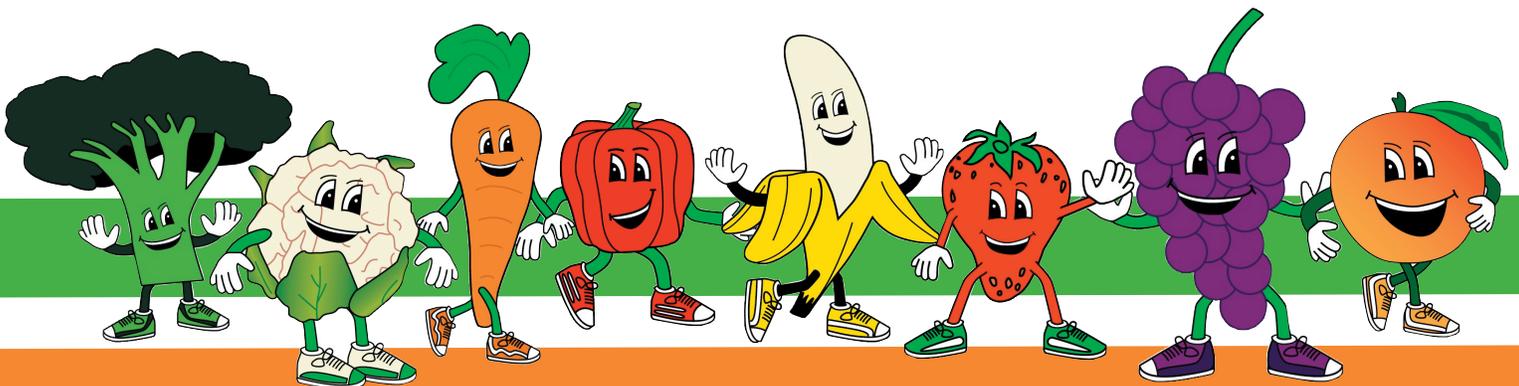
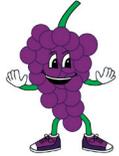


Nebraska Fresh Fruit & Vegetable Program

Lessons K-5 & Classroom Activities



Lessons K-5 & Classroom Activities Binder Contents



INTRODUCTION

- Using the Lesson & Classroom Activities Binder
- Summary Table of Lesson Plans
- What Foods are in the Vegetable Group
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- Anatomy of MyPyramid
- Teaching MyPyramid
- Home Sweet Home, Sweet Potato
- Is It a Fruit or a Veggie?
- Digging Up Fruits and Veggies

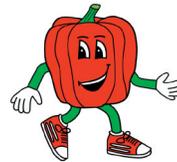


LESSONS:

- K-5 Lessons

CLASSROOM ACTIVITIES

- Request Form for Fresh Fruits and Vegetables
- Coloring Sheets
- Activity Sheets
- Fruit and Veggie Classroom Activities
- Promoting Fresh Fruits and Veggies: Story Time Follow-up Activities
- Fruits and Veggies with Art and Music
- Fruit and Veggie Cooking and Tasting
- Fruit and Veggie Taste Testing Activity
- Fruit and Veggie Challenge
- Fruit and Veggie Field Trip
- Field Trip to a Farm
- School Gardens
- Activity Cards for Lessons: K-1
- Bookmark Templates



Fruit and Veggies Lesson Plans for Grades K-5

The lesson plans and resources within this notebook will help you to effortlessly include fruit and veggie nutrition education into the classroom. The combination of fresh fruit and veggie snacks, nutrition education and promotion gives schools an opportunity to establish the importance of eating fruits and veggies every. Active role modeling and positive interactions within the classroom will be the stage for students to adopt lifelong healthy eating behaviors.

The enclosed K-5 curriculum combines fruit and veggie education with Math and English Language Arts activities. Resources that can be used with all grades can be found in the introduction and resource section as well as background nutrition information for the teacher. At the end of the notebook, additional ideas on promoting fruits and veggies with students can be found in the Classroom Activities section.

Each lesson includes the following sections:

- **Learning Objectives:** related to Math and English Language Arts
- **Teacher Resources:** background information to help prepare the lesson
- **Materials Needed:** additional items have been kept to a minimum
- **Handouts:** all student handouts are included in this notebook for easy reproduction
- **Focus:** an activity designed to get students focused on the topic covered in the lesson
- **Teacher Input:** material to be presented by the teacher
- **Practice and Assessment:** handouts and activities to be completed by students

Using these materials:

- Copy directly from the notebook
- Use the CD to print materials you need

Enclosed CD:

- FFVP Resource CD

| Grade | Lesson | Teacher Resources | Handouts |
|-------|---------------------------------------|---|---|
| K | Naming Fruits and Veggies | <ul style="list-style-type: none"> • What foods are in the fruit group? • What foods are in the vegetable group? | <ul style="list-style-type: none"> • Fruits and Veggies • Pyramid Go Fish • Where Do Fruits and Veggies Grow? |
| | Tasting Fruits and Veggies | <ul style="list-style-type: none"> • Promoting Fresh Fruits and Veggies: Story Time Follow-up Activities • What foods are in the fruit group? • What foods are in the vegetable group? • Fruit and Veggie Nutrients • Making Sense of Fruit and Veggie Nutrients • Fruit and Veggie Colors | <ul style="list-style-type: none"> • Graphing Fruits and Veggies |
| 1 | The Color of Fruits and Veggies | <ul style="list-style-type: none"> • What foods are in the fruit group? • What foods are in the vegetable group? • Fruit and Veggie Nutrients • Making Sense of Fruit and Veggie Nutrients • Fruit and Veggie Colors | <ul style="list-style-type: none"> • How Many Fruits and Veggies? • Fruit and Veggie Math Workout • The White Carrot and the Purple Potato |
| | Fruit and Veggie Diary | <ul style="list-style-type: none"> • What foods are in the fruit group? • What foods are in the vegetable group? • Fruit and Veggie Colors | <ul style="list-style-type: none"> • My Fruit and Veggie Snack Diary • Fresh Fruit and Veggie Snacks |
| 2 | Focus on Fruits and Vary Your Veggies | <ul style="list-style-type: none"> • What foods are in the fruit group? • What foods are in the vegetable group? • Fruit and Veggie Nutrients • Making Sense of Fruit and Veggie Nutrients • Fruit and Veggie Colors • Focus on Fruits • Vary Your Veggies • MyPyramid for Kids • Anatomy of MyPyramid • Teaching MyPyramid | <ul style="list-style-type: none"> • Vegetable Menu • Boxing Up Fruits and Veggies • Which Fruit |
| | My Fruit and Veggie Goals | <ul style="list-style-type: none"> • What foods are in the fruit group? • What foods are in the vegetable group? • Fruit and Veggie Nutrients • Making Sense of Fruit and Veggie Nutrients • Fruit and Veggie Colors • Focus on Fruits • Vary Your Veggies | <ul style="list-style-type: none"> • My Fruit and Veggie Snack • Eat More Fruits and Veggies • My Fruit and Veggie Goals |

| Grade | Lesson | Teacher Resources | Handouts |
|-------|---|---|--|
| 3 | Focus on Fruits, Vary Your Veggies | <ul style="list-style-type: none"> • What foods are in the fruit group? • What foods are in the vegetable group? • MyPyramid for Kids • Anatomy of MyPyramid • Teaching MyPyramid | <ul style="list-style-type: none"> • It's in the Dictionary • Sarah's Birthday Lunch • Who Has What Fruit? |
| | Put a Rainbow in Your Day | <ul style="list-style-type: none"> • What foods are in the fruit group? • What foods are in the vegetable group? • Fruit and Veggie Nutrients • Making Sense of Fruit and Veggie Nutrients • Fruit and Veggie Colors | <ul style="list-style-type: none"> • Put a Rainbow in Your Day Questionnaire • Put a Rainbow in Your Day Math • Put a Rainbow in Your Day Sentences • Rainbow Shopping |
| 4 | Finding Fiber | <ul style="list-style-type: none"> • What foods are in the fruit group? • What foods are in the vegetable group? • Fruit and Veggie Nutrients • Fruit and Veggie Colors • MyPyramid for Kids • Anatomy of MyPyramid • Teaching MyPyramid | <ul style="list-style-type: none"> • Finding Fiber • Finding Fiber Word Problems • Vegetable Orders • Fruit and Vegetable Identification |
| | The Sweet, Sweet Potato | <ul style="list-style-type: none"> • Home Sweet Home, Sweet Potato • Fruit and Veggie Nutrients • Making Sense of Fruit and Veggie Nutrients • Dietary Reference Intakes | <ul style="list-style-type: none"> • Sweet Potato Math Puzzle • The Sweet Potato and Your Daily Nutritional Needs • Sweet Potato DRI Graph • Grow a Sweet Potato House Plant |
| 5 | Is It a Fruit or Veggie? | <ul style="list-style-type: none"> • What foods are in the fruit group? • What foods are in the vegetable group? • MyPyramid for Kids • Anatomy of MyPyramid • Teaching MyPyramid • Is It a Fruit or a Veggie? | <ul style="list-style-type: none"> • Nutritional Seed Search • How Does Your Garden Grow? |
| | From the Garden | <ul style="list-style-type: none"> • MyPyramid for Kids • Anatomy of MyPyramid • Teaching MyPyramid • What foods are in the fruit group? • What foods are in the vegetable group? • Making Sense of Fruit and Veggie Nutrients • Digging Up Fruits and Veggies | <ul style="list-style-type: none"> • From the Garden • Garden of Foods • Fractions in the Garden • Perimeters in the Garden • Areas in the Garden |

What foods are in the vegetable group?

Any vegetable or 100% vegetable juice counts as a member of the vegetable group. Vegetables may be raw or cooked; fresh, frozen, canned, or dried/dehydrated; and may be whole, cut-up, or mashed. Vegetables are organized into 5 subgroups, based on their nutrient content. Some commonly eaten vegetables in each subgroup are:



Dark green vegetables

bok choy
broccoli
collard greens
dark green leafy lettuce
kale
mesclun
mustard greens
romaine lettuce
spinach
turnip greens
watercress

Orange vegetables

acorn squash
butternut squash
carrots
hubbard squash
pumpkin
sweet potatoes

Dry beans and peas

black beans
black-eyed peas
garbanzo beans (chickpeas)
kidney beans
lentils
lima beans (mature)
navy beans
pinto beans
soy beans
split peas
tofu (bean curd made from soybeans)
white beans

Starchy vegetables

corn
green peas
lima beans (green)
potatoes

Other vegetables

artichokes
asparagus
bean sprouts
beets
Brussels sprouts
cabbage
cauliflower
celery
cucumbers
eggplant
green beans
green or red peppers
iceberg (head) lettuce
mushrooms
okra
onions
parsnips
tomatoes
tomato juice
vegetable juice
turnips
wax beans
zucchini

Why is it important to eat vegetables?

Eating vegetables provides health benefits — people who eat more fruits and vegetables as part of an overall healthy diet are likely to have a reduced risk of some chronic diseases. Vegetables provide nutrients vital for health and maintenance of your body.

Health benefits

- Eating a diet rich in fruits and vegetables as part of an overall healthy diet may reduce risk for stroke and perhaps other cardiovascular diseases.
- Eating a diet rich in fruits and vegetables as part of an overall healthy diet may reduce risk for type 2 diabetes.
- Eating a diet rich in fruits and vegetables as part of an overall healthy diet may protect against certain cancers, such as mouth, stomach, and colon-rectum cancer.
- Diets rich in foods containing fiber, such as fruits and vegetables, may reduce the risk of coronary heart disease.
- Eating fruits and vegetables rich in potassium as part of an overall healthy diet may reduce the risk of developing kidney stones and may help to decrease bone loss.
- Eating foods such as vegetables that are low in calories per cup instead of some other higher-calorie food may be useful in helping to lower calorie intake.

Nutrients

- Most vegetables are naturally low in fat and calories. None have cholesterol. (Sauces or seasonings may add fat, calories, or cholesterol.)
- Vegetables are important sources of many nutrients, including potassium, dietary fiber, folate (folic acid), vitamin A, vitamin E and vitamin C.
- Diets rich in potassium may help to maintain healthy blood pressure. Vegetable sources of potassium include sweet potatoes, white potatoes, white beans, tomato products (paste, sauce, and juice), beet greens, soybeans, lima beans, winter squash, spinach, lentils, kidney beans, and split peas.
- Dietary fiber from vegetables, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower risk of heart disease. Fiber is important for proper bowel function. It helps reduce constipation and diverticulosis. Fiber-containing foods such as vegetables help provide a feeling of fullness with fewer calories.
- Folate (folic acid) helps the body form red blood cells. Women of childbearing age who may become pregnant and those in the first trimester of pregnancy should consume adequate folate, including folic acid from fortified foods or supplements. This reduces the risk of neural tube defects, spina bifida, and anencephaly during fetal development.
- Vitamin A keeps eyes and skin healthy and helps to protect against infections.
- Vitamin E helps protect vitamin A and essential fatty acids from cell oxidation.
- Vitamin C helps heal cuts and wounds and keeps teeth and gums healthy. Vitamin C aids in iron absorption.

How many vegetables are needed daily or weekly?

Vegetable choices should be selected from among the vegetable subgroups. It is not necessary to eat vegetables from each subgroup daily. However, over a week, try to consume the amounts listed from each subgroup as a way to reach your daily intake recommendation. The amount of vegetables you need to eat depends on your age, sex, and level of physical activity. Recommended total daily amounts are shown in the chart below.

| | | |
|-----------------|-----------------|---------|
| Children | 2-3 years old | 1 cup |
| | 4-8 years old | 1½ cups |
| Girls | 9-13 years old | 2 cups |
| | 14-18 years old | 2½ cups |
| Boys | 9-13 years old | 2½ cups |
| | 14-18 years old | 3 cups |
| Women | 19-30 years old | 2½ cups |
| | 31-50 years old | 2½ cups |
| | 51+ years old | 2 cups |
| Men | 19-30 years old | 3 cups |
| | 31-50 years old | 3 cups |
| | 51+ years old | 2½ cups |

What counts as a cup of vegetables?

In general, 1 cup of raw or cooked vegetables or vegetable juice, or 2 cups of raw leafy greens can be considered as 1 cup from the vegetable group.

Tips to help you eat vegetables

In general:

- Buy fresh vegetables in season. They cost less and are likely to be at their peak flavor.
- Stock up on frozen vegetables for quick and easy cooking in the microwave.
- Buy vegetables that are easy to prepare. Pick up pre-washed bags of salad greens and add baby carrots or grape tomatoes for a salad in minutes. Buy packages of such as baby carrots or celery sticks for quick snacks.
- Use a microwave to quickly “zap” vegetables. White or sweet potatoes can be baked quickly this way.
- Vary your veggie choices to keep meals interesting.
- Try crunchy vegetables, raw or lightly steamed.

For the best nutritional value:

- Select vegetables with more potassium often, such as sweet potatoes, white potatoes, white beans, tomato products (paste, sauce, and juice), beet greens, soybeans, lima beans, winter squash, spinach, lentils, kidney beans, and split peas.
- Sauces or seasonings can add calories, fat, and sodium to vegetables. Use the Nutrition Facts label to compare the calories and % Daily Value for fat and sodium in plain and seasoned vegetables.
- Prepare more foods from fresh ingredients to lower sodium intake. Most sodium in the food supply comes from packaged or processed foods.
- Buy canned vegetables labeled “no salt added.” If you want to add a little salt it will likely be less than the amount in the regular canned product.

At meals:

- Plan some meals around a vegetable main dish, such as a vegetable stir-fry or soup. Then add other foods to complement it.
- Try a main dish salad for lunch. Go light on the salad dressing.
- Include a green salad with your dinner every night.
- Shred carrots or zucchini into meatloaf, casseroles, quick breads, and muffins.
- Include chopped vegetables in pasta sauce or lasagna.



- Order a veggie pizza with toppings like mushrooms, green peppers, and onions, and ask for extra veggies.
- Use pureed, cooked vegetables such as potatoes to thicken stews, soups and gravies. These add flavor, nutrients, and texture.
- Grill vegetable kabobs as part of a barbecue meal. Try tomatoes, mushrooms, green peppers, and onions.



Make vegetables more appealing:

- Many vegetables taste great with a dip or dressing. Try a low-fat salad dressing with raw broccoli, red and green peppers, celery sticks or cauliflower.
- Add color to salads by adding baby carrots, shredded red cabbage, or spinach leaves. Include in-season vegetables for variety through the year.
- Include cooked dry beans or peas in flavorful mixed dishes, such as chili or minestrone soup.
- Decorate plates or serving dishes with vegetable slices.
- Keep a bowl of cut-up vegetables in a see-through container in the refrigerator. Carrot and celery sticks are traditional, but consider broccoli florettes, cucumber slices, or red or green pepper strips.



Vegetable tips for children:

- Set a good example for children by eating vegetables with meals and as snacks.
- Let children decide on the dinner vegetables or what goes into salads.
- Depending on their age, children can help shop for, clean, peel, or cut up vegetables.
- Allow children to pick a new vegetable to try while shopping.
- Use cut-up vegetables as part of afternoon snacks.
- Children often prefer foods served separately. So, rather than mixed vegetables try serving two vegetables separately.

Keep it safe:

- Wash vegetables before preparing or eating them. Under clean, running water, rub vegetables briskly with your hands to remove dirt and surface microorganisms. Dry after washing.
- Keep vegetables separate from raw meat, poultry and seafood while shopping, preparing or storing.



What foods are in the fruit group?

Any fruit or 100% fruit juice counts as part of the fruit group. Fruits may be fresh, canned, frozen, or dried, and may be whole, cut-up, or pureed. Some commonly eaten fruits are:



Apples
Apricots
Avocado
Bananas

Berries:
strawberries
blueberries
raspberries
cherries

Grapefruit
Grapes
Kiwi fruit
Lemons
Limes
Mangoes

Melons:
cantaloupe
honeydew
watermelon

Mixed fruits:
fruit cocktail

Nectarines
Oranges
Peaches
Pears
Papaya
Pineapple
Plums
Prunes
Raisins
Tangerines

100% Fruit juice:
orange
apple
grape
grapefruit

Why is it important to eat fruit?

Eating fruit provides health benefits — people who eat more fruits and vegetables as part of an overall healthy diet are likely to have a reduced risk of some chronic diseases. Fruits provide nutrients vital for health and maintenance of your body.

Health benefits

- Eating a diet rich in fruits and vegetables as part of an overall healthy diet may reduce risk for stroke and perhaps other cardiovascular diseases.
- Eating a diet rich in fruits and vegetables as part of an overall healthy diet may reduce risk for type 2 diabetes.
- Eating a diet rich in fruits and vegetables as part of an overall healthy diet may protect against certain cancers, such as mouth, stomach, and colon-rectum cancer.
- Diets rich in foods containing fiber, such as fruits and vegetables, may reduce the risk of coronary heart disease.
- Eating fruits and vegetables rich in potassium as part of an overall healthy diet may reduce the risk of developing kidney stones and may help to decrease bone loss.
- Eating foods such as fruits that are low in calories per cup instead of some other higher-calorie food may be useful in helping to lower calorie intake.

Nutrients

- Most fruits are naturally low in fat, sodium, and calories. None have cholesterol.
- Fruits are important sources of many nutrients, including potassium, dietary fiber, vitamin C and folate (folic acid).
- Diets rich in potassium may help to maintain healthy blood pressure. Fruit sources of potassium include bananas, prunes and prune juice, dried peaches and apricots, cantaloupe, honeydew melon, and orange juice.
- Dietary fiber from fruits, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower risk of heart disease. Fiber is important for proper bowel function. It helps reduce constipation and diverticulosis. Fiber-containing foods such as fruits help provide a feeling of fullness with fewer calories. *Whole or cut-up fruits are sources of dietary fiber; fruit juices contain little or no fiber.*

- Vitamin C is important for growth and repair of all body tissues, helps heal cuts and wounds, and keeps teeth and gums healthy.
- Folate (folic acid) helps the body form red blood cells. Women of childbearing age who may become pregnant and those in the first trimester of pregnancy should consume adequate folate, including folic acid from fortified foods or supplements. This reduces the risk of neural tube defects, spina bifida, and anencephaly during fetal development.

How much fruit is needed daily?

The amount of fruit you need to eat depends on age, sex, and level of physical activity. Recommended daily amounts are shown in the chart. Recommended amounts are shown in the table below.

| | | |
|-----------------|-----------------|--------------|
| Children | 2-3 years old | 1 cup |
| | 4-8 years old | 1 to 1½ cups |
| Girls | 9-13 years old | 1 ½ cups |
| | 14-18 years old | 1½ cups |
| Boys | 9-13 years old | 1½ cups |
| | 14-18 years old | 2 cups |
| Women | 19-30 years old | 2 cups |
| | 31-50 years old | 1½ cups |
| | 51+ years old | 1½ cups |
| Men | 19-30 years old | 2 cups |
| | 31-50 years old | 2 cups |
| | 51+ years old | 2 cups |

What counts as a cup of fruit?

In general, 1 cup of fruit or 100% fruit juice, or ½ cup of dried fruit can be considered as 1 cup from the fruit group.

Tips to help you eat fruits

In general:

- Keep a bowl of whole fruit on the table, counter or in the refrigerator.
- Refrigerate cut-up fruit to store for later.
- Buy fresh fruits in season when they may be less expensive and at their peak flavor.
- Buy fruits that are dried, frozen, and canned (in water or juice) as well as fresh, so that you always have a supply on hand.
- Consider convenience when shopping. Buy pre-cut packages of fruit (such as melon or pineapple chunks) for a healthy snack in seconds. Choose packaged fruits that do not have added sugars.

For the best nutritional value:

- Make most of your choices whole or cut-up fruit rather than juice, for the benefits dietary fiber provides.
- Select fruits with more potassium often, such as bananas, prunes and prune juice, dried peaches and apricots, cantaloupe, honeydew melon, and orange juice.
- When choosing canned fruits, select fruit canned in 100% fruit juice or water rather than syrup.
- Vary your fruit choices. Fruits differ in nutrient content.

At meals:

- At breakfast, top your cereal with bananas or peaches; add blueberries to pancakes; drink 100% orange or grapefruit juice. Or, try a fruit mixed with low-fat or fat-free yogurt.
- At lunch, pack a tangerine, banana, or grapes to eat, or choose fruits from a salad bar. Individual containers of fruits like peaches or applesauce are easy and convenient.
- At dinner, add crushed pineapple to coleslaw, or include mandarin oranges or grapes in a tossed salad.



- Make a Waldorf salad, with apples, celery, walnuts, and dressing.
- Try meat dishes that incorporate fruit, such as chicken with apricots or mango chutney.
- Add fruit like pineapple or peaches to kabobs as part of a barbecue meal.
- For dessert, have baked apples, pears, or a fruit salad.

As snacks:

- Cut-up fruit makes a great snack. Either cut them yourself, or buy pre-cut packages of fruit pieces like pineapples or melons. Or, try whole fresh berries or grapes.
- Dried fruits also make a great snack. They are easy to carry and store well. Because they are dried, ¼ cup is equivalent to ½ cup of other fruits.
- Keep a package of dried fruit in your desk or bag. Some fruits that are available dried include apricots, apples, pineapple, bananas, cherries, figs, dates, cranberries, blueberries, prunes (dried plums), and raisins (dried grapes).
- As a snack, spread peanut butter on apple slices or top frozen yogurt with berries or slices of kiwi fruit.
- Frozen juice bars (100% juice) make healthy alternatives to high-fat snacks.



Make fruit more appealing:

- Many fruits taste great with a dip or dressing. Try low-fat yogurt or pudding as a dip for fruits like strawberries or melons.
- Make a fruit smoothie by blending fat-free or low-fat milk or yogurt with fresh or frozen fruit. Try bananas, peaches, strawberries, or other berries.
- Try applesauce as a fat-free substitute for some of the oil when baking cakes.
- Try different textures of fruits. For example, apples are crunchy, bananas are smooth and creamy, and oranges are juicy.
- For fresh fruit salads, mix apples, bananas, or pears with acidic fruits like oranges, pineapple, or lemon juice to keep them from turning brown.



Fruit tips for children:

- Set a good example for children by eating fruit everyday with meals or as snacks.
- Offer children a choice of fruits for lunch.
- Depending on their age, children can help shop for, clean, peel, or cut up fruits.
- While shopping, allow children to pick out a new fruit to try later at home.
- Decorate plates or serving dishes with fruit slices.
- Top off a bowl of cereal with some berries. Or, make a smiley face with sliced bananas for eyes, raisins for a nose, and an orange slice for a mouth.
- Offer raisins or other dried fruits instead of candy.
- Make fruit kabobs using pineapple chunks, bananas, grapes, and berries.
- Pack a juice box (100% juice) in children's lunches versus soda or other sugar-sweetened beverages.
- Choose fruit options, such as sliced apples, mixed fruit cup, or 100% fruit juice that are available in some fast food restaurants.
- Offer fruit pieces and 100% fruit juice to children. There is often little fruit in "fruit-flavored" beverages or chewy fruit snacks.



Keep it safe:

- Wash fruits before preparing or eating them. Under clean, running water, rub fruits briskly with your hands to remove dirt and surface microorganisms. Dry after washing.
- Keep fruits separate from raw meat, poultry and seafood while shopping, preparing, or storing.



Fruit and Veggie Nutrients



Focus on Fruits and Vary Your Veggies



Just Do It...It's Essential

Fruits and veggies provide us with many of the nutrients we need for good health. These nutrients include essential vitamins and minerals, fiber, and other substances such as phytonutrients (plant nutrients).

Common Nutrients

Vitamin A, vitamin C, folic acid and potassium are just a few of the nutrients that are common in fruits and veggies. Dark green leafy vegetables, deeply-colored fruits, and dried peas and beans are especially rich in a variety of these nutrients.

Variety Is Key

Each fruit and veggie provides a unique blend of the nutrients we need every day. Some fruits and veggies are excellent sources of vitamin A, while others are more rich in vitamin C, for example. To get the most out of your fruits and veggies, mix it up!

Any Form Will Do

You can get the nutrients you need from fruits and veggies in any form—fresh, frozen, dried or canned! Try whole varieties more often than juice. Juices contain little or no fiber.

Make a Plan

- ◆ Select one vitamin C-rich fruit or veggie every day
- ◆ Go for one vitamin A-rich fruit or veggie every day
- ◆ Choose from one of the variety of high fiber selections every day
- ◆ Eat cabbage family veggies, such as broccoli, Brussels sprouts, cauliflower, cabbage, and kohlrabi several times a week

Cooking Losses

Prolonged heating can cause a loss of some of the B vitamins and vitamin C. Most other nutrients are not affected by the cooking process. Try quick heating methods such as steaming or microwaving if you are concerned about losses during cooking.

Common Fruit and Veggie Nutrients

| Nutrient | Function in Body | Fruit and Veggie Sources |
|---------------------------------|--|---|
| Vitamin A | Essential for vision, skin and the immune system. Promotes growth. Protects against some types of cancer. | Cantaloupe, apricots, dark green and deep yellow veggies such as pumpkin, carrots, sweet potatoes, spinach, greens and bell peppers. |
| Vitamin C | Strengthens blood vessels, improves wound and bone healing, increases the resistance to infections and increases the absorption of iron—another important nutrient for growth. | Cantaloupe, honeydew melon, peaches, oranges, strawberries, kiwifruit, asparagus, sweet potatoes, bell peppers, broccoli, Brussels sprouts. |
| Antioxidants and Phytonutrients | Antioxidants are vitamins, minerals, and other substances that fight free radicals, which may play a role in the progression of cancer and heart disease. Phytonutrients are the color pigments in fruits and veggies that either act as antioxidants or enhance the antioxidant benefits. | Fruits and veggies bursting with color, such as berries, tomatoes, and dark green and deep yellow veggies. |
| Fiber | Important to maintain digestive health as well as reduce blood cholesterol. | Raspberries, peas, blackberries, Brussels sprouts, parsnips, raisins, broccoli, black beans. |
| Folate | Important for normal cell division, wound healing and prevention of birth defects. | Orange juice, dried peas and beans, green leafy veggies, such as mustard and turnip greens, collards and spinach. |
| Calcium | Important for strong bones, blood clotting, muscle contraction and nerve function. | Rhubarb, okra and green leafy veggies, such as mustard and turnip greens, collards, kale and spinach. |

Fruit and Veggie Colors



Focus on Fruits and Vary Your Veggies

By eating a variety of colorful fruits and veggies, you can get many of the nutrients your body needs for good health.

- ◆ Create a rainbow on your plate. Think red tomatoes, orange cantaloupe, yellow pineapple, white onions, green collards, blue blueberries and purple plums!
- ◆ Choose fresh, frozen, dried or canned fruits and veggies. Any kind will do!
- ◆ Go for juice less often because it contains little or no fiber. Make sure to look for “100% juice” on the label when you do select juice.
- ◆ For children, set a goal to eat at least 2½ cups of veggies and 1½ cups of fruits each day, particularly focusing on dark green leafy vegetables and bright orange fruits and veggies. Adults need 2 to 3 cups of veggies and 1½ to 2 cups of fruits.

What are phytonutrients and why do you need them?

- ◆ Phytonutrient simply means plant (phyto-) nutrient.
- ◆ Phytonutrients act as a natural defense system for our bodies, helping to prevent chronic diseases.

REDS

Deep reds and bright pinks add powerful antioxidants called lycopene and anthocyanins to your diet. Diets rich in these nutrients are being studied for their ability to fight heart disease, diabetes, high blood pressure, Alzheimer’s Disease as well as skin, breast and prostate cancers.

Lycopene: tomato-based products (tomato juice, spaghetti sauce, tomato soup, tomato paste), watermelon, pink grapefruit, raw tomatoes, guava

Anthocyanins: red raspberries, sweet cherries, strawberries, cranberries, beets, red apples (with skin), red cabbage, red onion, kidney and red beans

GREENS

Green veggies are rich in the phytonutrients lutein, zeaxanthin and indoles. They also provide essential vitamins (folate), minerals and fiber. These nutrients protect your eyes, and may reduce the risk of cancerous tumors.

Lutein: kale, spinach, leafy greens (turnip, collard, mustard), romaine lettuce, broccoli, green peas, kiwifruit, honeydew melon

Indoles: broccoli, cabbage, Brussels sprouts, bok choy, arugula, Swiss chard, turnips, rutabaga, watercress, cauliflower, kale

YELLOW & ORANGE

The colors of the blazing sun are a must have in your daily diet. Yellow and orange fruits and veggies contain beta-carotene (which turns into vitamin A), vitamin C, vitamin E, folate (a B vitamin) and bioflavonoids. Research shows that these nutrients reduce the risk for cancer and heart attacks, boost immunity, help maintain good vision and strong bones/teeth/skin.

Beta-carotene: carrots, sweet potatoes, pumpkin, butternut squash, cantaloupe, mangos, apricots, peaches

Bioflavonoids: oranges, grapefruit, lemons, tangerines, clementines, peaches, papaya, apricots, nectarines, pineapple, yellow raisins, yellow pepper

BLUES AND PURPLES

Blues and purples not only add beautiful shades of tranquility and richness to your plate, they add health-enhancing flavonoids and antioxidants, such as anthocyanins, vitamin C, folic acid and polyphenols. These nutrients help your body defend against cancer, reduce the risk of age-related memory loss, help control high blood pressure and reduce the risk of diabetes complications and heart attacks.

Anthocyanins: blueberries, blackberries, purple grapes, black currants, elderberries

Phenolics: dried plums (prunes), raisins, plums, eggplant

WHITE

White fruits and veggies vary from sweet to strong. Veggies from the onion family, which include garlic, chives, scallions, leeks and any variety of onion, contain the phytonutrient allicin. Research is being conducted on allicin to learn how it may help lower cholesterol and blood pressure and increase the body's ability to fight infections and cancer. Indoles and sulfaforaphanes in cruciferous veggies like cauliflower may also inhibit cancer growth.

Allicin: garlic, onions, leeks, scallions, chives, cauliflower, shallots

Phytonutrients: bananas, pears, cauliflower, jicama, mushrooms, parsnips, potatoes, turnips

Vary Your Veggies



Focus on Fruits and Vary Your Veggies



12 Delicious, Easy Ways to Enjoy Veggies

From a health standpoint, veggies are a five-star food group: naturally nutrient-rich; better tasting than a vitamin pill; low in calories and fat; cholesterol-free and packed with disease-fighting phytonutrients. Here are a dozen daily ways to treat yourself to good health!

1. **Broccoli and cauliflower:** Versatile and very healthful – eat them raw (with dip if you like) or cooked, in a salad or even a slaw.
2. **Carrots:** Sweet, crunchy, good for your teeth, eyes and heart! Perfect raw (as a snack or salad) or cooked in a stew.
3. **Peppers:** Green, red, yellow, orange or even purple! Enjoy peppers in a salad, stir-fry, casserole or as a snack.
4. **Spinach:** A salad of baby spinach leaves with pears or apples can turn anyone into a real spinach lover.
5. **Onions:** The zesty onion family (scallions, leeks and garlic, too!) offer some powerful antioxidant nutrients.
6. **Peas:** Fresh, frozen or even canned, peas are a treat to eat and they are very popular with small children.
7. **Beets:** If you've never liked beets, try them in a new way – like roasted, grilled or lightly steamed in the microwave.
8. **Sweet potatoes and yams:** Switch the color of your usual baked potato and you'll get a lot more nutrients, along with great taste.
9. **Mushrooms:** Just a mushroom or two adds rich flavor to a casserole, soup, stew, stir-fry or even a tossed green salad.
10. **Leaf and romaine lettuce:** Rule of thumb for a healthy salad – the darker the green or the red of the lettuce leaves, the more nutrients you get.
11. **Green, yellow or purple beans:** Like their pea 'cousins', beans offer some fiber and a little bit of protein, along with vitamins and minerals.
12. **Tomatoes:** Cooking increases the availability of some tomato nutrients – so enjoy canned sauce, paste and chunks.

National Nutrition Month® - March 2005; Adapted by the NC NET Program from Eat Right Montana materials

Focus on Fruits



Focus on Fruits and Vary Your Veggies



12 Delicious, Easy Ways to Enjoy Fruit

Fruit is a double-sweet treat. It's a delicious treat for your taste buds and a nutrition treat for your whole body. Below are a dozen easy ways to treat yourself to good health and great taste!

1. **Berries, berries, berries:** Canned blueberries in muffins, dried cranberries in a salad, or fresh, juicy strawberries for dessert.
2. **Citrus fruit:** Oranges, pink and white grapefruit, tangerines, tangelos, clementines, lemons and limes.
3. **Melons and more melons:** Slices of watermelon, cantaloupe, honeydew or Crenshaw – in a fruit cup or for a sweet snack.
4. **Bananas:** Bananas, nature's fast food, come in their own wrapper – convenient to take in the car or eat at your desk.
5. **Kiwifruit:** Slice kiwifruit into a mixed fruit or fresh spinach salad or just scoop them out of their thin, brown peel.
6. **Pineapple:** One of the most versatile fruits, pineapple is perfect fresh, canned, dried, as juice or on a pizza!
7. **Tropical fruit:** Fresh produce departments and canned food aisles now serve up mangos, papaya and star fruit.
8. **Apples and pears:** A fresh, crisp snack, a juicy addition to green salad, and in a tasty pie, tart or cobbler for dessert.
9. **Summer tree fruit:** Nectarines, peaches and apricots are fabulous when fresh and still quite tasty when canned in their own juice.
10. **Plums and prunes:** Fresh plums are another juicy taste of summer. Dried or made into juice, prunes are very nice for regularity!
11. **Cherries and grapes:** Fresh or dried, cherries and grapes make a great snack or addition to salads (mixed fruit or tossed green).
12. **Trendy tomatoes:** Tomatoes are a fruit and now they come in sweet, fruit-shaped cherry, grape and strawberry varieties.



