage the registration check-in and the post activity process and the other will lead the activity instructions.

**CONCEPTS TO COVER:**

Touch is arguably the most important skill in soccer.

Ball control: The ability to control the ball when receiving it.

Foot skills: The ability to have a positive, controlled touch on the ball with both feet.

**LESSON ACTIVITY (4 min):**

- toe-touch (1 min)
- pendulum (1 min)
- To view video of these skills, see: <https://www.youtube.com/watch?v=TzVcPLnOTrQ>

**MODIFICATIONS:** None

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring page





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Soccer

Soccer is the world's most popular sport with over 250 million individuals playing the sport worldwide. Soccer has many health benefits including improved cardio health, increased endurance, and improved coordination. Teamwork is also an essential part of Soccer, as there are 11 players on the field at a time all working together to score goals and stop the other team from scoring goals.



### Kernels of Truth:

- In almost every country around the world, soccer is called football, except in the US and Canada, where it is called soccer.
- In 1950, India declined to participate in the World Cup because they weren't allowed to play the game barefoot.
- In one game, players run between six and ten miles, which is the most out of any other sport.



## Local Berry Kabob

### Ingredients

- Strawberries
- Blueberries
- Blackberries
- Wooden skewers

### Directions

1. Thread the strawberries, blueberries, and blackberries alternately onto skewers, placing at least 2 pieces of fruit on each skewer.
2. Arrange the fruit skewers decoratively on a serving platter.





# #50 VITAMIN OF THE SUN

**ACTIVITY DESCRIPTION:** Kids will make a mobile. While learning the benefits of Vitamin D and how to get that essential nutrient while being safe in the sun.

## **MATERIALS REQUIRED:**

- Construction paper with a variety of colors
- Yarn or string
- Sturdy paper plates
- Pencil
- Scissors
- Markers
- Duct tape

## **CONCEPTS TO COVER:**

- Vitamin D promotes calcium absorption and leads to bone growth and helps reduce risk of rickets in children and osteoporosis in seniors
- Very few food items naturally contain Vitamin D. The best sources are fish like tuna, cod, salmon, swordfish as well as fish liver oil. Some other foods provide smaller amounts of Vitamin D, like beef liver, cheese, and egg yolks. Fortified sources like milk, yogurt and orange juice contain Vitamin D.
- Ultraviolet B rays from the sun provide Vitamin D. Some scientists suggest that 5-30 minutes of sun exposure to the face, arms, legs, or back at least twice weekly between 10am and 3pm without sunscreen usually provides sufficient Vitamin D intake. Other doctors recommend that you should always use sunblock all the time while in the sun and suggest your body will still get some Vitamin D benefit, even with full sun block protection.
- Prolonged unprotected exposure to the sun can increase your risk of sunburn and skin cancer.

