

TWIGS

Youth Gardening and Healthy Eating Curriculum



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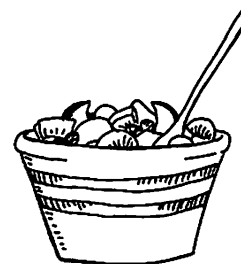


Food Preparation

METHODOLOGY AND HINTS

Most activities provided involve dividing youth into smaller groups for preparation of different recipes that they report on and share with the large group. Each activity suggests a division of the larger group, but adults are always encouraged to diversify makeup of each - combine younger and older youth, combine genders, and particularly if a group has a number of young children, provide older teens or an adult advisor to work directly with that group.

Generally, everyone prepares different recipes at the same time in groups, then shares their dish with the rest of the group.



SUPPLY TABLE

A method that works well is having all supplies that all groups will need on a central supply table. Groups should send runners for specific items called for in their recipe, use what is needed, and as soon as finished, return it to the supply table for others to use. This works well for all food preparation equipment and supplies, including utensils, food items, and serving dishes. Each activity lists specific supplies needed. Remember to bring or make sure sponges, detergent, dish cloths and/or paper towels are available to help with cleanup.

Remember, as supplies are gathered and transported to the location of the activity, keep cold foods cold and hot foods hot.

RECIPE DIRECTIONS

To prepare for a hands-on food preparation activity, write each group's recipe in large print on butcher paper. When posted near their station the day of the activity, it is easier for the group to read and follow on their own as they prepare their item.

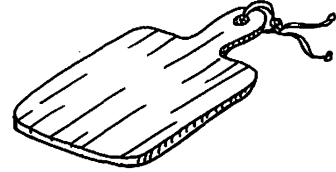


Food Preparation

GROUND RULES

1. ***Always wash hands before working with food.*** This is an extremely important guideline that makes eating healthier and safer. It means warm, soapy water for a minimum of 40 seconds as most effective in reducing the number of germs on hands.

Nutrition Activity #2, Safe and Clean, is designed to emphasize basic guidelines for safety and cleanliness in food preparation. This activity is recommended before other food preparation activities are included in project work.



2. ***Everyone has something to do.*** Dependent on age, either have group members organize themselves and be responsible for making sure that the work is fairly distributed or have older teens and adults assist in the division of responsibilities so everyone participates equitably.
3. ***Walk, no running.*** Accidents are more frequent when care is not taken to walk.
4. ***One person working with an appliance at a time.*** Be sure to tape down extension and appliance cords. Tie a loose knot where the extension and appliance cords meet so that there will be some "give" in case they are tugged.
5. ***Knives stay at the table.*** Sharp knives can be used by elementary age children safely. It is very important that safety is discussed each time they are used.

Some helpful knife safety rules to review with children:

- Always keep the cutting side of the blade pointed down toward the table.
- Always keep the sharp point of the blade pointed toward the center of the table and away from people.
- Always cut "away" from yourself, not "towards" you.
- Use only when cutting food.
- Don't cut into the food in the air, but place the food item on a cutting surface, and cut through the food into the cutting board.

If you have large groups of young children and/or limited older youth and adult presence, plastic knives can be used particularly well when cutting soft fruits, such as those used in fruit kabobs.

Allow children to handle knives only when cutting food.



Vitamin Values

1 NUTRITION ACTIVITY

Summary:

The group discusses different foods and the vitamins they supply. A drawing helps identify how the body uses the basic vitamins and minerals. A person's outline is traced onto paper and then everyone glues pictures of the foods to the appropriate part of the body. As they do this they review the nutrients that foods supply and how they help us stay healthy.

Some Helpful Information:

There are lots of different vitamins and minerals that help keep us healthy. Iron is a mineral that is in our blood. Without it we would all suffocate because it carries oxygen from our lungs to every cell in our body. Calcium is another mineral. It helps make strong bones and healthy teeth. Vitamin A helps our eyes stay healthy and see in the dark. Vitamin C is one that helps us heal scrapes and bumps. These and others help keep our body functioning optimally so we can stay healthy and get better quickly when we have an illness or injury.

These vitamins and minerals are most often found in fruits and vegetables. That is why it is healthy to eat lots of fruits and vegetables every day. Some of the vitamins our body needs (like B and C) dissolve in water. These vitamins get washed through our body and need frequent replacing for optimal health. Other vitamins are fat soluble (like A, D, E, and K). These do not leave the body as quickly. Our bodies can store up these so we don't need to eat them daily. It is possible to get too much of a vitamin or mineral, especially when taking them in pill or other supplemental form. Eating a balanced diet that includes a different vegetable or fruit five times every day is the best way to get the vitamins and minerals you need.

Why Do This?

Everyone hears, "Eat your broccoli, it's good for you" but rarely does anyone know why it's good. This activity makes the connection between different food types, the nutrients they supply and how they help keep us healthy.



Vitamin Values

TIME:

1 hour

MATERIALS:

- Newsprint
- Magazines with pictures of foods
- Papers
- Crayons/pens
- Glue/tape
- Small samples of orange, potato, cabbage, carrot, cereal, milk, broccoli, pasta, rice (can use pictures instead of the actual food)

PREPARATION:

1. Gather materials. Newsprint is inexpensive when roll-ends are purchased from a local newspaper.
2. Label each food with the vitamin associated with it.

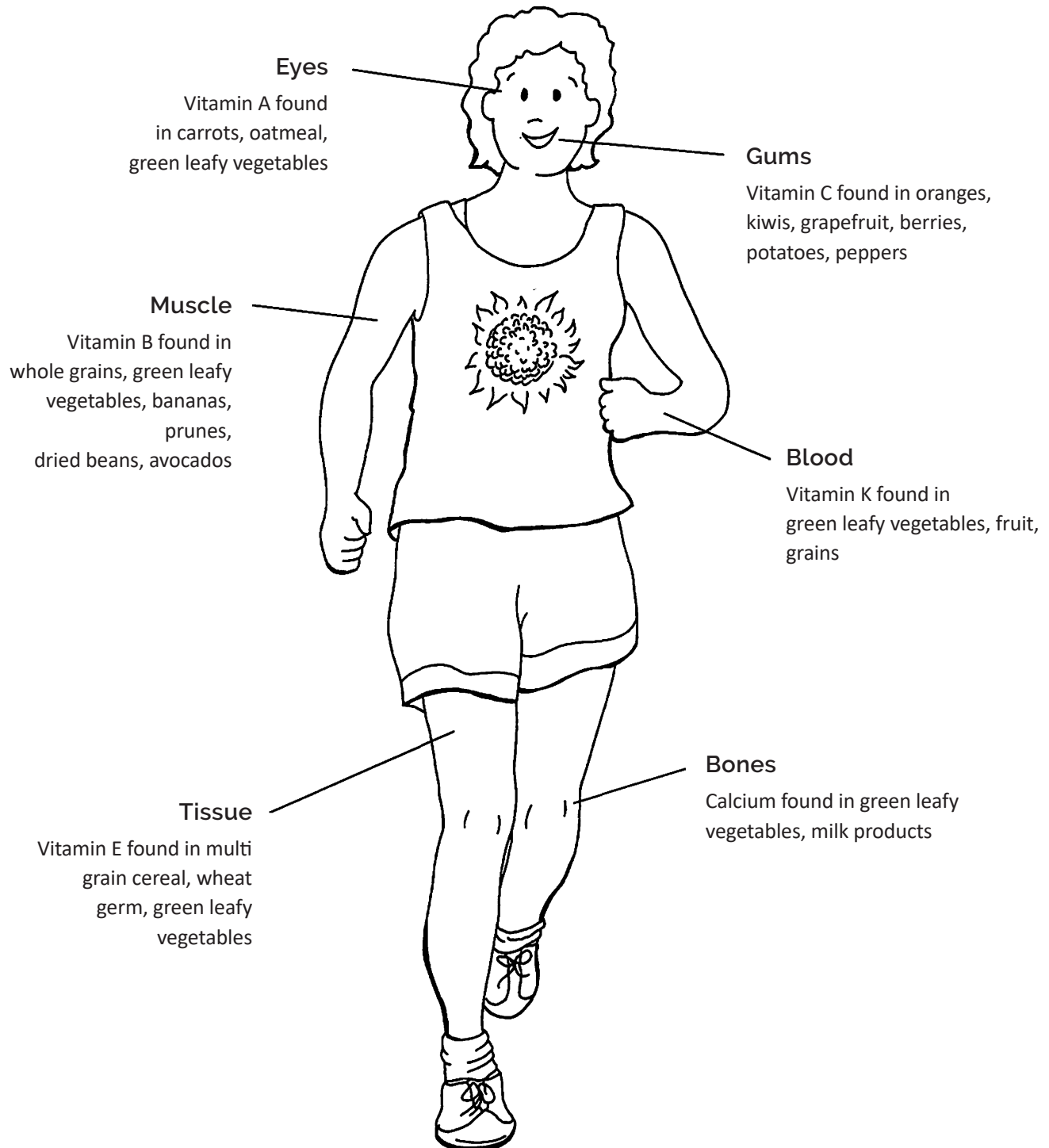
STEP BY STEP:

1. Hand out "Vitamin Values." Discuss the illustration. Ask "Where does Vitamin A come from? What part of our body does it help?" etc.
2. Hold up the food samples you brought and have the group tell you what vitamins each contains and what part of the body it helps.
3. Divide into groups and give each group a piece of paper. Choose a person from each group to be traced around.
4. Have the person lie down and trace around them onto the paper.
5. Go through the magazines and cut out pictures of foods that provide vitamins and minerals. If a picture can't be found have the groups make drawings of a food type.
6. Have each group glue the pictures to the drawing on the body part it helps.
7. Have each group share their picture-covered person with the other groups.
8. Have the entire group come up with a day's menu that includes at least 1 cup each of fruits and vegetables (daily recommendation amounts vary based on age, sex, and level of physical activity).

EXTENSIONS:

- Have everyone draw what they ate for breakfast and lunch that day and talk about what kind of vitamins they ate.
- Send home a paper that asks them to keep a record of what they eat in the way of fruits and vegetables each day until the next group meeting. This way their families will see the list and may learn about the "five a day" rule.

Vitamin Values



Why Do This?

It is easy to forget to wash our hands before cooking or working with food. This lesson makes the contamination of foods very visible. Using knives and stoves correctly and working safely while cooking can prevent painful accidents and illnesses.

Safe and Clean

Summary:

The group will discuss kitchen safety and cleanliness. Everyone will get to do an experiment to see what happens to food that is exposed to dirty hands and compare it to food handled with clean hands.

Some Helpful Information:

There are some basic safety guidelines that make cooking safer and eating healthier. One of the more obvious safety hazards in the kitchen is knives. It is important to learn how to use a knife safely. We should never cut with the blade of the knife facing towards us or others. Always cut down onto a cutting board. If there are any slips the knife hits the board harmlessly. Knives should not be dropped into the bottom of a full sink. A knife buried in the sink can cut anyone who reaches in to wash or grab something. It is wise to clean knives and put them away when not in use. If they are to be set down, point the blade away from people and set it somewhere that is out of reach of little ones.

Thinking ahead and prevention help avoid all sorts of accidents. Pots on the stove should have their handles turned in so a bump doesn't tip and spill the hot contents. Electric cords must not be near water or handled by wet hands or persons standing in puddles. Don't let cords dangle where you could accidentally jerk them off the counter. Keep anything flammable away from the stove to prevent fires and burns. Don't leave burners on if they are not in use.

Be sure your cooking area is clear and safe. Don't leave things around that could cause you to trip or distract you. Take care to keep sharp things where they belong. Be aware of hot pots, hot foods and hot burners to prevent burns.