Making Sense of Fruit and Veggie Nutrients

Like most all foods, fruits and veggies are made up of a mixture of many different nutrients. These nutrients include water, carbohydrate, protein, fat, fiber, vitamins and minerals. Below you will find information about each of these nutrients found in fruits and veggies.

Water

Fruits and veggies are made up of a great deal of water. Juicy fruits and veggies typically contain more than 90% water, which can contribute to total daily fluid intake.

Water is the most abundant substance in the human body as well as the most common substance on earth. Like oxygen, you cannot live without water. On average, body weight is 50 to 75% water or about 10-12 gallons. Water is a simple substance containing two parts hydrogen and one part oxygen (H₂O). It has no calories, but every body process needs water to function.

Water regulates your body temperature, keeping it constant at about 98.6 F. Many body processes produce heat, including any physical activity. Through perspiration, heat escapes from your body as water evaporates on your skin.

- Water transports nutrients and oxygen to your cells and carries waste products away.
- Water helps with the digestion of foods.
- Water moistens body tissues such as those in your mouth, eyes and nose.
- Water is the main part of every body fluid including blood, stomach juices and urine.
- Water helps cushion your joints and protects your body's organs and tissues.

Of all the nutrients in the body, water is the most abundant. Water and other beverages are the main sources. But you also eat quite a bit of water in solid foods. Juicy fruits and veggies such as celery, lettuce, tomatoes and watermelon contain more than 90% water. Even dry foods such as bread supply some water.

The average adult loses about two quarts of water daily through perspiration, urination, bowel movements and even breathing. One and one-half cups of water is lost just through breathing. **Most people need 8 to 12 cups of water daily from drinking water and other beverages.**

When we are really active outside in the hot weather we need to be especially careful to avoid dehydration. No matter what you do - biking, running, swimming, walking or just playing outside - make sure you get enough fluids.

- Drink plenty of fluids before, during and after activity. Carry a water bottle especially if you do not have a water source available.
- Drink fluids by schedule (every fifteen minutes) even when you do not feel thirsty.
- Wear light colored clothing.
- Be especially careful if you exercise in warm, humid weather.
- Signs of dehydration are flushed skin, fatigue, increased body temperature and increased breathing and pulse rate.

Carbohydrates

When comparing energy-yielding nutrients, fruits and veggies are made up of predominantly carbohydrates. From the simple sugar of fruits to the starch of roots and legumes, fruits and veggies are one of the best sources of this nutrient.

Carbohydrates are organic molecules constructed in the ratio (CH₂O) in a variety of lengths and shapes. Carbohydrates are the body's preferred source of energy; the other potential energy sources being proteins and fats. Carbohydrates are broken down in the body into sugars, starches and fiber. The sugars are known as simple carbohydrates, and the starches and fiber are known as complex carbohydrates.

Function

Carbohydrates perform three important functions in the body:

- Supply energy
- Supply fiber
- Aid in the digestion of fats

| Monosaccharides | Disaccharides | Polysaccharides |
|---|--|---|
| <p><i>Monosaccharides</i> are the simplest form of carbohydrates. The monosaccharides are glucose, galactose, and fructose. Sugars and starches are broken down in the body into the simple sugar glucose. Glucose is the major sugar found in the bloodstream and supplies energy for the body. Some body tissues, such as red blood cells and parts of the brain, are able to get energy only from glucose. Fructose is found in honey and fruits and is known as the sweetest of the sugars. Galactose is not found in nature, but it is one of the two monosaccharides available after the breakdown of lactose (milk sugar).</p> | <p><i>Disaccharides</i> are formed when two monosaccharides are joined together. They are broken down into their monosaccharide components during digestion. The disaccharides are sucrose, maltose, and lactose. Sucrose (glucose + fructose) is found in white, refined table sugar, brown sugar, confectioner's sugar, cane sugar, beet sugar, molasses, and maple syrup. Maltose (glucose + glucose) is malt sugar which is found in sprouting cereal grains. Lactose (glucose + galactose) is milk sugar and is found only in milk.</p> | <p><i>Polysaccharides</i> are the complex carbohydrates often consisting of very long chains of glucose monomers. They include starch, cellulose and glycogen. Starch is the most abundant polysaccharide and is an important storage form of energy in plants. Starch can be found in roots (such as potatoes), legumes, grains, and veggies, but must be broken down into glucose by the body before it can be utilized. Cellulose is the fibrous material found in plants, such as the strings in celery, and is commonly referred to as fiber or roughage. Cellulose cannot be digested by humans. Sources of cellulose include veggies, fruits, and whole grain cereals. Glycogen, also known as animal starch, is the storage form of carbohydrates found in the liver and muscles. Glycogen in the liver is easily broken down into blood glucose, and muscle glycogen supplies glucose for muscle use. This is especially important during periods of intense exercise.</p> |

Forty-five to sixty-five percent of calories should come from complex carbohydrates. Preferred carbohydrate sources include veggies, fruits, grains and grain products, legumes, and dairy products. Current recommendations suggest half of all grain and grain products consumed should be whole grains.

Protein

While most fruits and veggies are not rich sources of protein, legumes are a great source.

Without protein, the human body would not be able to survive. Protein performs four very important functions.

Function

The body uses protein for:

- Growth and repair of new and damaged tissues. Skin, muscles, hair, finger nails, and blood clots are all made of protein.
- Regulating all body functions through the actions of enzymes, hormones, and other functional molecules.
- Transporting other nutrients and oxygen throughout the body.
- Supplying energy when adequate amounts are not supplied by carbohydrates and fat.
Providing immune system defenses; antibodies are made of proteins.

Protein is an organic macromolecule comprised of compounds called amino acids. Amino acids are often referred to as the building blocks of protein. They consist of an amino group (H₂N-), a carboxyl group (-COOH), a hydrogen (-H), and what is called a “side group” (usually denoted chemically as “R”) attached to a central carbon atom. There are 22 different amino acids; they differ by the type of “R” group attached.

Thirteen of the 22 amino acids can be manufactured by the body. The remaining nine amino acids – often called essential amino acids – must be supplied by the diet. People in developing countries may suffer from diet-related diseases and other health problems because of the shortage of protein foods.

Protein foods that supply all nine of the essential amino acids are called complete proteins. Foods that supply only some of the nine essential amino acids are called incomplete proteins. Two incomplete protein foods can be eaten together to form a complete protein source. Most generally, animal proteins are complete protein sources and plant proteins are incomplete protein sources. However, animal proteins also provide more fat and calories than plant proteins. It is a wise dietary practice to consume combinations of plant proteins to fulfill some of the body’s need for complete proteins. Some examples of combining incomplete proteins to form complete proteins are:

- Legumes (dried beans, lentils, split peas) and rice
- Pinto beans and corn tortillas
- Peanut butter sandwich (peanuts are a legume).

The amino acids are joined together by peptide bonds to form polypeptides. A protein consists of one or more of the polypeptide chains. Enzymes are globular proteins that catalyze chemical reactions within the body. For enzymes and all proteins, shape determines function – and the shape is determined by the sequence of the different amino acids.

Denaturation is the disruption of the bonds and the three-dimensional shape of a protein. This is often accomplished by changes in pH or temperature. To see denaturation in process, cook an egg white. The visible differences (moving from translucent to opaque, from watery to rubbery) are due to protein denaturation caused by heat.

It is recommended for adults that 10-35% of calories come from protein; for teenagers and children over the age of four, it is recommended that 10-30% of calories come from protein. Additional protein is needed by women during times of pregnancy and lactation. People should consult the Dietary Reference Intake charts for their gender and age group for specific protein requirements.

Fats

Fruits and veggies tend to be very low in fat and have no cholesterol. Exceptions to the low-fat feature of fruits and veggies include avocados and peanuts, for example. Of significance, the type of fat found in these foods is heart healthy and can be part of a healthy diet if eaten in moderation.

Fats are semisolid, energy-filled organic macromolecules found in animal and plant tissues. The term lipid is often used interchangeably with the term fat, but it is also used to describe a larger group that includes fats (solids, semisolids at room temperature), oils (liquids at room temperature), and fat-related substances. The major form of fat in the body and in foods is known as triglycerol or triglyceride. Triglycerides are organic compounds containing a glycerol backbone and three attached fatty acid chains. Other forms of fat in the body include sterols, a class of fats consisting of fused carbon rings without fatty acid chains, and phospholipids (such as lecithin). Steroids include cholesterol, Vitamin D, and sex hormones (estrogen and testosterone).

Functions of fat in the body include:

- provide energy
- transport and absorb fat-soluble vitamins
- cushion vital organs in the body
- important part of the membranes of cells
- supply essential fatty acids
- add flavor to foods
- satisfy the appetite by delaying hunger
- insulate the body
- serve as protection for nerves and blood vessels

Fatty acid chains are classified as saturated, monounsaturated, or polyunsaturated depending on the number of double bonds they possess. Every time a double bond is formed, one of the hydrogen molecules is removed and a tiny bend or kink forms in the chain. The more saturated the fat, the fewer kinks it has, the more closely the molecules can pack, and the more solid it is at room temperature.

- **Saturated fats** have no double bonds and the most hydrogen. Saturated fats are found in animal meats, butter, chocolate, egg yolks, lard, coconut and palm oil (the only saturated oils), and many other foods. The Dietary Guidelines for Americans suggest that 10% or fewer of calories should come from saturated fat.
- **Monounsaturated fats** have one double bond and less hydrogen than saturated fats. Example sources include canola, olive, and sunflower oils, and nuts.
- **Polyunsaturated fats** have multiple double bonds and even less hydrogen than monounsaturated fats. Polyunsaturated fats can be found in soybean, corn, and safflower oil, walnuts, and flaxseeds.

Trans fats are a special category of fats. Trans fats occur naturally in small amounts in meat and dairy foods, but the majority of trans fats in the American diet come from hydrogenation. When liquid oils are hydrogenated, treated with hydrogen to become semi-solid or solid fats, trans fats can be created. Trans fats are most commonly found in veggie shortening, hard (stick) margarine, and manufactured foods such as crackers, cookies and baked goods. Consumption of trans fats should be limited, as they have been linked to an increased risk in coronary heart disease.

Children ages 4 to 18 years should receive between 25 and 35% of their calories from fat; adults should receive between 20 and 35% of their calories from fat.

Fiber

Fruits and veggies are rich sources of fiber. Eating whole fruits and veggies offers more fiber than drinking fruits and veggies in the form of juice. Furthermore, fresh fruits and veggies tend to provide more fiber than canned versions.

Dietary fiber is a type of carbohydrate consisting of the parts of a plant that cannot be digested. There are two categories of fiber: soluble and insoluble. Soluble fiber is dissolved in water and may help control diabetes and lower blood pressure in some people. Soluble fiber is found in some fruits, beans, and oat bran. Insoluble fiber is not able to be dissolved in water and therefore has different functions from soluble fiber. Insoluble fiber helps move food through the digestive tract. It aids in the prevention of colon and rectal cancer, helps to control diverticulosis, and helps prevent constipation. Diverticulosis is caused when bulging pockets form on the intestinal wall and can become inflamed. Sources of insoluble fiber are fruits, veggies, wheat bran, whole wheat, and some beans.

Function

Fiber has a number of functions in the digestive system:

- Because fiber cannot be absorbed, it essentially contributes no calories to the diet. It can give a feeling of fullness in the stomach, without adding extra calories.
- Fiber slows the emptying of food from the small intestine. Because sugars in the food are not moving through your digestive system so quickly, fiber has a positive effect on blood glucose levels.
- Fiber can interfere with the absorption of fats and cholesterol. By sweeping the fats out of the body, fiber can help lower blood cholesterol levels.

Many types of beans (black, navy, kidney, pinto, lima, etc.) are very high in fiber. Bran and shredded wheat cereals are also good fiber sources. Many fruits and veggies, including sweet and plain potatoes, pears, peas, berries (raspberries, blackberries), pumpkin, spinach, apples, bananas, oranges, and broccoli, are good sources of fiber. Additionally, some foods you might not expect – such as almonds, soybeans, and tomato paste – also provide fiber to the diet.

Vitamins

Fruits and veggies are rich sources of vitamins, especially vitamin A, vitamin C and folate.

Vitamins are organic compounds necessary for normal growth, maintenance of health and reproduction. There are 13 vitamins currently identified as essential for maintaining good health; the body cannot survive without them.

Function

Vitamins help the body convert carbohydrates and fat into energy and assist in the formation of bones and tissues. Vitamins are either fat-soluble or water-soluble. Fat-soluble vitamins cannot be dissolved in water, so they are stored in the body fat until they are transported to the cells by the blood.

Because these vitamins can accumulate in the body, it is especially important for a person's regular daily nutrient intake of fat soluble vitamins not to exceed the Tolerable Upper Intake Levels (UL).

Water-soluble vitamins are easily dissolved by water and therefore are not significantly stored by the body. Water-soluble vitamins must be replenished frequently.

| Fat-Soluble Vitamin Alternative Names | Description | Sources |
|---|---|---|
| Vitamin A Retinol Beta-carotene (a precursor) | Responsible for night and color vision, growth of bones and teeth, immune function, maintenance of epithelial tissues, and embryonic development. Excessive amounts of certain forms of Vitamin A (found in some skin medications) can cause fetal abnormalities. | Dark green and dark yellow veggies, yellow fruits, egg yolks, whole milk, liver, and fish oils. |
| Vitamin D Calciferol | Important for the normal growth and development of bones and teeth. Aids in the absorption and utilization of calcium and phosphorus. With exposure to the sun, the body is able to make its own Vitamin D. | Egg yolks, liver, fish liver oils, fortified cereals, and fortified milk. |

Vitamin E
Tocopherol

Protects cells from oxidation and is important in cell membranes. Oxidation is a chemical change that occurs as a result of exposure to oxygen. When blood cells or tissue cells are exposed to oxygen, the resulting chemical change causes a weakening of the cell walls and thus damages the tissues. Vitamin E is most effective in protecting the red blood cells in the lungs and the cells of the lung tissue because of their continuous exposure to oxygen.

Veggie oils, whole grains, nuts and seeds, liver, fish oils, and green leafy veggies (spinach, kale, etc.).

Vitamin K

Necessary for protein synthesis involved in blood clotting and other body processes.

Green veggies (leafy veggies, broccoli, Brussels sprouts), cabbage, plant oils, margarine. Can be produced by bacteria in the gastrointestinal tract.

| Water-Soluble Vitamin Alternative Names | Description | Sources |
|--|---|---|
| <p>B1 Thiamin Aneurin</p> | <p>Helps the body breakdown carbohydrates and release energy from food. It is necessary for cell respiration, promotion of normal appetite and digestion, and maintenance of a healthy nervous system. Thiamin is heat sensitive and is easily leached into the cooking liquid.</p> | <p>Enriched or fortified whole grain products, green leafy veggies, legumes, and pork.</p> |
| <p>B2 Riboflavin</p> | <p>Important for the breakdown of foods and the release of energy (oxidation-reduction reactions). Riboflavin is easily destroyed by exposure to light, especially sunlight.</p> | <p>Fortified cereals and bread products, eggs, fish, organ meats, and milk.</p> |
| <p>B3 Niacin Nicotinic acid</p> | <p>Helps cells convert food into energy, and is important in the nervous and digestive systems.</p> | <p>Lean meats, poultry, fish, nuts, enriched or fortified bread products and cereals, eggs, and dairy products.</p> |

Folate
Folic acid
Folacin

Necessary for the body to produce normal red blood cells and for amino acids and nucleic acid metabolism. Key in preventing neural tube defects, such as spina bifida, during pregnancy.

Dark leafy green veggies, enriched grain and cereal products, yeast.

Biotin

Essential in the metabolism of fats and amino acids.

Liver and eggs are important sources of biotin; it is also found in baker's yeast, and legumes.

B5
Pantothenic acid

Aids in the metabolism of fats and the formation of cholesterol and hormones.

Eggs, milk, whole-grain products, sweet potatoes, and lean beef.

B6
Pyridoxine

Important in maintaining nervous tissue function and muscle cells, DNA and RNA production, and the metabolism of carbohydrates, proteins, and fats.

Sources include poultry, fish, fortified whole grain cereals, and lentils.

B12
Cobalamin
Cyanocobalamin

Important in red blood cell formation, nucleic acid metabolism and the prevention of pernicious anemia.

Animal products (meat, fish, poultry, milk), fortified cereals.

Vitamin C
Ascorbic acid

Aids in the formation of collagen, the healing of wounds, and the absorption of iron and calcium. Vitamin C is also an important antioxidant.

Sources include citrus fruits, parsley, broccoli, green and red peppers, and tomatoes.

Research continues into the role vitamins and minerals play in preventing chronic disease and in maintaining health and wellness. The **Dietary Reference Intakes** serve as guidelines for determining the amounts of nutrients that a person needs each day.

Minerals

Fruits and veggies are sources of several essential minerals, notably potassium, calcium, iron and magnesium.

Minerals are inorganic substances necessary for building bones, tissues, and other compounds as well as for regulating body processes. Minerals found in large amounts in the body or those with high daily intake requirements (at least 100 milligrams per day) are called macrominerals. Macrominerals include calcium, phosphorus, magnesium, sodium, potassium, and chloride.

Function

Minerals perform a number of functions in the body:

- Calcium is used to make the bones and teeth
- Iron is used to make the hemoglobin in red blood cells
- Minerals become part of tissue structure, like in bone and teeth
- Minerals help maintain acid-base balance, to keep the body pH neutral
- Minerals help regulate body processes, such as in enzyme systems
- Minerals function in nerve impulse transmission and muscle contraction
- Minerals help release energy from food

| Macromineral | Function | Sources |
|-----------------------------|--|--|
| Calcium | Needed for bone rigidity, blood clotting, muscle contraction, normal nerve function; Just because an individual eats food containing calcium does not mean that the body absorbs the calcium. Factors that increase calcium absorption include: an overall balanced diet; intake of vitamins C and D; intake of certain amino acids Factors that decrease calcium absorption include: vitamin D deficiency; fat malabsorption; eating large amounts of fiber; lack of exercise; stress; lactose deficiency or lactose intolerance | Milk and dairy products, soft-boned fish, calcium-fortified orange juice, leafy dark green veggies, and broccoli. |
| Phosphorus | Helps build strong bones and teeth, important in cell membranes, a significant factor in energy production and storage, and in maintaining pH levels in the body | Dairy products, meat, eggs, fish, lentils, almonds |
| Magnesium | Metabolism of carbohydrates and fats; synthesis of DNA, RNA, enzymes; structure of bone, cell membranes; movement of potassium and calcium | Green leafy veggies, nuts, whole grains, meat, fish, dairy products |
| Sodium, Chloride, Potassium | These three work together to regulate: the flow of fluids in the body, help regulate nervous system, regulate muscle function (including the heart), regulate nutrient absorption in the cells | Sodium and chloride are found together in table salt, and in foods with added salt (processed meats, butter, etc.). Potassium is found in meat, milk, bananas, leafy green veggies, citrus fruits. |

Minerals found in small amounts in the body are called trace elements or microminerals. Trace elements that appear to be needed by the body include: arsenic, boron, chromium, copper, fluoride,

iodine, iron, manganese, molybdenum, nickel, selenium, silicon, vanadium, and zinc. We know they are needed because of the results of animal studies; when the elements are completely removed from the diets of laboratory animals, the animals begin to show ill effects. However, some of these elements are needed in such small amounts that scientists are still trying to determine their exact functions within the body. Please see below for more information about some of the best researched microminerals.

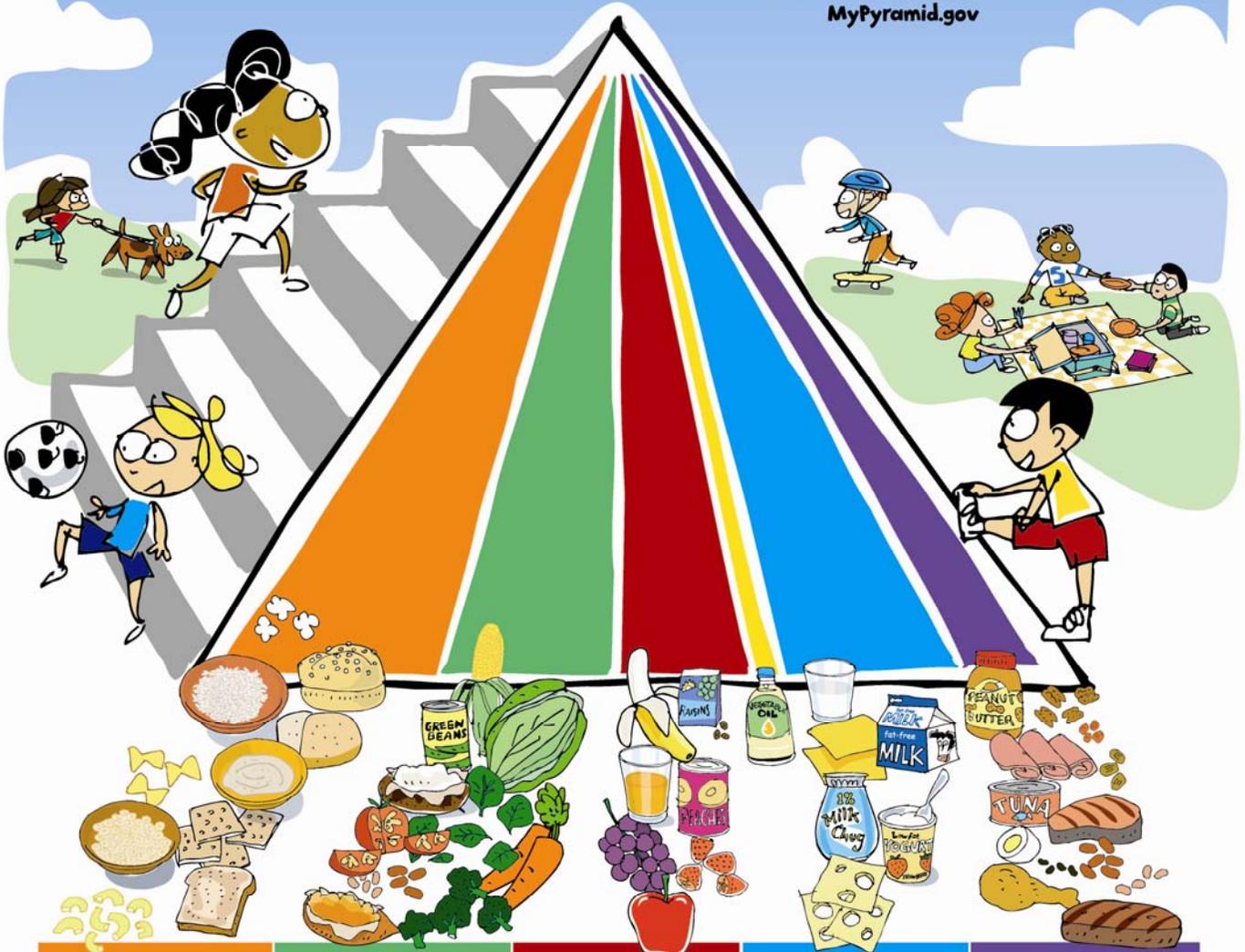
| Micromineral | Function | Sources |
|--------------|--|---|
| Chromium | Maintains normal glucose uptake into cells; helps insulin bind to cells | Meat, poultry, fish, some cereals |
| Copper | Necessary for the formation of hemoglobin and melanin. | Organ meats, seafood, bran products, cocoa products, nuts. |
| Fluoride | Prevents dental caries (decay); stimulates bone formation | Fluoridated drinking water, dental products; tea, marine fish |
| Iodine | Required by the thyroid gland for hormone creation | Iodized salt; marine fish, seaweed |
| Iron | Component of hemoglobin (oxygen-carrying protein in the blood) and cytochrome. | Meat, poultry, eggs (heme sources; more readily absorbed); leafy green veggies, fortified bread and grain products, dried fruit (non-heme). |
| Manganese | Involved in bone formation, metabolism of carbohydrates, protein | Nuts, legumes, whole grains, tea |
| Molybdenum | Helps enzymes break down amino acids | Legumes, grain products, nuts |
| Selenium | Defends against oxidation; regulates thyroid hormones | Seafood, organ meats, grains and plants grown in selenium-rich soil |
| Zinc | Involved in protein and DNA synthesis; metabolism; part of many enzymes | Fortified cereal, red meat, oysters, herring |

MyPyramid

For Kids

Eat Right. Exercise. Have Fun.

MyPyramid.gov



Grains
Make half your grains whole

Start smart with breakfast. Look for whole-grain cereals.

Just because bread doesn't mean it's whole-grain. Search the ingredients list to make sure the first word is "whole" (like "whole wheat").

Vegetables
Vary your veggies

Color your plate with all kinds of great-tasting veggies.

What's green and orange and tastes good? Veggies! Go dark green with broccoli and spinach, or try orange ones like carrots and sweet potatoes.

Fruits
Focus on fruits

Fruits are nature's treats – sweet and delicious.

Go easy on juice and make sure it's 100%.

Milk
Get your calcium-rich foods

Move to the milk group to get your calcium. Calcium builds strong bones.

Look at the carton or container to make sure your milk, yogurt, or cheese is lowfat or fat-free.

Meat & Beans
Go lean with protein

Eat lean or lowfat meat, chicken, turkey, and fish. Ask for it baked, broiled, or grilled – not fried.

It's nutty, but true. Nuts, seeds, peas, and beans are all great sources of protein, too.

For an 1,800-calorie diet, you need the amounts below from each food group. To find the amounts that are right for you, go to MyPyramid.gov.

Eat 6 oz. every day;
at least half should be whole

Eat 2 1/2 cups every day

Eat 1 1/2 cups every day

Get 3 cups every day;
for kids ages 2 to 8, it's 2 cups

Eat 5 oz. every day

Oils Oils are not a food group, but you need some for good health. Get your oils from fish, nuts, and liquid oils such as corn oil, soybean oil, and canola oil.

Find your balance between food and fun

- Move more. Aim for at least 60 minutes everyday, or most days.
- Walk, dance, bike, rollerblade – it all counts. How great is that!

Fats and sugars – know your limits

- Get your fat facts and sugar smarts from the Nutrition Facts label.
- Limit solid fats as well as foods that contain them.
- Choose food and beverages low in added sugars and other caloric sweeteners.



USDA is an equal opportunity provider and employer.

Anatomy of MyPyramid

One size doesn't fit all

USDA's new MyPyramid symbolizes a personalized approach to healthy eating and physical activity. The symbol has been designed to be simple. It has been developed to remind consumers to make healthy food choices and to be active every day. The different parts of the symbol are described below.

Activity

Activity is represented by the steps and the person climbing them, as a reminder of the importance of daily physical activity.

Moderation

Moderation is represented by the narrowing of each food group from bottom to top. The wider base stands for foods with little or no solid fats or added sugars. These should be selected more often. The narrower top area stands for foods containing more added sugars and solid fats. The more active you are, the more of these foods can fit into your diet.

Personalization

Personalization is shown by the person on the steps, the slogan, and the URL. Find the kinds and amounts of food to eat each day at MyPyramid.gov.

Proportionality

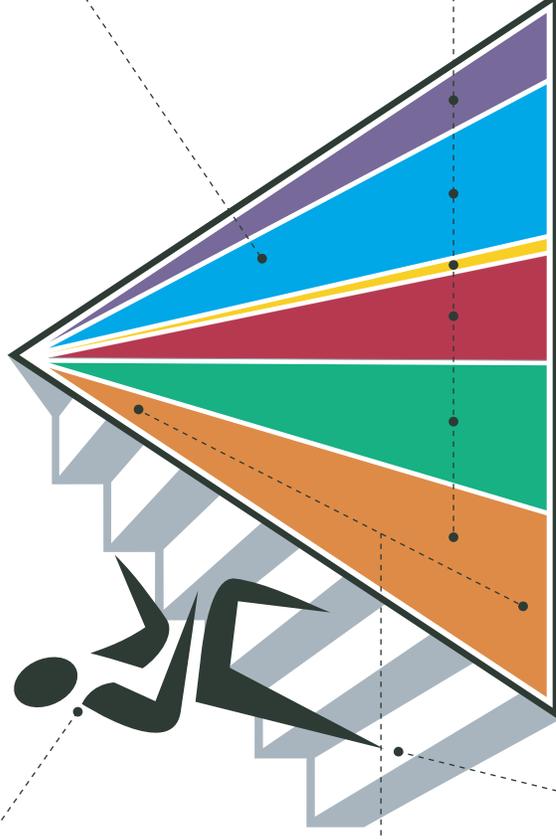
Proportionality is shown by the different widths of the food group bands. The widths suggest how much food a person should choose from each group. The widths are just a general guide, not exact proportions. Check the Web site for how much is right for you.

Variety

Variety is symbolized by the 6 color bands representing the 5 food groups of the Pyramid and oils. This illustrates that foods from all groups are needed each day for good health.

Gradual Improvement

Gradual improvement is encouraged by the slogan. It suggests that individuals can benefit from taking small steps to improve their diet and lifestyle each day.



MyPyramid.gov
STEPS TO A HEALTHIER YOU



U.S. Department of Agriculture
Center for Nutrition Policy
and Promotion
April 2005 CNPP-16

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GRAINS

VEGETABLES

FRUITS

OILS

MILK

MEAT &
BEANS

Teaching MyPyramid

MyPyramid is one way for people to understand how to eat healthfully. A rainbow of colored, vertical stripes represents the five food groups plus fats and oils. Here's what the colors stand for:

- orange - grains
- green - vegetables
- red - fruits
- yellow - fats and oils
- blue - milk and dairy products
- purple - meat, beans, fish, and nuts

The U.S. Department of Agriculture (USDA) changed the pyramid in spring 2005 because they wanted to do a better job of telling Americans how to be healthy. The agency later released a special version for kids. Notice the girl climbing the staircase up the side of the pyramid? That's a way of showing kids how important it is to exercise and be active every day. In other words, play a lot! The steps are also a way of saying that you can make changes little by little to be healthier – one step at a time.

The Pyramid Speaks

Let's look at some of the other messages this new symbol is trying to send:

Eat a variety of foods. A balanced diet is one that includes all the food groups. In other words, have foods from every color, every day.

Eat less of some foods and more of others. You can see that the bands for meat and protein (purple) and oils (yellow) are skinnier than the others. That's because you need less of those kinds of foods than you do of fruits, vegetables, grains and dairy foods.

You also can see the bands start out wider and get thinner as they approach the top. That's designed to show you that not all foods are created equal, even within a healthy food group like fruit. For instance, apple pie might be in that thin part of the fruit band because it has a lot of added sugar and fat. A whole apple would be down in the wide part because you can eat more of those within a healthy diet.

Make it your own. Through the USDA's MyPyramid website (www.mypyramid.gov), people can get personalized recommendations about the mix of foods they need to eat and how much they should be eating. There is a kids' version of the website (www.mypyramid.gov/kids) available too.

How Much Do I Need to Eat?

Everyone wants to know how much they should eat to stay healthy. It's a tricky question, though. It depends on your age, whether you're a girl or a boy, and how active you are. Kids who are more active burn more calories, so they need more calories. But we can give you some ideas for how much you need of each food group.

Grains

Bread, cereal, rice, pasta, oatmeal, pancakes and tortillas are some foods in the grain group. Foods in the grains group give our bodies and our brains energy we need to move and think. Grain servings are measured in ounce equivalents. Ounce equivalents are just another way of showing a serving size. Here are ounce equivalents for common grain foods. An ounce equivalent equals:

- 1 piece of bread
- ½ cup of cooked cereal, like oatmeal
- ½ cup of rice or pasta
- 1 cup of cold cereal

This is how many grain ounce equivalents kids need each day:

- 4- to 8-year-olds need 4-5 ounce equivalents each day
- 9- to 13-year-old girls need 5 ounce equivalents each day
- 9- to 13-year-old boys need 6 ounce equivalents each day

And one last thing about grains: try to eat a lot of whole grains, such as 100% wheat bread, brown rice and oatmeal.

Vegetables

Of course, you need your vegetables, especially those dark green and orange ones. Vegetables are all different colors and provide us with lots of vitamins, minerals and fiber. Our bodies use these vitamins, minerals and fiber to keep us healthy and give us energy. They also can help protect us from getting sick. It's important to eat vegetables of all different colors so we can get as much of the good stuff as possible. But how much is enough? Vegetable servings are measured in cups. This is how many vegetables kids need each day:

- 4- to 8-year-olds need 1½ cups of veggies each day
- 9- to 13-year-old girls need 2 cups of veggies each day
- 9- to 13-year-old boys need 2½ cups of veggies each day

Fruits

Sweet, juicy fruit is definitely part of a healthy diet. Just like vegetables, fruits are all different colors and provide us with lots of vitamins, minerals and fiber. Our bodies use these vitamins, minerals and fiber to keep us healthy and give us energy. They also can help protect us from getting sick. It's important to eat fruits of all different colors so we can get as much of the good stuff as possible. But how much is enough? Fruit servings are measured in cups. This is how many fruits kids need each day:

- 4- to 8-year-olds need 1-1½ cups of fruit each day
- 9- to 13-year-old girls need 1½ cups of fruit each day
- 9- to 13-year-old boys need 1½ cups of fruit each day

Milk and Other Calcium-Rich Foods

Milk, smoothies, yogurt, cheese, milkshakes, ice cream and cottage cheese are some of the foods in this group. Dairy products give us calcium and protein and help make our teeth and bones strong. Dairy products are measured in cups. This is how much dairy kids need each day:

- 4- to 8-year-olds need 1-2 cups of milk (or another calcium-rich food) each day
- 9- to 13-year-old girls need 3 cups of milk (or another calcium-rich food) each day
- 9- to 13-year-old boys need 3 cups of milk (or another calcium-rich food) each day

If you want something other than milk, you can substitute yogurt, cheese, or calcium-fortified orange juice - just to name a few.

Meats, Beans, Fish, and Nuts

These foods contain protein, iron and lots of other important nutrients. Meats like beef and pork are in this group. Fish, chicken, eggs, beans, nuts and seeds are also in this group. Dried peas and beans are included in the meat group because they are a source of protein. Like grains, these foods are measured in ounce equivalents. An ounce equivalent of this group would be:

- 1 ounce of meat, poultry, or fish
- ¼ cup cooked dry beans
- 1 egg
- 1 tablespoon of peanut butter
- a small handful of nuts or seeds

This is how many meat ounce equivalents kids need each day:

- 4- to 8-year-olds need 3-4 ounce equivalents each day
- 9- to 13-year-old girls need 5 ounce equivalents each day
- 9- to 13-year-old boys need 5 ounce equivalents each day

Oils

Oils are not a food group, but you need some for good health. It is best to get your oils from fish, nuts and liquid oils such as corn oil, soybean oil and canola oil.

Find Your Balance between Food and Fun

Move more. The person climbing the stairs reminds you to do something active every day. You can run, walk the dog, play, swim, ride your bike, dance, rollerblade or even climb the stairs. It all counts! Kids should aim for at least 60 minutes every day.

Home Sweet Home, Sweet Potato

The sweet potato has great historical significance in the United States and in North Carolina. Below are some of the historical highlights of this veggie that was once a staple in the U.S.