## **LESSON ACTIVITY (10 minutes):**

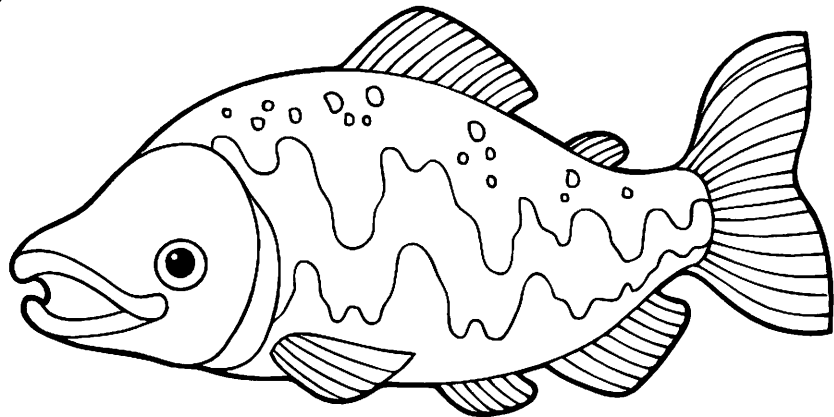
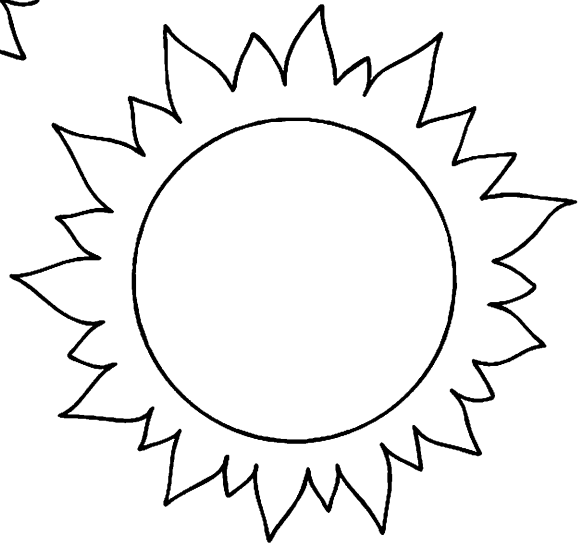
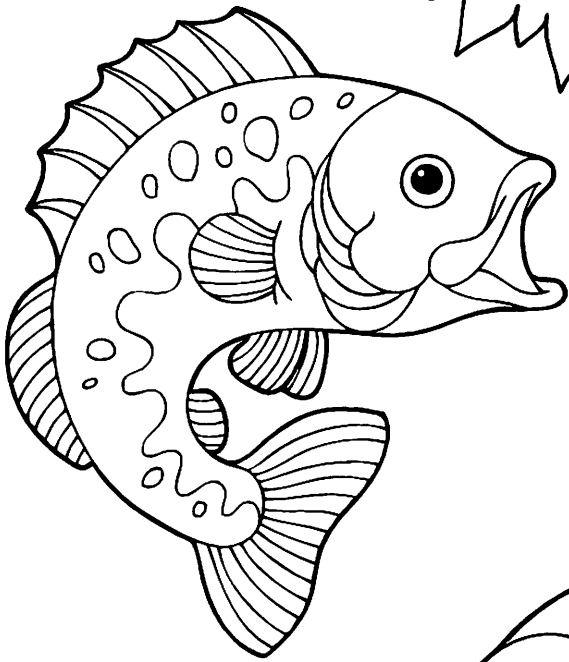
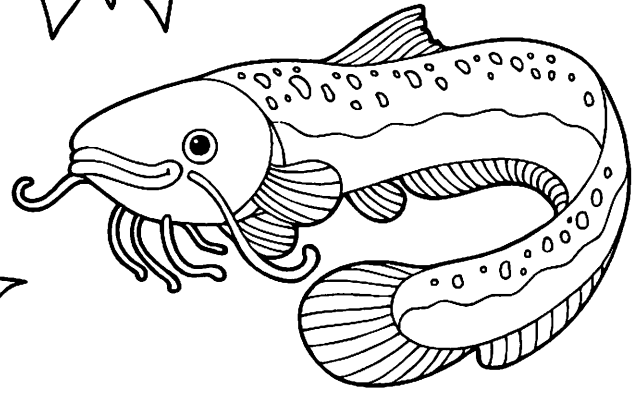
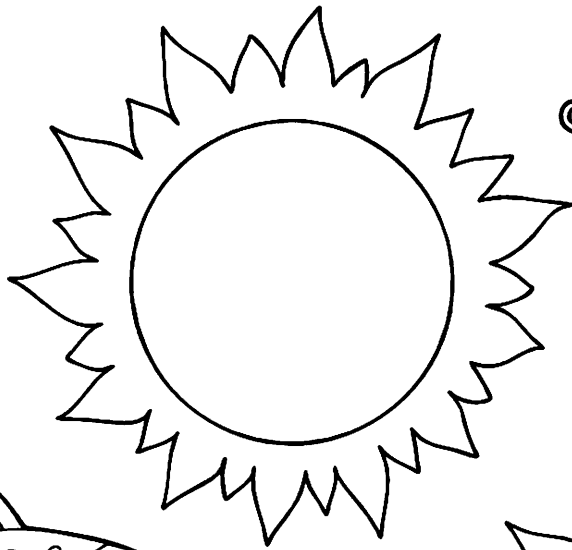
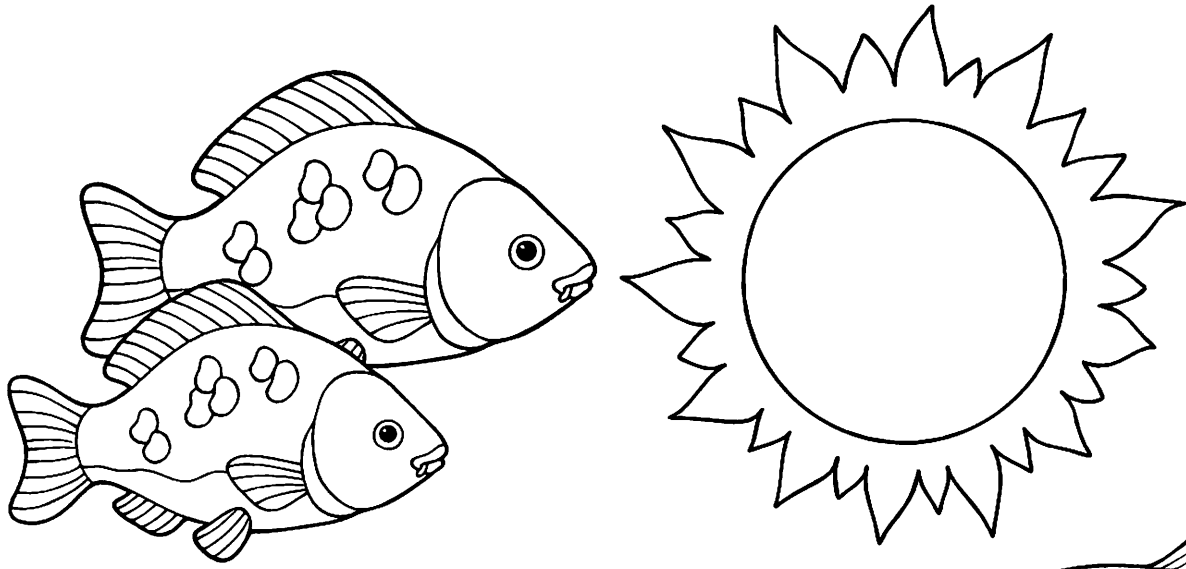
Each child draws a spiral on the paper plate and then cuts along the line. Then, the child decorates the paper plate with the markers as desired.