Another safety concern around food is cleanliness. If food is contaminated it can spoil and even make people sick. This is why it is important to get in the habit of keeping hands, cooking areas and materials clean. The human body is host to millions of bacteria that do us no harm. Unfortunately, we can carry bacteria that are bad for us and not know it. Because bacteria are everywhere, we come in contact with them all the time, every time we touch anything. Our noses, mouths and throats carry the viruses and bacteria of any cold or other flu-type bug we may have or be immune to and just be carrying. When we sneeze we are setting off a spray of germs.

continued



Safe and Clean

Helpful Information, *continued*

Germ (like us) tend to like a warm home. That's why we refrigerate food, to prevent yucky stuff (bacteria) from growing on our food.

Experiments show that washing hands with warm soapy water for a minimum of 40 seconds will greatly decrease the number of germs on our hands. Rinsing hands quickly in cool water helps, but not nearly as much as the 40 second hot and soapy wash. If we wash this way before handling food we will greatly reduce the number of little beasts that get onto our food and the food we prepare for others. Keeping hair and other things out of the food will decrease chances of contamination as well. No one likes to find a hair or bugs in their food. Keeping hair tied back and the kitchen free from insects, covering food that is left out and refrigerating food all help to prevent the growth of things that would spoil our food.

TIME:

1 hour

MATERIALS:

- Ziplock bags, two per person
- Bread, two slices per person
- Masking tape
- Pen
- Copies of the "Safe and Clean" handout

PREPARATION:

1. Collect materials.
2. Review the picture so you can help folks identify the safety elements.

STEP BY STEP:

Part One: Safety

1. Have a discussion about safety in the kitchen. Encourage participants to come up with some good safety tips. Let anyone who would like to relate how they or someone they knew got hurt in the kitchen.
2. Distribute the picture. Tell everyone that the asterisk indicates a factor in this kitchen that helps make it safe. Have them discuss and identify what safe practice the asterisk is identifying.

continued



Safe and Clean

Instructions, *continued*

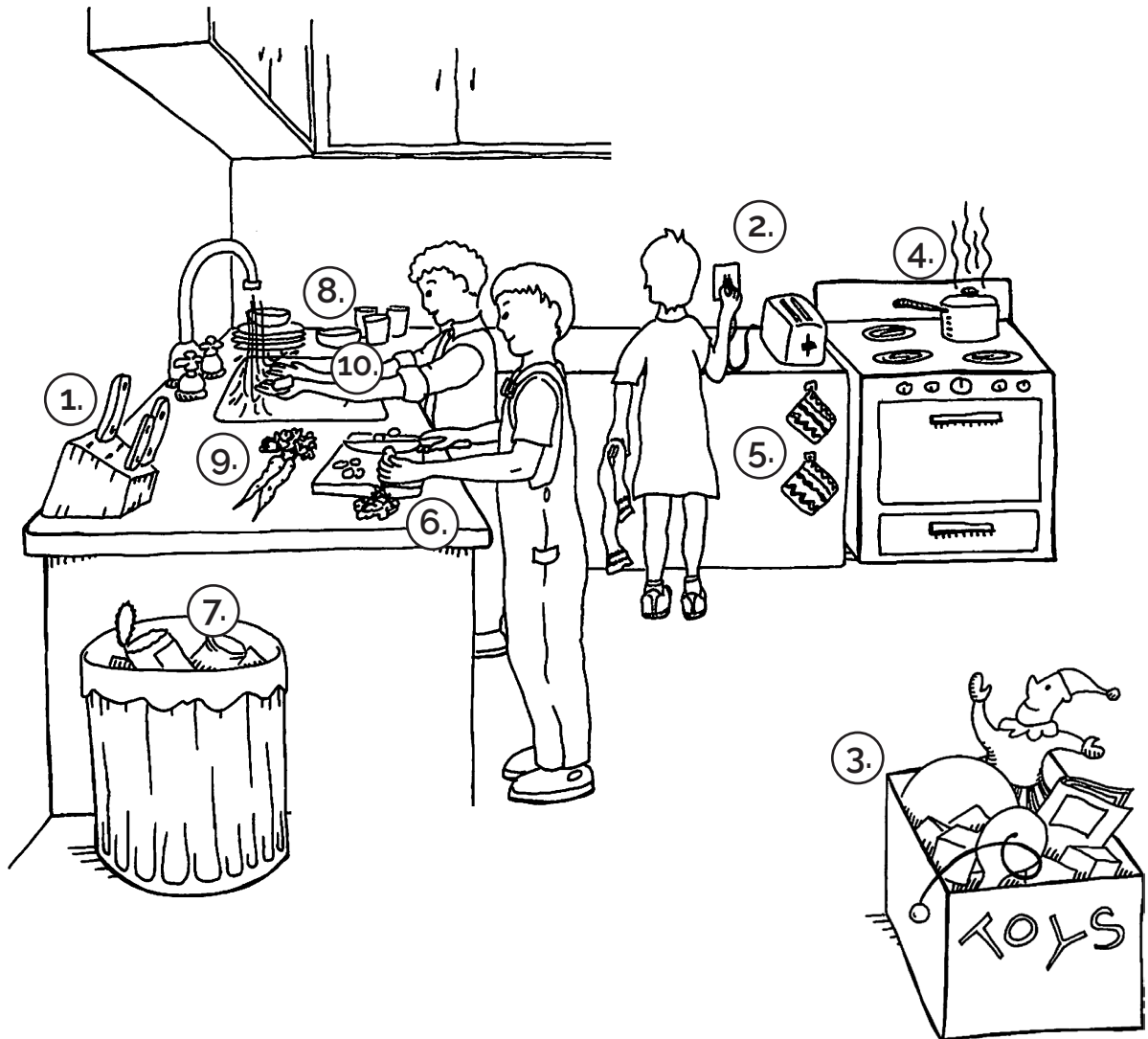
Part Two: Hygiene

1. Explain to everyone that they are going to see what kinds of germs there are on unwashed hands. Talk about how bacteria are everywhere. Many live on us all the time and do us no harm. Some bacteria can make us sick.
2. Have everyone take a baggy and a slice of bread. Explain that they are to wipe the invisible bacteria off their hands onto the bread. Once they have done this they are to lightly moisten their bread with a sprinkling of water. Seal it into the zip lock bag. Label the bag using the tape and pen. Put the person's name, the date and "dirty hands" on the label.
3. Have everyone wash their hands in warm soapy water for 40 seconds minimum. Dry them on a clean paper towel. Repeat the bread-wiping process. Moisten the bread, place in a bag and label again with name, date and this time "clean hands."
4. Have everyone predict what they think will happen when they look at the pieces of bread next week.
5. The leader takes all the baggies and keeps them in a warm place. Over the next two weeks everyone checks to see if their predictions came to pass.

EXTENSIONS:

- Try treating some bread slices differently. Put some baggies in the fridge, some in a hot place. Wipe feet or sneeze on the bread. Place some in open air for a day; then moisten and bag the bread.
- Have someone wipe rubber gloves that are washed in anti-bacterial soap on bread and see what the differences are.
- Have folks go home and check their home kitchens for safety. Have them be official "Safety Marshals" and teach their household about kitchen safety.

Safe and Clean



Safe Kitchen Key

- | | |
|---|--|
| 1. Knives in Butcher Block | 6. Someone Cutting Properly at Cutting Board |
| 2. Someone who has Dried their Hands, with Towel, Plugging in Toaster | 7. Open Can Lid in Trash |
| 3. Toys Stacked Neatly to One Side | 8. Dirty Dishes Stacked Safely (Not Tall) |
| 4. Pan on Stove with Handle Turned In | 9. Clean, Organized Counter Top |
| 5. Pot Holders Hanging Away from Burners | 10. Someone Washing Hands with Soap |

Eat Your Plants

NUTRITION ACTIVITY 3

Why Do This?

Fruits and vegetables are often lacking in our diets. Familiarity with these foods will encourage consumption. Youth who participate will be able to identify plant parts and know how they are related to the food we eat. They may learn that different people eat different plant parts. New kinds of food can be discovered this way as well.

Summary

The group will examine many different foods and learn where they come from and how they grow.

Some Helpful Information:

There are six basic plant parts: roots, stems, leaves, flowers, fruits and seeds. We eat all of these plant parts of various different growing plants. A classic root food is the carrot, stems that we eat are celery and rhubarb. Leaves? How about lettuce? Nasturtiums are edible flowers. Fruits are easy to think of (apple), and seeds (peanuts), too.

Here is a list of plant parts and the food that we get from them.

ROOTS:	carrots, turnips, rutabagas, beets, radish, parsnip, jicama, sprouts
STEMS:	celery, broccoli, bok choy, asparagus, cauliflower, rhubarb, sprouts, nopales (cactus), potato, yam, onion, garlic (these stems seem like roots, but they really are under ground stems)
LEAVES:	lettuce, spinach, chard, bok choy, cabbage, greens (mustard, collard, beet...), asparagus, cilantro, parsley, basil, oregano, sprouts
FLOWERS:	broccoli, cauliflower, squash flowers, nasturtium, asparagus, saffron
FRUITS:	squash, cucumber, tomato, pea pods, green beans, grapes, apples, pears, oranges, rose hips, peppers, eggplant, olives, peach
SEEDS:	nuts, beans, rice, wheat, oats, corn, peas, pomegranate, peanuts



Eat Your Plants

TIME:

1 hour

MATERIALS:

- Paper bags
- A large assortment of foods from each plant-part-group
- A large writing surface. A chalk board is great, or tape up a large sheet of paper
- Pens or chalk
- Copies of the "Eat Your Plants" handout

PREPARATION:

1. Make photocopies and collect other materials.
2. Put some food samples from each plant part into bags. Each group needs a bag that contains at least six pieces of food; one that demonstrates each plant part.

STEP BY STEP:

1. Have everyone think of a fruit or vegetable or any other plant-food and call it out. As they call them out start listing them on a piece of paper. List all the root foods at the bottom. Next up would be stem foods. Moving upward would be leaf, flower, fruit and seed foods. See if anyone can figure why you put them in the lists you are making. Draw a plant next to your list as a big hint (see illustration.)
2. Hand out the drawing of a plant showing the plant parts. Pick out some broccoli and discuss the plant parts. Point to the corresponding parts on the picture. (Broccoli will have stems and flowers and often leaves as well.)
3. Demonstrate with a bag how they are to explore their plant foods.
4. Each group will get a bag. Group members take turns (youngest first.) The first group member feels a food inside the bag without looking and tries to identify the food by name and/or plant part.
5. This person then takes that food out of the bag and figures out (with the group's help) what plant part(s) it comes from. The next person repeats the process, first guessing by touch, then taking the food out and discussing/describing it.
6. Have each group share what they had and talk about the foods. Are they the same?
7. Have everyone think of their favorite fruit or vegetable and name it. They can add why they like it and how or when they eat it.
8. Distribute the picture of a meal and have them categorize the foods by plant parts.

EXTENSIONS:

- Have groups make up a meal that includes every plant part and draw it.
- See how many plant parts could be in one food. For example, pizza has four plant part groups: fruit (tomato, olives), seeds (wheat), stem (garlic, onion) and leaves (oregano and basil).
- At home have them draw their dinner and categorize as many parts of it as they can.

Eat Your Plants

Leaf

Uses sunlight and chlorophyll to convert CO_2 and water to sugar; gives off water to regulate temperatures; gives off O_2 ; some can produce new plants.