Sweet Potato Historical Facts:

- Native Americans were growing sweet potatoes in Louisiana and the Carolina area of North America before European colonization.
- In colonial times, sweet potatoes were traded and shipped to northern cities.
- During the Revolutionary and Civil Wars, sweet potatoes were a staple food. They even were used to replace coffee during shortages in the South. The potato was cut into pieces, dried, ground and brewed.
- Most large plantations had a sweet potato “lot”. These fenced-in lots enclosed several hills of sweet potatoes heaped and covered with straw or soil to protect them from the cold and frost of winter. These were called “tater hills”. Today, storage houses protect the potatoes.
- Sweet potato patches were commonly seen on most all farms in North Carolina from colonial times until World War II. Today, sweet potatoes are grown in fields rather than patches.
- Among veggie crops in the U.S., the sweet potato ranked second only to the Irish potato in the early part of this century.
- Why aren’t sweet potatoes as popular today? It may be because the sweet potato was associated with hard times. As North Carolinians gained wealth, the sweet potato lost favor.
- The per capita consumption of sweet potatoes in the U.S. was 31 pounds in 1920; in recent years it dipped below 4 pounds per capita.
- Today more than 40 percent of the country’s supply of sweet potatoes comes from North Carolina.
- Sweet potatoes are a Thanksgiving favorite. For recipes, go to www.ncsweetpotatoes.com.
- The sweet potato is the official vegetable of North Carolina. In 1993, Representative Gene Arnold visited Mrs. Celia Batchelor’s fourth grade civics class at Elvie Street School in Wilson, NC. He inspired her students to become involved in their state government. These fourth grade students, along with their parents and teachers began a letter writing campaign to the State Legislature requesting that the sweet potato be named as the state vegetable. The entire community became involved in the campaign. After two years of letter writing and a lot of hard work, the bill passed in the general Assembly’s summer session of 1995. At last, the sweet potato was declared the official vegetable of the State of North Carolina.

Sweet Potato Nutritional Facts:

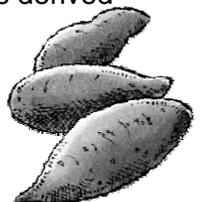
In the realm of fruits and veggies, the sweet potato is nutrient king. Even in colonial times, some doctors recognized that sweet potatoes had the ability to combat childhood nutritional diseases. Sweet potatoes are an excellent source of Vitamin A. In fact, one sweet potato can provide nearly 150 percent of an adult’s daily vitamin A needs! Additionally, sweet potatoes offer about one quarter of an adult’s daily vitamin C needs and are a rich source of fiber and minerals, such as potassium. With no fat, but plenty of complex carbohydrates, sweet potatoes are an excellent choice as an accompaniment to almost any meal.

Yam or Sweet Potato?

There is generally a lot of confusion surrounding the difference between yams and sweet potatoes. A true yam is a starchy root native to the Caribbean. “Yams” sold in the U.S. are actually a variety of sweet potato that tends to be vivid orange with a soft, moist consistency and very sweet taste when cooked. Several decades ago, use of the word “yam” for orange-fleshed sweet potatoes was derived from the African word for the true yam (“nyami”) to distinguish it from white-fleshed varieties.

Sources:

1. North Carolina Sweet Potato Commission at www.ncsweetpotatoes.com
2. USDA at www.usda.gov





Is It a Fruit or a Veggie?

What do you think of when you hear the words tomato or squash? Veggies, right? Surprisingly, they may or may not be depending upon who you ask. Below you will find in-depth information to help you identify fruits and veggies with confidence.

Dictionary Definitions

fruit: the fleshy product of a tree or other plant that contains a seed or seeds and can be eaten as food; the seed-bearing structure of a plant

vegetable: a plant or part of a plant used as food

The Culinary Perspective

Given the definitions above, why do we think of some seed-bearing structures of plants, such as tomatoes and squash, as veggies? This can be explained by how we typically use a fruit or veggie in cooking. For example, tomatoes and squash tend to be more savory than sweet, making them similar in this respect to true veggies. Conversely, the vegetable rhubarb is often considered a fruit from the culinary perspective because it is used in pies and other sweet desserts.

The Botanical Perspective

From the botanical perspective, whether a food is a fruit or a veggie is more clear-cut. Fruits develop from the ovary found in the base of a flower. And, as described above, they are the fleshy material that covers a seed or seeds. Veggies, on the other hand, are essentially all the other parts of an edible plant, including the stems, leaves and roots. Think cabbage leaves, celery stalks and potato tubers. Knowing these botanical facts, true fruits include several foods we think of as veggies, such as tomatoes, cucumbers, beans (green beans), peas, green peppers, corn, eggplant and squash.

Fruit and Veggie Twists

- The California legislature once passed a law declaring tomatoes a vegetable in order to impose a tariff on Mexican imports.
- Some cultivated forms of fruits may be seedless, like grapes and watermelons, for example.
- Some plants have a soft part which supports the seeds, though the “fruit” is not developed from the ovary. Strawberries are an example.
- Many “nuts” are actually fruits. Examples include almonds, coconuts, cashews and pistachios.

Sources:

1. Department of Horticulture Website at Cornell University at <http://www.hort.cornell.edu/extension/question.html#1>
2. Oxford Dictionaries at www.askoxford.com



Digging Up Fruits and Veggies

Most of us purchase fruits and veggies at the grocery store, but there are several alternative ways to obtain them. Whether it's from a personal garden or from a local farm, fruits and veggies acquired outside of grocery stores are sure to be in season. This means fresher and tastier produce! What's more, buying local produce benefits our communities by supporting a sustainable local economy for future generations. Read below to discover how to skip the grocery store and go just next door!

Farmers' markets

Selling fruits and veggies through farmers' markets is one of the oldest means of getting produce from the fields directly to the people. Typically, markets are set up at a park or parking lot where farmers, family members and hired helpers can sell farm fresh products.

Farm Stands

A farm stand is a place where one farm sells its produce. It may take the form of a roadside stand or even the back of a truck parked on the side of a central road within a community.

U-Picks

A U-Pick is a farm that opens its fields to the public during harvest time. Common crops offered at U-Picks are strawberries, apples and pumpkins.

Food Cooperatives (Co-ops)

Food co-ops offer local produce and the convenience of a regular grocery store. They are employee- or customer-owned entities that focus on high-quality, best-value products. Food coops may resemble retail stores or buying clubs. They are known for their commitment to consumer education and member control.

Community Supported Agriculture (CSA)

CSAs enable farmers to sell produce directly to people in their communities via weekly allotments of goods available usually from late spring through early fall. A relationship with a farm is begun after a community of supporters makes a financial commitment to that farm. This commitment secures CSA "membership". Some CSAs require members to work a small number of hours on the farm during the growing season, while others offer "working shares" whereby members can receive a discount on membership for working on the farm. CSAs are an innovative way to create an economically stable farm operation in which members are provided high-quality and, often, low-cost produce. Before joining a CSA, it is important to consider the abundance of produce that may be provided each week during the harvest time. Learning different cooking, storing and preserving techniques can be helpful to members.

Go to LocalHarvest.com to find farmers markets', farms, coops and CSAs in your area.

Sources:

1. LocalHarvest at www.localharvest.org
2. Project Green Leaf at http://greenleaf.uncg.edu/community_supported_agriculture.html#CSA_info_for_Consumers

Kindergarten

Kindergarten

Naming Fruits and Veggies

Math Objectives

- Identify, build, draw and name triangles, rectangles and circles; identify, build and name spheres and cubes.
- Sort and classify objects by one attribute.

English Language Arts Objectives

- Develop phonemic awareness and knowledge of alphabetic principle.
- Associate target words with prior knowledge and explore an author's choice of words.

Teacher Resources

- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*

Materials Needed

- *Fruit and Veggie Picture Cards* - cut along the dotted lines and laminate for long-term use
- Variety of fresh fruits and veggies or magazine/newspaper pictures of fruits and veggies
- *Pyramid Go Fish* - cut along the dotted lines and laminate for long-term use
- *Fruit and Veggie Clues*

Handouts

- *Where Do Fruits and Veggies Grow?*
- *Fruits and Veggies*

Focus

Hold up the different fruits and veggies cut from the *Fruit and Veggie Picture Cards*. For each picture, ask the students to tell you the name of the item and identify it as a fruit or a veggie.

Teacher Input

Using the teacher resources *What foods are in the fruit group?* and *What foods are in the vegetable group?*, demonstrate to students the variety of fruits and veggies available by stating and displaying examples (real, models, photos or illustrations). Play *Pyramid Go Fish* to reinforce the names and the variety of fruits and veggies.

Using the *Where Do Fruits and Veggies Grow?* handout, talk with students about which fruits and veggies grow under the ground, on the ground, on bushes, on vines or on trees. Ask students to identify the different fruits and veggies pictured.

Talking points:

- Veggies that grow under the ground include beets, carrots, radishes, potatoes and onions.
- Veggies that grow on the ground include artichokes, celery, cauliflower, broccoli and lettuce.

- Fruits and veggies that grow on bushes include blueberries and beans.
- Fruits and veggies that grow on vines include tomatoes, grapes, cucumbers, pumpkins and watermelon.
- Fruits that grow on trees include oranges, pears, cherries, bananas and peaches.
- Ask students for additional examples and encourage them to share their own experiences with these fruits and veggies.

Practice and Assessment

Distribute copies of the *Fruits and Veggies* handout. Read the following statements:

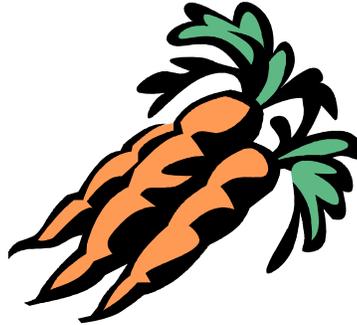
- In line 1, draw a circle around the fruit.
- In line 1, draw an X over the veggie that grows under the ground.
- In line 2, draw a square around the fruit that grows in a tree.
- In line 3, draw an X over the veggie.
- In line 3, draw a circle around the fruit that grows on a vine.
- In line 4, draw a triangle around the fruits.

Read the *Fruit and Veggie Clues*. Encourage students to guess the answers.

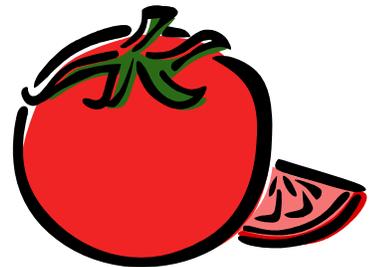
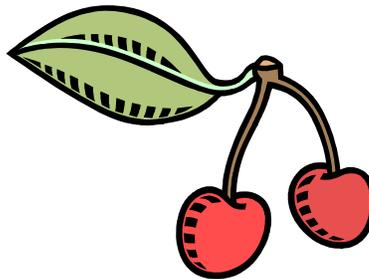
Name _____

Fruits and Veggies

1.



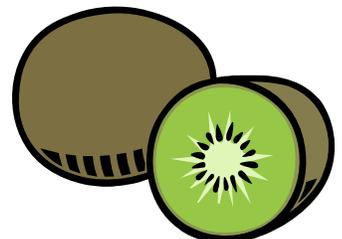
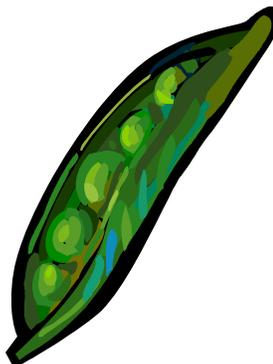
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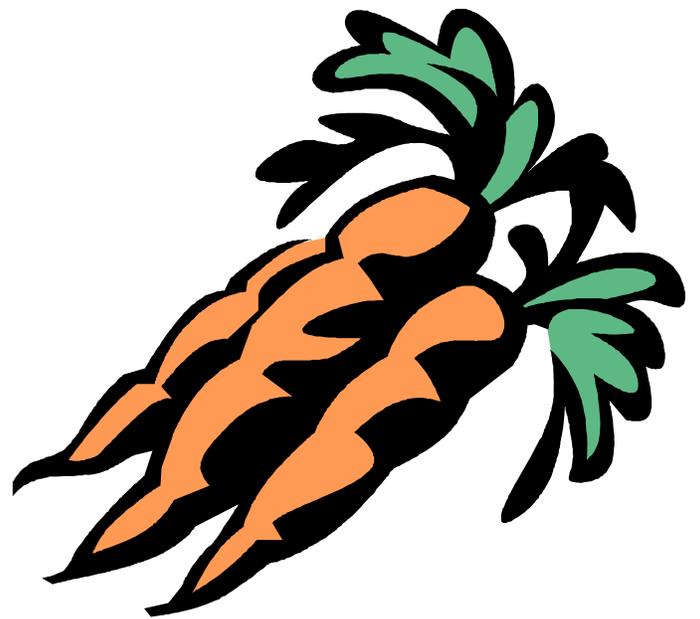
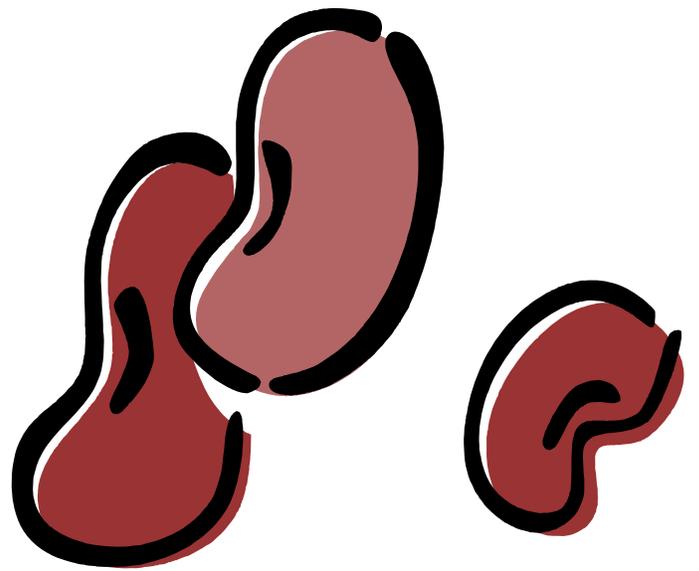
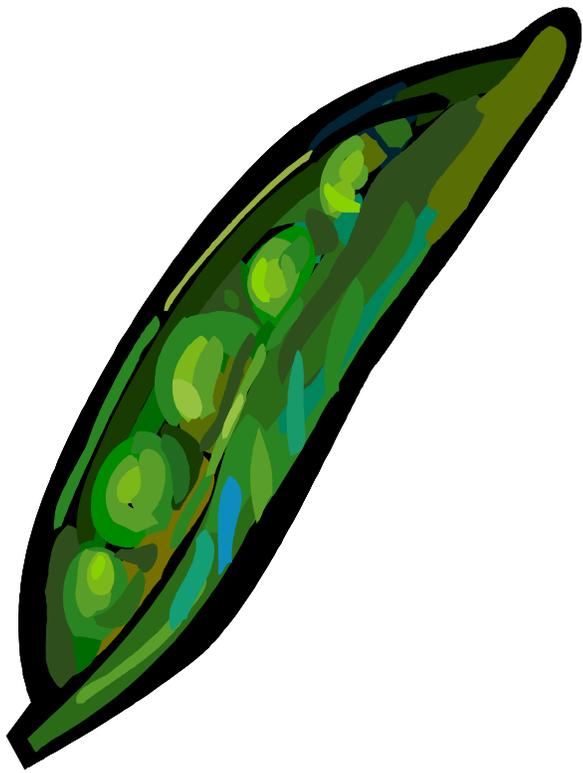


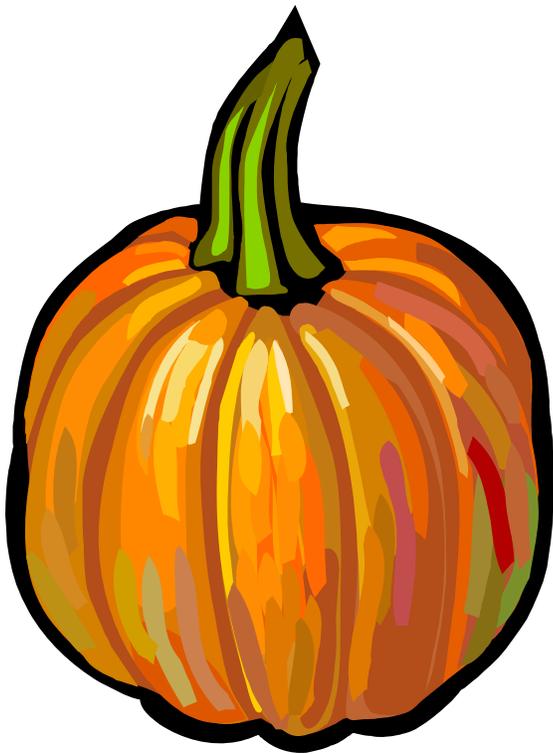
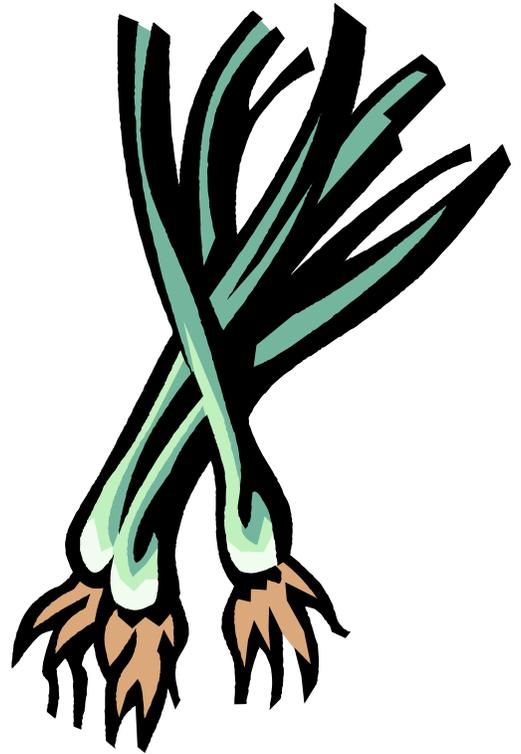
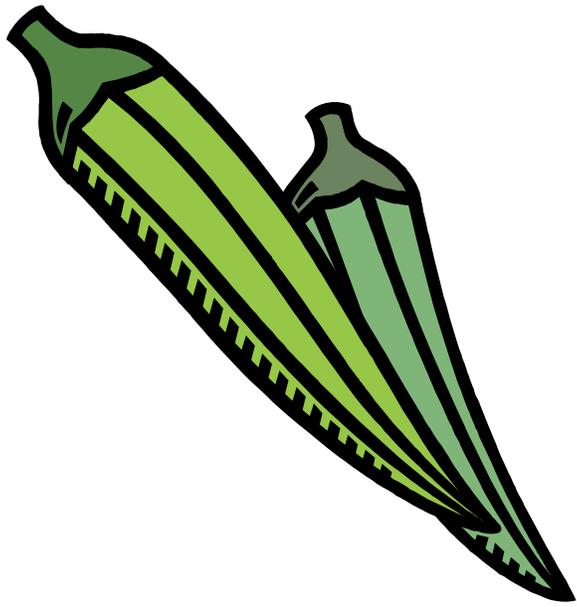
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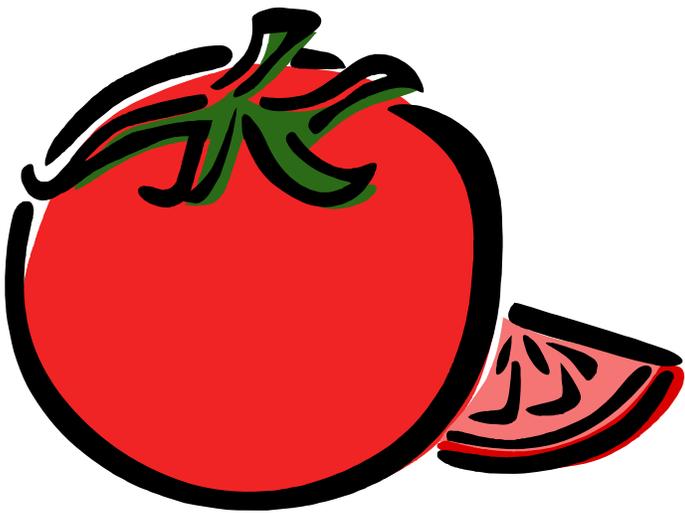


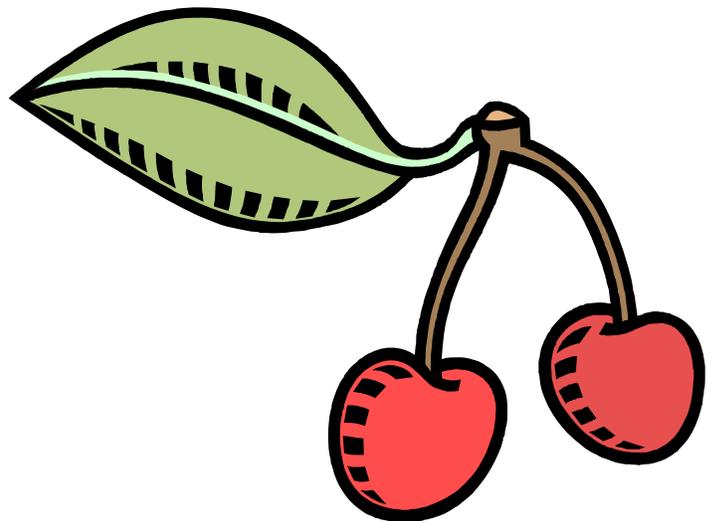
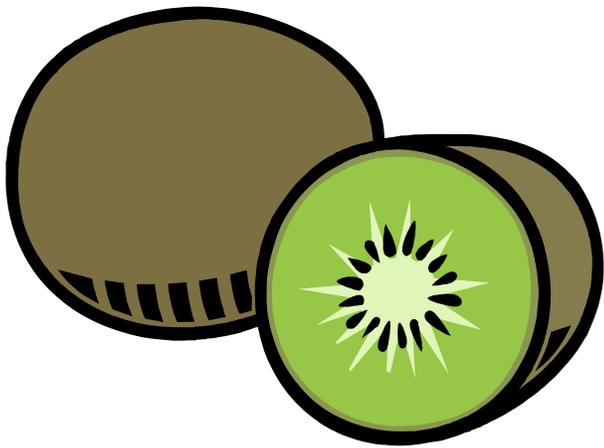
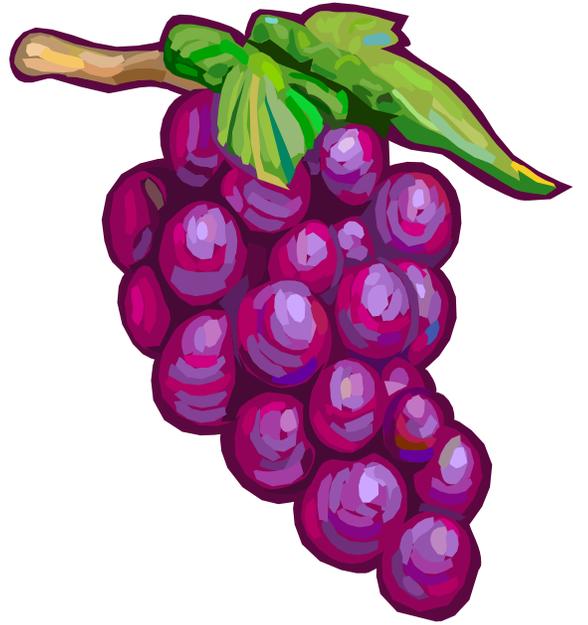
Fruit and Veggie Clues

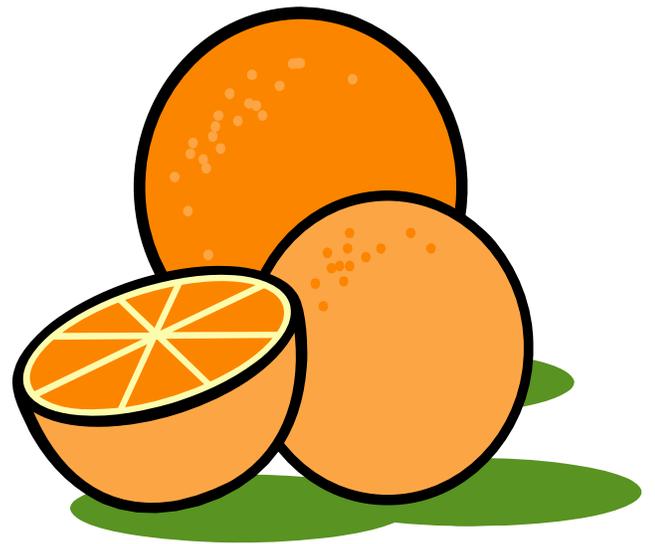
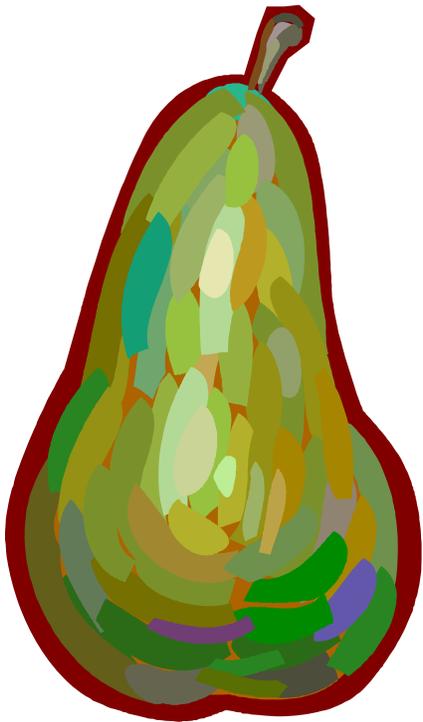
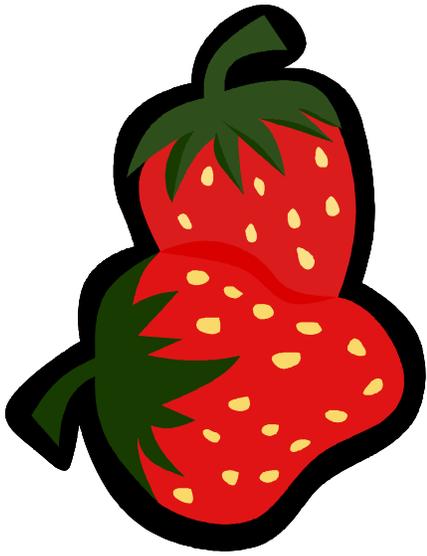
1. Name a fruit that starts with "A." It is white on the inside and can be red, yellow, or green on the outside. **Answer: Apple**
2. Name a long, thin fruit that starts with "B." It is yellow on the outside and white on the inside. Monkeys like to eat it. **Answer: Banana**
3. Name a green vegetable that sort of looks like a little tree. It starts with a "B." **Answer: Broccoli**
4. Name a long, thin, crunchy, orange vegetable that grows underground. It can help you to see well. It starts with a "C." **Answer: Carrot**
5. Name a crisp, green vegetable that has long stalks. It is juicy and stringy. It starts with "C." **Answer: Celery**
6. Name a yellow vegetable that grows on a cob and starts with "C." **Answer: Corn**
7. Name a vegetable that is green on the outside and white on the inside with lots of seeds. You can make pickles from it. It starts with "C." **Answer: Cucumber**
8. Name a big fruit that starts with "G." It can be yellow or pink and sometimes squirts you when you eat it. **Answer: Grapefruit**
9. Name a sweet fruit that grows in bunches on vines. It can be green, purple or red. It starts with "G." **Answer: Grapes**
10. Name a sour, yellow fruit that starts with "L." This fruit is shaped like football. **Answer: Lemon**
11. Name a green, leafy vegetable that tastes good in salads. It starts with an "L." **Answer: Lettuce**
12. Name a sharp-tasting vegetable that starts with "O." It can make you cry when you cut it. It grows underground. **Answer: Onion**
13. Name a fruit that you squeeze for juice in the morning. The name is the same as the color. It starts with an "O." **Answer: Orange**
14. Name a fruit that is round, fuzzy and sort of a orange-yellow color. It starts with a "P." **Answer: Peach**
15. Name a tiny, round green vegetable that grows in pods. It starts with "P." **Answer: Peas**
16. Name a vegetable that is brown on the outside and white on the inside. It grows underground and starts with the letter "P." **Answer: Potato**
17. Name an orange vegetable that can be made into pie or a Jack-o-Lantern. It starts with "P." **Answer: Pumpkin**
18. What do you get when you dry a grape? It starts with "R." **Answer: Raisin**
19. Name a sweet, red berry that looks a little like a heart. It starts with "S." **Answer: Strawberry**
20. Name a sweet, orange vegetable that starts with "S." It grows underground and can be made into pie. **Answer: Sweet Potato**
21. Name a round red vegetable that starts with a "T." You use this vegetable to make sauce for pizza or spaghetti. **Answer: Tomato**
22. Name a sweet fruit that starts with "W." It is green on the outside and pink on the inside with black seeds. **Answer: Watermelon**



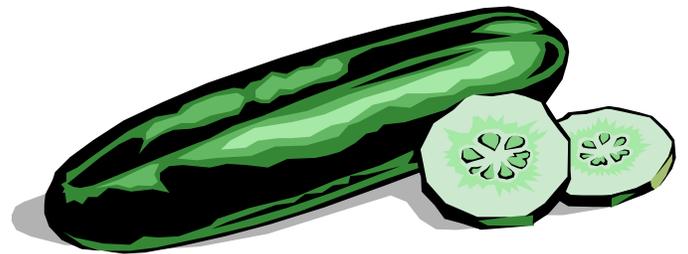
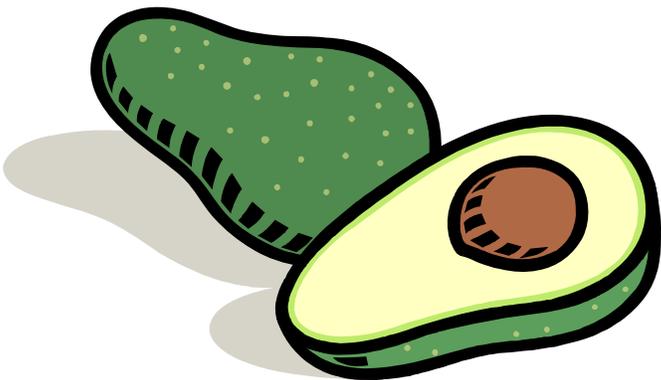
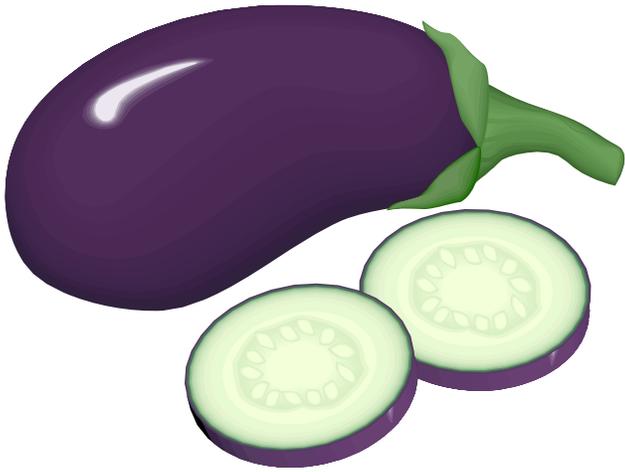


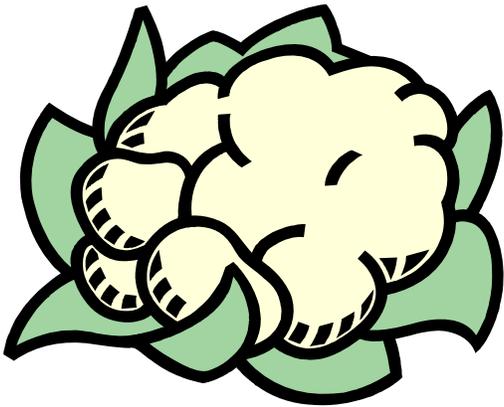
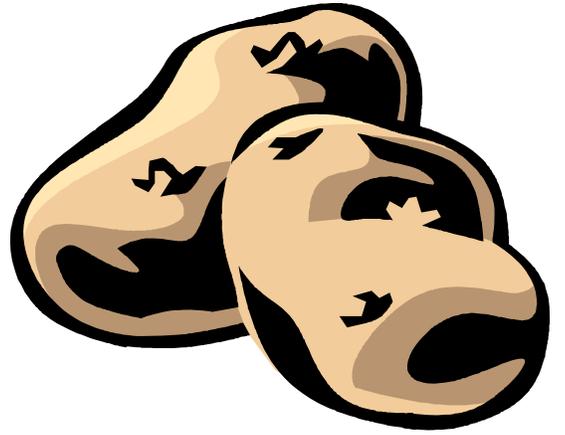












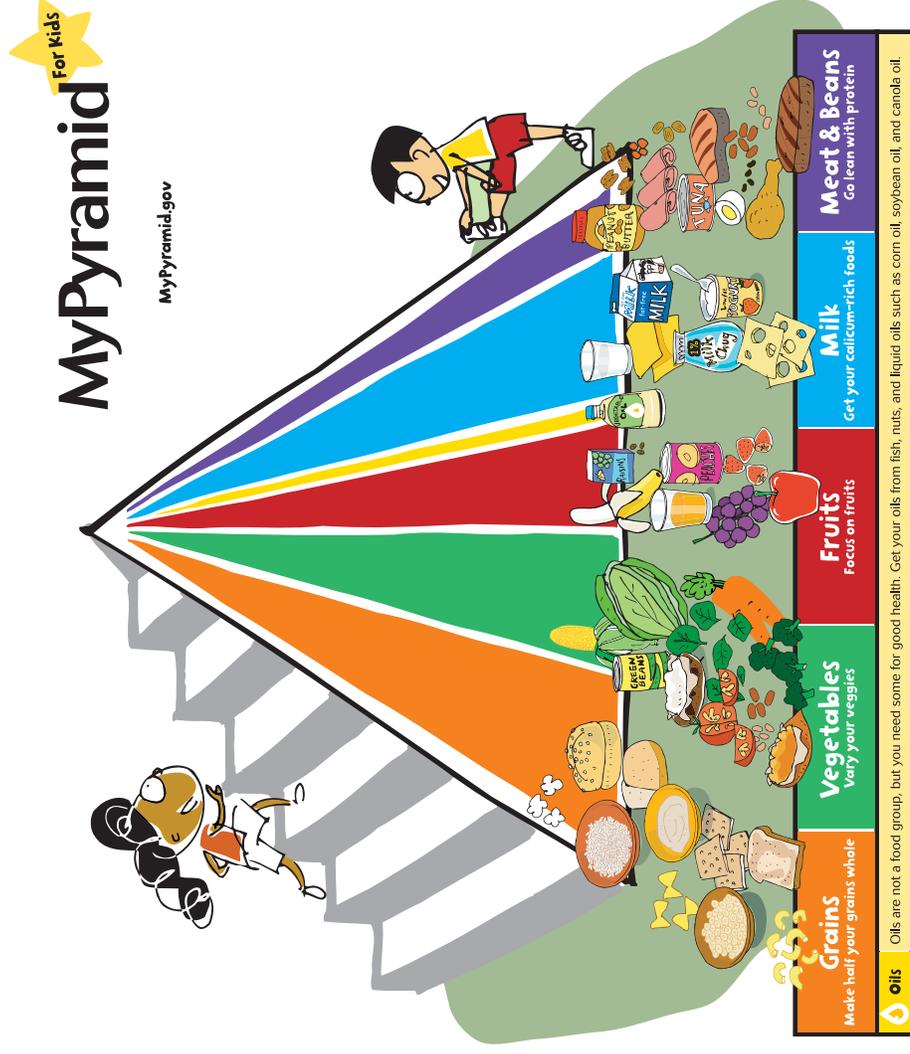
Pyramid Go Fish Instructions

Getting Ready

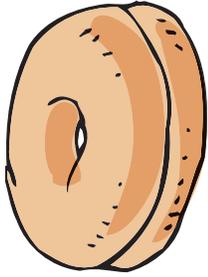
Print copies of the Pyramid Go Fish food cards. At least two sets of cards are needed for a class of 25 students; one set is adequate for a class of 10 – 12 students. Cut out the cards along the dotted lines. To make the cards sturdier, print onto card stock, laminate the cards, or paste the printed cards onto index cards or playing cards.