Kids select construction paper and use templates to color a sun and fish and then cut it out. (Kids can also draw their own fish and sun if they like, instead of the templates). 3-5 total cut outs per child is a good range. Use markers to decorate fish and sun.

Cut different lengths of string and then tape (duck tape works best) or staple one end of the string to a sun and fish and then attach the other ends of the strings to the plate with tape.

## **ATTACHED DOCUMENTS INCLUDE:**

- Templates for fish and sun





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Vitamins of the Sun

Vitamin D can be found in a limited amount of foods as well as made in our skin when it is exposed to sunlight. Ultraviolet B rays from the sun provide Vitamin D. The best food sources for Vitamin D are fish like tuna, cod, salmon, swordfish as well as fish liver oil. Some other foods provide smaller amounts of Vitamin D, like beef liver, cheese, and egg yolks. Milk, yogurt, and orange juice are some food sources that are fortified with Vitamin D. Fortified means a nutrient, in this case Vitamin D, is added to the food.



### Kernels of Truth:

- Vitamin D promotes calcium absorption, leads to bone growth, helps reduce risk of rickets in children and osteoporosis in seniors.
- Prolonged unprotected exposure to the sun can increase your risk of sunburn and skin cancer.
- Vitamin D is important for not only your bones but also your blood cells and immune system.



## Breakfast Burrito

### Ingredients

- 2 large eggs
- 1 Tablespoon of milk (fortified w/ Vitamin D)
- 1 teaspoon of chopped fresh cilantro
- Salt and pepper to taste
- ½ teaspoon of butter
- 4 Tablespoons of shredded of Cheddar and/or Monterey Jack cheese
- 2 flour tortillas (about 8 inches diameter) heated up your favorite way
- ¼ cup of seeded and chopped tomatoes
- 2 Tablespoons of salsa (either bottled or freshly made)

### Directions

1. Beat eggs, milk, cilantro, salt, and pepper in a medium bowl until blended.
2. Heat butter in large skillet over medium heat until hot and then add the egg mixture.
3. Pull the eggs gently across the skillet with a spatula as they begin to set forming large soft curds.
4. Continue cooking without stirring constantly until the eggs thicken and no liquid egg is visible.
5. Sprinkle half the cheese along the center of each tortilla followed by the eggs, tomatoes, and salsa.
6. Roll up the burritos by folding the bottom up and then the sides to the center.
7. Then cut each tortilla in half and serve.



**Note:** Add smoked salmon for even more Vitamin D

# # 51 Healthy Whole Grains

## ACTIVITY Description:

Learn about whole grains and run an obstacle course.

## Required Materials & Attached Documents:

- Bag of brown rice
- Bag of whole wheat pasta
- Bag of quinoa
- 3 hoops (or hula hoops)
- Box of a type of o shaped cereal (i.e Cheerios)
- Container for cereal
- Bowl
- Jump rope, broomstick, or swimming noodle

## LESSON ACTIVITY (10 mins):

### A. Concepts to Cover

Grains are an important part of a healthy diet and at least half the grains you eat should be whole grains. Examples of whole grains include whole-wheat flour, bulgur, oatmeal, whole cornmeal, brown rice, quinoa, and barley. Easy ways to eat more whole grains includes replacing white bread with whole wheat bread and using brown rice instead of white rice.