Stem

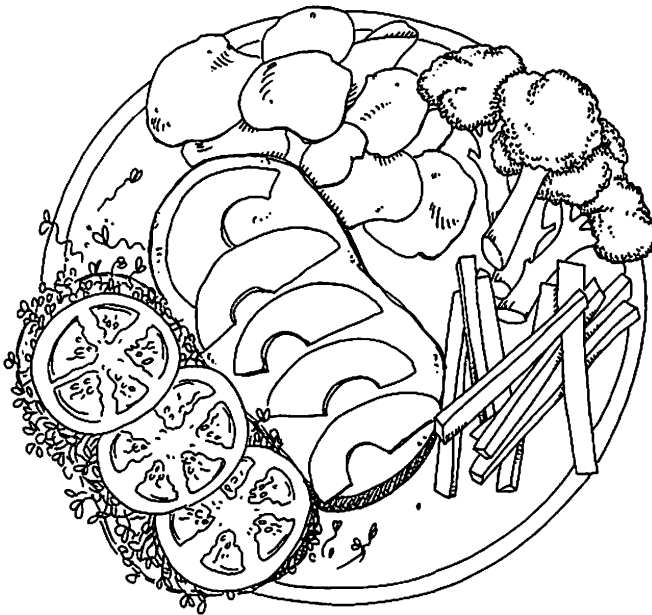
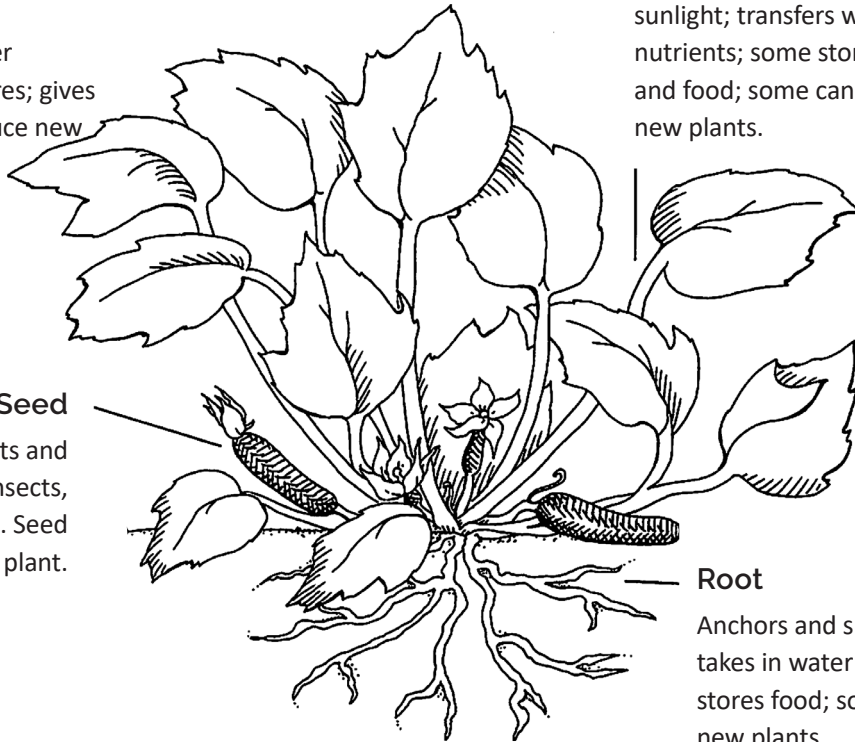
Supports leaves to get sunlight; transfers water and nutrients; some store liquids and food; some can produce new plants.

Flower/Fruit/Seed

Produces seed; attracts and feeds certain birds, insects, and other pollinators. Seed produces new plant.

Root

Anchors and supports plant; takes in water and nutrients; stores food; some can produce new plants.



Plant Parts Meal:

avocado sandwich with sprouts and tomato
baked potato chips
carrot sticks
broccoli flowerets

Fabulous Fruits

4 NUTRITION ACTIVITY

Summary:

Groups will make fruit salad and fruit kabobs. As everyone eats, you can talk about why fruit is healthy and where it comes from.

Some Helpful Information:

There are lots of good reasons to eat fruit. The first reason is it tastes great. As a snack food it provides vitamins as well as fiber, and no fat. Fruits contain chemicals called carotenoids that help prevent certain types of cancer. Folacin, a B-Vitamin, is also found in fruits. It is very important for pregnant women. The vitamins, minerals and fiber found in fruit are good for people of all ages. Whole uncooked fruits have the most nutrients. Canned, frozen, dried and juiced fruits, 100% fruit juice are also good choices if fresh fruits are not available or too costly. Fruits are part of the MyPlate fruit group (see Nutrition Activity 11 - MyPlate), and should be eaten every day for a healthy diet. One cup of fruit or 100% fruit juice or 1/2 cup dried fruits would count as one cup of fruit (daily recommendations vary based on age, sex, and level of physical activity).

Putting fruit in school lunches and eating them for snacks is a great idea. You can serve fruits with every meal. Keep a bowl of fruit around. Keep washed whole or sliced fruits in the fridge for children and adults to snack on. Buy whatever fruit is in season and you'll save money.

Some fruits that supply Vitamin A are cantaloupe, apricots and persimmons. Remember that Vitamin A is good for growth and for your eyes. Vitamin C helps to heal wounds and hold body cells together. It's found in oranges, grapefruit, cantaloupe, and strawberries. Try to include unusual fruits like kiwis, persimmons, star fruit, kumquats or any others you can find.

For this activity half the class will make fruit kabobs and the other half will make fruit salad. Groups should have an adult to keep an eye on knives. Assign half the groups salad and the others kabobs.

Why Do This?

With some exposure to good fruit perhaps people will be more likely to reach for an apple or pear rather than a candy bar or potato chips next snack time.



Fabulous Fruits

TIME:

1 hour

MATERIALS:

- Chalk board or paper and pen
- Globe
- Fruits of all kinds, as wide a variety as possible
- Lemons (for juice)
- Large mixing/serving spoons
- Bowls
- Skewers (short ones or break them in half)
- Knives (several serrated plastic and one large sharp one for pineapple)
- Spoons and cups
- Napkins
- Towels
- Sponges for drips, spills, and clean up
- *Optional:* Yogurt, raisins, shredded coconut, chopped almonds

PREPARATION:

1. Collect materials.
2. Check out the recipes and the fruit available right now. Select the recipes that work best for your group and the current season of the year.
3. Make sure you know where all the fruits come from; if not, call the library, look in a dictionary or ask the produce folks at the store.

STEP BY STEP:

1. Ask everyone to think of their favorite fruit. Have them call them out. Write them on a board or piece of paper. When someone calls out one that has already been named, make a tally mark next to it. Talk about everyone's favorites and see if they know where each comes from.
2. Break into groups, distribute recipes and materials.
3. Each group makes their recipe.
4. Everyone gets to try everyone else's kabobs and salads.
5. When everyone is served and eating, take out the globe and talk about the fruits you are eating and where they are grown.

EXTENSIONS:

- Have everyone (who can) bring a fruit the day of the activity and include them in the kabobs and salads.
- Have everyone go to the grocery store and see how many of the fruits (and vegetables) they can name. Do you know where they are from?
- While at the store have the produce manager come answer questions and talk about different foods they sell.

Fabulous Fruits

Fruit Salad

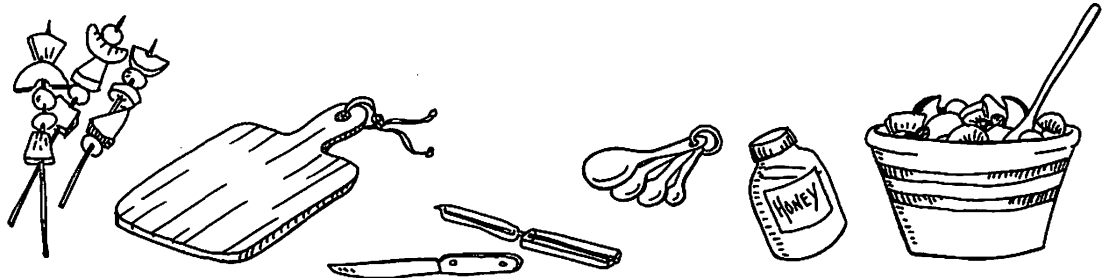
(about 10 small servings)

Ingredients:

3 apples
2 bananas
2 oranges
1-2 cups other fruits in season
(such as: apples, pears, bananas,
grapes, melons, pineapple,
nectarines, strawberries, kiwis,
oranges or tangelos)
honey

Directions:

1. Wash and dry all the fruit. Peel and core as needed. Cut into small pieces. Put all the fruit in a bowl and sprinkle with lemon juice. This keeps them from turning brown. (The brown is not bad for you – it just isn't pretty.)
2. Mix some juice from the bowl with a tablespoon of honey and stir it into the fruit.
3. *Optional:* Add three tablespoons of plain or flavored yogurt; sprinkle on some chopped almonds, raisins and/or coconut



Fruit Kabobs

Ingredients:

Assorted fruits in season (such as:
apples, pears, bananas, grapes,
melons, pineapple, nectarines,
strawberries, kiwis, oranges or
tangelos)
Lemon juice

Directions:

1. Wash and dry all the fruit; peel those that need peeling; cut rinds from melon. Core apples and pears, pit nectarines.
2. Using a cutting board, cut fruit into bite-sized chunks. Be sure the pieces are large enough so they don't fall apart.
3. Put all pieces in a bowl and toss with a bit of lemon juice. This keeps them from turning brown. (The brown is not bad for you - it just isn't pretty.)
4. Place chunks on the skewer sticks and arrange on a serving plate. Make enough for twice the number of your total group.

Ravenous for Roots

NUTRITION ACTIVITY 5

Why Do This?

Members get experience learning about, cooking, and eating some plants that grow underground.

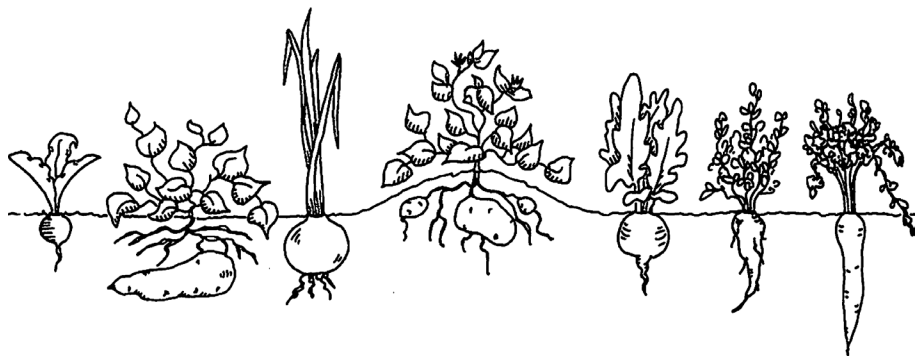
Summary:

Pairs of people will get a vegetable to look at and read about. Then they will talk to the rest of the group about it. Groups will prepare foods from roots and other underground growing vegetables.

Some Helpful Information:

We typically find roots of plants underground. Some plants actually have some of their stems there, too. There are vegetables that are true roots, like carrots, radishes, turnips, parsnips, rutabagas and beets. Other plants have underground stems-plant parts that bear roots and other plant growth, such as potatoes, onions, garlic, yams and sweet potatoes. Many of these vegetables are rich in vitamins, and all can be delicious to eat. One cup of any of these raw or cooked vegetables (including 1 cup of 100% vegetable juice) will count as one cup from the MyPlate vegetable group.

If you have a favorite recipe that would be easy to prepare with the group, use it in place of one of the provided ones.





Ravenous for Roots

TIME:

1-2 hours

MATERIALS:

See individual recipes for ingredients.

For cooking:

- electric fry pan
- microwave oven and casserole dish hot plate
- knives (see about handling sharp knives page 70)
- napkins, cups or plates, and utensils for eating towels
- soap and sponges for clean up

PREPARATION:

1. Collect the materials.
2. If you can, practice preparing the recipes ahead of time. Keep track of the procedure and times so you can give groups precise cooking times.
3. Decide ahead of time how you will group people. The baked sweet potato and mashed potato recipes can be done by relatively young kids.

STEP BY STEP:

1. Hand everyone one of the pieces of produce. Have a discussion on what each one is. If anyone has eaten them and knows recipes that use them, have them explain to the rest of the group.
2. Collect the materials again.
3. Break into groups and have each prepare one of the dishes in the recipes that come with this activity.
4. Encourage discussions about roots. Talk about how carrots are roots, potatoes are stems and onions are bulbs.
5. Have a feast and enjoy before clean-up time.