Playing Pyramid Go Fish

- Divide the students into groups of four.
- Give each group 30 cards.
- The dealer shuffles the cards and deals out four cards to each student, and places the rest in the middle.
- The first student (let's call him Michael) asks the student sitting to his left, "Kayla, do you have a fruit?" If Kayla has a fruit she says, "Yes, I do," and hands it to Michael, who then places his pair on the table. Michael is then able to ask the next student a question.
- If Kayla doesn't have a fruit, she replies, "No I don't have a fruit. Go fish," and Michael can take a card from the pile in the middle. It is then Kayla's turn to ask the student on her left for a card. The students continue to ask questions and match cards until all the pairs are found.
- The student with the most pairs wins.

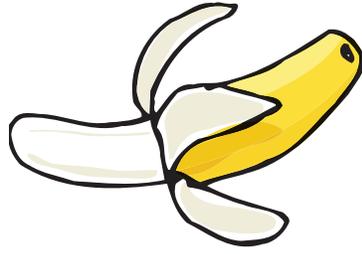


Grains



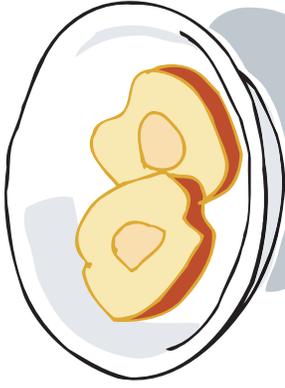
Bagel

Fruits



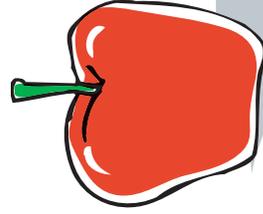
Banana

Fruits



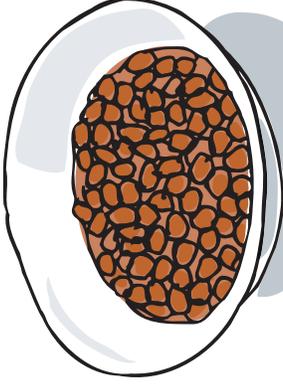
Baked Apple

Fruits



Apple

Meat & Beans



Baked Beans

Meat & Beans



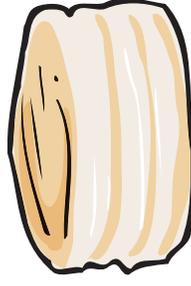
Beef Jerky

Vegetables



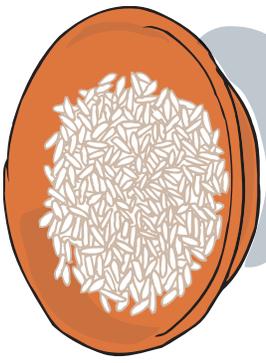
Baked Potato

Grains



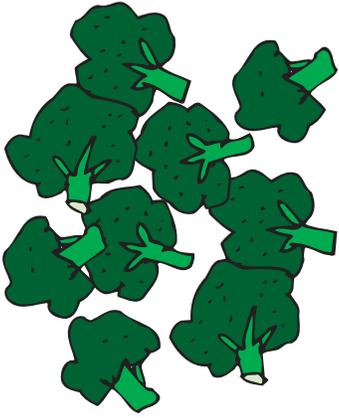
Biscuit

Grains



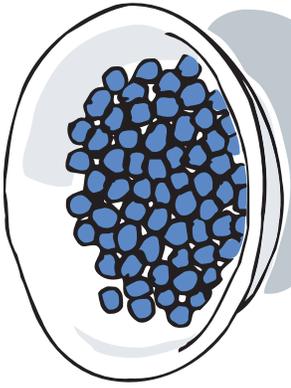
Brown Rice

Vegetables



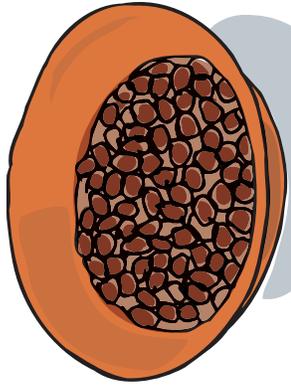
Broccoli

Fruits



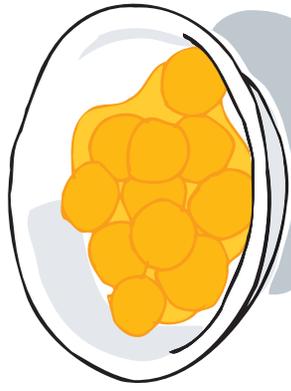
Blueberries

Meat & Beans



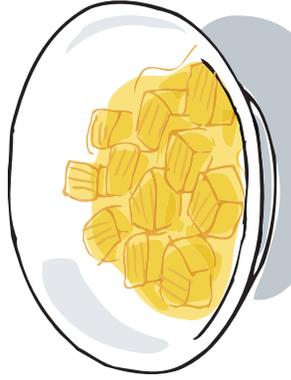
Black Bean Soup

Fruits



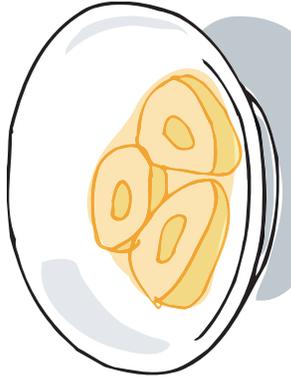
Cantaloupe

Fruits



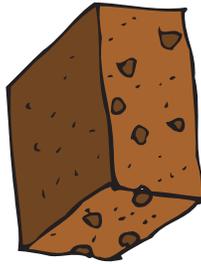
Pineapple

Fruits



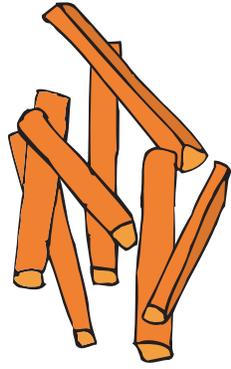
Pears

Grains



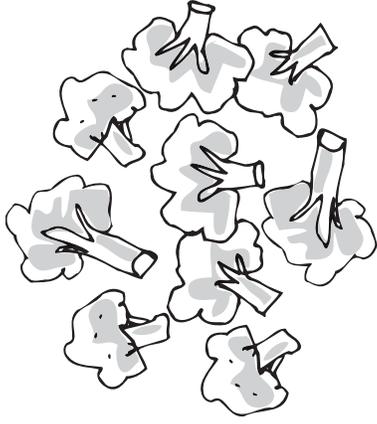
Brownie

Vegetables



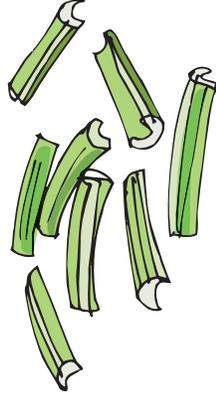
Carrot Sticks

Vegetables



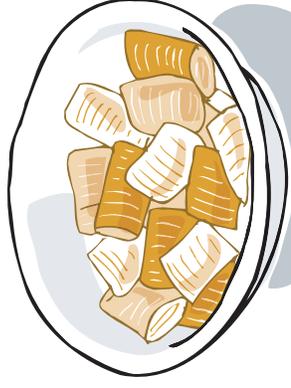
Cauliflower

Vegetables



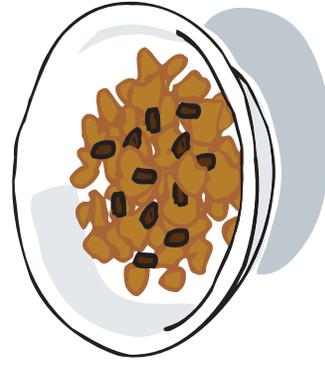
Celery

Grains



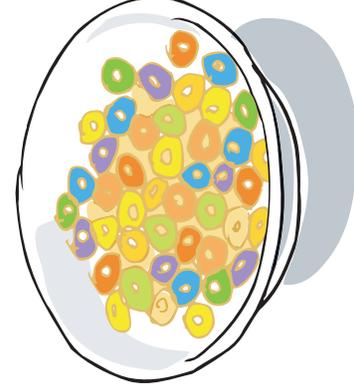
Cereal

Grains



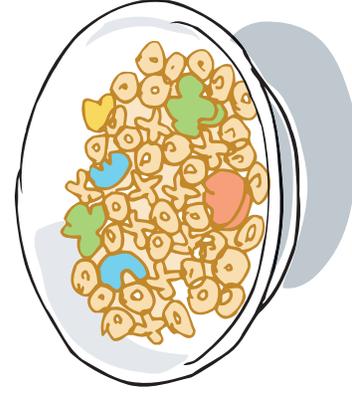
Cereal

Grains



Cereal

Grains



Cereal

Grains

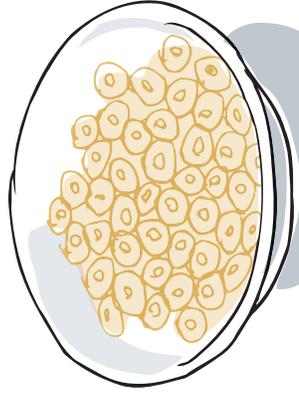
Grains

Grains

Grains

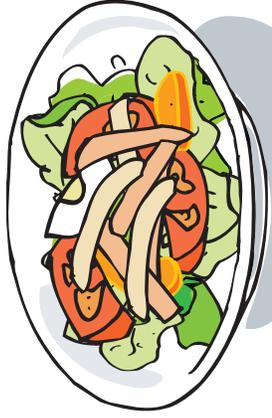
Grains

Grains



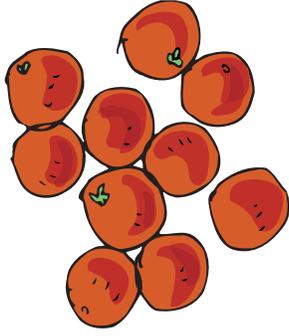
Cereal

Vegetables



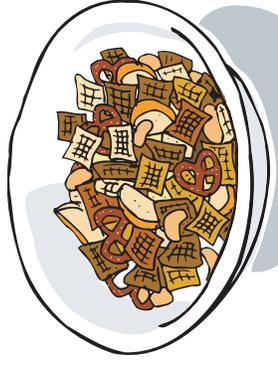
Chef Salad

Vegetables



Cherry Tomatoes

Grains



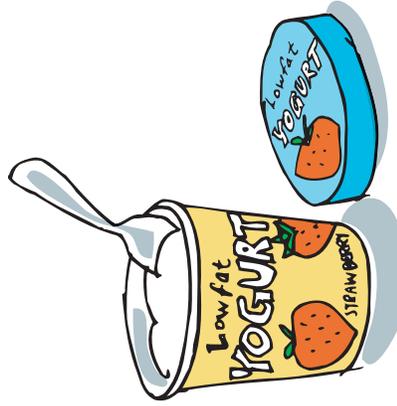
Chex Mix

Grains



Wild Rice

Milk



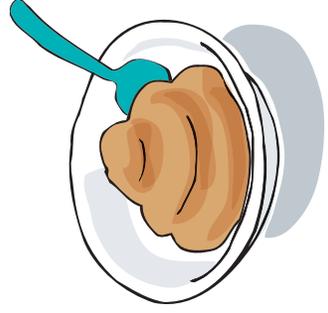
Yogurt

Grains



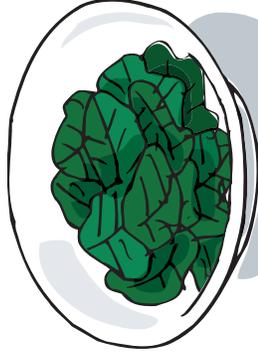
Chocolate Chip Muffin

Milk



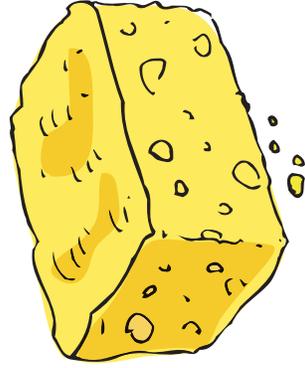
Chocolate Pudding

Vegetables



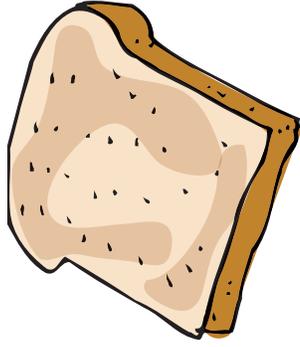
Collard Greens

Grains



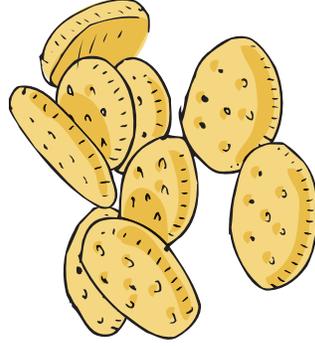
Cornbread

Grains



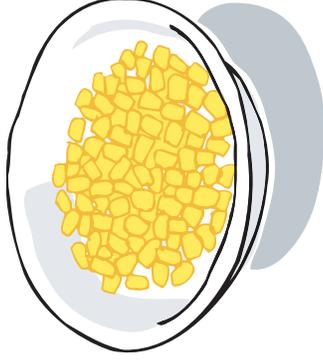
**Whole Wheat
Toast**

Grains



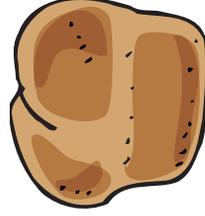
Crackers

Vegetables



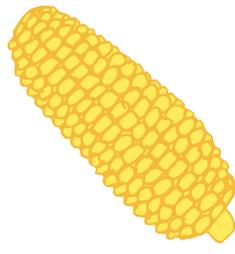
Corn

Grains



**Whole Wheat
Dinner Roll**

Vegetables



Corn

Fruits



Dried Apricots

Grains



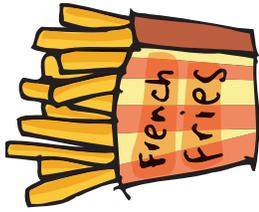
English Muffin

Fruits



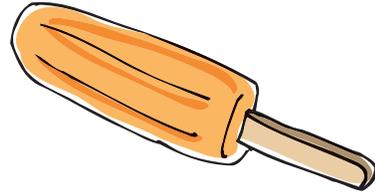
Applesauce

Vegetables



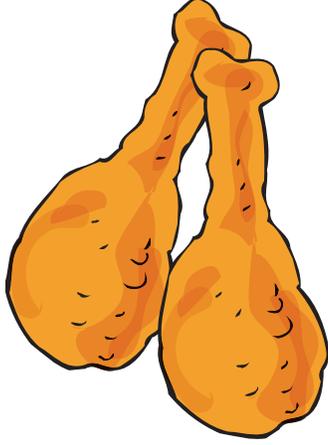
French Fries

Fruits



Frozen Fruit
Juice Bar

Meat & Beans



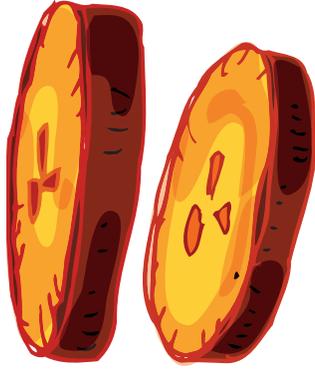
Fried Chicken

Milk



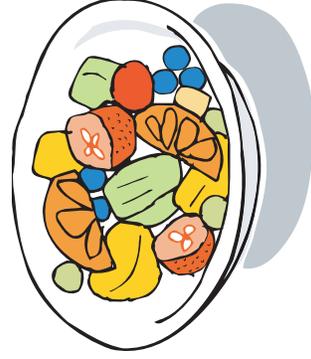
Frozen Yogurt

Fruits



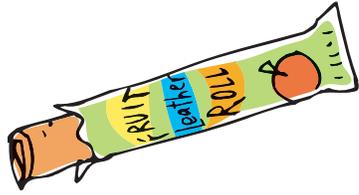
Fried Plantains

Fruits



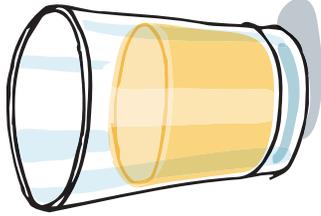
Fruit Salad

Fruits



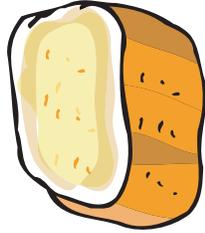
Fruit Leather

Fruits



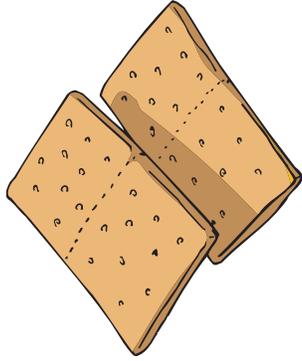
Apple Juice

Grains



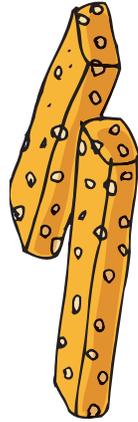
Garlic Bread

Grains



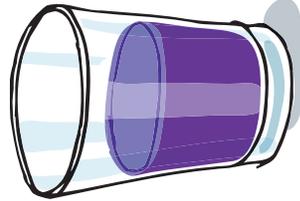
Graham Crackers

Grains



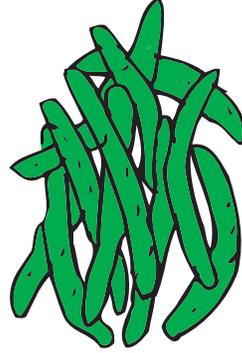
Granola Bar

Fruits



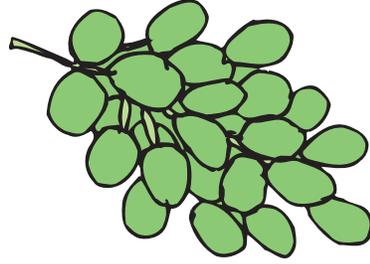
Grape Juice

Vegetables



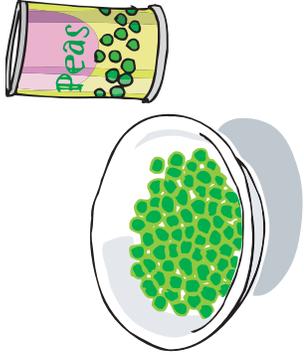
Green Beans

Fruits



Green Grapes

Vegetables



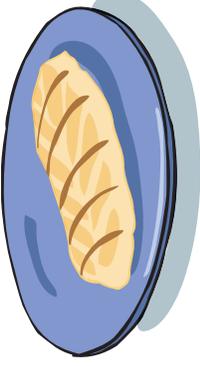
Green Peas

Meat & Beans



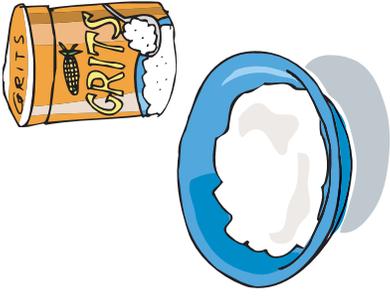
Grilled Chicken

Meat & Beans



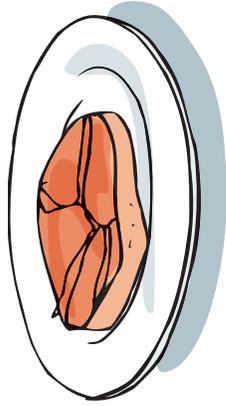
Grilled Fish

Grains



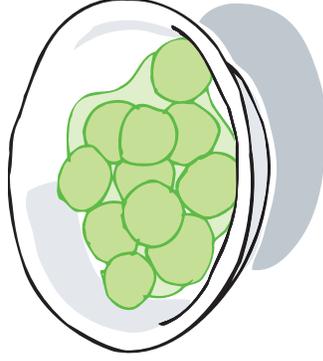
Grits

Meat & Beans



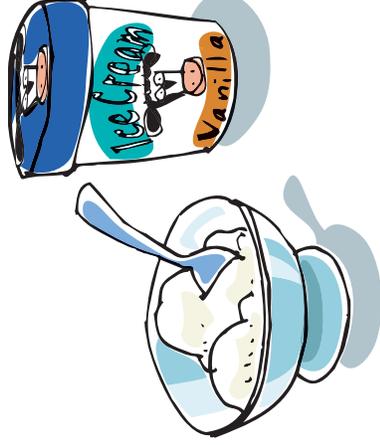
Ham

Fruits



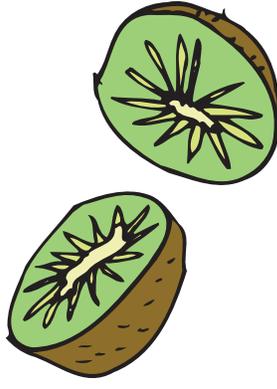
Honeydew

Milk



Ice Cream

Fruits



Kiwi

Milk



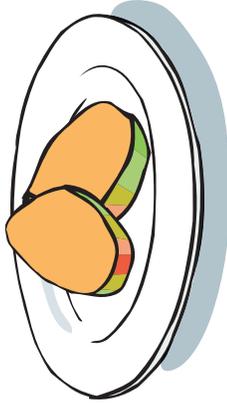
Cottage Cheese

Milk



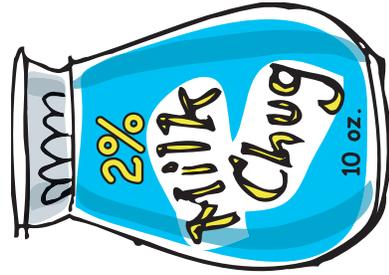
Chocolate
Fat Free Milk

Fruits



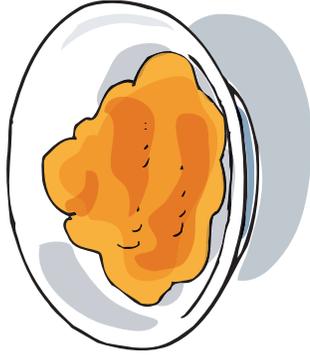
Mango

Milk



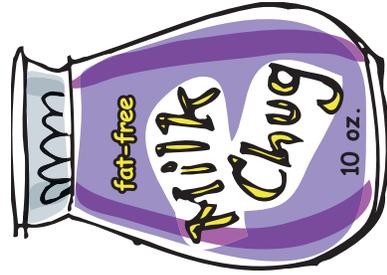
2% Milk

Vegetables



Mashed Sweet
Potatoes

Milk



Fat Free Milk

Milk



2% Milk

Milk



Fat Free Milk

Milk



**Strawberry
Fat Free Milk**

Grains



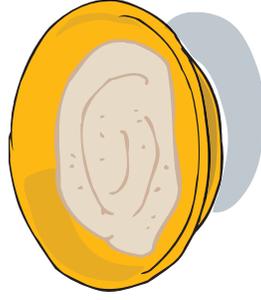
Animal Crackers

Milk



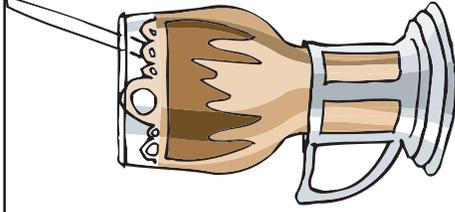
Whole Milk

Grains



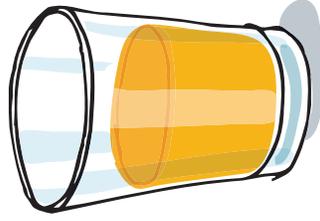
Oatmeal

Milk



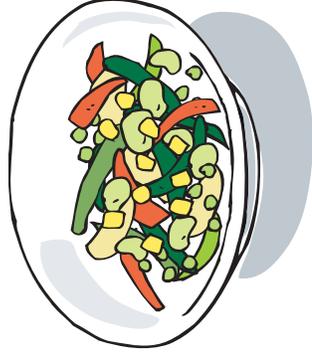
Milkshake

Fruits



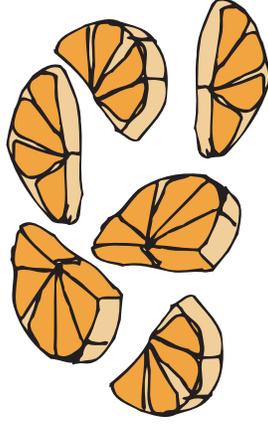
Orange Juice

Vegetables



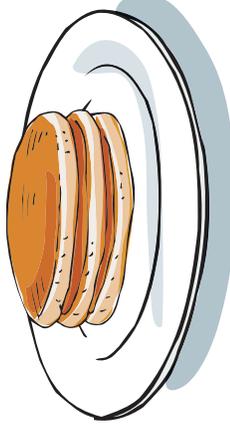
Mixed Vegetables

Fruits



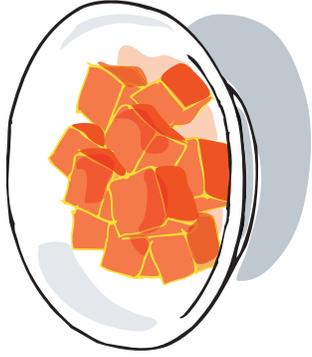
Orange Slices

Grains



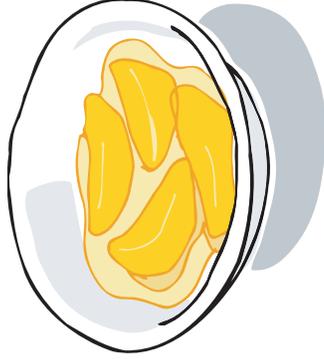
Pancakes

Fruits



Papaya

Fruits



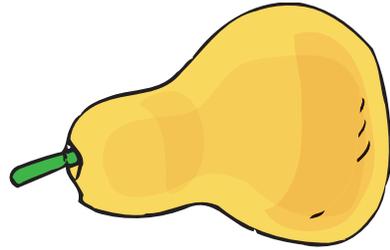
Peaches

Meat & Beans



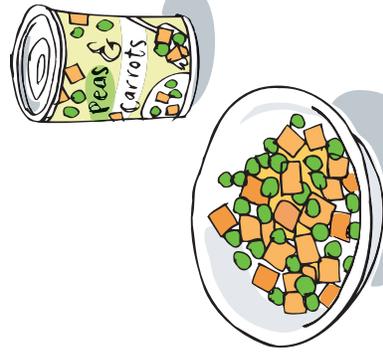
Peanuts

Fruits



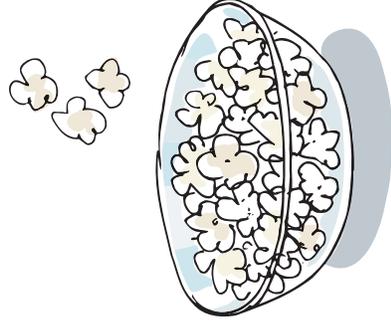
Pear

Vegetables



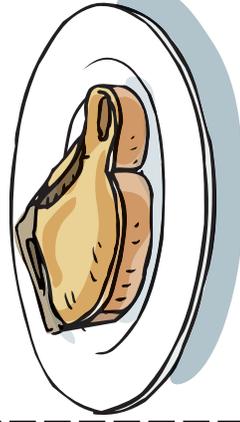
Peas & Carrots

Grains



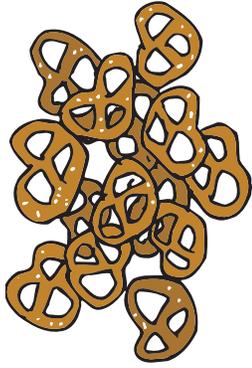
Popcorn

Meat & Beans



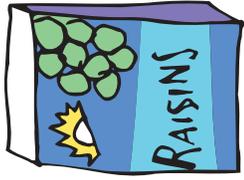
Pork Chop

Grains



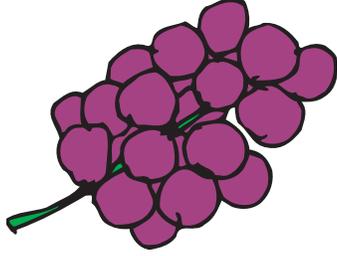
Pretzels

Fruits



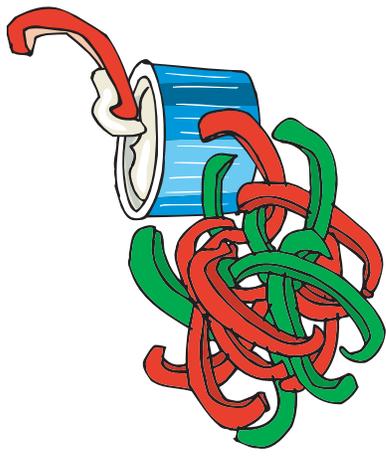
Raisins

Fruits



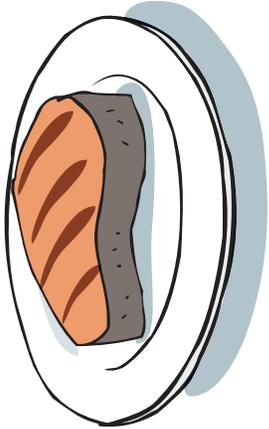
Red Grapes

Vegetables



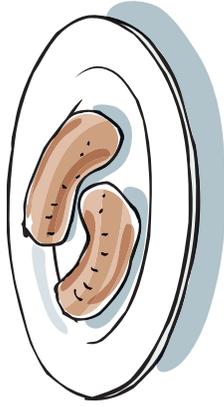
Red & Green
Pepper Slices

Meat & Beans



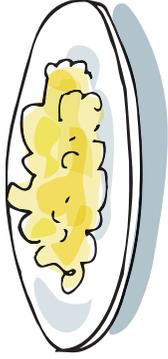
Salmon

Meat & Beans



Sausage Links

Meat & Beans



Scrambled Eggs

Vegetables



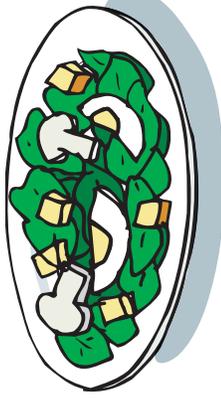
Side Salad

Grains



Soft Pretzel

Vegetables



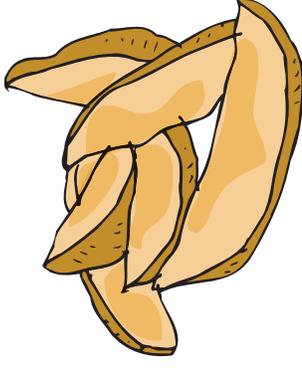
Spinach Salad

Meat & Beans



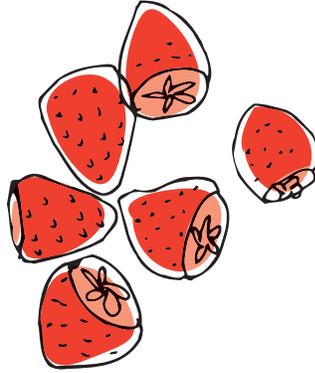
Steak

Vegetables



Steak Fries

Fruits



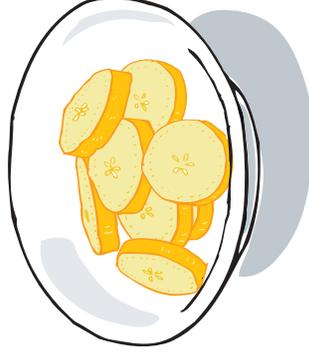
Strawberries

Milk



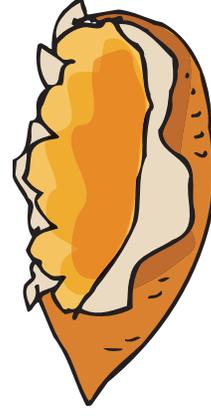
String Cheese

Vegetables



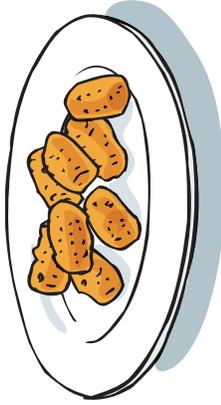
Summer Squash

Vegetables



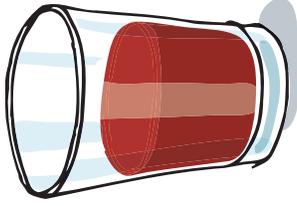
**Baked
Sweet Potato**

Vegetables



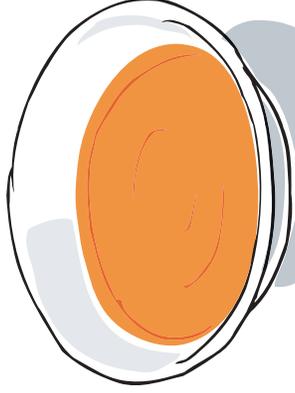
Tater Tots

Vegetables



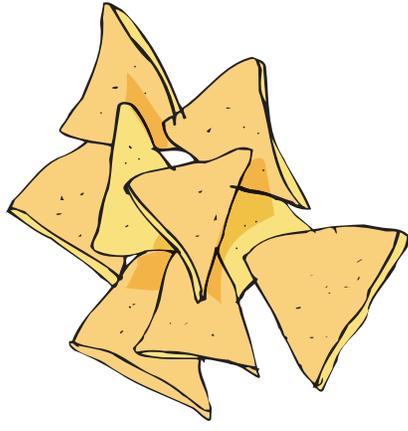
Tomato Juice

Vegetables



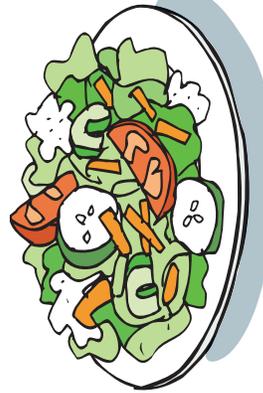
Tomato Soup

Grains



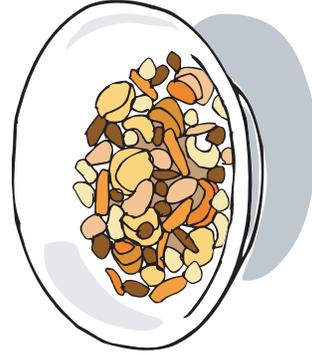
Tortilla Chips

Vegetables



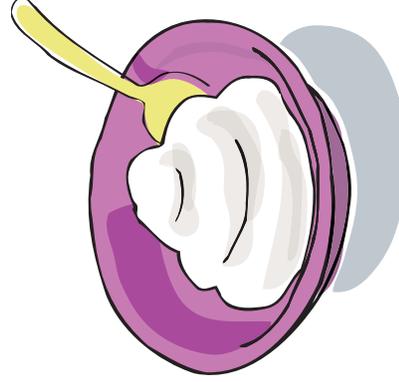
Tossed Salad

Meat & Beans



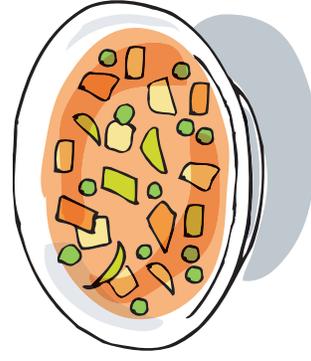
Trail Mix

Milk



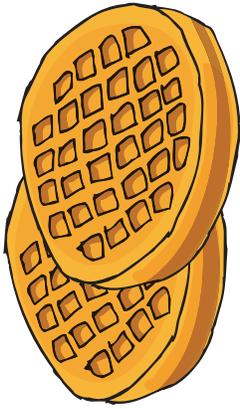
Vanilla Pudding

Vegetables



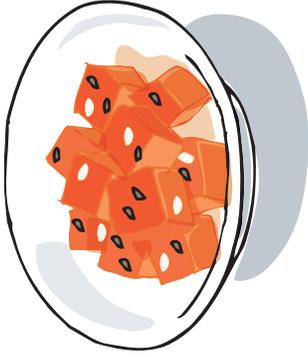
Vegetable Soup

Grains



Waffles

Fruits



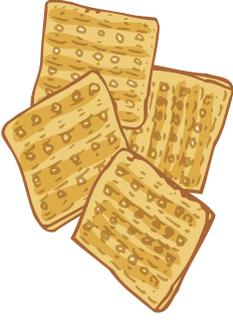
Watermelon

Grains



Whole Wheat Bagel

Grains



Whole Wheat Crackers



Where Do Fruits and Vegetables Grow?