Whole grains contain the entire grain kernel, which consists of the bran, the germ, and the endosperm. The bran is the skin of the kernel. The germ is the part of the kernel that can sprout into a new plant. The endosperm supplies the nutrition to the germ as it grows into a new plant.

Whole grains provide nutrients like Vitamins B and E, magnesium, iron, and fiber. Whole grains can help reduce the risk of obesity, heart disease, cancer, and diabetes. Many grain products use refined grains. Grains are refined through a process called milling. During this process, the bran and germ are removed. Also removed are nutrients like fiber, iron, and many B Vitamins.

Many popular products contain refined grains, so finding the whole grain products can be a challenge. One strategy to overcoming this obstacle is looking at the ingredient list. The whole grain should be the first ingredient listed and should include "whole" with the grain, for example, "whole wheat". Another reliable way is identifying something like "100% whole wheat" printed on the packaging.

Quinoa offers all nine essential amino acids and was believed to be first cultivated 5000 years ago on the border between Peru and Bolivia.

Ceres was the Roman goddess of agriculture and grain. The term cereal is derived from her name.

Nearly 3 in 4 grain products contain wheat.

## B. Activity Description

### Obstacle Course Set-Up:

- Set up all the stations in a big circle, the largest you have space for. Have 3-5 feet between each station.
- Start at Station 1, have a label and a bag of whole wheat spaghetti.
- At Station 2, have a label and a bag of quinoa on the ground in front of the station sign with enough room for the child to walk or run around the bag.
- At Station 3, Have a label and bag of popcorn then lay out 3 circles with ropes or hoola hoops on the ground (big enough for a child to jump in with both feet). Have all three rings touch.
- At Station 4, have cereal "o's" in an easily accessible container. Place the bowl at least three feet away from where the kids are standing.
- At Station 5, have two people hold a jump rope (swimming noodle or broomstick) or have it attached to two chairs at an appropriate height for children to limbo. Adjust per child as needed. Usually around the height of their shoulders.
- The Finish line should bring kids back to the activity booth.

**START: Station 1. Noodle Stretch:** Stand straight and then stretch to the sky with your arms straight over your head. Stand still to a count of three. Then at the waist bend over and flop around like a cooked noodle to a count of three. Go to Stage 2.

**STAGE 2. Circle the Quinoa:** Walk a circle as close to the bag of quinoa as possible without stepping on the bag. Circle the Quinoa as many times as your age. For example, five years old equals five times around the bag. Go to Stage 3.

**STAGE 3. Corn Popper:** Jump among the three hoops like popcorn. No need to jump in any order. Jump 5 times (or your age). Go to Stage 4.

**STAGE 4. Cereal Toss:** Grab an "o" cereal and try to toss in the bowl. When successful, go to Stage 5.

**STAGE 5. Whole Wheat Limbo:** bend and limbo under the rope, stick, or swimming noodle without knocking it off. Then the child is given a bag of brown rice to carry from Station 5 to the Finish line. Run to the finish.

### FINISH!

#### Limited Space Modification:

1. Remove a stage or two in the obstacle course.
2. For Stage 3 remove hoops and change to have kids jumping in place instead.

#### ATTACHMENT DOCUMENTS INCLUDE:

- Coloring page



# Whole Grain Heroes





# KERNEL

Kids Eating Right-Nutrition and Exercise for Life

## Whole Grain Energy

At least half the grains you eat should be whole grains. Examples of whole grains are whole-wheat flour, bulgur, oatmeal, whole cornmeal, brown rice, buckwheat, farro, quinoa, and barley.

Whole grains provide nutrients like fiber, iron, and many B Vitamins. Whole grains can help reduce the risk of obesity, heart disease, cancer, and diabetes. As grain products are refined these nutrients are unfortunately removed.

How do you know it's whole grain? Read the ingredient list. The whole grain should be the first ingredient listed and should include "whole" with the grain, for example, "whole wheat".

### Kernels of Truth:

- Quinoa offers all nine essential amino acids and was believed to be first cultivated 5000 years ago on the border between Peru and Bolivia.
- Ceres was the Roman goddess of agriculture and grain. The term cereal is derived from her name.
- There are 19 different whole grains. 9 of these you will find in most grocery stores. Find a new one to love!