EXTENSIONS:

- Have everyone keep track of all the “underground” foods they eat during the week.
- Go to the grocery store and see how many of these kinds of foods are available in the produce section.
- Plant several types of potatoes in the garden. When harvested, cook them all the same way and compare, voting on favorites.

Ravenous for Roots

Group 1

Finger Salad

Materials:

knife, cutting board, serving tray

Ingredients:

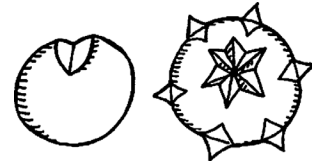
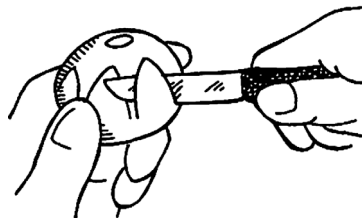
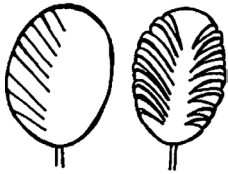
1 turnip

3 medium carrots

1 bunch of radishes

Directions:

1. Scrub turnips.
2. Peel skins off turnips. Slice them into "match sticks."
3. Scrub carrots, slice into bite size sticks.
4. Cut tops off of radishes, scrub and cut or serve whole.



Group 2

Mashed Potatoes

Materials:

hot plate, knife, masher, pot, bowl, serving spoon, cutting board, cup or mug

Ingredients:

4 large potatoes

water

salt, pepper and margarine
to season

Directions:

1. Chop up potatoes, put in large pot.
2. Cover with water and boil until tender.
3. Pour water off, saving about 1 cup of it. Mash with a masher or fork.
4. Add back enough liquid to make a smooth, creamy texture.
5. Season with margarine, salt and pepper as desired.



Ravenous for Roots

Group 3

Sauteed Parsnips

Materials:

Electric fry pan, knife and cutting board, cooking spoon/serving spoon, measuring cup and spoons

Ingredients:

3 medium parsnips
1 medium onion
4 Tbs olive oil or margarine
2 Tbs soy sauce
 $\frac{1}{3}$ cup water

Directions:

1. Scrub parsnips; slice into $\frac{1}{4}$ inch rounds
2. Chop onion fine.
3. On medium heat, saute parsnips and onion in olive oil.
4. When onion is clear, add water and soy sauce.
5. Cover and let simmer on low heat until parsnips are tender.



Group 4

Baked Sweet Potatoes

Materials:

microwave, knife, cutting board, plate to serve from

Ingredients:

sweet potatoes
margarine
salt and pepper for garnish

Directions:

1. Scrub potato clean. Cut off $\frac{1}{2}$ inch from ends
2. Bake or microwave until tender.
3. Cut into small serving sizes. Eat like a baked potato.
4. Season with margarine, salt and pepper as desired.



Group 5

Yams with Apple

Materials:

microwave, knife, cutting board, covered casserole, measuring cup and spoons, plates

Ingredients

2 medium yams
2 large green apples
 $\frac{1}{2}$ cup brown sugar
3 Tbs margarine

Directions:

1. Scrub 2 medium yams; slice into $\frac{1}{4}$ inch rounds.
2. Wash, core and slice two large green apples.
3. In a covered microwave or oven-safe casserole: Layer yam rounds, cover with apple slices, sprinkle on 1 Tbs brown sugar and dot with margarine.
4. Repeat until all yams and apples are used or you pan is full.
5. Microwave on high for 5 minutes at a time. Turn dish, check for doneness (done when tender all the way through.)

Sumptuous Seeds

NUTRITION ACTIVITY 6

Why Do This?

A lot of empty calories are consumed in the form of snack foods. Many kinds of seeds are quite nutritious and tasty.

Summary:

Seeds and nuts will be provided and pictures of the plants they grow on. Everyone tries to match the plant or nut to the right seed.

Some Helpful Information:

It's great if you have access to bring in nuts or seeds on a branch. Our foods often are so removed from their origins we forget they weren't manufactured! You can purchase all these nuts in the shell. There are hints provided with the plant pictures to help folks identify the right seed/nut.

Buy sesame seeds at a health food store; they are much less expensive than the ones on the spice rack at a grocery store. They will probably be dark in color. The color is from a very thin husk that is good to eat.

Some nutritional information (amount per tablespoon):

	Calories	Protein (g)	Fat (g)	Vitamins
Almonds	24	.8	2	C, B-6, B-12, iron, calcium
Filbert	34	.68	3.6	iron, calcium, C, B-6,
Peanuts	52	2.4	4.5	iron, calcium, B-6,
Pumpkin	48	2.5	4.1	A, iron, calcium, B-6
Sesame	50	1.6	4.4	LOTS of calcium
Sunflower	51	2.2	4.3	A, iron, calcium, B-6
Walnuts	52	1.2	5.1	A, iron, calcium, B-6, C



Sumptuous Seeds

TIME:

1 hour

MATERIALS:

- Nuts and seeds, in their shells: almonds, walnuts, peanuts, filberts, sunflower seeds, pumpkin seeds, sesame seeds
- 4 nut crackers
- Copies of "Sumptuous Seeds" handout
- Tape
- 7 bowls to put seeds and nuts out in

PREPARATION:

1. Make copies of "Sumptuous Seeds."
2. Collect other materials.
3. Review step by step procedure and look at the handout so you are clear about what folks will be doing.

STEP BY STEP:

1. Have people get in pairs. There needs to be a strong reader in each pair.
2. Distribute a copy of "Sumptuous Seeds" to each pair. They are to go to each bowl and try to match the seed or nut to the plant picture on the page. When they have decided/guessed they tape a sample of that nut on the paper where indicated.
3. When everyone is done you show them the answers and they check their own work.
4. Have a discussion in which everyone gets to tell what they know about the nuts and seeds they are seeing. What are their names? Have you eaten them before? Are there certain dishes they go in or go with? What other seeds and nuts do we eat? (grains, poppy, cashews...)
5. Have a nutty feast.

EXTENSIONS:

- Make nut butter by putting sunflower seeds, almonds or peanuts through a food processor, blender, or food grinder. Usually extra oil is needed.
- Grow sunflowers, pumpkins and other winter squash, then roast the seeds. Put seeds on a pan and place in oven at 300 degrees and roast until brown and crisp. (Don't wash pumpkin or squash seeds before roasting; they'll have a better flavor.)

Sumptuous Seeds



Almonds

Some people make nut butter from me. I have lots of calcium so I'm good for bones and teeth. You can buy me roasted, slivered and blanched.



Sesame Seeds

I'm very nutritious. My plant has a sunny outlook on the world. Birds like me as much as people.



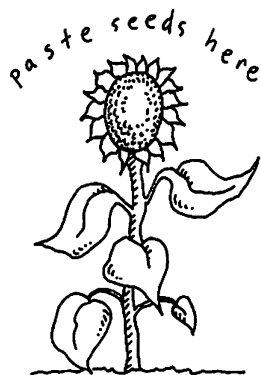
Pumpkin Seeds

I'm made into oil and used to season foods. You can get me at McDonald's. A lot of vegetarians make sure they eat me so they will get protein and calcium.

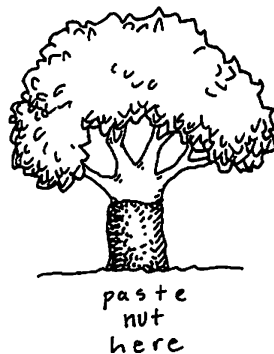
Filbert



You can call me Hazel. I grow on trees that sometimes look like bushes! Sometimes I'm ground up and used to flavor coffee.

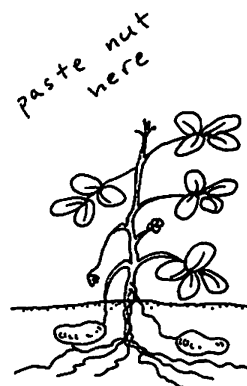


Sunflower Seeds



Walnuts

There are lots of my kind of tree growing on roadsides. Some might call me a builders - nut. I am the most commonly used nut for baking.



Peanuts

I grow underground. I love baseball. I'm good spread on celery.

Apples

7 NUTRITION ACTIVITY

Summary:

After a discussion about apples, everyone will get to look at, compare and taste different varieties of apples and some apple products.

Some Helpful Information:

Apples are versatile fruits. They can be eaten raw, which is the best way to get all the nutrition from them. Or apples can be made into sauce, jelly, pie, baked apples, apple butter, vinegar, cider, juice and wine. There are so many varieties of apples it would be difficult to list them all. The apples we find at the grocery stores are typically Golden and Red Delicious, Granny Smith, Pippin, Rome and some more exotic varieties like Fuji. All have unique textures, flavors and colors. A Golden Delicious is not the best for making pie because it has a soft flesh, but a Pippin holds up well, and the sugar added to the pie sweetens up this sometimes tart member of the apple family. Apples have Vitamin C in them. Some varieties have more than others, but all have their vitamins in the flesh close to the skin. That's why it's good to eat your apples skins and all!

If you want to learn about different varieties of apples you can stop at produce stands and see what unique varieties they are selling that may never make it to the grocery store.

Why Do This?

Apples are inexpensive and available all year. There are many varieties that have very different qualities. Firsthand experience will tune members in to the differences and give them a new perspective on apples.



Apples

TIME:

1 hour

MATERIALS:

- A variety of apples, at least two of each. (Write down the names.)
- A variety of apple products and supplies:
 - » applesauce
 - » a paper grocery sack
 - » apple cider
 - » plastic bags
 - » apple butter
 - » spoons
 - » dried apple
 - » peanut butter
 - » apple juice
 - » sunflower seeds or granola
 - » apple jelly
 - » paring knives
 - » baked apple
 - » bowls
 - » raisins
 - » paper cups

PREPARATION:

1. Collect materials.
2. Learn the names of as many different apples as you can find.
3. Try scooping out an apple for the Walking Apple Feast so you can find the best and safest tool to give to your group members.
4. Place all the apple products in the sack.

STEP BY STEP:

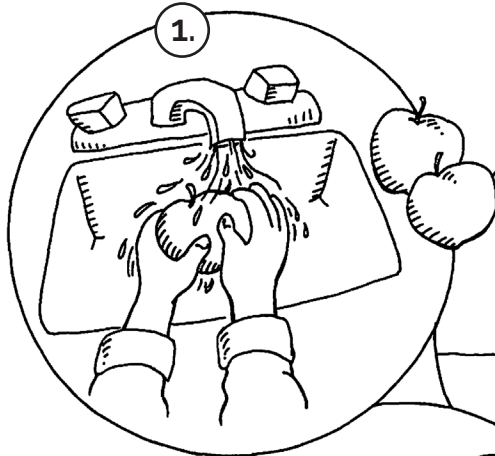
1. In front of everyone cut an apple in half. Dip one cut side in lemon juice, leaving them both open to the air. Ask everyone what they think will happen.
2. Tell them you have some apple products in your sack. Can they name some? As they name them, pull them out of the sack. Pull out and name any they don't guess.
3. Open the products and let everyone take little tastes.
4. Look at the sliced apple. The plain one turned brown because the flesh has reacted with the air. This is called oxidation and is similar to rusting of metal. The lemon juice is acidic and prevents oxidation.
5. Distribute all the different apples. Have everyone compare how they look. Ask if anyone knows the names of the apples they see.
6. Break into groups and make the Walking Apple Feast. Youngsters can mix and fill apples while oldsters cut and scoop out the insides.
7. Don't forget to put the cores in the compost!

EXTENSIONS:

- Take a trip to an apple tree in an orchard or in someone's yard.
- Make applesauce. Core apples and simmer slowly with a little added water. Put through a processor or mash with a potato masher and eat lumpy style.