Olivia and Jose planted a fruit and vegetable garden. Now they are ready to collect the fruits and vegetables that have grown. They need your help finding the fruits and vegetables.

Olivia and Jose can find these vegetables growing **under the ground**. Can you tell them what they are?



Olivia and Jose can find these vegetables growing **on the ground**. Can you tell them what they are?



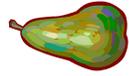
Olivia and Jose can find these fruits and vegetables growing **on bushes**. Can you tell them what they are?



Olivia and Jose can find these fruits and vegetables growing **on vines**. Can you tell them what they are?



Olivia and Jose can find these fruits growing **on trees**. Can you tell them what they are?



Kindergarten

Tasting Fruits and Veggies

Math Objectives

- Develop number sense for whole numbers through 30.
- Collect and organize data as a group activity.
- Display and describe data with concrete and pictorial graphs as a group activity.

English Language Arts Objective

- Associate target words with prior knowledge and explores an author's choice of words.

Materials Needed

- Poster board and markers to create a larger version of the *Fruit and Veggie Taster Club*

Teacher Resources

- *Promoting Fresh Fruits and Veggies: Story Time Follow-up Activities*
- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *Fruit and Veggie Nutrients*
- *Making Sense of Fruit and Veggie Nutrients*
- *Fruit and Veggie Colors*

Handouts

- *Graphing Fruits and Veggies*

Focus

Ask each student to tell you the name and to describe the taste of a fruit or veggie that he/she ate in the last few days. As each student names a fruit or veggie, write it on the board. List all the fruits together and all the veggies together.

Teacher Input

Using relevant books from the teacher resource *Promoting Fresh Fruits and Veggies: Story Time Follow-up Activities*, encourage students to try fruits and veggies they have never tasted. Books such as *I Will Never NOT EVER Eat a Tomato* can be read to reinforce the concept that trying new foods can be a positive experience.

Talking points:

- Each fruit and veggie has distinctive characteristics (sweet, bitter, juicy, crunchy). What characteristics are unique to each of the fruits and veggies listed on the board?
- There is an abundance of fruits and veggies from which to choose. If one is considered displeasing, there are still many others to try. Highlight the variety presented on the fruit and veggie lists.

- It is wise to take at least one bite of a new fruit or veggie before deciding that it does not taste good. Remind the students of the experiences the characters had in the story books.
- If the first bite of a new fruit or veggie is not well-liked, encourage students to try it again in a few weeks. Our taste for new foods often changes with time.

The teacher resources *What foods are in the fruit group?*, *What foods are in the vegetable group?*, *Fruit and Veggie Nutrients*, *Making Sense of Fruit and Veggie Nutrients* and *Fruit and Veggie Colors* can be used to discuss the ways in which fruits and veggies help children grow and be healthy. The student-generated fruit and veggie lists can be used as tools to:

- Discuss the key nutrients found in each fruit and veggie and how they function in the body.
- Stress the importance of eating a variety of colorful fruits and veggies. Students can divide the lists into the five fruit and veggie color groups, for example.

Practice and Assessment

Tell students that for the next two weeks, the class will keep a record of the fruits and veggies that are served as part of the USDA Fresh Fruit and Vegetable Program at school. Tell them they will be recording the fruits and veggies that each student tastes. Post the *Fruit and Veggie Taster Club* poster (created by the teacher) on the wall. List all the students' names. As the fruits and veggies are served for snacks, record them in the top row. Put an "X" next to each student's name if he or she tries that particular fruit or veggie. After two weeks, as a class, instruct students to count how many students tried each fruit and veggie. Record the totals at the bottom.

When the chart is complete, write the words "fruits" and "veggies" on the board. As a class, review the snacks that are recorded on the chart and determine if it is a fruit or a veggie. Write the item on the board in the appropriate category. As a class, count the total number of fruits and the total number of veggies. Distribute the *Graphing Fruits and Veggies* handout and direct students to work in pairs. Instruct them to graph the number of fruits and veggies that were served as snacks. They may place an "X" in the box or draw a picture of the fruit or veggie.

Name _____

Graphing Fruits and Veggies

| |
|--|
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| |
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Fruits

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Veggies

Grade 1

Grade 1

The Color of Fruits and Veggies

Math Objectives

- Develop a sense of whole numbers through 99.
- Develop fluency with single-digit addition and corresponding differences using strategies such as modeling, composing and decomposing quantities, using doubles and making tens.
- Create and extend patterns, identify the pattern unit and translate into other forms.

Materials Needed

- *Fruit and Veggie Word Cards* - cut along dotted lines and laminate for long-term use
- Paper bag

Teacher Resources

- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *Fruit and Veggie Nutrients*
- *Making Sense of Fruit and Veggie Nutrients*
- *Fruit and Veggie Colors*

Handouts

- *How Many Fruits and Veggies?*
- *Fruit and Veggie Math Workout*
- *The White Carrot and the Purple Potato*

Focus

Write the following words on the board: blue/purple, green, white, yellow/orange and red. Place all of the *Fruit and Veggie Word Cards* in a paper bag. Direct each student to select a card from the bag. Go over the pronunciation of the fruit or veggie on each card. Ask students to match the color of the fruit or veggie with the colors listed on the board. Write the name of the item under the correct color. Continue with the activity until all the cards have been used.

Teacher Input

Using the teacher resources *What foods are in the fruit group?*, *What foods are in the vegetable group?*, *Fruit and Veggie Nutrients*, *Making Sense of Fruit and Veggie Nutrients* and *Fruit and Veggie Colors*, discuss the importance of eating a variety of colorful fruits and veggies every day.

Talking points:

- The five fruit and veggie color groups are blue/purple, green, white, yellow/orange and red.
- Fruits and veggies are grouped by color based on the part that we eat. For example, bananas are in the white group because we eat the white fruit, not the yellow skin;

watermelon is in the red group because we eat the red fruit, not the green rind; and green apples are in the green group because we eat the green skin as well as the white flesh.

- Each color group gives us different vitamins and minerals that our bodies need to stay healthy.
- Each unique plant nutrient (phytonutrient) found within a color group plays a special role in protecting our bodies from illness.
- It is important to eat fruits and veggies from each color group every day.
- Eating a variety of different fruits and veggies from within each color group is another way to make sure we get many of the nutrients we need for good health.

Practice and Assessment

To emphasize the variety of colorful fruits and veggies available, distribute the handout *The White Carrot and the Purple Potato*. Direct the students to fill in the answers.

Distribute the *How Many Fruits and Veggies?* handout. Refer to the fruit and veggie lists grouped by colors. As a class, answer the questions on the handout.

Distribute the *Fruit and Veggie Math Workout* handout and instruct students to complete it.

Sweet Corn

Broccoli

Peas

Green Pear

Red Pear

Peach

Red Apple

Carrot

Green Apple

Radish

Lettuce

Yellow Apple

Sweet Potato

Blueberry

Potato

Apricot

Green Beans

Strawberry

Collards

Red Grapes

Orange

Spinach

Banana

Green Pepper

Zucchini

Asparagus

Kiwi

Watermelon

Green Grapes

Red Pepper

Plum

Raisins

Eggplant

Avocado

Green Grapes

Cabbage

Celery

Cucumbers

Okra

Mushrooms

Cantaloupe

Lemon

Mango

Pineapple

Butternut Squash

Pumpkin

Cherries

Tomato

Fruit and Veggie Word Card Answers

Blue/Purple

FRUIT
blueberry
plum
raisins

VEGETABLES
eggplant

Green

FRUIT
kiwi
green grapes
green pear
green apple

VEGETABLES
broccoli
peas
lettuce
green beans
collards
spinach
green pepper
zucchini
asparagus
avocado
cabbage
celery
cucumbers
okra

White

FRUIT
banana

VEGETABLES
potato
mushrooms

Yellow/Orange

FRUIT
yellow apple
apricot
orange
cantaloupe
lemon
mango
pineapple

VEGETABLES
sweet corn
carrot
sweet potato
butternut squash
pumpkin

Red

FRUIT
red pear
red apple
strawberry
red grapes
watermelon
cherries

VEGETABLES
radish
red pepper
tomato

Name _____

How Many Fruits and Veggies?

1. How many FRUITS are in the BLUE/PURPLE group?
2. How many VEGETABLES in the BLUE/PURPLE group?
3. How many FRUITS are in the GREEN group?
4. How many VEGETABLES are in the WHITE group?
5. How many FRUITS are in the WHITE group?
6. How many VEGETABLES are in the YELLOW/ORANGE group?
7. How many ROUND FRUITS are in the YELLOW/ORANGE group?
8. How many FRUITS are in the RED group?
9. Which group has the most number of VEGETABLES?
10. Which group has the least number of FRUITS?
11. What is your favorite FRUIT? What color is it?
12. What is your favorite VEGETABLE? What color is it?

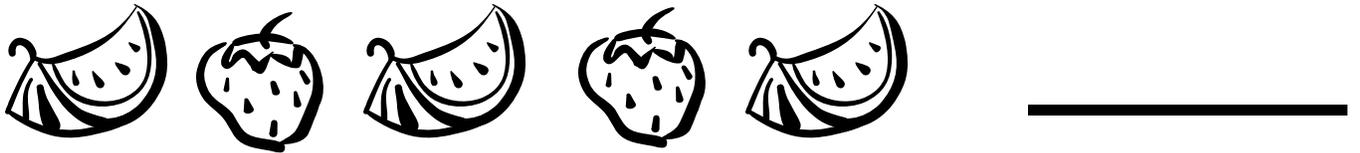
Name _____

Fruit and Veggie Math Workout

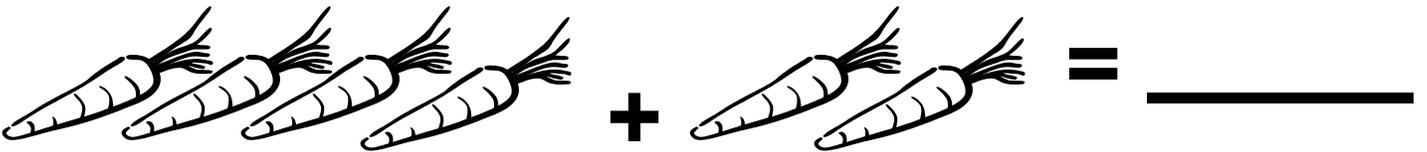
1. You have 2 slices of **RED** watermelon and 3 **RED** strawberries.
How much **RED** fruit do you have all together?



2. Finish the pattern.

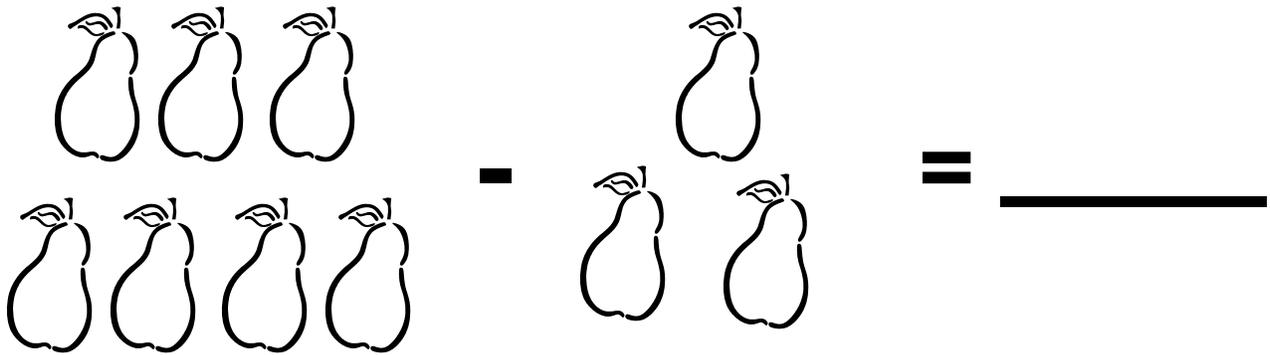


3. You picked 4 **ORANGE** carrots from the garden. There are 2 **ORANGE** carrots left in the garden. How many carrots are there all together?

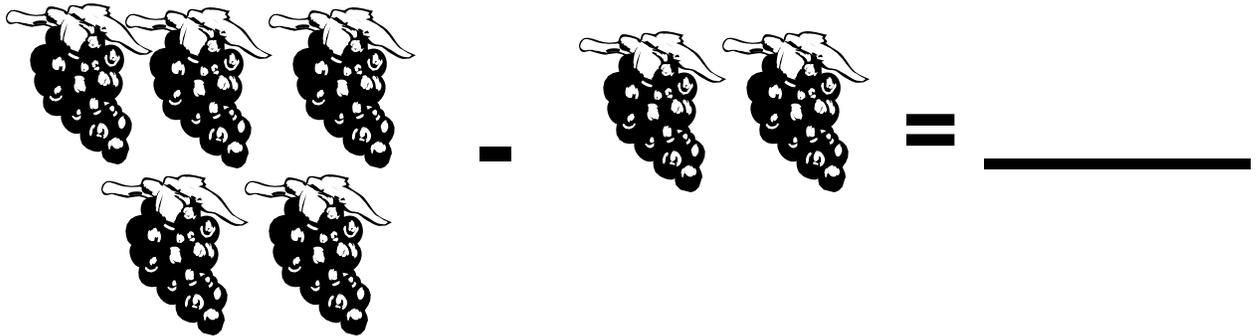


4. Draw an **ORANGE** or **YELLOW** vegetable.

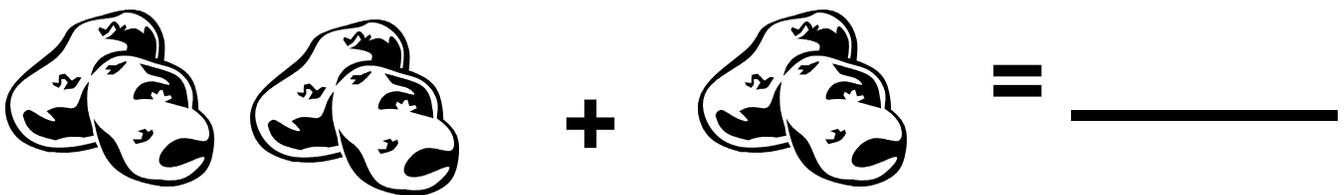
5. You had 7 **GREEN** pears. You and your friends ate 3 **GREEN** pears. How many are left?



6. There are 5 bunches of **PURPLE** grapes on the vine. You pick 2 bunches of **PURPLE** grapes. How many are left?



7. You had 4 **WHITE** potatoes to wash. Your mom gave you 2 more **WHITE** potatoes to wash. How many do you have all together?



8. Write 3 ways you can eat potatoes.

The White Carrot and the Purple Potato

Fruits and veggies come in many different colors. For example, there are orange carrots and there are white potatoes. Did you know that carrots also can be white and potatoes can be purple? Fruits and veggies come in many surprising colors!

Directions: The sentences below describe some of the different colors of fruits and veggies. Fill in the blanks using the color hints next to each sentence.

Apples can be red, green or _____. (Hint: the color of a canary)

Asparagus can be green or _____. (Hint: the color of milk)

Berries can be red or _____. (Hint: the color of the ocean)

Cabbage can be purple or _____. (Hint: the color of a leaf)

Cauliflower can be white, green or _____. (Hint: the color of a jack-o'-lantern)

Eggplant can be purple, green or _____. (Hint: the color of snow)

Grapes can be green, purple or _____. (Hint: the color of a fire truck)

Onions can be red or _____. (Hint: the color of a cloud)

Pears can be red, yellow or _____. (Hint: the color of grass)

Peppers can be green, red, orange or _____. (Hint: the color of the sun)

Plums can be purple or _____. (Hint: the color of a stop sign)

Potatoes can be white, purple or _____. (Hint: the color of a clown nose)

Squash can be green, orange, white or _____. (Hint: the color of a school bus)

Tomatoes can be green, purple, yellow, red or _____. (Hint: the color of a goldfish)



Grade 1

Fruit and Veggie Diary

Math Objectives

- Collect, organize, describe and display data using line plots and tallies.
- Sort and classify objects by two attributes.

English Language Arts Objectives

- Use preparation strategies to anticipate vocabulary of a text and to connect prior knowledge and experiences to new text.
- Select and use new vocabulary and language structures in both speech and writing contexts.
- Use words that describe, name characters and settings (who, where) and tell action and events (what happened, what did _____ do) in simple texts.
- Use specific words to name and tell action in oral and written language.

Materials Needed

- Hole punch
- Scissors for each student
- Yarn or string
- Overhead projector

Teacher Resources

- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *Fruit and Veggie Colors*

Handouts

- *My Fruit and Veggie Snack Diary*
- *Fresh Fruit and Veggie Snacks*

Focus

Challenge students to name all the fruits and veggies they have eaten as part of the USDA Fresh Fruit and Vegetable Program. Do this quickly - limit the time to one or two minutes. Write the names of the fruits and veggies on the board. After the list is on the board, ask students if each item is a fruit or veggie and to which color group it belongs: blue/purple, green, white, yellow/orange or red.

Teacher Input

Using the teacher resources *What foods are in the fruit group?*, *What foods are in the vegetable group?* and *Fruit and Veggie Colors*, review the importance of eating a variety of colorful fruits and veggies every day. The student-generated fruit and veggie list can be used as a tool to:

- Discuss the protective role of each unique plant nutrient (phytonutrient) found within a color group. For example, which color group is known for protecting our vision? Which color group promotes heart health?
- Talk about what colors might be poorly represented within the list. In other words, are there fruits and veggies from all color groups listed? If not, students can name fruits and veggies to fill in the color gaps.
- Discuss whether a variety of fruits and veggies from within each color group are being eaten. Is there room for improvement? What one new fruit or veggie is each student willing to try?

Practice and Assessment

Distribute the *My Fruit and Veggie Snack Diary* handout to each student. Have students cut out the pages and put them in the correct order. Punch a hole through the upper-left-hand corner and have children tie the diary with yarn or string. Every day for a week, have students write all the fruits and veggies they ate that day as part of the USDA Fresh Fruit and Vegetable Program at school. At the end of the week, ask students to name the fruits and veggies they ate. Talk about the variety of colors of fruits and veggies.

Turn the information from the *Fruit and Vegetable Diaries* into a graphing activity. Ask students to total the number of fruits and veggies the class ate for the USDA Fresh Fruit and Vegetable Program during the week. Ask them to total the number of items in each color group: blue/purple, green, white, yellow/orange and red. Help the class present this information in the form of a graph for your classroom wall. Use different color squares to represent the different colors of fruits and veggies. This activity could be continued for several weeks and the types and colors of fruits and veggies could be compared over time.

Prepare a transparency and distribute the *Fresh Fruit and Veggie Snacks* handout. Place the transparency on the overhead. Read along and instruct the students to fill in the blanks. Ask students to read the completed sentences after filling in the blanks. Instruct students to come up with a few sentences that describe who, when, where, what and how. For example, Mandy eats red strawberries on her cereal for breakfast. Write these sentences on the board.

1. Cut out the pages on the dotted lines.
2. Put them in the correct order.
3. Have your teacher make a hole through the circle.
4. Tie the pages together.
5. Write the fruits and vegetables you eat each day for your school snack. Write the color of each fruit and vegetable.

My Fruit and Veggie Snack Diary

Name: _____



MONDAY

Fruits

Vegetables



TUESDAY

Fruits

Vegetables



WEDNESDAY

Fruits

Vegetables



THURSDAY

Fruits

Vegetables



FRIDAY

Fruits

Vegetables

Name _____



Fresh Fruit and Veggie Snacks

Once upon a time there was a little girl named Mandy. Mandy was in the first grade. In Mandy's school, the students got fresh fruit and veggie snacks every day. Mandy's favorite color was _____.

Mandy's best friend was _____.

The fruit that Mandy liked best for a school snack was _____.

The color of this fruit was _____. Mandy also liked to eat this fruit at _____. She liked to cut it up and put it on her _____. It tasted _____.

The vegetable that Mandy liked best for a school snack was _____.

She liked to eat it with _____. Mandy liked to eat other vegetables for lunch. Her favorite vegetable for lunch was _____. The color of this vegetable was _____.

Why do you think Mandy liked to eat fruits and vegetables so much?

Grade 2

Grade 2

Focus on Fruits and Vary Your Veggies

Math Objectives

- Develop fluency with multi-digit addition and subtraction through 999 using multiple strategies.
- Identify, describe, translate and extend repeating and growing patterns.

Teacher Resources

- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *Fruit and Veggie Nutrients*
- *Making Sense of Fruit and Veggie Nutrients*
- *Fruit and Veggie Colors*
- *Focus on Fruits*
- *Vary Your Veggies*
- *MyPyramid for Kids*
- *Anatomy of MyPyramid*
- *Teaching MyPyramid*

Handouts

- *Vegetable Menu*
- *Boxing Up Fruits and Veggies*
- *Which Fruit*

Focus

Ask students to brainstorm a list of fruits and veggies that they eat. Trigger responses from the students by asking their favorites: ones they like raw, cooked, on pizza or from the garden. Record their responses on the board. Ask students why they think it is important to eat lots of fruits and veggies every day.

Teacher Input

Using the teacher resources *What foods are in the fruit group?*, *What foods are in the vegetable group?*, *Fruit and Veggie Nutrients*, *Making Sense of Fruit and Veggie Nutrients*, *Fruit and Veggie Colors* and all three MyPyramid resources, talk to students about the importance of eating fruits and veggies every day.

Talking points:

- Eating a lot of fruits and veggies every day helps us stay healthy.
- Fruits and veggies are excellent sources of many nutrients, including vitamins A and C, potassium and fiber.
- Vitamin A keeps eyes and skin healthy and helps to protect against infections.
- Vitamin C helps heal cuts and wounds and keeps teeth and gums healthy.
- Fiber keeps food moving through the digestive tract.

- Most fruits and veggies are naturally low in fat and calories and do not contain cholesterol.
- MyPyramid tells us how many fruits and veggies we need to eat every day. In general, about half of the food we eat in a day should be fruits and veggies.

The teacher resources *Fruit and Veggie Nutrients*, *Making Sense of Fruit and Veggie Nutrients*, *Focus on Fruit* and *Vary Your Veggies* can be used to help students identify good sources of vitamin A, vitamin C and fiber noted on their fruit and veggie list. Expand the students' knowledge of vitamin A-, vitamin C- and fiber-rich fruits and veggies by listing several additional examples from each category.

Practice and Assessment

Distribute the *Vegetable Menu*, *Boxing Up Fruits and Veggies* and *Which Fruit?* handouts and instruct students to complete them.

Name _____

Vegetable Menu



Joshua has \$1.00 to spend on vegetables. He wants to buy as many servings as he can with his money. Read the **Vegetable Menu**. What four combinations of vegetables can he buy. List four possible choices in the charts. How much change will he receive from his \$1.00 in each of the choices? Show your work in the charts!

| Vegetable Menu | |
|----------------|----------------------|
| Vegetable | Cost for one serving |
| broccoli | \$.50 |
| corn | \$.30 |
| carrot | \$.15 |
| peas | \$.20 |

| CHOICE 1 | | CHOICE 2 | | CHOICE 3 | | CHOICE 4 | |
|------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|
| <u>Vegetable</u> | <u>Cost</u> | <u>Vegetable</u> | <u>Cost</u> | <u>Vegetable</u> | <u>Cost</u> | <u>Vegetable</u> | <u>Cost</u> |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Total Cost | \$ |
| Change | \$ | Change | \$ | Change | \$ | Change | \$ |

1. Which vegetable helps you see in the dark?
2. Which vegetable has lots of fiber?
3. Which vegetable has vitamin A and vitamin C?

Name: Answer Key

Vegetable Menu



Joshua has \$1.00 to spend on vegetables. He wants to buy as many servings as he can with his money. Read the **Vegetable Menu**. What four combinations of vegetables can he buy. List four possible choices in the charts. How much change will he receive from his \$1.00 in each of the choices? Show your work in the charts!

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| CHOICE 1 | | CHOICE 2 | | CHOICE 3 | | CHOICE 4 | |
|-------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|
| <u>Vegetable</u> | <u>Cost</u> | <u>Vegetable</u> | <u>Cost</u> | <u>Vegetable</u> | <u>Cost</u> | <u>Vegetable</u> | <u>Cost</u> |
| corn | \$.30 | carrot | \$.15 | corn | \$.30 | corn | \$.30 |
| carrot | \$.15 | broccoli | \$.50 | broccoli | \$.50 | carrot | \$.15 |
| broccoli | \$.50 | peas | \$.20 | peas | \$.20 | peas | \$.20 |
| Total Cost \$.95 | | Total Cost \$.85 | | Total Cost \$1.00 | | Total Cost \$.65 | |
| Change \$.05 | | Change \$.15 | | Change \$0 | | Change \$.35 | |

- Which vegetable helps you see in the dark?
carrots
- Which vegetable has lots of fiber?
corn or peas
- Which vegetable has vitamin A and vitamin C?
broccoli

Name _____

Boxing Up Fruits and Veggies

| | | | | |
|---|---|---|---|---|
| F | V | F | V | F |
| V | V | V | V | V |
| F | V | F | V | F |
| | | | | |
| F | V | F | V | F |
| | | | | |

Ashley is packing a box of fruits and vegetables.

She is arranging them in a pattern.

F stands for fruits and **V** stands for vegetable.

Fill in the box for Ashley by placing a **F** or a **V** in the spaces.



Complete the box using the fruits and vegetables in the pattern. Answer these questions after the box is filled in. Show your work!

1. How many pieces of fruit will be in the box when it is full?
2. How many vegetables will be in the box when it is full?
3. How many fruits AND vegetables in all will be in the box when it is full?
4. Are there more fruits or vegetables in the box?

Name: Answer Key

Boxing Up Fruits and Veggies

| | | | | |
|---|---|---|---|---|
| F | V | F | V | F |
| V | V | V | V | V |
| F | V | F | V | F |
| V | V | V | V | V |
| F | V | F | V | F |
| V | V | V | V | V |

Ashley is packing a box of fruits and vegetables.

She is arranging them in a pattern.

F stands for fruits and V stands for vegetable.

Fill in the box for Ashley by placing a F or a V in the spaces.



Complete the box using the fruits and vegetables in the pattern. Answer these questions after the box is filled in. Show your work!

1. How many pieces of fruit will be in the box when it is full?

9 fruits

2. How many vegetables will be in the box when it is full?

21 vegetables

3. How many fruits AND vegetables in all will be in the box when it is full?

$5 \times 6 = 30$ pieces total or

$6 + 6 + 6 + 6 + 6 = 30$ or

$5 + 5 + 5 + 5 + 5 + 5 = 30$

4. Are there more fruits or vegetables in the box?

vegetables

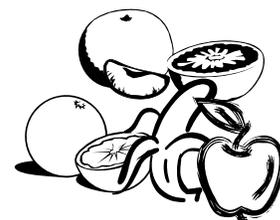
Name _____

Which Fruit?

Four friends, Michael, Pedro, Andy and Hassan are eating their favorite fruit. Each person has a different favorite fruit. Use the clues to match the person with his favorite fruit. If a choice can be eliminated by reading the clues, write **NO** in the space on the chart. Write **YES** in the correct place on the chart to identify each person's favorite fruit.

| | Banana  | Apple  | Orange  | Grapefruit  |
|---------|---|--|---|---|
| Michael | | | | |
| Pedro | | | | |
| Andy | | | | |
| Hassan | | | | |

1. Michael's favorite fruit is round.
2. The name of Pedro's fruit has two syllables in its name.
3. Hassan sat next to his friend who had a red fruit.
4. Pedro sat next to his friend who had a fruit that had three syllables in its name.
5. The name of Hassan's fruit is not a compound word.
6. Michael enjoys watching his friend eat a grapefruit.
7. Andy likes to squeeze his fruit and get the juice out.
8. The name of Andy's fruit is not a compound word.
9. Michael sat next to his friend who has a fruit with an orange-colored peel.
10. Andy's fruit was smaller than Pedro's fruit.



QUESTIONS:

1. Which fruit has fiber?
2. Which fruit has vitamin C?

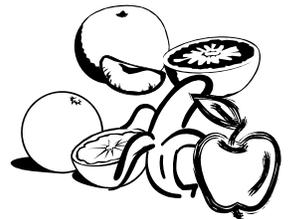
Name: Answer Key

Which Fruit?

Four friends, Michael, Pedro, Andy and Hassan are eating their favorite fruit. Each person has a different favorite fruit. Use the clues to match the person with his favorite fruit. If a choice can be eliminated by reading the clues, write **NO** in the space on the chart. Write **YES** in the correct place on the chart to identify each person's favorite fruit.

| | Banana  | Apple  | Orange  | Grapefruit  |
|---------|---|--|---|---|
| Michael | | YES | | |
| Pedro | | | | YES |
| Andy | | | YES | |
| Hassan | YES | | | |

1. Michael's favorite fruit is round.
2. The name of Pedro's fruit has two syllables in its name.
3. Hassan sat next to his friend who had a red fruit.
4. Pedro sat next to his friend who had a fruit that had three syllables in its name.
5. The name of Hassan's fruit is not a compound word.
6. Michael enjoys watching his friend eat a grapefruit.
7. Andy likes to squeeze his fruit and get the juice out.
8. The name of Andy's fruit is not a compound word.
9. Michael sat next to his friend who has a fruit with an orange-colored peel.
10. Andy's fruit was smaller than Pedro's fruit.



QUESTIONS:

1. Which fruit has fiber?
apple, orange or grapefruit
2. Which fruit has vitamin C?
orange or grapefruit

Grade 2

My Fruit and Veggie Goals

English Language Arts Objectives

- Use phonic knowledge and structural analysis (e.g., knowledge of syllables, suffixes, prefixes and root words) to decode regular multi-syllable words when reading text.
- Use text for a variety of functions, including literary, informational and practical.
- Explain and describe new concepts and information in own words.
- Use oral communication to identify, organize and analyze information.

Teacher Resources

- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *Fruit and Veggie Nutrients*
- *Making Sense of Fruit and Veggie Nutrients*
- *Fruit and Veggie Colors*
- *Focus on Fruits*
- *Vary Your Veggies*

Handouts

- *My Fruit and Veggie Snack*
- *Eat More Fruits and Veggies*
- *My Fruit and Veggie Goals*

Focus

Ask students to think about the fruits and veggies that they have eaten as part of the USDA Fresh Fruit and Vegetable program at school. Ask them which fruits and veggies they really liked. Ask them why they liked those fruits and veggies. Have students brainstorm other ways they could eat more fruits and veggies other than for their school snack. Write their responses on the board. Some ideas include: ask parents to buy them, help parents to fix them, order them at restaurants, eat them for school lunch, eat them at a friend or relative's house, eat them at breakfast, or dinner and eat them for snacks when at home.

Teacher Input

Using the teacher resources *What foods are in the fruit group?*, *What foods are in the vegetable group?*, *Fruit and Veggie Nutrients*, *Making Sense of Fruit and Veggie Nutrients* and *Fruit and Veggie Colors*, remind students about the importance of eating a variety of fruits and veggies every day. *Focus on Fruits*, *Vary Your Veggies* and *Fruit and Veggie Nutrients* can be used to review examples of good fruit and veggie sources of vitamin A, vitamin C and fiber. Talk with students about setting goals to eat more fruits and veggies.

Talking points:

- Set realistic and achievable goals. For example, if only corn and apple juice are accepted at this time, try adding just one new fruit this week.
- Take one step at a time. No one expects a complete change in eating habits to happen overnight. Try making one new, positive change and then continue to make gradual changes over time.

Practice and Assessment

After the class has had the fruit or veggie snack for the day, distribute the *My Fruit and Veggie Snack* and *Eat More Fruits and Veggies* handouts and instruct students to complete them. Next, distribute the *My Fruit and Veggie Goals* handout. Review the goal of eating more fruits and veggies and instruct students to complete the handout. Have each student share orally with the class his/her fruit or veggie goal.



Name _____

My Fruit and Veggie Snack

1. What did you have for your school snack today?

2. Was it a fruit or a vegetable?

3. How did it taste?

4. What was the texture?

5. What color was the outside?

6. What color was the inside?

7. How does it grow? Circle the answer.

under the ground

above the ground

on a vine

on a bush

in a tree

8. Does it have vitamin A?

9. Does it have vitamin C?

10. Does it have fiber?



Name _____

Eat More Fruits and Veggies

1. Find: squash, apple, yams, orange, celery, banana, broccoli, pear, peas, grapes, eggplant, kiwi, carrots and prunes. The words can read up, down or across from left to right or right to left.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| B | F | S | E | S | E | N | U | R | P |
| R | C | Q | L | S | R | P | E | A | R |
| O | H | U | P | B | A | N | A | N | A |
| C | P | A | P | Y | R | E | L | E | C |
| C | S | S | A | Y | A | M | S | T | E |
| O | A | H | E | G | N | A | R | O | K |
| L | E | C | A | R | R | O | T | S | I |
| I | P | G | R | A | P | E | S | K | W |
| B | E | G | G | P | L | A | N | T | I |

2. Which of these fruits and veggies have you tasted for your fruit and veggie snack at school?



Name _____

My Fruit and Veggie Goals

1. Circle the names of the fruits you have eaten.

| | | | | |
|------------|------------|-----------|------------|----------------|
| Apple | Banana | Grape | Orange | Lime |
| Kiwifruit | Cantaloupe | Plum | Peach | Lemon |
| Pineapple | Blueberry | Raspberry | Strawberry | Guava |
| Blackberry | Pear | Cranberry | Grapefruit | Papaya |
| Watermelon | Mango | Cherry | Nectarine | Honeydew Melon |

2. Write the names of fruits you would like to try.

3. How will you eat these fruits?

4. Circle the names of vegetables you have eaten.

| | | | | |
|---------|-------------|--------------|-------------|----------------|
| Corn | Celery | Carrot | Lettuce | Cucumber |
| Peas | Potato | Squash | Zucchini | Green Onion |
| Onion | Radish | Rutabaga | Turnip | Beet |
| Pumpkin | Asparagus | Green Pepper | Green Beans | Artichoke |
| Cabbage | Cauliflower | Broccoli | Mushroom | Collard Greens |

5. Write the names of vegetables you would like to try.

6. How will you eat these vegetables?

Grade 3

Grade 3

Focus on Fruits, Vary Your Veggies

Math Objectives

- Represent fractions concretely and symbolically (halves, fourths, thirds, sixths and eights).
- Develop flexibility in solving problems by selecting strategies and using mental computations, estimation, calculators or computers and paper and pencil.
- Collect, organize and display data (including circles, graphs and tables) to solve problems.

English Language Arts Objective

- Use word reference material (e.g. dictionary, glossary) to confirm decoding skills, verify spelling and extend meanings of words.

Materials Needed

- Poster of MyPyramid
- Calculators

Teacher Resources

- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *MyPyramid for Kids*
- *Anatomy of MyPyramid*
- *Teaching MyPyramid*

Handouts

- *It's in the Dictionary*
- *Sarah's Birthday Lunch*
- *Who Has What Fruit?*

Focus

Ask the students how they think that their class is doing with eating fruits and veggies. Are they eating enough fruits and veggies? Ask the students to think about the number of fruits and veggies they ate yesterday. Did they eat fruits and veggies from the USDA Fresh Fruit and Vegetable program? If so, which ones did they choose? Did they eat a fruit or veggie at lunch or at home? Have them raise their hands if they ate one fruit or veggie, two fruits or veggies, three fruits or veggies, etc. Ask a student to write the numbers on the board as the children raise their hands. Make a pie graph on the board or have each student graph how many fruits and veggies he or she ate.