## Quinoa, Fresh Corn & Black Bean Salad

### Ingredients

- ¼ cup quinoa
- ½ cup chicken or veggie broth
- 1 can black beans, drained and rinsed
- 1 large fresh tomato, diced
- 1 cup fresh corn cut from the cob (about 3 cooked ears)

### Dressing

- 3 T fresh lemon juice
- 2 T olive oil
- 2 T fresh cilantro or parsley, chopped
- 1 t minced garlic
- 1 t cumin

### Directions

1. Boil shucked fresh corn for 3 mins, remove from pot and let cool.
2. Rinse then cook quinoa in broth for 12 to 15 mins until liquid is absorbed.
3. Mix dressing ingredients in a large bowl. Add quinoa to the dressing.
4. Cut corn off the cob (have a grown-up help with this).
5. Add drained black beans, fresh corn, and diced tomato to the quinoa.
6. Cool to room temperature and add dressing. Chill until ready to eat.



# #52 BEE DANCE

**ACTIVITY DESCRIPTION:** Bees “dance” as a form of communication.

**ACTIVITY OBJECTIVE:** Kids will learn that bees “dance” as a form of communication with other bees.

**MATERIALS REQUIRED:**

- Sidewalk chalk (if on pavement of any sort)
- Or Rope (if on a surface not conducive to sidewalk chalk, like grass, stone, soil, bark)

**STAFFING NEEDED:** 1-2 staff needed. Two or more is optimal with one person for the registration/check-in and the post-activity process and the other for the activity instruction.

**CONCEPTS TO COVER:**

Waggle dance: a figure eight like dance performed by bees to communicate with other bees.

**LESSON ACTIVITY (2-5 mins):**

Before the activity, draw a figure eight on the surface or use a rope to outline one. (It should resemble the picture on the activity card). More than 1 figure eight may be required depending upon the number of children participating.

Facts to share during the activity:

- Waggle dance is a figure eight like dance performed by bees to communicate with other bees.
- The straight line through the waggle in the middle of the bee’s dance gives the other bees in the hive information like how far away food is.
- We need bees to produce the food we eat.
- Bees have a great sense of smell and excellent vision.

Ask the kids to walk the figure eight on the ground and then ask them to make up their own dance to communicate with bees.

Example: If the bee waggles straight up the wall of the hive you know the food can be found by flying straight towards the sun.

Older Kid Example: If the bee dances at 90 degrees to the left relative to the top of the hive that means the food is 90 degrees towards the left of the sun from the hive.

**MODIFICATION:** None

**ATTACHED DOCUMENTS INCLUDE:**

- Coloring Page



# BEE Dancing

**FIRST:**  
Pretend you're a bee

**SECOND:**  
Color a flower  
with the most food

**THIRD:**  
Draw the dance you  
would do to tell your other  
hive mates where  
the food is

**FOURTH:**  
Bee creative!!







# KERNEL

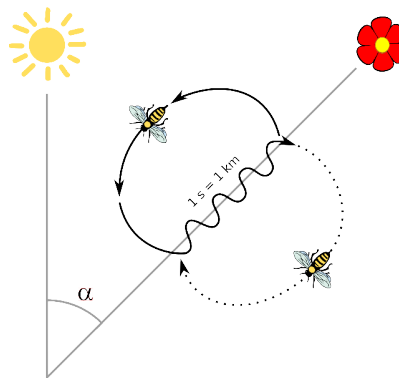
Kids Eating Right-Nutrition and Exercise for Life

## Why do Some Bees Dance?

Honeybees tell the other bees in the hive how to find food, water and other important things using one of the most-studied animal languages – dancing.

Bees do a simple round dance traveling in loops in one direction and then the other direction to communicate food is so close they can smell it just outside the hive. When the food is far away, the scout performs a waggle dance.

The straight line through the waggle in the middle of a bee's dance gives the other bees in the hive information. It tells them how far away the food is based on the length of the line. It also tells them, based on the angle or direction of the waggle line, what direction to fly away from the hive relative to the sun to find that food.



## Yogurt, Honey, Granola and Fruit

### Ingredients

- 1 cup of non-fat plain Greek yogurt
- 1 Tablespoon of honey
- 1/3 cup of granola
- Handful of berries or cut peaches

### Directions

1. Drizzle honey over yogurt before sprinkling
2. Top off with fruit of your choice



### Kernels of Truth:

- Bees are the most efficient and effective pollinators.
- Bees have a great sense of smell and excellent vision.
- A bee communicates where the food is by dancing!