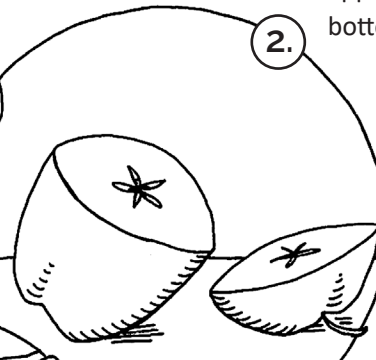
Apples – Walking Apple Feast

Wash apples



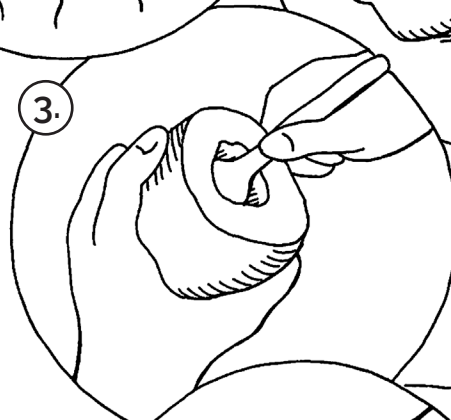
1.

Cut top 1/3 off of apple. Save top and bottom.



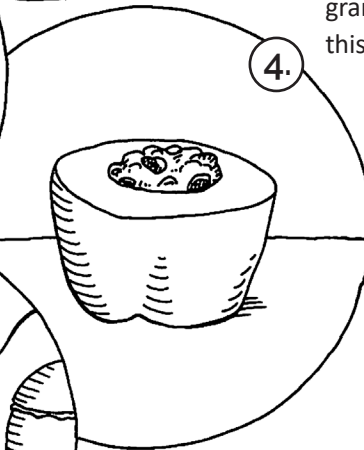
2.

Hollow out the core.



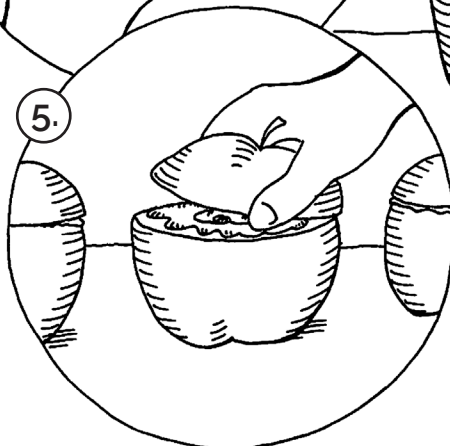
3.

Moosh some peanut butter with raisins and sunflower seeds or granola. Fill the hole with this mixture.



4.

Glue apple top back on with more peanut butter.
You can prepare these then store them in a plastic bag for a hiking trip sometime.



5.

NUTRITION ACTIVITY 8

Why Do This?

Grains constitute a large portion of our diet. This activity introduces several grains with an emphasis on what wheat is and how it is used.

Wonderful World of Wheat

Summary:

First everyone will examine different types of grains and try to guess which food was made with which grain. A variety of recipes are provided to be prepared as a group and either taken home and cooked or cooked as part of the day's project.

Some Helpful Information:

People eat many different grains. Wheat, corn, oats, rice, barley, millet, triticale, rye, quinoa, and amaranth are some of the grains that are eaten all over the world. These grains are actually the seeds of plants. Inside each seed is all the nutrition needed to start another plant. That means they are nutritious for people too.

The world's cultures have different diets, using a variety of grains in different ways. The corn tortilla is popular in Mexico, while some Asian nations eat rice with every meal. In our western culture wheat has become the grain we utilize most. Each American eats about 130 pounds of wheat every year-enough for about 200 loaves of bread. We use wheat for bread, noodles, cereals, cakes, snacks, and even to feed our livestock. Some folks grow small wheat plants and then extract a green juice, considered very nutritious. Wheat seeds can be sprouted and ground and baked to make a simple dense loaf called wayfarer's or traveler's bread.

Wheat flour is made from ground wheat seeds. The anatomy of the wheat seed helps us understand two different types of flour, white and whole wheat. The seed coat (bran), is rich in B vitamins and trace minerals. The embryo, called the germ, is high in polyunsaturated oil, as well as B vitamins and trace minerals. The endosperm is where all the seed's food is stored, and it is the largest part of the wheat grain. It contains protein, carbohydrates, and iron as well as some B vitamins. The endosperm is what people eat most; it's what white flour is made of. Whole wheat flour is just that-flour made using the whole wheat seed endosperm, bran and germ.

The kind of wheat plant seed is taken from yields different types of flour. For instance, for a good bread flour you need a hard wheat. This variety contains the gluten needed to help a loaf hold its shape. For pastries, cookies and crackers, soft wheat is used. It has a smoother lighter consistency. Specialty foods, like udon noodles or Chinese steam bread are made from mixtures of different wheat types to provide all the right qualities.



Wonderful World of Wheat

TIME:

1+ hour

MATERIALS:

- A variety of grains (Health food stores have bins; you can buy small samples.)
- Small clear containers such as baby food jars or sandwich bags
- Ingredients/materials for the recipe you choose
- A stalk of wheat
- Some whole wheat (often called wheat berries, if not at your grocery store, available at health food stores)
- A blender, food processor or grain mill
- A sampling of foods made from grains such as rice cakes, popcorn, tortillas, bread (whole wheat and white), cookies, oat muffins, udon noodles ... (whatever is available, to show variety)

PREPARATION:

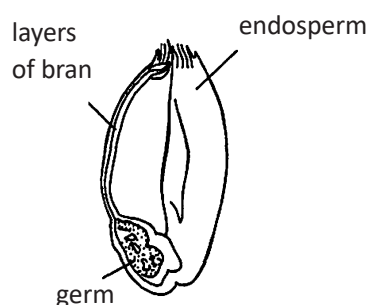
1. Collect materials.
2. Make up packages of sample grains, preferably three per participant. Make sure everyone gets a packet of wheat.
3. You may want to try out the recipes so you know how they turn out and how long they take.

STEP BY STEP:

1. Set out the food samples. Have everyone get three different sample packages of grain-everyone gets wheat.
2. Have them examine their grains and try to figure if the sample foods were made from these grains. (Very young children should be paired with an older person for this step.)
3. Have everyone discuss their grains and the foods.
4. Show them the wheat stalk and the wheat berries. Remove and rub the husks off the wheat seeds.
5. Grind some wheat seeds in the food mill and show everyone the flour that results.
6. Divide into groups and prepare the recipe of choice.

EXTENSIONS:

- Go on a field trip to an ethnic food store and look for food products made from grains.
- Have participants go home and see how many grain products there are in their home. Have them list them and bring the information back to the group.
- Go to the grocery store and see how many kinds of wheat flour there are. Look at some food products and see how many have wheat flour as the first listed ingredient.



Wonderful World of Wheat

Honey Wheat Bag Bread

A very easy option is to use instant soup mixes that have a variety of noodles, grains and seeds in them. Boil water, add mix, and enjoy! Be sure to discuss what ingredients came from wheat and other grains.

WASH HANDS FIRST! THESE FIRST TWO HAVE EVERYONE HANDLING THE FOOD.

Materials (per group of 4):

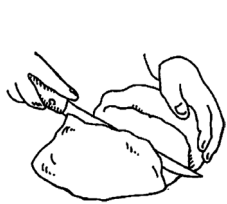
1 two-gallon heavy freezer bag
Measuring cup
Tablespoon
4 Small aluminum loaf pans
Clean surface to knead on
Towel or plastic wrap

Ingredients:

4 cups All-purpose flour
3 $\frac{3}{4}$ cups Whole wheat flour
2 pkg Active dry yeast
2 $\frac{1}{2}$ cups Warm water (105° - 115°F)
 $\frac{1}{4}$ cup Honey
 $\frac{1}{4}$ cup Nonfat dry milk
3 Tbs Oil
1 Tbs Salt

DIRECTIONS:

1. Put these into the plastic bag: 1 cup all-purpose flour, 1 cup warm water, 2 pkgs yeast, 2 tablespoons honey.
2. Seal the bag with as little air inside as possible. Lay it on a table and take turns mixing the ingredients together with fingers.
3. When completely mixed let rest 15 minutes.
4. Add the rest of the water, honey, dry milk, salt and just 2 Tbs oil (1 Tbs oil is for greasing the pans).
5. Work this together in the bag taking turns as before.
6. Gradually add all of the whole wheat flour. Add all-purpose flour until the mixture is stiff and pulls away from the bag. Turn dough out on a floured surface, divide into two balls and continue to knead for 5 minutes. Add more flour if necessary.
7. Cover with plastic or damp towel and let rest 10 minutes.
8. Separate into four equal pieces and shape into a loaf shape (see illustration). Place loaf seam-side down in greased pan. It should rest for about 30 minutes. If the loaf falls before it can be baked, it can be kneaded and shaped again – allow to rise until doubled, then cook.
9. If you have time and an oven, bake the loaves for everyone to take home.
10. Bake 30-35 minutes in a 375° F oven.



Wonderful World of Wheat

Navajo Fry Bread

Materials:

bowl, spoon, measuring spoons,
and measuring cup
electric fry pan or stove access
plate
2 paper towels butter knife

Ingredients:

1 cup flour
½ tsp baking powder
½ tsp salt
½ cup lukewarm water
8 Tbs margarine for frying
honey or jam for spreading on
finished bread

Directions:

1. Combine dry ingredients and mix well.
2. Add the water and mix well.
3. Knead the dough, pushing with the heel of your hand. Dust with flour if it's too sticky.
4. Make little golf balls of dough and pat until it's ¼" thick.
5. Cook in hot margarine (hot, but not smoking). Fry until brown; drain on paper towels.

Simple Noodle Smorgasbord

Materials:

a pot
a hot plate or electric fry pan
colander
measuring spoon
stirring spoon
plates, forks and napkins
can opener* (optional)

Ingredients:

4 - 6 cups water
¼ tsp salt
2 cups pasta, any kind

Directions:

1. Get water with salt boiling, add pasta and cook until just done (read the package and don't overcook!). Drain the noodles and toss with your choice of toppings:

Simple Garlic Pasta

4 tablespoons butter and 1 teaspoon garlic granules

Clams And Pasta

4 tablespoons butter, small can chopped clams,* 1 teaspoon garlic granules

Macaroni And Cheese

½ cup cream, 1 cup shredded cheese (cheddar, romano and/or parmesan)

Lemon Spice Pasta

4 tablespoons butter, ½ teaspoon nutmeg, 1 tablespoon lemon juice

Why Do This?

The dehydrated foods the groups will make are nutritious enjoyable snacks. This activity provides group members with one more nutritious way to snack and another way to eat more fruits and vegetables as well as familiarizing them with the dehydration process.

Dry and Delicious

Summary:

Groups will make dehydrated fruit and veggie snacks.

Some Helpful Information:

People have been dehydrating foods since the beginning of time. Dried berries and other fruits and vegetables provided much needed vitamins to people who had no other means to preserve food. We can benefit from dehydrating foods today as well. Dried foods are lightweight, don't take up much room, and require no refrigeration. This means they can be stored well and are ideal as lightweight food to take on hikes or put in lunches. Dried food makes a great every day snack as well.

Dehydrating means to remove the water. We will prepare foods by slicing $\frac{1}{8}$ inch thick slices so they will dry relatively quickly. Vegetables that have a long cooking time like carrots, parsnips, turnips and squash should be blanched. To blanch dunk the cut up vegetables in boiling water for 5 minutes. Blanching reduces spoiling, preserves color and makes produce dry quicker. Vegetables that have a short cooking time like zucchini, beets, cucumber, peppers, onions, mushrooms or tomatoes don't require blanching.

If foods are dried in the oven you need to make sure trays are small enough to allow air circulation and that the temperature never gets above 140 degrees. Temperatures that are too high will destroy nutrients and make the food tough. It is possible to dry foods with the sun, but temperatures need to be consistently above 100 degrees with low humidity. Food must be protected to keep insects off. Take trays in at night. It can take about 4 days to get some foods completely dry. Using a food dehydrator is the easiest. It will hold a constant temperature, and drying time for veggies is about 7-9 hours. Veggies are done when they are tough to brittle. Fruit is done when it is leathery and pliable with no sticky or damp spots.