Teacher Input

Using the teacher resources *What foods are in the fruit group?*, *What foods are in the vegetable group?* and all three MyPyramid resources, talk to the students about what the different color bands represent on the MyPyramid poster. Emphasize the red and green bands, which represent the fruit and veggie groups, respectively.

Talking points:

- Each band of color shows us different types of foods we should eat each day to help us grow and have more energy to play.
- The green band represents veggies and the red band represents fruits.
- It is especially important for health to choose veggies that are dark green and orange. Examples of dark green veggies include broccoli, spinach and dark green lettuce. Examples of orange veggies are squash, sweet potatoes and carrots.
- Fruits do not always need to be fresh; they also can be canned, frozen or dried. Expand students' knowledge of these different forms by having them provide examples.
- Fruits and veggies have a lot of vitamins, minerals and fiber, which help us to stay healthy.
- *MyPyramid for Kids* suggests daily servings equivalent to 1½ to 2½ cups of vegetables and 1½ to 2 cups of fruit for children in third grade.

Practice and Assessment

Distribute the *It's in the Dictionary* handout. Direct students to look at the fruits and veggies listed at the bottom of the page. Ask them if there are any fruits and veggies that they have never heard of or tasted. What are they? Ask them if there are fruits and veggies that they have eaten from the USDA Fresh Fruit and Vegetable Program at school. Instruct them to circle the fruits and veggies that they have eaten from the USDA Fresh Fruit and Vegetable Program. Instruct the students to fill in the fruits and veggies between the guidewords listed in each block. Remind the students that there is one extra veggie.

Distribute and complete the *Sarah's Birthday Lunch* handout.

Distribute the *Who Has What Fruit?* handout. Students can work in pairs or individually.

Name _____

It's in the Dictionary

Directions: There are twelve dictionary pages below. Each page has two guidewords listed at the top. Choose from the list of fruits and vegetables at the bottom of this page to fill in each dictionary page. Write the name of each fruit and vegetable on the correct dictionary page. If there is more than one fruit or vegetable on a page, write the words in alphabetical order. There is one fruit or vegetable that does not fit into a page.

Apple _____ Banana

1

Beans _____ Celery

2

Cherries _____ Cucumber

3

Dates _____ Grapefruit

4

Green Beans _____ Kale

5

Lettuce _____ Mushrooms

6

Onion _____ Plum

7

Potato _____ Raisin

8

Raspberry _____ Snow Peas

9

Spinach _____ Sweet Potato

10

Swiss Chard _____ Tomato

11

Turnip _____ Watermelon

12

tangerines
limes
quince
tangelos
sweet corn
cabbage
collard greens

avocados
oranges
apricots
jicama
eggplant
broccoli
cranberries

corn
string beans
endive
zucchini
garlic
baby carrots
huckleberries

pumpkin
star fruit
beets
parsnips
rhubarb
water chestnuts
melons

radishes
figs
ugli fruit
mango
watercress
peas
red pepper

What vegetable did not fit into the dictionary? _____

It's in the Dictionary

Directions: There are twelve dictionary pages below. Each page has two guidewords listed at the top. Choose from the list of fruits and vegetables at the bottom of this page to fill in each dictionary page. Write the name of each fruit and vegetable on the correct dictionary page. If there is more than one fruit or vegetable on a page, write the words in alphabetical order. There is one fruit or vegetable that does not fit into a page.

| | | | |
|---|--|---|--|
| <p><u>Apple</u> <u>Banana</u></p> <p>apricot avocado baby carrots</p> <p>1</p> | <p><u>Beans</u> <u>Celery</u></p> <p>beets broccoli cabbage</p> <p>2</p> | <p><u>Cherries</u> <u>Cucumber</u></p> <p>collard greens corn cranberries</p> <p>3</p> | <p><u>Dates</u> <u>Grapefruit</u></p> <p>eggplant endive figs garlic</p> <p>4</p> |
| <p><u>Green Beans</u> <u>Kale</u></p> <p>huckleberries jicama</p> <p>5</p> | <p><u>Lettuce</u> <u>Mushrooms</u></p> <p>lime mango melons</p> <p>6</p> | <p><u>Onion</u> <u>Plum</u></p> <p>orange parsnips peas</p> <p>7</p> | <p><u>Potato</u> <u>Raisin</u></p> <p>pumpkin quince</p> <p>8</p> |
| <p><u>Raspberry</u> <u>Snow Peas</u></p> <p>radishes red pepper rhubarb</p> <p>9</p> | <p><u>Spinach</u> <u>Sweet Potato</u></p> <p>star fruit string beans sweet corn</p> <p>10</p> | <p><u>Swiss Chard</u> <u>Tomato</u></p> <p>tangelos tangerines</p> <p>11</p> | <p><u>Turnip</u> <u>Watermelon</u></p> <p>ugli fruit water chestnuts watercress</p> <p>12</p> |

- | | | | | |
|----------------|-------------|---------------|-----------------|------------|
| tangerines | avocados | corn | pumpkin | radishes |
| limes | oranges | string beans | star fruit | figs |
| quince | apricots | endive | beets | ugli fruit |
| tangelos | jicama | zucchini | parsnips | mango |
| sweet corn | eggplant | garlic | rhubarb | watercress |
| cabbage | broccoli | baby carrots | water chestnuts | peas |
| collard greens | cranberries | huckleberries | melons | red pepper |

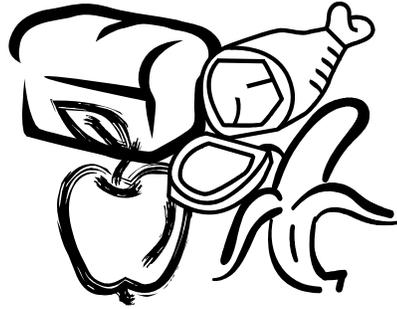
What vegetable did not fit into the dictionary? zucchini

Name _____

Sarah's Birthday Lunch

Sarah is planning to have a special birthday lunch with her friends. At her birthday lunch, she will have ham and cheese sandwiches, fresh fruit, baked chips and birthday cake. She needs to buy the following items to prepare her special meal:

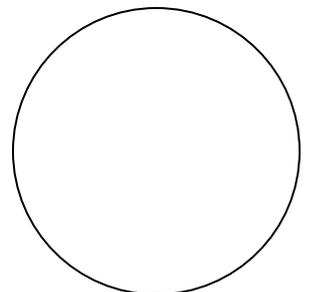
| | |
|-------------------|--------|
| Sliced ham | \$1.89 |
| Sliced cheese | \$2.20 |
| Whole-wheat bread | \$1.99 |
| Fresh fruit | \$2.69 |
| Baked chips | \$2.89 |
| Birthday cake | \$3.88 |



1. Estimate how much Sarah has to pay for her birthday lunch. Round off to the nearest dollar to get the estimated cost of the meal. If there is no sales tax, what is the estimated cost of the meal? Show your work. Circle the correct answer.
 - a. \$10.00
 - b. \$12.00
 - c. \$14.00
 - d. \$16.00
 - e. \$18.00
2. Show at least three different combinations of bills to illustrate how much money Sarah must have to buy the food items.

| | | |
|--|--|--|
| | | |
|--|--|--|

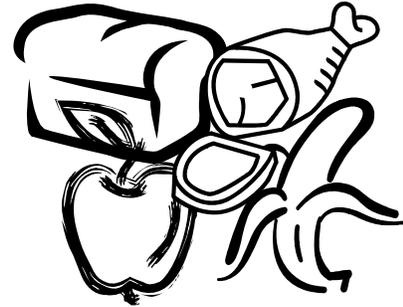
3. Using a calculator, find the exact cost of Sarah's birthday meal. \$ _____
4. If Sarah invites seven friends to her party, how much will the meal cost for each person at the party (include Sarah)? _____
5. On the circle below, show how you would divide Sarah's cake for Sarah and her seven friends. How many pieces do you have? _____
6. How much of the cake did each person have to eat? _____



Sarah's Birthday Lunch

Sarah is planning to have a special birthday lunch with her friends. At her birthday lunch, she will have ham and cheese sandwiches, fresh fruit, baked chips and birthday cake. She needs to buy the following items to prepare her special meal:

| | | |
|-------------------|--------|----------|
| Sliced ham | \$1.89 | (\$2.00) |
| Sliced cheese | \$2.20 | (\$2.00) |
| Whole-wheat bread | \$1.99 | (\$2.00) |
| Fresh fruit | \$2.69 | (\$3.00) |
| Baked chips | \$2.89 | (\$3.00) |
| Birthday cake | \$3.88 | (\$4.00) |



1. Estimate how much Sarah has to pay for her birthday lunch. Round off to the nearest dollar to get the estimated cost of the meal. If there is no sales tax, what is the estimated cost of the meal? Show your work. Circle the correct answer.

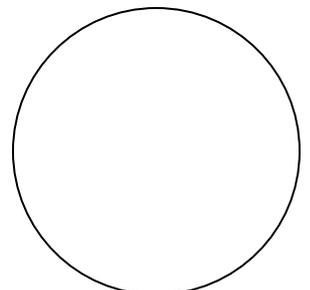
$2.00 + 2.00 + 2.00 + 3.00 + 3.00 + 4.00 = 16.00$

- a. \$10.00
- b. \$12.00
- c. \$14.00
- d. \$16.00**
- e. \$18.00

2. Show at least three different combinations of bills to illustrate how much money Sarah must have to buy the food items.

| | | |
|--|--|-----------------------------------|
| <p>3 five-dollar bills 1 one-dollar bill</p> | <p>1 ten-dollar bill 1 five-dollar bill 1 one-dollar bill</p> | <p>16 one-dollar bills</p> |
|--|--|-----------------------------------|

3. Using a calculator, find the exact cost of Sarah's birthday meal. **\$15.54**
4. If Sarah invites seven friends to her party, how much will the meal cost for each person at the party (include Sarah)? **\$1.94** **$\$15.54/8 = \$1.94$**
5. On the circle below, show how you would divide Sarah's cake for Sarah and her seven friends. How many pieces do you have? **8**
6. How much of the cake did each person have to eat? **1/8**



Name _____

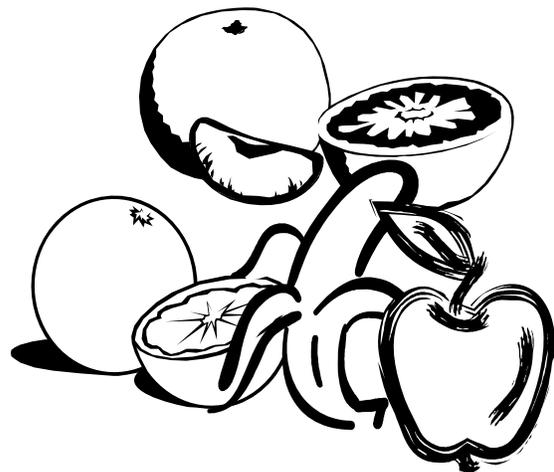
Who Has What Fruit?

Directions: Four friends, Austin, Juan, Andrea and Tashieka are eating fruit. Each person has a different fruit. Use the clues to match the person with their fruit. If a choice can be removed by reading the clues, write NO in that space on the chart. Write YES in the right place on the chart to show which fruit each person has.

| | Banana | Apple | Orange | Grapefruit |
|----------|--------|-------|--------|------------|
| Austin | | | | |
| Juan | | | | |
| Andrea | | | | |
| Tashieka | | | | |

Clues

1. Austin's favorite fruit is round.
2. The name of Juan's fruit has two syllables.
3. Tashieka sat next to her friend who had a red fruit.
4. Juan sat next to his friend who has a fruit with three syllables in its name.
5. The name of Tashieka's fruit is not a compound word.
6. Austin enjoys watching his friend eat grapefruit.
7. Andrea likes to squeeze her fruit to get the juice.
8. The name of Andrea's fruit is not a compound word.
9. Austin sat next to his friend who has a fruit with an orange-colored peel.
10. Andrea's fruit was smaller than Juan's fruit.



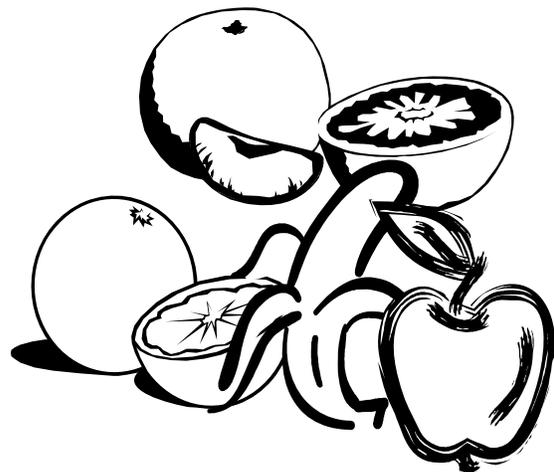
Who Has What Fruit?

Directions: Four friends, Austin, Juan, Andrea and Tashieka are eating fruit. Each person has a different fruit. Use the clues to match the person with their fruit. If a choice can be removed by reading the clues, write NO in that space on the chart. Write YES in the right place on the chart to show which fruit each person has.

| | Banana | Apple | Orange | Grapefruit |
|----------|--------|-------|--------|------------|
| Austin | NO | YES | NO | NO |
| Juan | NO | NO | NO | YES |
| Andrea | NO | NO | YES | NO |
| Tashieka | YES | NO | NO | NO |

Clues

1. Austin's favorite fruit is round.
2. The name of Juan's fruit has two syllables.
3. Tashieka sat next to her friend who had a red fruit.
4. Juan sat next to his friend who has a fruit with three syllables in its name.
5. The name of Tashieka's fruit is not a compound word.
6. Austin enjoys watching his friend eat grapefruit.
7. Andrea likes to squeeze her fruit to get the juice.
8. The name of Andrea's fruit is not a compound word.
9. Austin sat next to his friend who has a fruit with an orange-colored peel.
10. Andrea's fruit was smaller than Juan's fruit.



Grade 3

Put a Rainbow in Your Day

Math Objectives

- Develop fluency with multiplication from 1x1 to 12x12 and division up to two-digit by one-digit numbers using strategies for multiplying and dividing numbers.
- Use area or region models and set models of fractions to explore part-whole relationships.

English Language Arts Objectives

- Use correct capitalization and punctuation, underlining book titles, period after initials and abbreviated titles and appropriate contractions.
- Use correct subject/verb agreement.

Materials Needed

- Poster paper
- Crayons

Teacher Resources

- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *Fruit and Veggie Nutrients*
- *Making Sense of Fruit and Veggie Nutrients*
- *Fruit and Veggie Colors*

Handouts

- *Put a Rainbow in Your Day Questionnaire*
- *Put a Rainbow in Your Day Math*
- *Put a Rainbow in Your Day Sentences*
- *Rainbow Shopping*

Focus

Pass out copies of the *Put a Rainbow in Your Day Questionnaire*. You can read the questions to the students or have the students read it to themselves. Ask the students to check if they agree or disagree with the sentences.

Teacher Input

Using the teacher resources *What foods are in the fruit group?*, *What foods are in the vegetable group?*, *Fruit and Veggie Nutrients*, *Making Sense of Fruit and Veggie Nutrients* and *Fruit and Veggie Colors*, discuss with students how eating a lot of fruits and veggies every day helps them to stay healthy.

Talking points:

- Fruits and veggies have many vitamins, minerals, fiber and phytonutrients (fight-o-nutrients) to help us do better in school, have more energy to play, keep us from getting sick and help our bodies to work better.
- The different types of phytonutrients found in veggies and fruits are grouped by color. There are five color groups: red, green, yellow/orange, blue/purple and white.
- The red group includes fruits and veggies such as tomatoes, watermelon, cranberries, strawberries, red apples and red cabbage.
- The green group includes fruits and veggies like broccoli, green cabbage, romaine lettuce, kiwifruit and honeydew melon.
- The yellow/orange group includes fruits and veggies like carrots, sweet potatoes, cantaloupe, apricots, oranges, tangerines, pineapple and yellow raisins.
- The blue/purple group includes fruits and veggies such as blueberries, blackberries, purple grapes, raisins and plums.
- The white group includes fruits and veggies such as cauliflower, bananas, pears, potatoes and turnips.

To expand students' knowledge, consider having them create a poster with additional examples of fruits and veggies that can be found in each of the five color groups. Are any of the fruits and veggies ones that they have eaten in relationship to the USDA Fresh Fruit and Vegetable Program?

Practice and Assessment

Distribute the *Put a Rainbow in Your Day Math* handout. Direct students to answer the questions. Distribute the *Put a Rainbow in Your Day Sentences* handout. Review the directions with the students. Ask the students to write the corrected sentence.

Additional Activity (additional handouts and/or materials needed)

Distribute the *Rainbow Shopping* handout. Students can take it home or work in pairs to complete the answers.

Name _____

Put a Rainbow in Your Day Questionnaire

Think about the foods that you eat every day. Do you eat a lot of fruits and veggies? For each statement below, check whether you agree or disagree.

- | | Agree | Disagree |
|--|-----------------------|-----------------------|
| 1. MyPyramid suggests that you eat 1 cup of veggies and $\frac{1}{2}$ cup of fruit every day. | <input type="radio"/> | <input type="radio"/> |
| 2. Fruits and veggies have vitamins and minerals. | <input type="radio"/> | <input type="radio"/> |
| 3. Fruits and veggies can be grouped by color. | <input type="radio"/> | <input type="radio"/> |
| 4. Bananas belong to the yellow/orange group. | <input type="radio"/> | <input type="radio"/> |
| 5. Grouping fruits and veggies by color is an easy way to remember to eat a variety of fruits and veggies. | <input type="radio"/> | <input type="radio"/> |
| 6. Strawberries belong in the red group. | <input type="radio"/> | <input type="radio"/> |
| 7. Eating fruits and veggies from each of the 5 color groups and being active will help you stay fit. | <input type="radio"/> | <input type="radio"/> |
| 8. I eat colorful fruits and veggies every day. | <input type="radio"/> | <input type="radio"/> |



Put a Rainbow in Your Day Questionnaire

Think about the foods that you eat every day. Do you eat a lot of fruits and veggies? For each statement below, check whether you agree or disagree.

- | | Agree | Disagree |
|--|----------------------------------|----------------------------------|
| 1. MyPyramid suggests that you eat 1 cup of veggies and ½ cup of fruit every day. MyPyramid suggests that we eat 2 to 2½ cups of vegetables and 1½ to 2 cups of fruit every day. | <input type="radio"/> | <input checked="" type="radio"/> |
| 2. Fruits and veggies have vitamins and minerals. Fruits and vegetables provide many vitamins and minerals our bodies need to stay healthy. For example, vitamin A helps keep our eyes healthy. It can be found in carrots, cantaloupes and sweet potatoes. | <input checked="" type="radio"/> | <input type="radio"/> |
| 3. Fruits and veggies can be grouped by color. Fruits and vegetables can be grouped into five colors: blue/purple, green, white, yellow/orange and red. | <input checked="" type="radio"/> | <input type="radio"/> |
| 4. Bananas belong to the yellow/orange group. Only the skin of the banana is yellow. The part you eat is white, and that is what counts. | <input type="radio"/> | <input checked="" type="radio"/> |
| 5. Grouping fruits and veggies by color is an easy way to remember to eat a variety of fruits and veggies. Since the different color groups give us different nutrients and other things our bodies need, you should eat from each group every day. You should also try to eat different fruits and vegetables within each group. | <input checked="" type="radio"/> | <input type="radio"/> |
| 6. Strawberries belong in the red group. Strawberries are in the red group. They are a good source of vitamin C. | <input checked="" type="radio"/> | <input type="radio"/> |
| 7. Eating fruits and veggies from each of the 5 color groups and being active will help you stay fit. It is not enough to eat your colors every day. Activity is an important part of a healthy lifestyle, too. It helps to keep your muscles strong, helps you to maintain your body weight, and makes you feel good. | <input checked="" type="radio"/> | <input type="radio"/> |
| 8. I eat colorful fruits and veggies every day. Answers will vary, but stress that "Agree" is the desired answer. Everyone should eat at least 2 to 2½ cups of vegetables and 1½ to 2 cups of fruit every day. | <input type="radio"/> | <input type="radio"/> |



Name _____

Put a Rainbow in Your Day

Math

Directions: Answer the questions by putting the correct number or fraction in the space.
Show your work.

1. Kristen has 8 tomatoes in her garden. She will divide them among her 4 friends. How many tomatoes will she give to each friend? _____



2. Tom picked 10 bunches of cherries. He will share them equally with his friend David. How many bunches of cherries will each of the boys get? _____

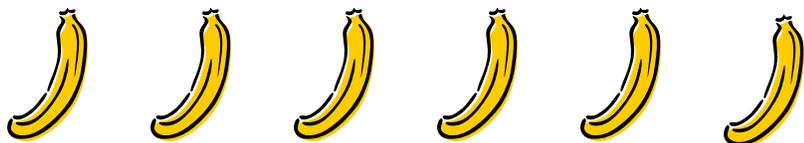


3. Shameka has 3 apples to share with her 6 friends. Divide the apples so each one of her friends can have a piece.



How much of the apple will each of her friends have to eat? _____

4. Jose buys 6 bananas to share with his soccer team. There are 12 boys on the team. How much of a banana will each boy get to eat? _____



5. Houg has 12 strawberries to share with her 3 sisters. If Houg divides the strawberries so that she and her 3 sisters get an equal number, how many strawberries will each girl get? _____

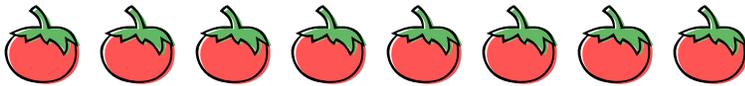


Put a Rainbow in Your Day

Math

Directions: Answer the questions by putting the correct number or fraction in the space.
Show your work.

1. Kristen has 8 tomatoes in her garden. She will divide them among her 4 friends. How many tomatoes will she give to each friend? **2 tomatoes**



2. Tom picked 10 bunches of cherries. He will share them equally with his friend David. How many bunches of cherries will each of the boys get? **5 bunches**

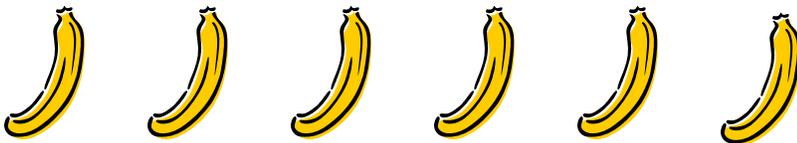


3. Shameka has 3 apples to share with her 6 friends. Divide the apples so each one of her friends can have a piece.



How much of the apple will each of her friends have to eat? $\frac{1}{2}$ **apple**

4. Jose buys 6 bananas to share with his soccer team. There are 12 boys on the team. How much of a banana will each boy get to eat? $\frac{1}{2}$ **banana**



5. Houg has 12 strawberries to share with her 3 sisters. If Houg divides the strawberries so that she and her 3 sisters get an equal number, how many strawberries will each girl get? **4 strawberries**



Name _____

Put a Rainbow in Your Day

Sentences

Directions: Read each sentence. There is at least one mistake in the underlined part of each sentence. The mistake may be spelling, punctuation, capitalization, word usage or in sentence structure. Rewrite the sentence correctly on your own paper.

1. I eat colorful fruits and veggies every day?
2. Broccoli and green apples is part of the green group
3. Choose lots of fruits and veggies for you're daily diet.
4. Have you read the book Fruits and Vegetables by T B murphy.
5. Oranges are grown in the state of florida
6. Fruits and Veggies are a good source of fiber.
7. Know one fruit can give us all of the vitamins that we need.
8. eating a lot of fruits and veggies will help you stay healthy.
9. What does putting a rainbow in your day tell us.
10. One of our favorite veggies that we eat at thanksgiving is from the orange group. What veggie is it?



Put a Rainbow in Your Day

Sentences

Directions: Read each sentence. There is at least one mistake in the underlined part of each sentence. The mistake may be spelling, punctuation, capitalization, word usage or in sentence structure. Rewrite the sentence correctly on your own paper.

1. I eat colorful fruits and veggies every day.
2. Broccoli and green apples are part of the green group.
3. Choose lots of fruits and veggies for your daily diet.
4. Have you read the book Fruits and Vegetables by T.B. Murphy?
5. Oranges are grown in the state of Florida.
6. Fruits and veggies are a good source of fiber.
7. No one fruit can give us all of the vitamins that we need.
8. Eating a lot of fruits and veggies will help you stay healthy.
9. What does putting a rainbow in your day tell us?
10. One of our favorite veggies that we eat at Thanksgiving is from the orange group. What veggie is it?



Name _____

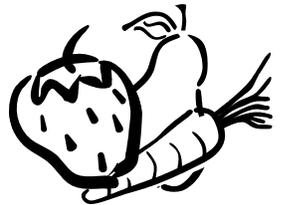
Rainbow Shopping

Part 1

Directions: You are helping out with the food shopping. Your job is to buy the fruits and veggies, but your shopping list got all mixed up. First, unscramble the words to find out what you need to buy. Then, circle the words on your list with crayons, colored pencils or colored pens to show the group in which each fruit and veggie belongs (think about the five color groups).



1. rieserch _____
2. nedcan estotoma _____
3. deird goman _____
4. plepineap iceju _____
5. nanabas _____
6. achspin _____
7. colibroc _____
8. pleganteg _____
9. berblrieuse _____
10. zenfro saep _____



Part 2

Directions: You can find fruits and veggies all over the supermarket because they come in different forms. For example, pineapples can be found in the produce section as fresh fruit, in the dairy case as pineapple juice, in the frozen food section as frozen juice, in the canned goods section and in the dried fruit section. Think about the fruits and veggies below. Depending upon their form, where might you find them in the supermarket? Mark an "X" under the sections where you might find each fruit and veggie.

| | Produce | Dairy | Frozen Foods | Packaged/Canned Goods |
|-------------|---------|-------|--------------|-----------------------|
| Grapes | | | | |
| Cauliflower | | | | |
| Green beans | | | | |
| Mushrooms | | | | |
| Tomatoes | | | | |
| Potatoes | | | | |
| Peaches | | | | |
| Blueberries | | | | |
| Carrots | | | | |
| Oranges | | | | |

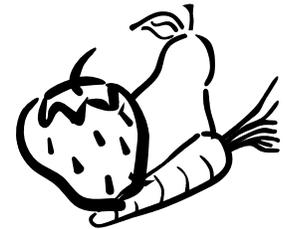
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- | | | |
|-----|-----------------|------------------------|
| 1. | rieserch | <u>cherries</u> |
| 2. | nedcan estotoma | <u>canned tomatoes</u> |
| 3. | deird goman | <u>dried mango</u> |
| 4. | plepineap iceju | <u>pineapple juice</u> |
| 5. | nanabas | <u>bananas</u> |
| 6. | achspin | <u>spinach</u> |
| 7. | colibroc | <u>broccoli</u> |
| 8. | pleganteg | <u>eggplant</u> |
| 9. | berblrieuse | <u>blueberries</u> |
| 10. | zenfro saep | <u>frozen peas</u> |



Part 2

Directions: You can find fruits and veggies all over the supermarket because they come in different forms. For example, pineapples can be found in the produce section as fresh fruit, in the dairy case as pineapple juice, in the frozen food section as frozen juice, in the canned goods section and in the dried fruit section. Think about the fruits and veggies below. Depending upon their form, where might you find them in the supermarket? Mark an "X" under the sections where you might find each fruit and veggie.

| | Produce | Dairy | Frozen Foods | Packaged/Canned Goods |
|-------------|---------|-------|--------------|-----------------------|
| Grapes | X | | | X |
| Cauliflower | X | | X | X |
| Green beans | X | | X | X |
| Mushrooms | X | | | X |
| Tomatoes | X | | | X |
| Potatoes | X | | X | X |
| Peaches | X | | X | X |
| Blueberries | X | | X | X |
| Carrots | X | | X | X |
| Oranges | X | X | X | X |

Grade 4

Grade 4

Finding Fiber

Math Objectives

- Develop fluency with multiplication and division.
- Develop fluency with addition and subtraction of non-negative rational numbers with like denominators, including decimal fractions through hundredths.

English Language Arts Objectives

- Use reference materials (e.g. glossary, dictionary, thesaurus) to identify and comprehend unknown words.
- Interact with the text before, during and after reading, listening and viewing by locating relevant information and making connections with previous experiences, information and ideas.

Materials Needed

- Poster of MyPyramid for Kids
- Small can of orange juice
- 1 whole orange
- Top of a Bic Pen
- Paper clips (3 of various sizes)

Teacher Resources

- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *Fruit and Veggie Nutrients*
- *Fruit and Veggie Colors*
- *MyPyramid for Kids*
- *Anatomy of MyPyramid*
- *Teaching MyPyramid*

Handouts

- *Finding Fiber*
- *Finding Fiber Word Problems*
- *Vegetable Orders*
- *Fruit and Vegetable Identification*

Focus

Show the students a can of orange juice and a whole orange. Tell them that both are fruits and both of them are healthy choices. Ask them which one is better and why. Both have vitamin C but the whole orange has more fiber than the juice – about 3 grams compared to 0.5 grams. Fiber is known as your body’s broom because it helps keep your digestive tract healthy. Fiber is only found in plant-based foods like fruits, veggies and whole-grain cereals and breads. Animal

products like milk, meat and cheese contain no fiber. Eating fruits and veggies is a great way to get your fiber every day.

Teacher Input

Using the teacher resources *What foods are in the fruit group?*, *What foods are in the vegetable group?* and all three MyPyramid resources, discuss with students how fruits and veggies fit into their daily diet.

Talking points:

- In MyPyramid, each band of color shows different types of foods we can eat each day to help us grow and play.
- The green band is for veggies and the red is for fruits.
- The green and red bands are wider than the purple band, for example, because a large part of our daily diet needs to be made up of fruits and veggies in order to stay healthy.
- It is especially important to choose veggies that are dark green, like broccoli, spinach and dark green lettuce, and veggies that are orange, such as sweet potatoes and carrots.
- Fruits do not always need to be fresh, but also can be canned, frozen or dried. Students can expand their knowledge by providing the class with examples of these different forms.
- MyPyramid for Kids suggests that fourth graders eat 1½ to 2 cups of fruits and 2 to 2½ cups of veggies every day.

Using the teacher resources *What foods are in the fruit group?*, *What foods are in the vegetable group?*, *Fruit and Veggie Nutrients*, and *Fruit and Veggie Colors*, discuss with students how fruits and veggies help them stay healthy, specifically pointing out the role fiber plays.

Talking points:

- Eating plenty of different fruits and veggies helps protect us from getting sick.
- Fruits and veggies are good sources of essential vitamins, minerals and fiber.
- Fiber is found in other foods, like whole grain breads, cereals and legumes.
- Fiber is measured in grams. A gram is a unit of measure. The number of grams of fiber kids need can be found by adding 5 to the child's age. As a basis for comparison, a plastic cap of a Bic pen weighs about 1 gram and a paper clip can weigh between 0.5 to 1.5 grams.
- Instruct students to calculate how many grams of fiber they need each day.

Practice and Assessment

Distribute the *Finding Fiber* handout. Instruct students to find the fruit or veggie that has the most fiber, a sweet potato. Tell the students that sweet potatoes are a good source of vitamins A and C as well as a good source of fiber. Instruct students to circle any fruits and veggies in the list that they have eaten as part of the USDA Fresh Fruit and Vegetable Program. Instruct students to pick three to five fruits and veggies that would give them the total grams of fiber they need for the day.

Distribute the *Finding Fiber Word Problems* handout and instruct students to complete it.

Distribute the *Vegetable Orders* handout to students and allow the students to work in pairs. Challenge students to read the clues about ordering veggies in order to solve the puzzle.

Additional Activity (additional handouts and/or materials needed)

Distribute the *Fruit and Vegetable Identification* handout. Direct students to see how many of the fruits and veggies they can identify. Instruct students to use the dictionary if they are not sure of the spelling. If you do not have a color copy of the *Fruit and Vegetable Identification* handout, you may need to tell the students the colors of some of the fruits and veggies.



Finding Fiber in Fruits and Veggies

Fiber is important for a healthy diet. Fiber has no calories. It helps to keep your digestive tract healthy. Fiber is only found in plant-based foods like fruits, veggies and whole-grain breads and cereals. Animal products like milk, meat and cheese do not have fiber. Eating fruits and veggies is a great way to get your fiber every day.

| Fruit or Veggie | Serving Size | Dietary Fiber (in grams) |
|-----------------|---------------------------------|--------------------------|
| Apple | 1 medium apple | 3.3 |
| Asparagus | 5 medium stalks | 1.7 |
| Avocado | 1/5 medium avocado | 2.4 |
| Banana | 1 medium banana | 3.1 |
| Bell pepper | 1/2 medium pepper | 1.0 |
| Blueberry | 1 cup blueberries | 3.5 |
| Broccoli | 1/2 cup raw or steamed broccoli | 1.1 |
| Cabbage | 1 cup chopped cabbage | 2.0 |
| Cantaloupe | 1 cup cubed melon | 1.4 |
| Carrot | 1 medium or 8 baby carrots | 1.7 |
| Cherry | 15 cherries | 2.1 |
| Corn | 1/2 cup cooked corn | 2.4 |
| Grape | 17 grapes | 0.4 |
| Green Bean | 1/2 cup raw or steamed beans | 1.9 |
| Iceberg Lettuce | 1 cup chopped lettuce | 0.9 |
| Kiwifruit | 1 medium kiwifruit | 2.6 |
| Mango | 1/2 mango | 1.5 |
| Orange | 1 medium orange | 3.1 |
| Peach | 1 medium peach | 1.5 |
| Pineapple | 1/2 cup cubed pineapple | 1.1 |
| Potato | 1 potato baked with skin | 3.6 |
| Raisins | 1/4 cup raisins | 1.5 |
| Strawberry | 8 medium berries | 1.9 |
| Sweet potato | 1 medium sweet potato | 3.8 |
| Tangerine | 1 medium tangerine | 1.5 |
| Tomatoes | 1 medium tomato | 1.6 |
| Watermelon | 1 cup cubed melon | 0.6 |

Name _____

Finding Fiber

Word Problems

1. Which has more fiber?

- | | | |
|--|-----------|--|
| <input type="checkbox"/> ½ cup of broccoli | <u>OR</u> | <input type="checkbox"/> 5 spears of asparagus |
| <input type="checkbox"/> 1 banana | <u>OR</u> | <input type="checkbox"/> 17 grapes |
| <input type="checkbox"/> ½ medium mango | <u>OR</u> | <input type="checkbox"/> 1 cup of cantaloupe |
| <input type="checkbox"/> 1 medium sweet potato | <u>OR</u> | <input type="checkbox"/> ½ cup corn |
| <input type="checkbox"/> 1 baked potato | <u>OR</u> | <input type="checkbox"/> 1 cup of blueberries |

2. Tameka would like to eat more fiber. What five fruits could she eat that would give her the most fiber? How many grams of fiber would she get from the five fruits?