Dried vegetables are best when used within six months as they become tough with long term storage. Fruit keeps longer but flavor and texture both deteriorate with time. Dried foods can be eaten as a snack. If you want to add vegetables to a recipe you can rehydrate foods. Soak the dried food in an equal amount of water. For example, soak one cup of dried carrots in one cup of water. If you use warm or hot water they will rehydrate more quickly. Don't soak for more than 2 hours or they may spoil. The rehydrated veggies can be served with a sauce or added to a recipe like a soup or sauce.



Dry and Delicious

TIME

1 hour to prepare;
Up to 9 hours in the
dehydrator or oven,
½ hour next meeting

MATERIALS:

First Meeting:

- Fresh firm fruits such as apples, pears, nectarines, persimmons, papaya, bananas, plums
- Fresh veggies such as cucumbers, zucchini, tomato, mushrooms, peppers, beets, parsnips, carrots
- cookie sheets or trays
- Oil or heavy plastic wrap
- Sharp knives and/or food processor with slicing blade
- cutting boards
- Bowls
- Dehydrator or oven
- Masking tape and pen

Next Meeting:

- HOT water for rehydrating
- Cups and forks

PREPARATION:

1. Decide if you will oven dry or use a dehydrator. (The dehydrator will hold at 140 degrees; it may be difficult to keep the oven temperature that low.)
2. Select foods that are ripe but firm enough to slice easily. If using a food processor with slicer, try it out to be sure that fruits make it through the processor slicer without getting pureed.
3. Figure out how much room you have in your oven or dehydrator. You may want to do two batches of dehydrating. Fill an appropriate number of trays. This will determine how much food to buy, how many trays to provide, and how many groups to break into.

STEP BY STEP:

First Meeting:

1. Ask everyone if they were going on a long trip and they had to carry all their fruits and vegetables, how they could do that. Ask if they have eaten dried foods or fruits. Do they know how astronauts and mountain climbers carry their fruits and vegetables? Discuss with them that dehydrating is the removal of water. There is a lot of water in fruits and vegetables. You can bring an instant soup to look at and discuss.
2. Break into groups. Supply each group with a food (or foods) and the materials they need to prepare them.
3. They must all clean, core and/or peel depending on the food they have chosen or been given. Have them slice thin (½ inch) or use food processor to do slicing. Those too young to slice can lay foods out evenly on the trays. Each group should put their name on a piece of tape and put it on their tray(s.)
4. Dry the foods. Bag them or place them in airtight containers with the groups' names fastened to the containers. Bring them to the next group meeting.

Next Meeting:

5. Have everyone find the foods they prepared and taste them. Have everyone taste everyone else's dried foods.
6. Discuss which ones they like the best and why.
7. Try rehydrating some of each type with HOT water and taste test them again. Talk about using some rehydrated foods to cook with.



Dry and Delicious

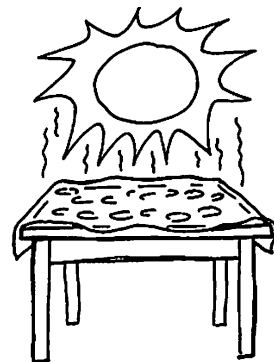
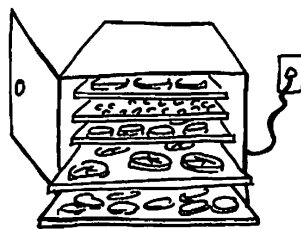
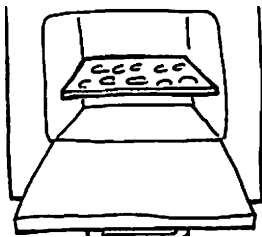
EXTENSIONS:

- Make an instant soup with instant rice, rehydrated veggies and hot bouillon.
- Have everyone think up a way to use the dried or rehydrated food. Have a potluck with their ideas.
- Make fruit leather with applesauce. Spread it ¼ inch deep on thick plastic draped on a tray. Dry in dehydrator following directions or in an oven set as low as possible. Let steam out occasionally and rotate trays. It's done when no longer sticky and will roll up and hold together.

Fruit Leather is a popular dried fruit treat. It requires cooking and more equipment. Food dryers have special trays for fruit leathers. Pour on special plastic tray and dry in dehydrator, following temperature directions provided with machine. If you are drying in an oven you'll need to lay plastic over a cookie sheet and oil the surface of the plastic. Here is a recipe:

FRUIT LEATHER

For each cup of cleaned, peeled and pared fruit (apples, plums, berries, peaches ...) add about one and one-half tablespoons of sugar. The amount of sugar varies with how tart your fruit is and your taste. Cook the fruit and sugar together. Cook just long enough to get the fruit very soft. Puree the mixture. Spread a thin coat on oiled plastic wrap. Be sure it's less than one-quarter inch thick, otherwise it won't dry in the middle. Dry as for dried fruit. Leathers usually take about 3 hours at 135 degrees F. When the surface doesn't feel sticky even when your finger is rubbed over it, leather is done. It will be pliable and a bit stretchy. The finished product can be rolled up on the plastic and refrigerated.



Greens Galore

10 NUTRITION ACTIVITY

Summary:

Several African greens recipes will be tried so everyone can taste a variety of healthful dishes made from these easy-to-grow, nutritious vegetables.

Some Helpful Information:

Greens are versatile vegetables. They grow well all over the world. They are available all year and are not usually expensive. There are lots of vitamins in greens. They provide fiber in the diet as well. Several varieties of greens are edible raw as well as cooked. These recipes are all African ways of cooking greens and have interesting spices and combinations that are very tasty. Many African recipes call for quite a bit of hot pepper. Where pepper is called for in the recipes included here, it has been reduced substantially.

Why Do This?

Experiencing different recipes
will expose everyone to new
vegetables and ethnic cooking.



Greens Galore

TIME:

1 hour

MATERIALS:

- Electric fry pan (one per group)
- Cutting board (one per group)
- Knives (one per group)
- Measuring cup (one per group)
- Measuring spoons (one per group)
- Forks and cups, or plates for eating/tasting
- Copies of recipes (two per group)
- See recipes for ingredients needed.

PREPARATION:

1. There are four recipes provided. If you have fewer than four groups you can eliminate one recipe.
2. Collect materials.
3. If you are unclear about any of the recipes, try them out at home first.

STEP BY STEP:

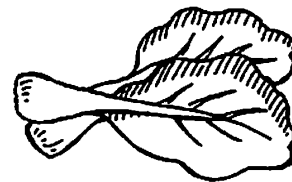
1. Show everyone what greens are.
2. Ask if anyone has eaten them. Ask people to talk about times and ways they have eaten greens.
3. Explain that greens are eaten by most cultures. African cultures are known for their tasty recipes using greens, and the group is going to try a few.
4. Break into groups and distribute materials.
5. Have everyone taste all the recipes they would like.

EXTENSIONS:

- Pick another ethnic group and cook selected recipes for that group.
- Taste each of the greens raw as well as cooked.



kale



bok choy



chard



spinach

Greens Galore

Kale with Coconut Milk (Kenya, Uganda)

Ingredients:

$\frac{3}{4}$ cup Water
1 lb Fresh kale, cleaned
and chopped
1 medium Onion
3 large Tomatoes
1 cup Canned coconut milk
salt

Directions:

1. Wash kale, trim/tear off bruised spots.
2. Simmer kale in $\frac{3}{4}$ cup water 4-5 minutes.
3. Add onions, tomatoes, milk, and salt. Stir well.
Cook uncovered 20 minutes. Serve hot.

Spinach Stew (Central African Republic)

Ingredients:

2 small Onions, chopped fine
2 Tbs Oil
2 Tomatoes, chopped
1 Green bell pepper
2 lbs Fresh spinach (or two
packages frozen spinach)
1 tsp Salt
 $\frac{1}{4}$ tsp Cayenne pepper
4 Tbs Peanut butter

Directions:

1. Cook onions until golden in 2 Tbs oil.
2. Stir in tomato and green pepper. Simmer 5 minutes.
3. Thin peanut butter with 2 Tbs warm water.
4. Add all other ingredients. Cook for 10-15 minutes. Add water if necessary
to prevent scorching and sticking.

(This is traditionally served over rice or other cooked grain.)

Recipes adapted from:

Cooking the African Way by Constance Nabwire and Bertha Vining Montgomery, *Lerner Publications, 1988.*

Recipes: African Cooking, *Time Life Books, 1970.*

African News Cookbook African Cooking for Western Kitchens, Ed. Tami Hultman, *African New Service Inc., 1985.*

Greens Galore

Okra and Greens (Gabon)

Ingredients:

- 1 small Onion, chopped fine
- 2 Tbs Oil
- 1 lb Shredded collards
(or turnip greens)
- 16 Okra
- ½ cup Pine nuts
- ½ tsp Cayenne pepper

Directions:

1. Clean and chop greens.
2. Saute onions until golden in 2 Tbs oil.
3. Add remaining ingredients plus about ¼ cup water.
4. Simmer until nuts and greens are tender, about 20 minutes.

Red Cabbage with Apples (South Africa)

Ingredients:

- 2 lb Red Cabbage, cored and
shredded thin
- 1 Large Onion, chopped
- ¼ cup Oil
- 2 Tbs Sugar
- ½ cup Water
- 2 Tart Green Apples, cored and
cut into ¼ inch slices
- ½ tsp Nutmeg
- 1 ½ tsp Salt Dash of Pepper
- 2 Tbs (malt) Vinegar

Directions:

1. Pare, clean and chop onion, apple and cabbage.
 2. Saute onion in oil until golden.
 3. Add all other ingredients except vinegar, cover and simmer until
cabbage is cooked.
 4. Add vinegar and cook for a minute or two. Serve hot.
- (Traditionally cooked with bacon and bacon drippings, this recipe is
altered for TWIGS group use.)

MyPlate, My Colorful Plate

11 NUTRITION ACTIVITY

Summary:

This activity will help youth recognize MyPlate and identify it as a guide to healthy eating.

Helpful Information:

The **2015-2020 Dietary Guidelines for Americans** provides science-based advice to promote health and reduce the risk for major chronic diseases through diet and physical activity. According to the Dietary Guidelines, a healthy diet:

- Emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products.
- Includes lean meats, poultry, fish, beans, eggs, and nuts; and
- Is low in saturated fats, trans fats, cholesterol, salt, and added sugar.

MyPlate was created to show how to implement the recommendations contained in the Dietary Guidelines. It graphically displays the five food groups that should be the core of a healthy diet. Each of these food groups has a key message to help you improve your diet.

Grains group – Make at least half your grains whole grains. Grains give us energy to work and play. Whole grains provide us with fiber, vitamins, and minerals.

Fruit group – Make half your plate fruits and vegetables. Eat a variety of fruits – whether fresh, frozen, canned, or dried – rather than fruit juice for most of your fruit choices.

Vegetable group – Make half your plate fruits and vegetables. Eat more dark green veggies such as broccoli, kale, and other dark leafy greens, and orange veggies such as carrots, sweet potatoes, pumpkin, and winter squash.

Dairy group – Switch to fat-free or low-fat (1%) milk. Foods in the milk group provide calcium, potassium, vitamin D & protein.

Protein group – Go lean with protein. Choose lean meats and poultry. Bake it, broil it, or grill it. Vary your protein choices with more fish, beans, peas, nuts and seeds.

Why Do This?

MyPlate is a tool to remind us to make healthy food choices and to build a healthy plate at mealtimes. It features the five food groups in proportion to how much we need to eat daily.



MyPlate, My Colorful Plate

TIME:

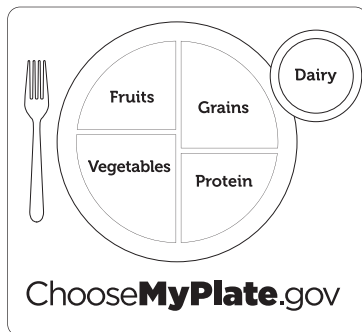
1 hour

MATERIALS:

- MyPlate poster
- MyPlate food pieces
- Picture of a farmer's market

PREPARATION:

1. Gather materials
2. Make copies of "MyPlate" handout

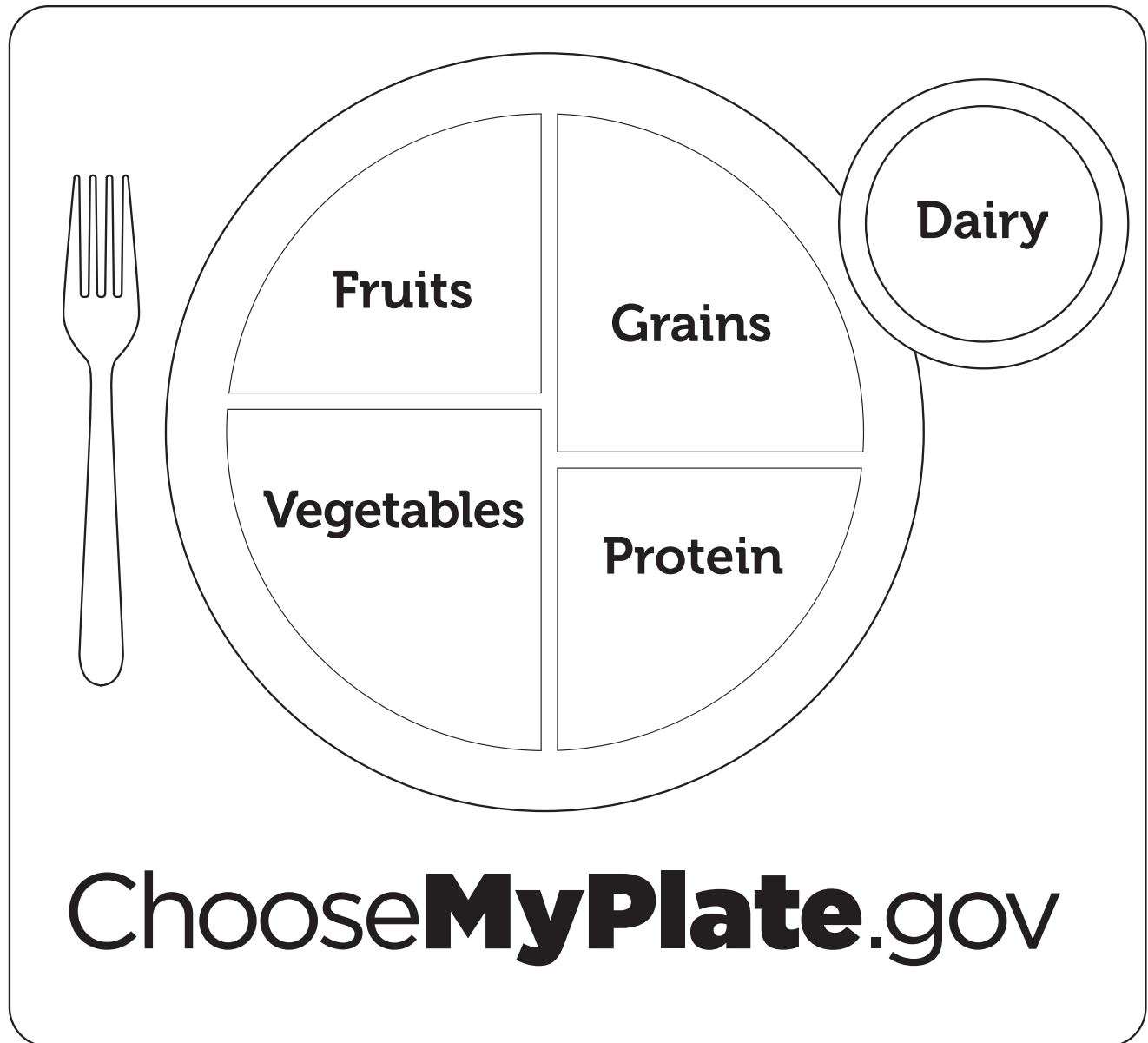


STEP BY STEP:

1. Ask questions to help students understand where food comes from.
 - Have you visited a farm? What kind of food can you find on a farm?
 - Farmers can sell their food to grocery stores or they can take the food to sell at farmers markets. How many of you have been to a farmers' market? What kind of food do you find there? [Show a picture of a farmer's market]
2. Tell the youth that we need to eat right to have a healthy body. Let's talk about how to eat right. Show the MyPlate poster and ask these questions:
 - How many food groups do you see on MyPlate? What are these food groups?
 - Why do we need foods from each food group every day? (*Each food group gives something –nutrients–that your body needs. Eating these foods every day can help make you healthy and strong.*)
 - Can you name some foods that belong in the fruits group? The vegetables group? The grains group? The protein group? The dairy group?
 - Ask each child to select a food piece and place it in the correct group of the poster.
 - MyPlate tells us how much of each food group we should eat. How much of your plate should be fruits and vegetables? (*half of your plate*) Grains? Protein? Dairy?
 - Show students some foods that don't fit in any of the food groups (soda, cookies, ice cream, etc.). Explain these are *sometimes* foods. Place these on left side of poster board.

[For older youth, discuss the key messages from the Dietary Guidelines. Explain concepts such as whole grains, lean meat, fat-free or low-fat, etc.]
3. Pass out the blank MyPlate worksheet and ask students to plan a dinner plate. They have the choice of getting foods from a grocery store or a farmers' market or a vegetable garden.
 - Draw or write the food you select on your plate according to the food group (or use food stickers)
 - How many different colors are on your plate? Who has the most colorful plate?
 - Discuss how eating a variety of colorful food provides vitamins, minerals, and antioxidants to nourish your body.

MyPlate, My Colorful Plate



Sippin' Soda

NUTRITION ACTIVITY 12

Why Do This?

Commercial sodas can be expensive, contain artificial chemicals and often contain as much as 12 teaspoons of sugar.

There are fresh fruit-flavored drinks that make a much healthier beverage.

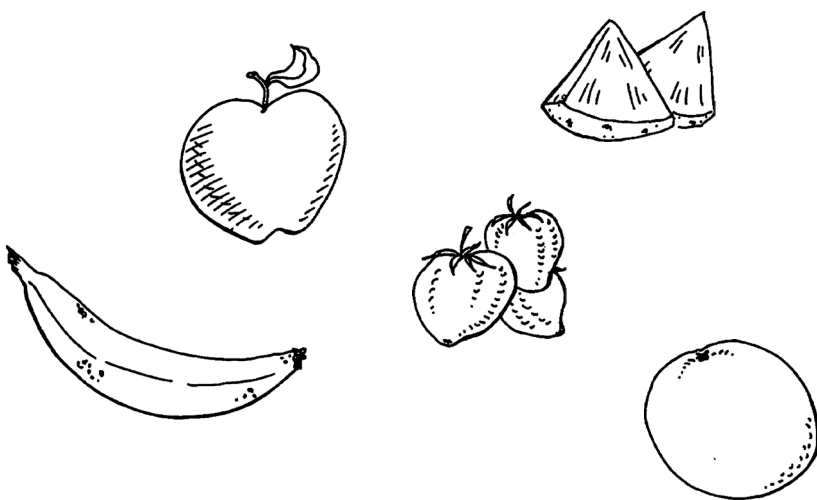
Summary:

Groups make several fruit drinks from scratch. Everyone tastes the drinks and tells how they were made.

Some Helpful Information:

You can make your own healthful beverages at home. Make a batch of one of these and keep it in the fridge. One group of these beverages is called Latino fruit drinks or Liqueados. These drinks are available for purchase in Mexican open markets and on street corners. The fruit you choose can be whatever is in season and therefore least expensive.

There are many types of fruit to try besides apples, oranges and bananas. Using new varieties in these recipes will expose your group to some new healthy foods. If the drink is 100% fruit juice, then it counts as part of a fruit group.





Sippin' Soda

TIME:

1 hour

MATERIALS:

- Ingredients for recipes
- 2 Blenders
- Cutting boards
- Small size paper cups
- Towels and sponges for messes
- Knives: a couple of sharp ones are necessary, the rest butter knives
- Bowls to hold fruit in
- Paper and drawing materials

PREPARATION:

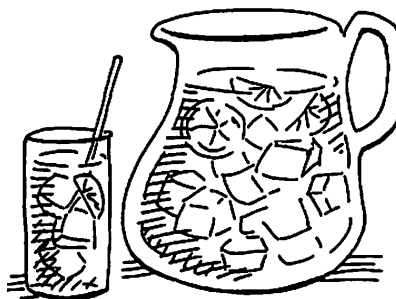
1. Gather materials.
2. If you are unsure of any of the recipes try them at home first.

STEP BY STEP:

1. Break into groups.
2. Distribute a different recipe to each group. Also provide the ingredients they need.
3. Have everyone make their beverage.
4. Have them make a drawing of ingredients and write the name of the beverage on it. Encourage groups to make up a new, more exciting name.
5. Everyone go around and taste the drinks and see what they are made of.
6. If you can do it without hurting feelings, vote on the tastiest concoction.
7. Ask if anyone has a suggestion for another recipe.

EXTENSIONS:

- Bring in fresh orange juice, frozen orange juice, orange soda, and powdered orange drink. Taste and compare each. Talk about the ingredients, calories and nutrition in each.
- Have everyone talk about their favorite drink and how much they drink of it. List drinks in order of how healthy they are.



Sippin' Soda

Lemonade

Ingredients:

- 1 cup fresh squeezed lemon juice
- 2 quarts water
- 2 ½ Tbs honey

Directions:

1. Mix honey and water, stir until dissolved.
2. Squeeze the lemons to make 1 cup of juice, add and stir.

Sangria

Ingredients:

- 1 quart grape juice
- Juice of 2 oranges
- Juice of 1 lemon
- 1 orange, washed then sliced thin
- ½ lemon washed then sliced thin
- 1 quart carbonated water
(club soda, mineral water)

Directions:

1. Mix all ingredients and chill.

Orange Chiller

Ingredients:

- 1 cup nonfat dry milk powder
- 2 cups water
- 1 cup ice
- 1 cup water
- 1 (6 ounce) can of frozen orange juice concentrate
- 1 Tbs sugar

Directions:

1. Mix together well. Should be stirred before serving.

Tropical Smoothie

Ingredients:

- 6 Bananas
- 3 cups Plain Yogurt
- 3 cups Orange or Pineapple Juice
- 10 Ice Cubes
- 1 ½ cup Water
- 2 Tbs Sugar
- 1 ½ cup Fruit (your choice)

Directions:

1. Blend all ingredients together in a blender. You will have to do a couple batches to get it all blended.

Liquado Drinks

Ingredients:

- Choose one:
- ½ watermelon seeded and cut off rind
- 1 cantaloupe
- 2 baskets strawberries
- ½ pineapple

Directions:

1. Blend in blender with 2 cups of water.
2. Strain then and add to 1 quart water. Serve chilled or over ice.
(You don't have to strain it, if you don't it's even better for you because you get the fiber.)

Staying Fit with Fiber

13 NUTRITION ACTIVITY

Summary:

This is a food race. Using some clear plastic tubing as intestines, two snack foods will be "eaten." How fast they move through the intestine will be apparent.

Some Helpful Information:

Dietary fiber is the part of food that adds bulk, its non-digestible bits that help keep the "plumbing" of your digestive tract flowing smoothly. Fiber is found in the leaves and stems of vegetables and the pulp and skins of fruits. Fiber is also in beans (the best fiber source), whole grains and foods prepared with whole wheat flour. Getting more fiber in our diet is one of the best ways to prevent cancer of the intestine. Fiber can reduce cholesterol, cleans out the intestine, and prevents constipation as well.