3. What five veggies would give Tameka the most fiber? How many grams of fiber would she get from the five veggies?

4. Cindy is nine years old. In one week, she ate all of the fruits and veggies listed on the chart below. How much fiber did Cindy eat that week? Fill in the chart to find out how much fiber Cindy ate for the week.

| Fruit or Veggie | Number of Servings | Grams of Fiber for One Serving | Total Grams of Fiber |
|-----------------|--------------------|--------------------------------|----------------------|
| apples | 5 | | |
| blueberries | 4 cups | | |
| cabbage | 2 cups | | |
| carrots | 6 | | |
| kiwi | 5 | | |
| sweet potatoes | 3 | | |

Cindy's Total Grams of Fiber for the Week _____

5. What was Cindy's average fiber intake for each day of the week?
6. How much fiber does Cindy need each day for her age?
7. Was Cindy's average fiber intake enough to meet her total daily fiber needs for her age?
8. If not, how much more fiber does she need to get each day from foods such as legumes and whole grain breads and cereals?
9. What fruits and veggies have you eaten at school from the Fresh Fruit and Vegetable Program?
10. What is your favorite fruit and veggie?
11. How many grams of fiber does your favorite fruit and veggie have?



Finding Fiber

Word Problems

1. Which has more fiber?

- | | | | | |
|-------------------------------------|-----------------------|-----------|-------------------------------------|-----------------------|
| <input type="checkbox"/> | ½ cup of broccoli | <u>OR</u> | <input checked="" type="checkbox"/> | 5 spears of asparagus |
| <input checked="" type="checkbox"/> | 1 banana | <u>OR</u> | <input type="checkbox"/> | 17 grapes |
| <input checked="" type="checkbox"/> | ½ medium mango | <u>OR</u> | <input type="checkbox"/> | 1 cup of cantaloupe |
| <input checked="" type="checkbox"/> | 1 medium sweet potato | <u>OR</u> | <input type="checkbox"/> | ½ cup corn |
| <input checked="" type="checkbox"/> | 1 baked potato | <u>OR</u> | <input type="checkbox"/> | 1 cup of blueberries |

2. Tameka would like to eat more fiber. What five fruits could she eat that would give her the most fiber? How many grams of fiber would she get from the five fruits?

| | |
|--------------------------|-------------------|
| 1 cup blueberries | 3.5 grams |
| 1 apple | 3.3 grams |
| 1 banana | 3.1 grams |
| 1 orange | 3.1 grams |
| 1 kiwifruit | 2.6 grams |
| Total | 15.6 grams |

3. What five veggies would give Tameka the most fiber? How many grams of fiber would she get from the five veggies?

| | |
|---------------------------------|-------------------|
| 1 medium sweet potato | 3.8 grams |
| 1 baked potato with skin | 3.6 grams |
| ½ cup corn | 2.4 grams |
| 1 cup chopped cabbage | 2.0 grams |
| ½ cup green beans | 1.9 grams |
| Total | 13.7 grams |

4. Cindy is nine years old. In one week, she ate all of the fruits and veggies listed on the chart below. How much fiber did Cindy eat that week? Fill in the chart to find out how much fiber Cindy ate for the week.

| Fruit or Veggie | Number of Servings | Grams of Fiber for One Serving | Total Grams of Fiber |
|-----------------|--------------------|--------------------------------|----------------------|
| apples | 5 | 3.3 | 16.5 |
| blueberries | 4 cups | 3.5 | 14 |
| cabbage | 2 cups | 2.0 | 4 |
| carrots | 6 | 1.6 | 9.6 |
| kiwi | 5 | 2.6 | 13 |
| sweet potatoes | 3 | 3.8 | 11.4 |

Cindy's Total Grams of Fiber for the Week 68.5

5. What was Cindy's average fiber intake for each day of the week?
68.5 grams/7 = 9.78 grams
6. How much fiber does Cindy need each day for her age?
9 years old + 5 = 14 grams
7. Was Cindy's average fiber intake enough to meet her total daily fiber needs for her age?
No
8. If not, how much more fiber does she need to get each day from foods such as legumes and whole grain breads and cereals?
4.22 grams
9. What fruits and veggies have you eaten at school from the Fresh Fruit and Vegetable Program?
Answers will vary
10. What is your favorite fruit and veggie?
Answers will vary
11. How many grams of fiber does your favorite fruit and veggie have?
Answers will vary



Name _____

Vegetable Orders

Directions: Jane, Beverly, Michael and Joseph went to a restaurant. Each person had **two** vegetables as a part of their meal. Read the clue to match the person with their vegetable choices. Each vegetable can only be chosen by **one** person. If a choice can be eliminated by reading the clues, write NO in the space on the chart. Write YES in the correct place on the chart to identify the two vegetables chosen by each person.

| | Peas \$.49 | Cabbage \$.49 | Potato \$.99 | Broccoli \$.85 | Greens \$.75 | Carrots \$.59 | Corn \$.75 | Celery \$.30 |
|---------|---------------|------------------|-----------------|-------------------|-----------------|------------------|---------------|-----------------|
| Jane | | | | | | | | |
| Beverly | | | | | | | | |
| Michael | | | | | | | | |
| Joseph | | | | | | | | |

CLUES

- Michael chose one vegetable that cost \$.75.
- Each of Jane's vegetables cost less than \$.75.
- Beverly did not choose a vegetable that cost \$.49.
- Jane did not choose cabbage.
- Michael's friend chose celery.
- Jane did not order a vegetable that cost \$.75.
- One of Michael's vegetables was a green vegetable.
- Joseph sat next to his friend who chose peas.
- Beverly did not order the most expensive vegetable on the menu.
- One of Beverly's vegetables cost more than corn.
- Michael sat next to his friend who ordered cabbage.
- Joseph did not choose a vegetable that cost more than \$.50.
- Michael sat next to his friend who chose peas.
- Beverly's total cost for her two vegetables was \$1.60.
- Beverly's friend chose celery.
- Jane did not choose a vegetable that cost more than \$.85.
- Joseph chose two green vegetables.
- One of Beverly's choices was not greens.
- Beverly chose one green vegetable and one yellow vegetable.
- Beverly did not choose a vegetable that cost \$.59.
- Joseph's total cost for his two vegetables was less than \$1.00.
- Michael sat next to his friend who ordered corn.
- One of Jane's vegetable choices was not the least expensive on the menu.
- One of Jane's vegetable choices cost less than corn but more than cabbage.
- Michael bought one vegetable that cost more than broccoli.



Vegetable Orders

Directions: Jane, Beverly, Michael and Joseph went to a restaurant. Each person had **two** vegetables as a part of their meal. Read the clue to match the person with their vegetable choices. Each vegetable can only be chosen by **one** person. If a choice can be eliminated by reading the clues, write NO in the space on the chart. Write YES in the correct place on the chart to identify the two vegetables chosen by each person.

| | Peas \$.49 | Cabbage \$.49 | Potato \$.99 | Broccoli \$.85 | Greens \$.75 | Carrots \$.59 | Corn \$.75 | Celery \$.30 |
|---------|---------------|------------------|-----------------|-------------------|-----------------|------------------|---------------|-----------------|
| Jane | YES | NO | NO | NO | NO | YES | NO | NO |
| Beverly | NO | NO | NO | YES | NO | NO | YES | NO |
| Michael | NO | NO | YES | NO | YES | NO | NO | NO |
| Joseph | NO | YES | NO | NO | NO | NO | NO | YES |

CLUES

- Michael chose one vegetable that cost \$.75.
- Each of Jane's vegetables cost less than \$.75.
- Beverly did not choose a vegetable that cost \$.49.
- Jane did not choose cabbage.
- Michael's friend chose celery.
- Jane did not order a vegetable that cost \$.75.
- One of Michael's vegetables was a green vegetable.
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Fruit and Veggie Identification



1



2



3



4



5



6



7



8



9



10



11



12



13



14



15



16



17



18



19



20



21



22



23



24



25



26



27



28



29



30



31



32

Fruit and Veggie Identification

Answer Key

1. peaches
2. carrots
3. peas
4. grapefruit
5. raspberries
6. banana
7. zucchini
8. cantaloupe
9. tomatoes
10. watermelon
11. asparagus
12. potatoes
13. chili peppers
14. pineapple
15. corn
16. sweet potatoes
17. bell peppers
18. apples
19. strawberries
20. blueberries
21. kiwifruit
22. raisins
23. green beans
24. cauliflower
25. celery
26. pears
27. apricots
28. oranges
29. broccoli
30. plums
31. grapes
32. spinach

Grade 4

The Sweet, Sweet Potato

Math Objectives

- Develop fluency with multiplication and division (larger numbers with calculators).
- Develop fluency with addition and subtraction of non-negative rational numbers with like denominators, including decimal fractions through hundredths (larger numbers with calculator).
- Collect, organize and display data (including line graphs and bar graphs) to solve problems.

English Language Arts Objectives

- Demonstrate understanding in speaking and writing.
- Elaborate information and ideas in writing and speaking.
- Compose multiple paragraphs.

Materials Needed

- Calculators

Teacher Resources

- *Home Sweet Home, Sweet Potato*
- *Fruit and Veggie Nutrients*
- *Making Sense of Fruit and Veggie Nutrients*
- *Dietary Reference Intakes*

Handouts

- *Sweet Potato Math Puzzle*
- *Eating Smart with Sweet Potatoes*
- *Sweet Potato Graph*
- *Grow a Sweet Potato House Plant*

Focus

Distribute the *Sweet Potato Math Puzzle* handout. Direct student to answer the questions. Review the answers and discuss these sweet potato facts. Even though we call the sweet potato a potato, it is not in the potato family. Potatoes are tubers and sweet potatoes are roots. Vitamin A is found in orange and yellow veggies, such as sweet potatoes, yellow squash, carrots, pumpkins and cantaloupe. Sweet potatoes are one of the best sources of vitamin A. Vitamin A helps us to see better and fights infections in the body.

Teacher Input

Using the teacher resource *Home Sweet Home, Sweet Potato*, discuss with students the historical significance of sweet potatoes in the United States and, specifically, in North Carolina.

Talking points:

- Native Americans were the first to grow sweet potatoes in the U.S.
- Sweet potatoes have been growing in the south for more than 300 years.
- North Carolina produces almost half of the sweet potatoes in the U.S.
- Sweet potatoes are often part of the Thanksgiving meal.
- The sweet potato is the official vegetable of North Carolina. It became the state vegetable in 1995 because of fourth graders! The fourth grade students of Elvie Street School in Wilson, NC campaigned for two years to make the sweet potato the state vegetable.

Using the teacher resources *Fruit and Veggie Nutrients*, *Making Sense of Fruit and Veggie Nutrients* and *Dietary Reference Intakes*, talk to students about the nutritional importance of sweet potatoes.

Talking points:

- Sweet potatoes are a good source of Vitamin A.
- Vitamin A helps us to see better and protects the body from infections.
- Sweet potatoes provide us with many other vitamins and minerals.
- Every day we need a certain amount of vitamins and minerals. The amounts that we need are called Dietary Reference Intakes, or DRIs.

Practice and Assessment

Instruct students to write a story about the sweet potato. Suggested topics include: *Why is the sweet potato called sweet?* or *How does the sweet potato feel at Thanksgiving?*, etc. Remind them to make sure the story has a beginning, middle and end, to write in complete sentences, and to use correct grammar, spelling, punctuation and capitalization.

Distribute *Eating Smart with Sweet Potatoes* handout. Review the directions with the students. After the students have completed the exercise, provide them with the *Sweet Potato Graph* handout and instruct them to draw a bar graph showing the percentages of nutrient that are provided by eating one medium baked sweet potato with skin.

Additional Activity (additional handouts and/or materials needed)

Use the *Grow a Sweet Potato House Plant* handout to grow a plant. This activity can be done in the classroom or at home.

Name: _____

Sweet Potato Math Puzzle

Sweet potatoes deliver a knock out punch of vitamin A. Vitamin A helps us see better and fight infections.

Find out how many cups of broccoli it takes to equal the amount of vitamin A in just one sweet potato. Do the following math problems and write your answers down as you go.

1. Start with the number of pounds in a ton. _____

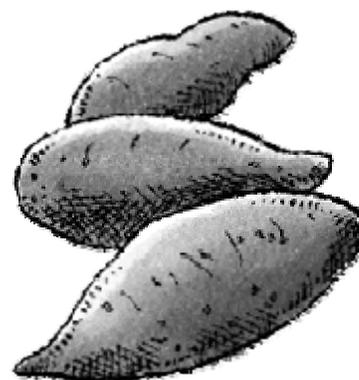
2. Divide that by the number of years in a century. _____

3. Multiply that by the number of fingers on one hand (including the thumb). _____

4. Now subtract from that number the number that is $\frac{9}{10}$ ths of the lowest positive three-digit number. _____

5. Lastly, add to that number the number that is considered "bad luck", especially on Fridays. Now enter the final magic number in the box!

This is the number of cups of broccoli it takes to equal the vitamin A content in just one sweet potato!



Sweet Potato Math Puzzle

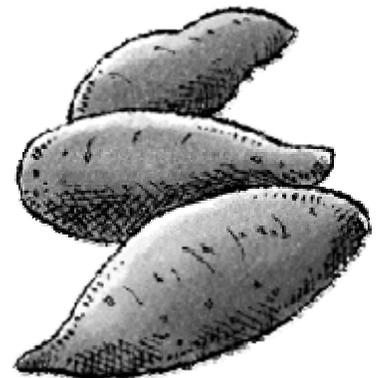
Sweet potatoes deliver a knock out punch of vitamin A. Vitamin A helps us see better and fight infections.

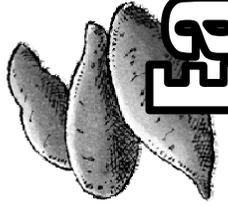
Find out how many cups of broccoli it takes to equal the amount of vitamin A in just one sweet potato. Do the following math problems and write your answers down as you go.

1. Start with the number of pounds in a ton. **2000**
2. Divide that by the number of years in a century. (100) **20**
3. Multiply that by the number of fingers on one hand (including the thumb). (5) **100**
4. Now subtract from that number the number that is 9/10ths of the lowest positive three-digit number. (90) **10**
5. Lastly, add to that number the number that is considered "bad luck", especially on Fridays. (13) Now enter the final magic number in the box!

| |
|-----------|
| 23 |
|-----------|

This is the number of cups of broccoli it takes to equal the vitamin A content in just one sweet potato!





Name: _____

Eating Smart with Sweet Potatoes

Directions (use a calculator): In **Table 1** you see how many calories you need each day to stay strong and have energy. You also see the how much of some nutrients you need each day to stay healthy. In **Table 2**, you see the same information for one baked sweet potato with skin. The numbers in both tables have units after them. Work out how much you get if you eat one sweet potato.

1. Divide each number in **Table 2** by each matching number in **Table 1** (round your answers). For example, **Table 2** shows that there are 2.3 grams of protein in a sweet potato. Then, in **Table 1** you see that you need 34 grams of protein each day. Divide 2.3 by 34. You will get the answer 0.068. That rounds up to 0.07.
2. Now, multiply by 100 to get the percent. For example, $0.07 \times 100 = 7\%$. In other words, a sweet potato gives you 7% of the protein you need in a day.
3. Fill in the rest of the answers on **Table 3** below.
4. Graph your answers on the **Sweet Potato Graph**.

Table 1: How much you need each day (For children 8 to 10 years old)

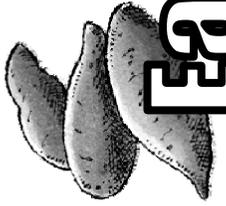
| Calories | Protein | Vitamin E | Vitamin A | Vitamin C | Thiamin | Riboflavin | Niacin | Calcium | Phosphorus | Iron |
|----------|---------|-----------|-----------|-----------|---------|------------|--------|---------|------------|------|
| 2,100 | 34 g | 11 mg | 600 µg | 45 mg | 0.9 mg | 0.9 mg | 12 mg | 1300 mg | 1250 mg | 8 mg |

Table 2: How much there is in one baked sweet potato with skin

| Calories | Protein | Vitamin E | Vitamin A | Vitamin C | Thiamin | Riboflavin | Niacin | Calcium | Phosphorus | Iron |
|----------|---------|-----------|-----------|-----------|---------|------------|--------|---------|------------|--------|
| 103 | 2.3 g | 0.8 mg | 1096 µg | 22.3 mg | 0.1 mg | 0.1 mg | 1.7 mg | 43 mg | 62 mg | 0.8 mg |

Table 3: The percent you get when you eat one sweet potato

| Calories | Protein | Vitamin E | Vitamin A | Vitamin C | Thiamin | Riboflavin | Niacin | Calcium | Phosphorus | Iron |
|----------|---------|-----------|-----------|-----------|---------|------------|--------|---------|------------|------|
| | 7% | | | | | | | | | |



Name: Answer Key

Eating Smart with Sweet Potatoes

Directions (use a calculator): In **Table 1** you see how many calories you need each day to stay strong and have energy. You also see the how much of some nutrients you need each day to stay healthy. In **Table 2**, you see the same information for one baked sweet potato with skin. The numbers in both tables have units after them. Work out how much you get if you eat one sweet potato.

1. Divide each number in **Table 2** by each matching number in **Table 1** (round your answers). For example, **Table 2** shows that there are 2.3 grams of protein in a sweet potato. Then, in **Table 1** you see that you need 34 grams of protein each day. Divide 2.3 by 34. You will get the answer 0.068. That rounds up to 0.07.
2. Now, multiply by 100 to get the percent. For example, $0.07 \times 100 = 7\%$. In other words, a sweet potato gives you 7% of the protein you need in a day.
3. Fill in the rest of the answers on **Table 3** below.
4. Graph your answers on the **Sweet Potato Graph**.

Table 1: How much you need each day (For children 8 to 10 years old)

| Calories | Protein | Vitamin E | Vitamin A | Vitamin C | Thiamin | Riboflavin | Niacin | Calcium | Phosphorus | Iron |
|----------|---------|-----------|-----------|-----------|---------|------------|--------|---------|------------|------|
| 2,100 | 34 g | 11 mg | 600 µg | 45 mg | 0.9 mg | 0.9 mg | 12 mg | 1300 mg | 1250 mg | 8 mg |

Table 2: How much there is in one baked sweet potato with skin

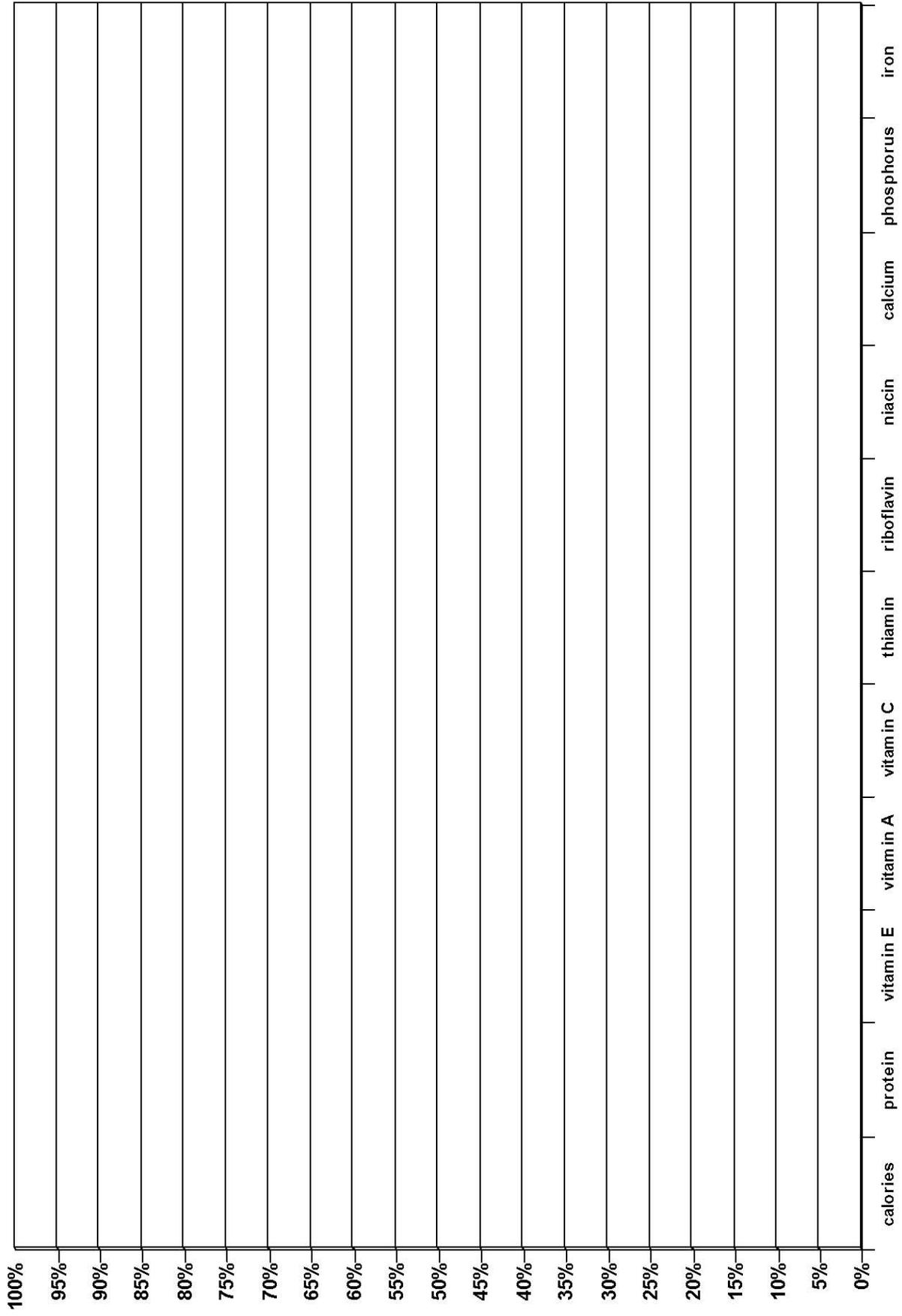
| Calories | Protein | Vitamin E | Vitamin A | Vitamin C | Thiamin | Riboflavin | Niacin | Calcium | Phosphorus | Iron |
|----------|---------|-----------|-----------|-----------|---------|------------|--------|---------|------------|--------|
| 103 | 2.3 g | 0.8 mg | 1096 µg | 22.3 mg | 0.1 mg | 0.1 mg | 1.7 mg | 43 mg | 62 mg | 0.8 mg |

Table 3: The percent you get when you eat one sweet potato

| Calories | Protein | Vitamin E | Vitamin A | Vitamin C | Thiamin | Riboflavin | Niacin | Calcium | Phosphorus | Iron |
|----------|---------|-----------|-----------|-----------|---------|------------|--------|---------|------------|------|
| 5% | 7% | 7% | 183% | 50% | 11% | 11% | 14% | 3% | 5% | 10% |

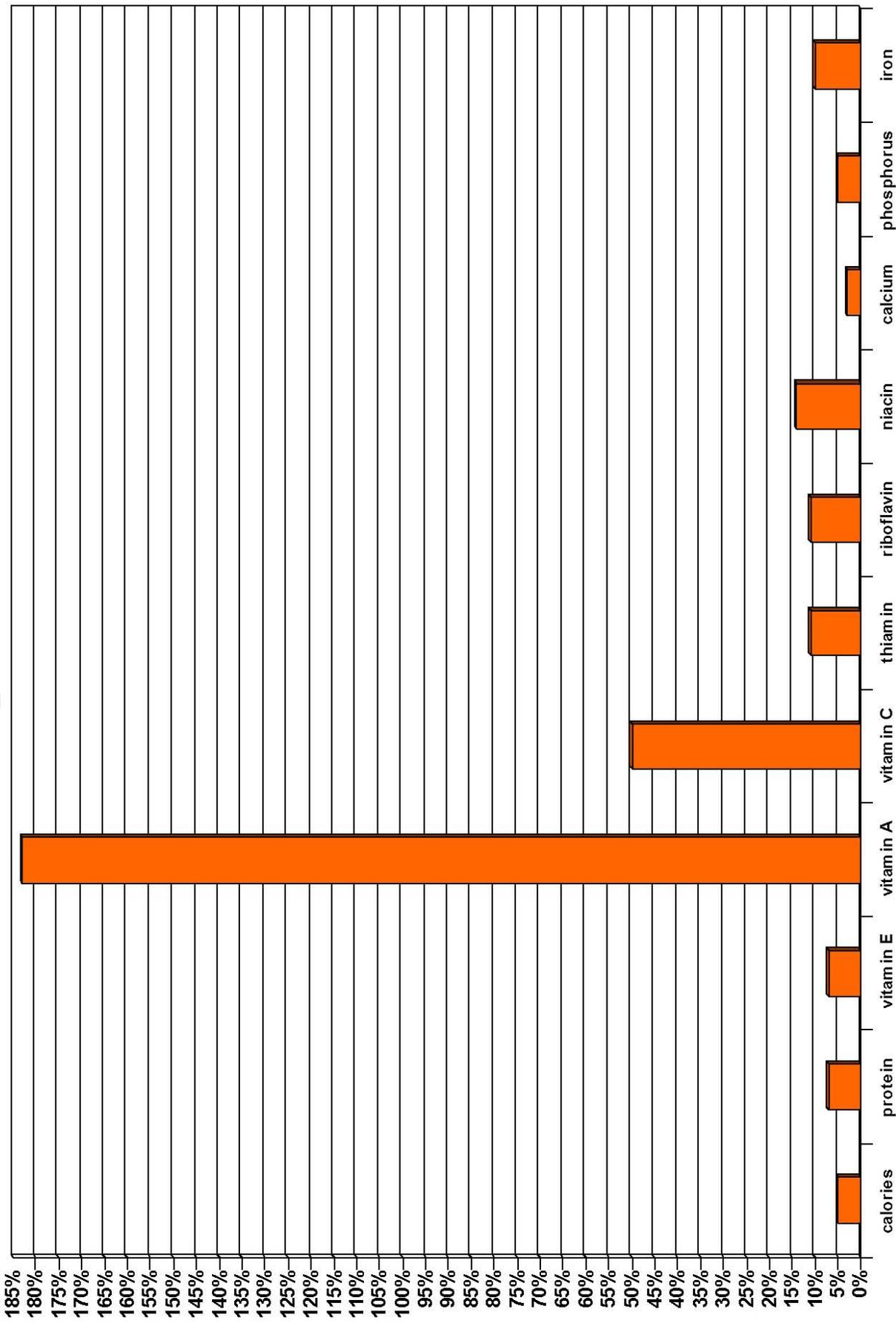
The Sweet Potato DRI Graph

Name _____



The Sweet Potato DRI Graph

Name: Answer Key



Grow a Sweet Potato House Plant

Materials

- Sweet potato
- Toothpicks
- Jar or glass
- Water (non-chlorinated)

Methods

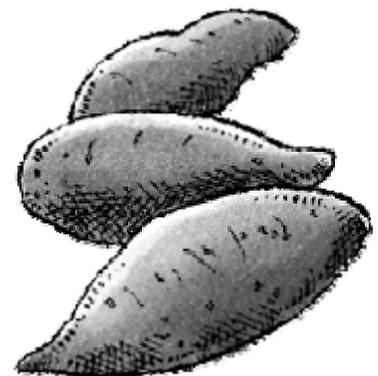
- Wash sweet potato thoroughly.
- Insert toothpicks into the sides of the sweet potato about one-third of the way down.
- Place the sweet potato into the jar.
- Fill the jar with water.

Results

- In about 10 to 15 days the sweet potato will begin to bud.
- For the next 3 to 6 months vines will grow from the sweet potato.
- You can train the vines to climb up or around whatever you choose.

Keeping It Green

- Always keep the jar filled with non-chlorinated water.
- Keep the sweet potato plant in full to moderate sunlight.
- Keep the sweet potato plant at a room temperature at or above 65° F.



Grade 5

Grade 5

Is It a Fruit or Veggie?

Math Objectives

- Developing fluency in adding and subtracting non-negative rational numbers.
- Develop flexibility in solving problems by selecting strategies and using mental computations, estimation, calculators or computers and paper and pencils.
- Identify, define, describe and accurately represent triangles, quadrilaterals and other polygons.

English Language Arts Objectives

- Compose a draft that elaborates on major ideas and adheres to the topic by using an appropriate organizational pattern that accomplishes the purpose of the writing task and effectively communicates its contents.

Materials Needed

- Large green pepper
- MyPyramid for Kids Poster

Teacher Resources

- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *MyPyramid for Kids*
- *Anatomy of MyPyramid*
- *Teaching MyPyramid*
- *Is It a Fruit or a Veggie?*

Handouts

- *Nutritional Seed Search*
- *How Does Your Garden Grow?*

Focus

Show the students a large green pepper and ask them to estimate how many seeds are inside. Instruct them to write the prediction in a sentence. “I predict there are _____ seeds inside the pepper”. Cut the pepper and remove all of the seeds. Give a portion of the seeds to each group and have them count the seeds by 10. Each group must write down their total and double check the number of seeds. Take the totals from each group and write them on the board. Add the numbers to see how many seeds were in the pepper.

Teacher Input

Using the teacher resources, *What foods are in the fruit group?*, *What foods are in the vegetable group?*, all three MyPyramid resources and *Is It a Fruit or a Veggie?*, discuss the difference between fruits and veggies with students.

Talking points:

- One way to identify the difference between fruits and veggies is to look at MyPyramid for Kids. The green band represents veggies, such as tomatoes, green peppers, potatoes, corn and squash, and the red band represents fruits, such as apples, peaches, grapes and bananas.
- How fruits and veggies are defined, however, varies depending upon the person talking about them. A cook is likely to define a fruit or a veggie based on how it tastes (sweet or savory). A scientist, on the other hand, will define a fruit or a veggie based on the part of the plant from which it came; veggies are edible stems, leaves and roots and fruits are the fleshy material that covers a seed or seeds.
- Many foods that are considered veggies from the cooking perspective are actually fruits based on the scientific perspective. For example, tomatoes, cucumbers, beans (green beans), peas, green peppers, corn, eggplant and squash are all fruits.
- No matter how fruits or veggies are classified, it is important to eat many every day!
- To further their understanding of fruit and veggie definitions, relate what students ate from the USDA Fresh Fruit and Vegetable Program to this discussion. Ask students what they ate from the USDA Fresh Fruit and Vegetable Program today. Ask if it was a fruit or a veggie, according to MyPyramid. Ask how they would classify their fruit or veggie if they were scientists. Discuss how their answers varied.

Practice and Assessment

Direct students to write a paragraph about a fruit or veggie that they like to eat. Tell them to explain why they like the fruit or veggie, how it tastes and when they eat it. They can also write why it is a fruit or veggie.

Distribute the *Nutritional Seed Search* handout. Read the directions to the students. Ask the students if there are any fruits or veggies on the list that they have not eaten. Reinforce the importance of eating a variety of fruits and veggies.

Distribute the *How Does Your Garden Grow?* handout and instruct students to answer the questions.



Name: _____

Nutritional Seed Search

Directions: Look at the word puzzle. Find and circle sixteen foods that could be grown from seed in a home garden. The words may be written horizontally, vertically, diagonally or backwards. Number the sixteen kinds of seeds listed below in alphabetical order.

___ tomato
___ watermelon
___ cucumber
___ squash

___ beans
___ pepper
___ radish
___ lettuce

___ zucchini
___ corn
___ pumpkin
___ okra

___ carrot
___ peas
___ cantaloupe
___ turnip

S R E R W A T E R M E L O N V
 C A N T E L O U P E D S A E P
 U D B E T Y U O I R E P P E P
 C I W U O K R A A Q W E R T Y
 U S L I C A R R O T S E I W I
 M H K O W O A R J R E R O E K
 B C T P E P C O R N E T E O T
 E E U L Z I U V J I H Y I T Y
 R S R E X U Y B B U S U N A P
 M E N T Z T R N E Y A I I M V
 N R I T C Y E M A T U O H O B
 O Y P U M P K I N E Q P C T N
 I U T C Y E W I S B S L C Z M
 P I I E T R E O R V I M U W I
 A S F T H U I O O N M T Z B O



Name: Answer Key

Nutritional Seed Search

Directions: Look at the word puzzle. Find and circle sixteen foods that could be grown from seed in a home garden. The words may be written horizontally, vertically, diagonally or backwards. Number the sixteen kinds of seeds listed below in alphabetical order.

- | | | | | | | | |
|----|------------|----|---------|----|----------|----|------------|
| 13 | tomato | 1 | beans | 16 | zucchini | 3 | carrot |
| 15 | watermelon | 9 | pepper | 4 | corn | 8 | peas |
| 5 | cucumber | 11 | radish | 10 | pumpkin | 2 | cantaloupe |
| 12 | squash | 6 | lettuce | 7 | okra | 14 | turnip |

R W A T E R M E L O N
 C A N T E L O U P E S A E P
 U D R E P P E P
 C I O K R A
 U S C A R R O T
 M H
 B T C O R N O
 E U L H I T
 R R E B S N A
 N T E A I M
 I T A U H O
 P U M P K I N Q C T
 C S S C
 E U
 Z

5. The class took their tomatoes to a local farmers' market and sold them for \$0.79 per pound. How much money did they get from the tomatoes?

6. The class made a list of their expenses for the tomatoes.

| Item | Quantity | Cost | Total Cost |
|--------------------------------------|-----------|-------------------|------------|
| Tomato plants | 48 plants | \$0.55 per plant | |
| Fertilizer | 10 pounds | \$0.35 per pound | |
| Gas for transportation to the market | 4 gallons | \$2.05 per gallon | |

Total cost for growing the tomato plants = _____

7. After paying for the cost of growing the tomato plants, how much money did the class have to go on their field trip?

8. Did the class have enough money for the field trip?

9. If they have money left over, how much will they have? What could they buy?

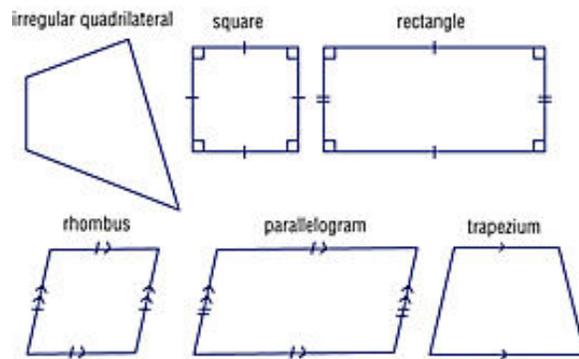




How Does Your Garden Grow?

The students of the fifth grade class at Valley Elementary are going to raise money to go on a field trip by planting a garden. The field trip will cost \$250.00. They are going to plant tomatoes to sell at the local farmers' market. The garden will be in the shape of a quadrilateral.

1. Draw four examples of a quadrilateral and label each one.



2. The class will plant forty-eight tomato plants. If the garden has six rows, how many plants will there be in each row?

$$48/6 = 8 \text{ plants in a row}$$

3. A local farmer told the class that each tomato plant will produce an average of twenty-five tomatoes. How many tomatoes will the class get from their garden?

$$25 \times 48 = 1,200 \text{ tomatoes}$$

4. When the tomatoes were ready, the class weighed them. It took an average of three tomatoes to make one pound. How many pounds of tomatoes did the class have?

$$1,200/3 = 400 \text{ pounds}$$

5. The class took their tomatoes to a local farmers' market and sold them for \$0.79 per pound. How much money did they get from the tomatoes?

$$400 \times \$0.79 = \$316$$

6. The class made a list of their expenses for the tomatoes.

| Item | Quantity | Cost | Total Cost |
|--------------------------------------|-----------|-------------------|----------------|
| Tomato plants | 48 plants | \$0.55 per plant | \$26.40 |
| Fertilizer | 10 pounds | \$0.35 per pound | \$3.50 |
| Gas for transportation to the market | 4 gallons | \$2.05 per gallon | \$8.20 |

$$\text{Total cost for growing the tomato plants} = \$38.10$$

7. After paying for the cost of growing the tomato plants, how much money did the class have to go on their field trip?

$$\$316.00 - \$38.10 = \$277.90$$

8. Did the class have enough money for the field trip?

YES

9. If they have money left over, how much will they have? What could they buy?

\$27.90; answers will vary on what the class should buy



Grade 5

From the Garden

Math Objectives

- Develop fluency in adding and subtracting non-negative rational numbers (halves, fourths, eighths; thirds, sixths, twelfths; fifths, tenths, hundredths, thousandths; mixed numbers).
- Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers and paper and pencil.
- Identify, define, describe and accurately represent triangles, quadrilaterals and other polygons.
- Solve problems involving the properties of triangles, quadrilaterals and other polygons.
- Describe, extend and generalize numeric geometric patterns using tables, graphs, words and symbols.