You can get more fiber by eating more fruits and vegetables. Eat whole fruits-juice has the fiber removed. Avoid peeling tomatoes, potatoes and other vegetables and fruits; the skin is fiber-rich and should be eaten. The stems of spinach, broccoli and other vegetables are good to eat, as well as the leaves and flowerets. Whole grain products like oats, brown rice, corn tortillas and whole wheat bread are other good sources of fiber. One great way to get more fiber in your diet is to eat fiber as a snack food. If you select carefully you can eliminate fats too which is good for your health.

Why Do This?

This demonstration will make the value of fiber apparent and is fun besides! Expect this activity to be a little rowdy and a lot of fun!



Staying Fit with Fiber

THE RELAY

In this activity teams feed a snack to their intestine-tube. The snack goes through the intestine (tube) and drops out the end into a bowl. One team member holds the tube over a bowl. Another team member, preferably an adult, "chews" the food by chopping it up into small bits (small enough to push through their tube) with a knife. Keep each food type separate (and the knife away from little ones). The next steps are timed. The first "feeder" stuffs the first food into the mouth of the tube. For half the groups it will be chopped snack cake; for the other groups it will be chopped carrots. They have only 30 seconds to do this! You indicate when the 30 seconds start and stop. The next player steps up to the tube. When everyone is ready you start the timer again. This time the tube mouths are being fed as follows: after cake, chopped candy bar, after the carrots, chopped jicama. Again they have only 30 seconds. The next feeders get 30 seconds to feed either potato chips or the seeds. The last feeder cleans the intestine by "drinking" (pouring through) a drink of water. Any feeder may either push food in with a finger OR squeeze the tube on the outsides (not both). NO team may shake the tube. The groups can compare how much of the snack made it through and how clean the intestine is at the end. If team members who hold the tube over the bowl are all around one table the comparison is obvious.

TIME:

1 hour

MATERIALS:

- A watch with a second hand or stop watch. A whistle is helpful but not necessary.

Per group:

- » 6 inch length of clear plastic tubing approx., 3/4 inch lumen (Optional: get funnels to fit tubing)
- » 1 Sharp knife* (only older participants are to use the knives and only with supervision. There needs to be an adult in each group)
- » Cutting board
- » Bowl
- » 1 Small glass of water

For half of the groups:

- » 1 snack cake with lots of frosting/filling
- » one mini chewy candy bar
- » 1 small bag of potato chips

For the other half of the groups:

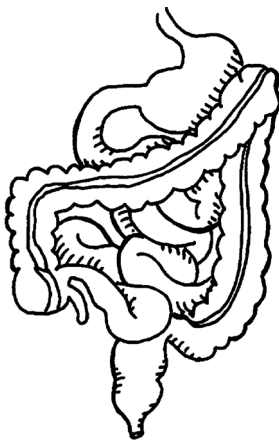
- » 1/2 small carrot
- » 1 small chunk of jicama
- » Tbs of raw sunflower seeds
- Various veggies to nibble and if desired some dips for them. (See recipes that follow.)
- NOTE: If there are not enough adults to chop for each group give the "junk" food feeders a butter knife.



Staying Fit with Fiber

PREPARATION:

1. Purchase tubing at a hardware store and cut into 6 inch lengths. (Optional: find and purchase funnels that fit the tube opening, a snug fit that holds the funnel in place is ideal.)
2. Read the description of the relay in the helpful information section and the step by step procedure a couple times. Visualize where to set up ahead of time.
3. Prepare veggies (and dips) to nibble or bring supplies so youth can cut up veggies and make the dips.



Human digestive tract

STEP BY STEP:

1. Start a discussion by asking if anyone knows what fiber or roughage is? Does anyone know why it is good for them? Hold up the snack cake and the carrot and ask which has more fiber.
2. Using information from the "helpful information section" to talk about fiber and why it is good for us.
3. Divide into groups of 5 or so. Explain the "food race" walking through the procedure once.
4. Assign the knife role and distribute the knives to the adults.
5. Distribute the rest of the materials.
6. Run the relay race! The chewers who chop the food ARE NOT TIMED. No one should feel rushed as they use the knife.
7. Encourage a discussion about the results. Which foods moved through the best? Worst? Why? Why are the foods with fiber good for us?

EXTENSIONS:

- Read the nutrition facts labels and compare the calories in each snack.
- Have groups predict what other foods would do in the intestine tubes.
- Repeat the procedure with light fluffy white bread and with coarse hearty 100% whole wheat bread or multi grain bread.

Staying Fit with Fiber

Some Fiber-Full Nibbles:

Carrots, green pepper, broccoli, tomato, cauliflower, turnip, celery, cucumber, zucchini, jicama, green beans, radishes.

Dip, Dip, Dip those Veggies

REFRIED BEAN DIP

1. Mix about $\frac{1}{4}$ cup cooked or canned pinto beans with $\frac{1}{2}$ teaspoon chili powder.
2. Mash with fork until very soft. If needed, add a little water.

CHEESE 'N CHIVES DIP

1. Mix $\frac{1}{2}$ cup cottage cheese with 1 tablespoon finely chopped chives, thin with 1-2 tablespoons buttermilk and put through the blender.

VEGGIE GARDEN DIP

1. Mix together 1 cup nonfat plain yogurt, $\frac{1}{4}$ cup light mayonnaise, $\frac{1}{4}$ cup finely chopped radishes, $\frac{1}{4}$ cup finely chopped green onion.
2. Add a dash of garlic powder and dried parsley.
3. Chill for one hour.

YOGURT CURRY DIP

1. Mix $\frac{1}{4}$ cup yogurt with $\frac{1}{2}$ teaspoon of curry powder.

Stir Fry Fun

14 NUTRITION ACTIVITY

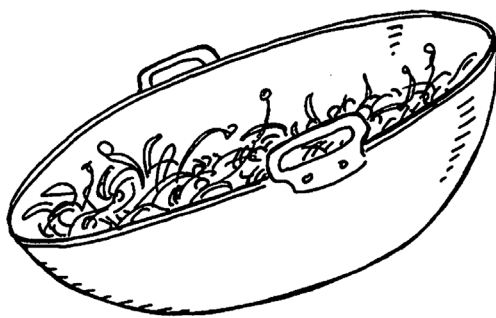
Summary:

The group will prepare a stir fry meal and eat it.

Some Helpful Information:

Stir frying means to cook the ingredients, in this case vegetables, quickly in a small bit of oil, then cover and let steam finish the cooking process. The still crisp and flavorful vegetables are served immediately. Stir frying has become more popular recently. Foods cook quickly, retaining a lot of their nutrients. In parts of east Asia people cook this way to save on precious cooking fuel, which is scarce.

Cooking time is short but preparation is necessary. Cut vegetables into thin and equal thicknesses. Vegetables that take longer to cook are added to the pan first. Those that cook quickly are added later so their total cooking time is less. Heat the pan, add the oil and heat until you can smell it, then add your prepared vegetables. If there is water left on the vegetables, it will cause splattering as it boils in hot oil. Prevent burns by making sure the vegetables are dry before adding them to the hot pan.



Why Do This?

Stir frying is a healthful way to cook. It prevents overcooking which means there are more nutrients left in the food.



Stir Fry Fun

TIME:

1 hour

MATERIALS:

Per group of about five:

- Electric wok or fry pan with lid
- Extension cord, if necessary
- Cooking utensils
- Cutting board
- Pot holders
- Measuring spoons
- Measuring cups
- Soap, Towels and Sponges for clean up

For everyone:

- Plates, forks (chop sticks) and napkins
- Knives: There are durable plastic knives that will cut vegetables and are safer than a sharp metal knife in the hands of young children. It is best to always have adult supervision.
- Ingredients for recipe (see below)

PREPARATION:

1. Think ahead about safety; there will be hot oil and knives around. Don't let anyone trip on an extension cord or spill hot oil!
2. Collect all the materials. If people can bring things from home it may help. Remember to have extras in case someone forgets.
3. You may want to try stir frying at home before leading a group so you are more comfortable with the procedure.
4. Decide if you want to add rice to the menu. If the stir fry is served over rice, it will feed about twice as many people. Don't forget the rice and rice cooking materials if you choose to serve it. You could prepare rice for everyone on a hot plate.

STEP BY STEP:

1. Explain that food often loses nutrients when it is cooked. Vitamins C and B are particularly vulnerable to cooking losses. When vegetables are steamed or boiled there are a lot of vitamins and other nutrients that wind up in the cooking water. It's great to use this liquid for soups, sauces or use to water plants.)
2. Show your group a wok, the traditional pan for stir frying.
3. Distribute materials. Have the groups wash and chop their veggies and then cook their meal.
4. Walk about, helping and answering questions.
5. When everyone is eating, get the group to talk about how well they like the meal. Has anyone eaten or cooked this way before? What other things can be cooked this way?

EXTENSIONS:

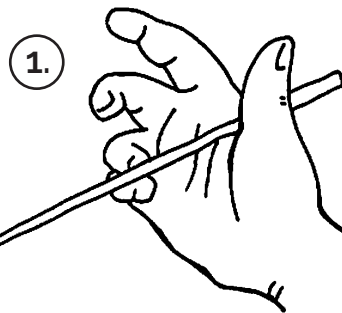
- Get some large format cookbooks from the library that have pictures of stir frying and stir fried foods.
- Go on a field trip to a restaurant that serves stir fry food.
- Have everyone look for different stir fry recipes.

Stir Fry Fun – Using Chopsticks

Think of chopsticks as tongs. One always stays still and the other one moves. Try different ways. Find the one that's easiest for you.

HOW TO USE CHOPSTICKS:

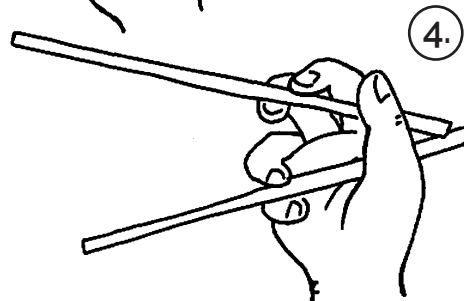
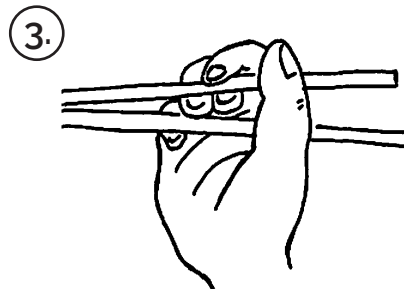
Put one chopstick between your thumb and first finger. Hold it steady with your third and fourth fingers. This chopstick will always stay still.



Hold the other chop stick between the tip of your thumb and the ends of your first two fingers. This is the chopstick that moves up and down.



Hold the lower stick steady while you move the upper one. Don't hold the sticks too tightly; a little pressure will do.



Now try to pick up a piece of food using the tips of your chopsticks. It's fun!

Stir Fry Fun

Stir Fry Meal

Ingredients:

1 Tbs Cornstarch
 ½ tsp Ground ginger
 ⅛ tsp Garlic powder
 1 tsp Soy sauce
 ⅓ cup Water
 2 Tbs Oil
 ⅓ cup Carrots, sliced thin
 ⅔ cup celery, sliced thin
 2 cups broccoli, separated
 into flowerets, stems cut thin
 ⅓ cup onions, cut thin
 1 cup bean sprouts

Directions:

1. Mix the cornstarch, ginger, garlic powder, soy sauce and water in a cup and set aside.
2. Clean and cut the veggies. They should be sliced thin and about equal sizes. Be sure they are dry so the oil won't splatter.
3. Heat the frying pan on high. Add oil.
4. When the oil smells hot, add the clean, dry carrots, onions and celery
5. Cook one minute, stirring constantly.
6. Add the broccoli, cook for two minutes. Keep stirring!
7. Add the liquid mixture and cook until bubbly.
8. Add the sprouts and put the lid on the pan. Cook for 2 more minutes.
9. CAREFULLY open lid (keeping face away from steam) serve and EAT! Try using chopsticks.