English Language Arts Objectives

- Use meta-cognitive strategies independently and flexibility to monitor comprehension and extend vocabulary.
- Interact with the text before, during and after reading, listening and viewing.

Materials Needed

- 4-5 packages of vegetable seeds
- Poster board
- White glue
- Rulers
- Grains for mosaic such as beans, peas, popcorn and squash seeds
- Crayons or colored markers

Teacher Resources

- *MyPyramid for Kids*
- *Anatomy of MyPyramid*
- *Teaching MyPyramid*
- *What foods are in the fruit group?*
- *What foods are in the vegetable group?*
- *Making Sense of Fruit and Veggie Nutrients*
- *Digging Up Fruits and Veggies*

Handouts

- *Food from the Garden*
- *Garden of Foods*
- *Fractions in the Garden*
- *Perimeters in the Garden*
- *Areas in the Garden*

Focus

Ask the students to look at the packages of vegetable seeds. Ask them if they have ever seen these packages and, if so, where. Ask the students if they have ever planted a garden or helped their parents plant a garden. Ask them why they think some people might plant a vegetable garden today. Ask them for a reason why someone would not plant a vegetable garden.

Teacher Input

Using the teacher resources *What foods are in the fruit group?* and *What foods are in the vegetable group?*, *Making Sense of Fruit and Veggie Nutrients* and all three MyPyramid resources, review with students the importance of eating a diet that includes many and various fruits and veggies.

Talking points:

- MyPyramid for Kids suggests that we eat a variety of fruits and veggies to get many of the nutrients we need to stay healthy and protect us from disease. Some of these nutrients are vitamins, minerals and fiber.
- Fifth graders should eat at least 2 to 2½ cups of veggies and 1 to 1½ cups of fruits every day.

Using the teacher resource *Digging Up Fruits and Veggies*, discuss with students where fruits and veggies can be obtained.

Talking points:

- Most of us purchase fruits or veggies at a store. Ask students where they usually get most of their fruits and veggies.
- There are several alternatives to purchasing fruits and veggies at the store. Alternatives include farmers' markets and personal gardens. Ask if they think of any other alternatives.
- Some people like to raise their own fruits and veggies because they taste better. Others like to garden as a hobby.

Practice and Assessment

Distribute the *Food from the Garden* handout. Allow students time for reading the selection. Discuss the reading and ask students to complete the questions at the end of the reading selection.

Divide the class into groups of three to four students and distribute a *Garden of Foods* handout to each group. Each group will need a sheet of poster board, rulers, glue and various seeds. The “garden” will be drawn according to the instructions on the handout and the sections of the garden filled with seeds to make a mosaic. Instruct students to design their garden following the directions in the handout. Suggest that they sketch their garden on another sheet of paper before putting it on the poster board.

Review the concepts of fractions, perimeters and areas. Discuss the real and relevant application of these mathematical concepts to the *Garden of Foods* mosaic and to actual gardening.

After the students have completed the mosaic, provide one task sheet to each group. Depending on the size of the class, some groups may have duplicate assignments. The tasks include: *Fractions in the Garden*, *Perimeters in the Garden* and *Areas in the Garden*. Allow students to continue working in groups to solve their task sheets.

Ask each group to report its findings to the class and share how the problems were solved. Each group will become the “expert group” to teach the class the applications of the skill on the task sheet. If time allows, the groups can complete all three task sheets.

Additional Activity (additional handouts and/or materials needed)

Ask students to choose a garden plant and create a seed packet design that would represent the plant. Relate the activity to the work of the Shakers. Identify the purpose of the packet to be informative for the consumer and a form of advertising.

Name: _____



Food from the Garden

MyPyramid for Kids says we should eat a lot of fruits and veggies. Most people do not eat enough fruits and veggies. MyPyramid says that kids in fifth grade should eat 2 to 2½ cups of veggies and 1 to 1½ cups of fruit every day.

A healthy diet has a lot of fresh fruits and veggies. Eating a mix of fruits and veggies helps keep our bodies healthy. Fruits and veggies give us vitamins and minerals, fiber and other things that are important to good health. Fresh fruits and veggies have very little salt.

One way to get a mix of fresh fruits and veggies is to grow a home garden. In a home garden, seeds are planted that will eventually give us food. Garden seeds don't cost very much. They can be found in many varieties. Many people think growing a home garden is also a good hobby. It is also a way to be more active each day.

A gardener must know about seeds when growing a garden. Some seeds need a longer growing season than others. The home gardener must know about the germination time, how deep to plant the seeds and how far apart to plant the seeds. It takes a few days for the seeds to sprout and come out of the ground. It takes some seeds longer to sprout than others. Some seeds may need more sunlight or water. This information is on the seed packet.

The seed coat protects the *embryo*, or baby plant, from rough treatment and cold temperatures. This *embryo* grows into a new plant. Water makes the seed coat soft. This lets the *embryo* push through and grow. A large portion of the seed gives the *embryo* food. The rest of the seed, the *cotyledons*, provides food for the new plant until it begins to make its own food. The *cotyledons* supply the energy for the baby plant to grow and make roots. All of the stored food will be used by the time roots have started to grow.

The Shakers, a religious group, started the first commercial seed nursery in the United States. They placed their seeds in small paper packets called "papers". The early seed packets were decorated with beautiful line drawings. Most garden seeds today are still sold in packages very similar to those first "papers". They are decorated with pictures of the plants. The seed packet will include the common name and sometimes the scientific name of the plant. It also will include general information about care and use. Most seed packets also include a map of the United States showing the different frost or growing zones. Most garden seed is sold by the ounce since home gardens are usually small.

Answer these questions based on the reading section:

1. What is the main idea of the second paragraph?
2. Which paragraph has information about what a gardener should know?
3. What information is in the fifth paragraph?
4. Which paragraph has historical information?
5. Which paragraph has information on MyPyramid?
6. Which paragraph has information on why you should consider raising a garden?

Source: Smart Nutrition-Arkansas Department of Education





Food from the Garden

MyPyramid for Kids says we should eat a lot of fruits and veggies. Most people do not eat enough fruits and veggies. MyPyramid says that kids in fifth grade should eat 2 to 2½ cups of veggies and 1 to 1½ cups of fruit every day.

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Answer these questions based on the reading section:

1. What is the main idea of the second paragraph?

A healthy diet includes plenty of fruits and veggies.

2. Which paragraph has information about what a gardener should know?

Paragraph 4

3. What information is in the fifth paragraph?

The paragraph includes information about seeds.

4. Which paragraph has historical information?

Paragraph 6

5. Which paragraph has information on MyPyramid?

Paragraph 1

6. Which paragraph has information on why you should consider raising a garden?

Paragraph 3





Garden of Foods

Names of Group Members:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Directions: Create a Garden of Foods mosaic by drawing a garden according to the instructions given. After the garden is drawn on poster board, spread a thin layer of white glue on each section of the garden. Next, attach the different types of seeds to the sections according to the instructions below. Use popcorn, peas, squash and beans to create a mosaic. Sketch the garden on another sheet of paper before beginning on poster board.

Instructions for drawing the garden on poster board:

1. The garden is a parallelogram with sides measuring 12 inches and 20 inches.
2. Each section of the garden is a parallelogram with one side measuring 20 inches.
3. One fourth of the garden is planted in corn.
4. One third of the garden is planted in beans.
5. One sixth of the garden is planted in squash.
6. The beans section of the garden joins the squash section of the garden.
7. One fourth of the garden is planted in peas.
8. The peas section of the garden does not touch the beans section.
9. The corn section of the garden does not touch the beans section.
10. The squash section of the garden has garden plants on both sides.





Garden of Foods

Mosaic:

- 1 inch x 20 inches per section
- 12 sections
- $\frac{1}{4}$ of garden = $\frac{3}{12}$
- $\frac{1}{3}$ of garden = $\frac{4}{12}$
- $\frac{1}{6}$ of garden = $\frac{2}{12}$

One possible garden arrangement:

| | | | | | | | | | | | |
|------|------|------|------|------|------|--------|--------|-------|-------|-------|-------|
| Peas | Peas | Peas | Corn | Corn | Corn | Squash | Squash | Beans | Beans | Beans | Beans |
|------|------|------|------|------|------|--------|--------|-------|-------|-------|-------|



Name: _____



Fractions in the Garden

Task 1: Solve the problems below based on the completed mosaic. Show your work.

1. What fractional part of the garden is planted in beans and squash? _____

2. What fractional part of the garden is planted in corn and peas? _____

3. What fractional part of the garden is planted in beans, peas and squash? _____

4. What fractional part of the garden is planted in corn, squash and peas? _____

5. What fractional part of the garden is planted in squash, beans and corn? _____

6. If the squash, corn and peas sections of the garden were removed, what fractional part of the garden would be left? _____

7. If the beans and squash sections of the garden were removed, what fractional part of the garden would be left? _____





Fractions in the Garden

Task 1: Solve the problems below based on the completed mosaic. Show your work.

1. What fractional part of the garden is planted in beans and squash? 1/2
 $1/3 \text{ beans} = 4/12$
 $1/6 \text{ squash} = 2/12$
 $2/12 + 4/12 = 6/12 = 1/2$
2. What fractional part of the garden is planted in corn and peas? 1/2
 $1/4 \text{ corn} = 3/12$
 $1/4 \text{ peas} = 3/12$
 $3/12 + 3/12 = 6/12 = 1/2$
3. What fractional part of the garden is planted in beans, peas and squash? 3/4
 $1/3 \text{ beans} = 4/12$
 $1/4 \text{ peas} = 3/12$
 $1/6 \text{ squash} = 2/12$
 $4/12 + 3/12 + 2/12 = 9/12 = 3/4$
4. What fractional part of the garden is planted in corn, squash and peas? 2/3
 $1/4 \text{ corn} = 3/12$
 $1/6 \text{ squash} = 2/12$
 $1/4 \text{ peas} = 3/12$
 $3/12 + 2/12 + 3/12 = 8/12 = 2/3$
5. What fractional part of the garden is planted in squash, beans and corn? 3/4
 $1/6 \text{ squash} = 2/12$
 $1/3 \text{ beans} = 4/12$
 $1/4 \text{ corn} = 3/12$
 $2/12 + 4/12 + 3/12 = 9/12 = 3/4$
6. If the squash, corn and peas sections of the garden were removed, what fractional part of the garden would be left? 1/3
 $12/12 - 8/12 = 4/12 = 1/3$
7. If the beans and squash sections of the garden were removed, what fractional part of the garden would be left? 1/2
 $12/12 - 6/12 = 1/2$



Name: _____



Perimeters in the Garden

Task 2: Solve the problems below based on the completed mosaic. Show your work.

1. What is the perimeter of the section of the garden planted in corn? _____

2. What is the perimeter of the section of the garden planted in corn and peas? _____

3. What is the perimeter of the section of the garden planted in corn, squash and peas? _____

4. What is the perimeter of the entire garden of foods? _____

5. What is the perimeter of the section of the garden planted in beans? _____

6. What is the perimeter of the section of the garden planted in squash and beans? _____

7. What is the perimeter of the section of the garden planted in peas? _____





Perimeters in the Garden

Task 2: Solve the problems below based on the completed mosaic. Show your work.

1. What is the perimeter of the section of the garden planted in corn? 46 inches
2. What is the perimeter of the section of the garden planted in corn and peas? 52 inches
3. What is the perimeter of the section of the garden planted in corn, squash and peas? 56 inches
4. What is the perimeter of the entire garden of foods? 64 inches
5. What is the perimeter of the section of the garden planted in beans? 48 inches
6. What is the perimeter of the section of the garden planted in squash and beans? 52 inches
7. What is the perimeter of the section of the garden planted in peas? 46 inches



Name: _____



Areas in the Garden

Task 3: Solve the problems below based on the completed mosaic. Show your work.

1. What is the area of the entire garden? _____
2. What is the area of the beans section of the garden? _____
3. What is the area of the beans and squash sections of the garden? _____
4. What is the area of the corn and peas sections of the garden? _____
5. What is the area of the beans, squash and corn sections of the garden? _____
6. What is the area of the peas section of the garden? _____
7. What is the area of the corn section of the garden? _____





Areas in the Garden

Task 3: Solve the problems below based on the completed mosaic. Show your work.

1. What is the area of the entire garden? 240 square inches
2. What is the area of the beans section of the garden? 80 square inches
3. What is the area of the beans and squash sections of the garden? 120 square inches
4. What is the area of the corn and peas sections of the garden? 120 square inches
5. What is the area of the beans, squash and corn sections of the garden? 180 square inches
6. What is the area of the peas section of the garden? 60 square inches
7. What is the area of the corn section of the garden? 60 square inches



Classroom Activities



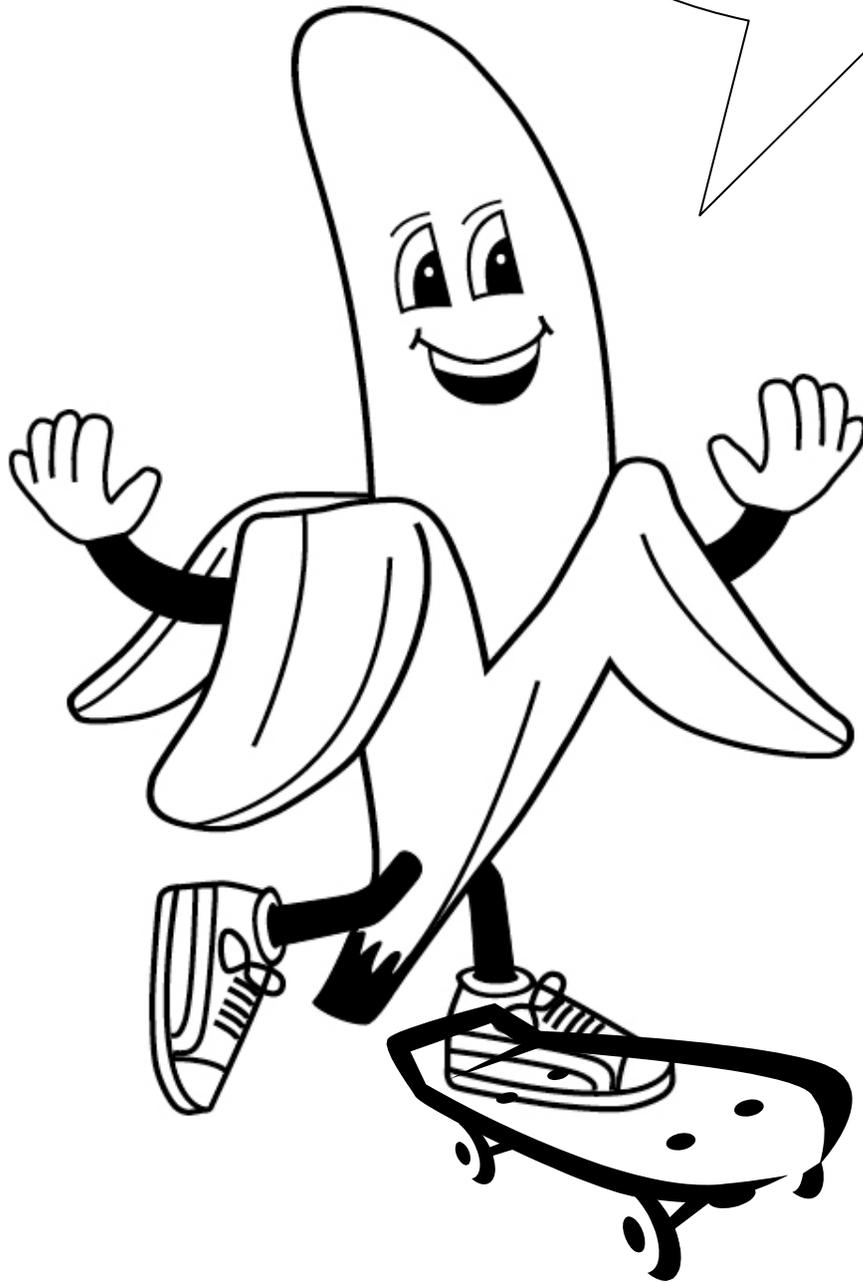
Nebraska Fresh Fruit & Vegetable Program

Request Form for Fresh Fruits and Vegetables

| | | |
|---|---|------------------------------|
| Name of School: | | Date: |
| Name of Person Requesting: | | Email: |
| Who is Receiving the Fresh Fruits and Vegetables: | | Phone Number to Contact You: |
| Date of Activity: | Time Needed: | Location of Activity: |
| Number of Students: | Indicate Pickup or Delivery (Please Circle One) | |
| Fresh Fruit and Vegetable Needed: List the Kind and Quantity | | |
| Special Instructions: | | |
| Other Supplies: Ex: Napkins, Plates, Plastic ware | | |
| Brief Description of Activity: | | |
| Return completed form to your School Food Service Manager. | | |

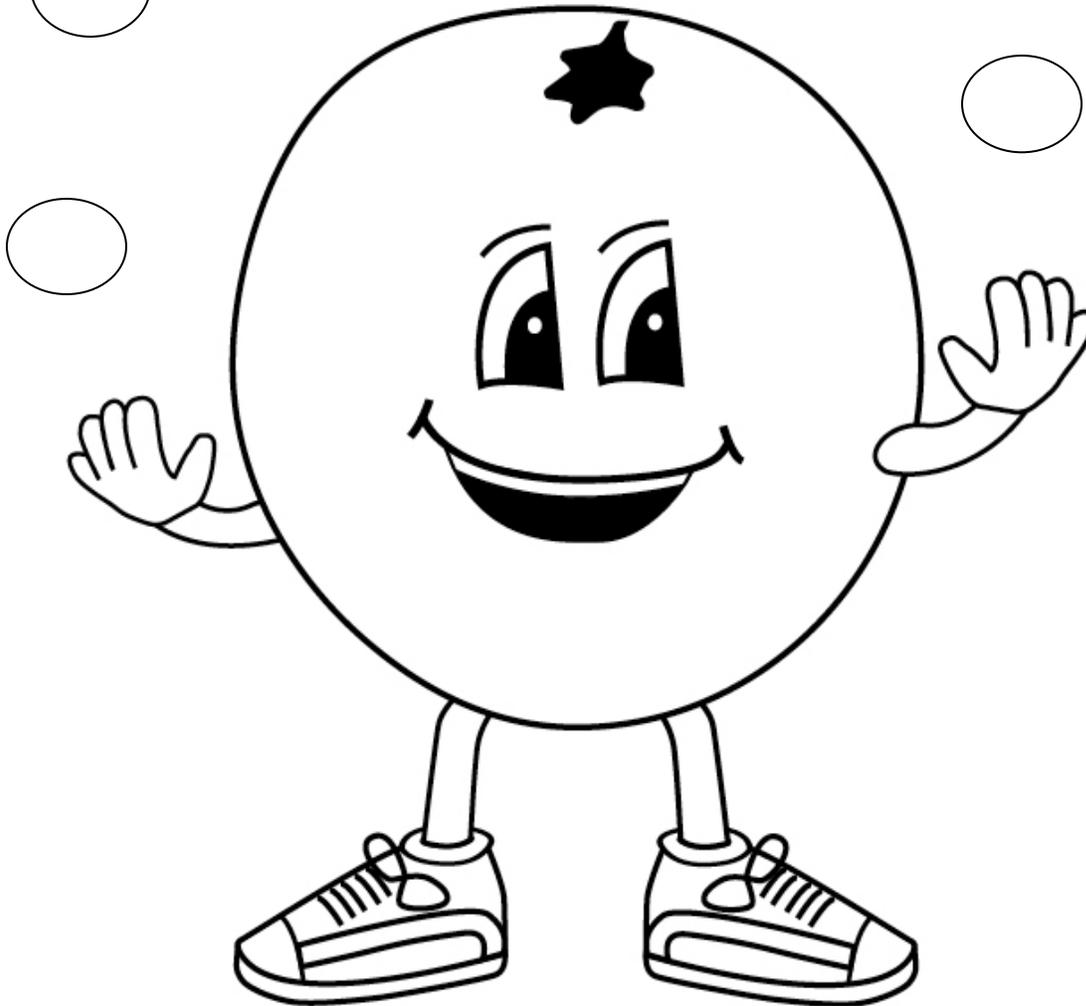
Please submit written request at least one week in advance of activity.

Hi there! I am a banana! I
am a great grab-n-go
snack. Just peel my skin
and eat!



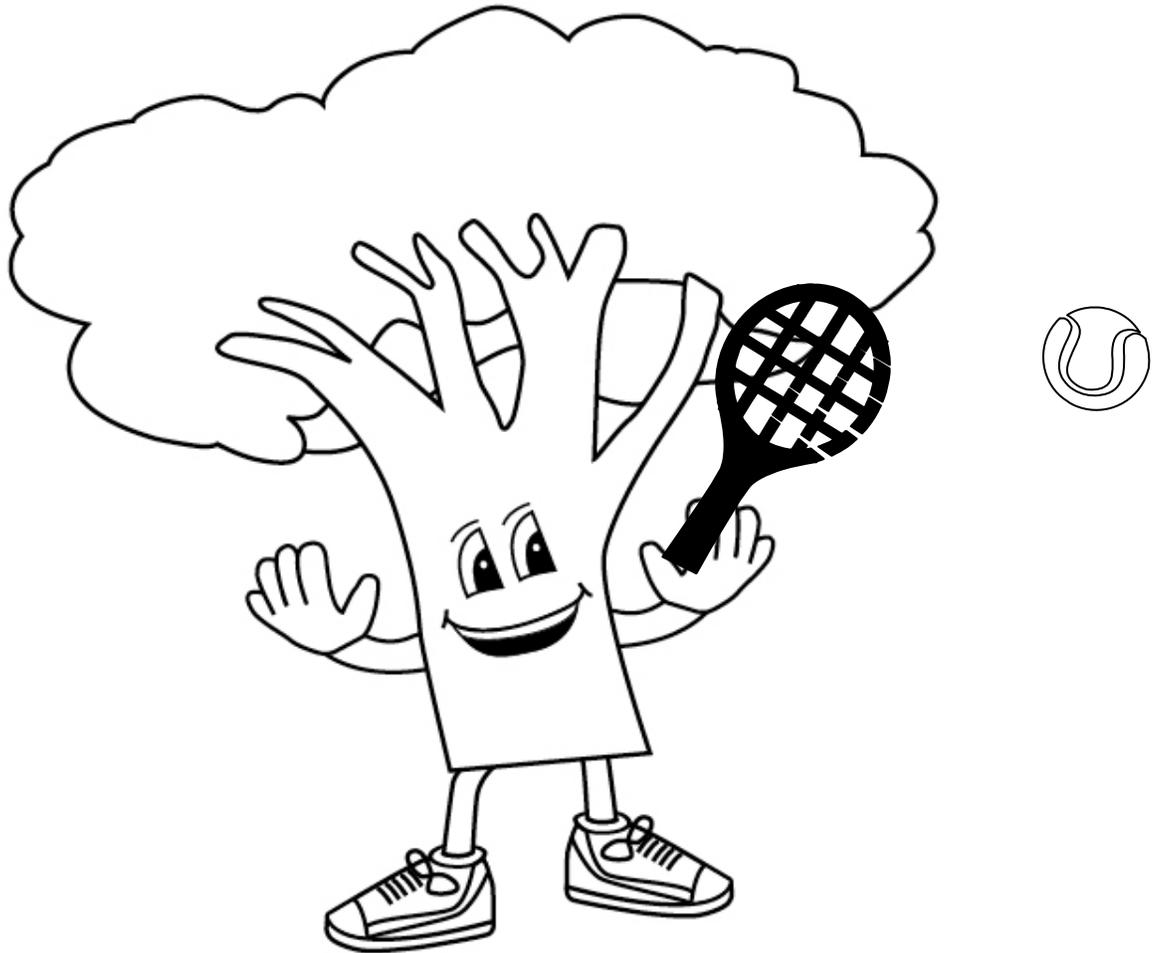
I am a good source of fiber, vitamin C, and potassium. Did you know the average person eats 33 pounds of bananas a year? Wow! I must be the most popular fruit in America!

Hi there! I am a blueberry!
You can toss me in your
cereal or in a blender
for a refreshing smoothie!

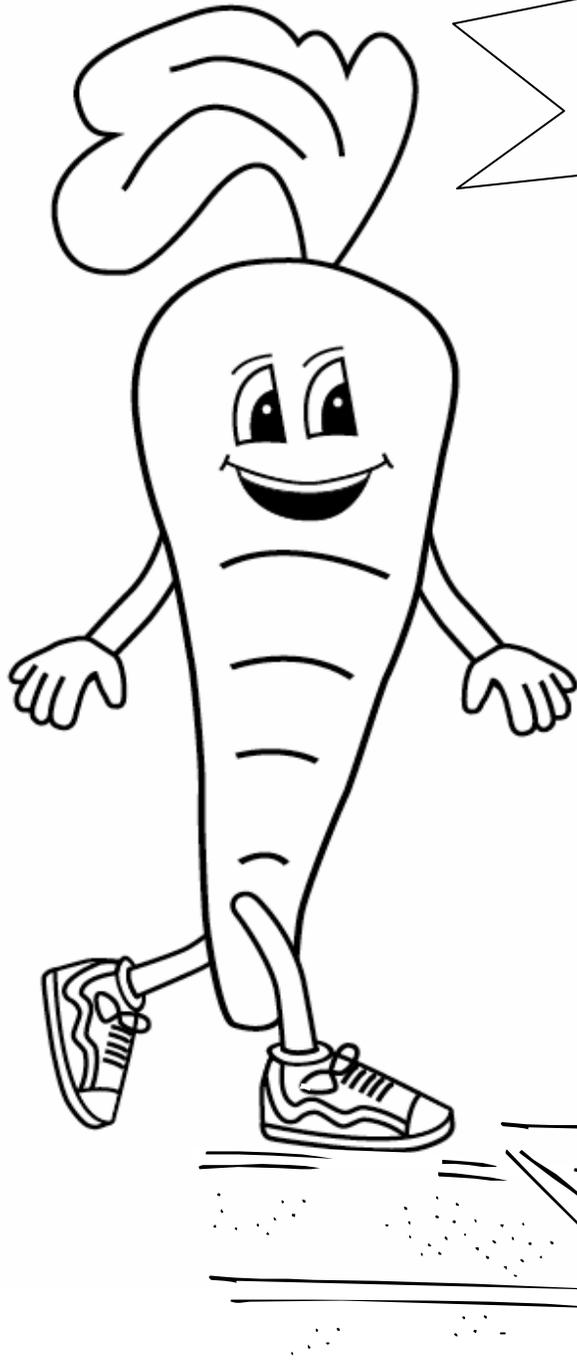


I am a good source of vitamin C and fiber. I am a great choice when choosing berries this summer! When you are thinking of a sweet and easy snack, think of me.

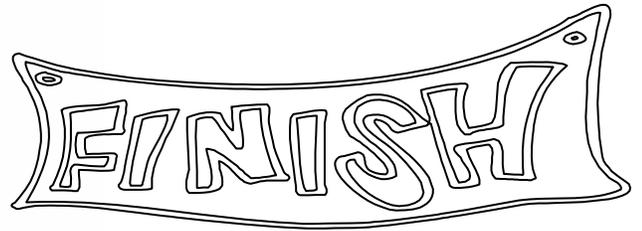
Hi there! I am broccoli. You can eat me with Cheese, in a salad, or in your favorite pasta. You can even dip me in salad dressing.



I am a powerhouse when it comes to nutrition! I am an excellent source of vitamin C and folate, and a good source of fiber and potassium!
Now, lets get ready to play tennis!

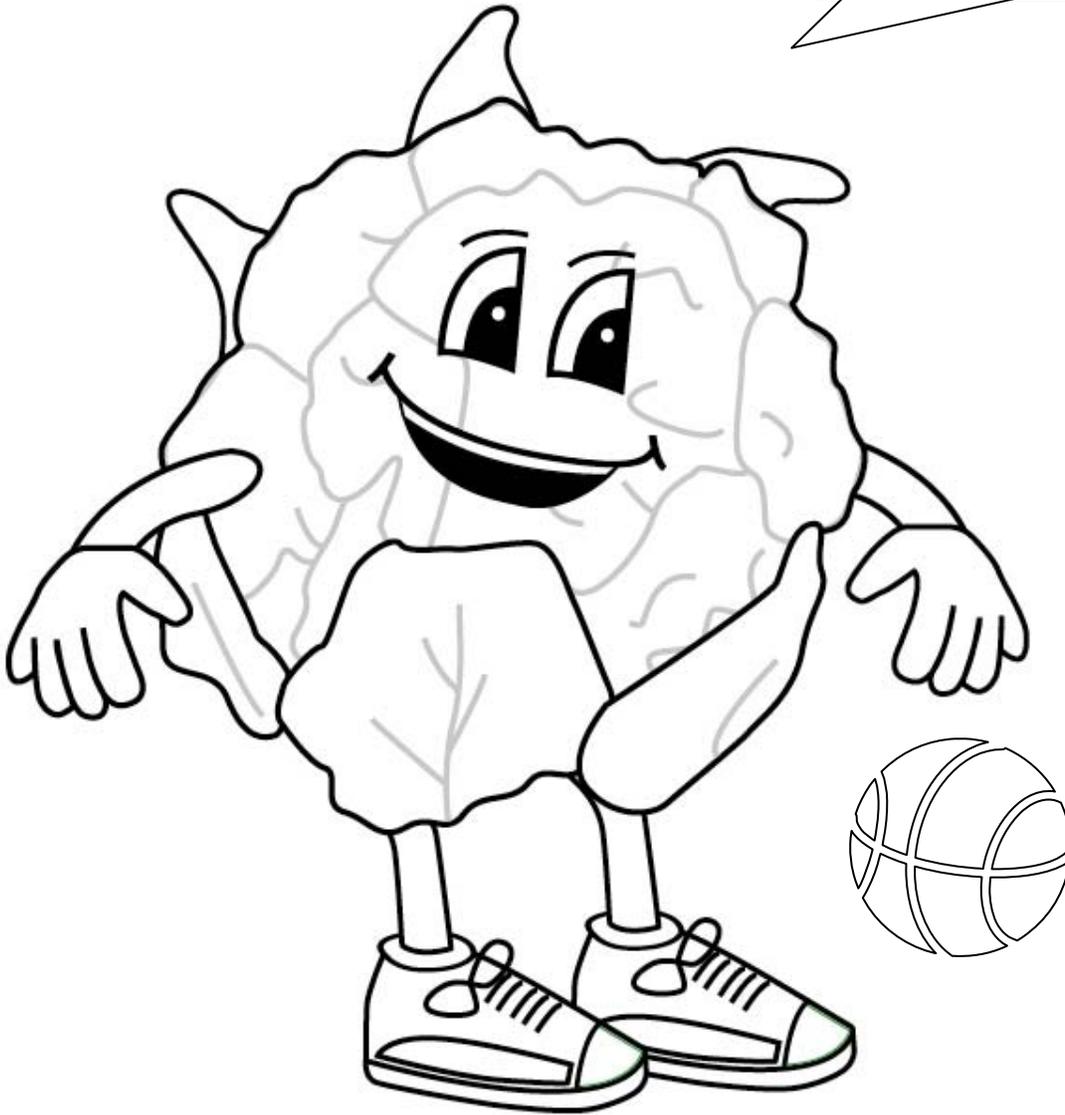


Hi there! I am a Carrot!
I am long, orange, and
very crunchy! I make a
tasty snack!

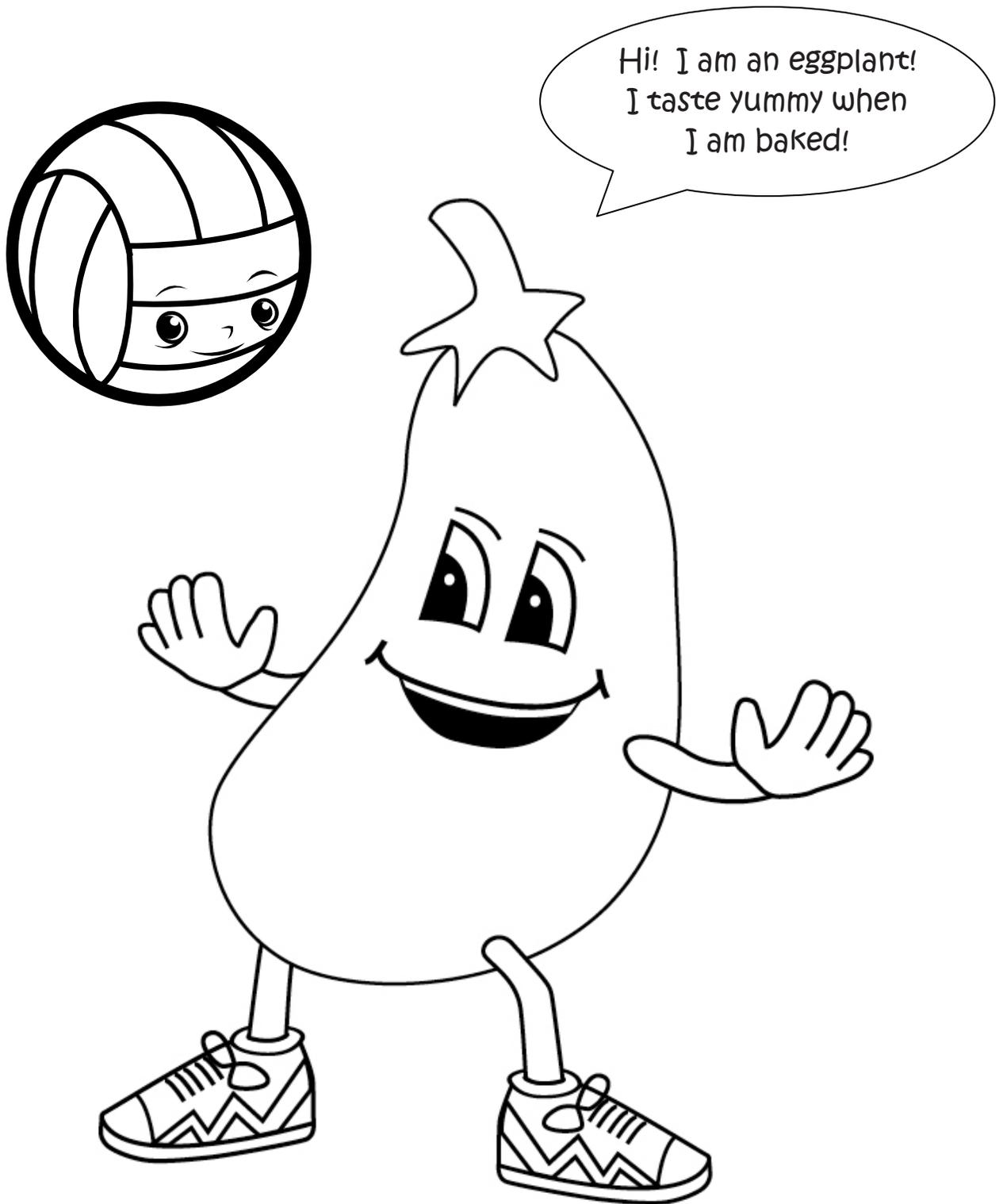


I am an excellent source of vitamin A and a good source of vitamin C. I grow in the ground and rabbits love to dig me up. But, now that I have these great shoes, I can outrun those rabbits and stay healthy too!

Hello! I am cauliflower! Cut me into bite-sized chunks and eat me raw with your favorite dip or you can steam me and top me with your favorite cheese!



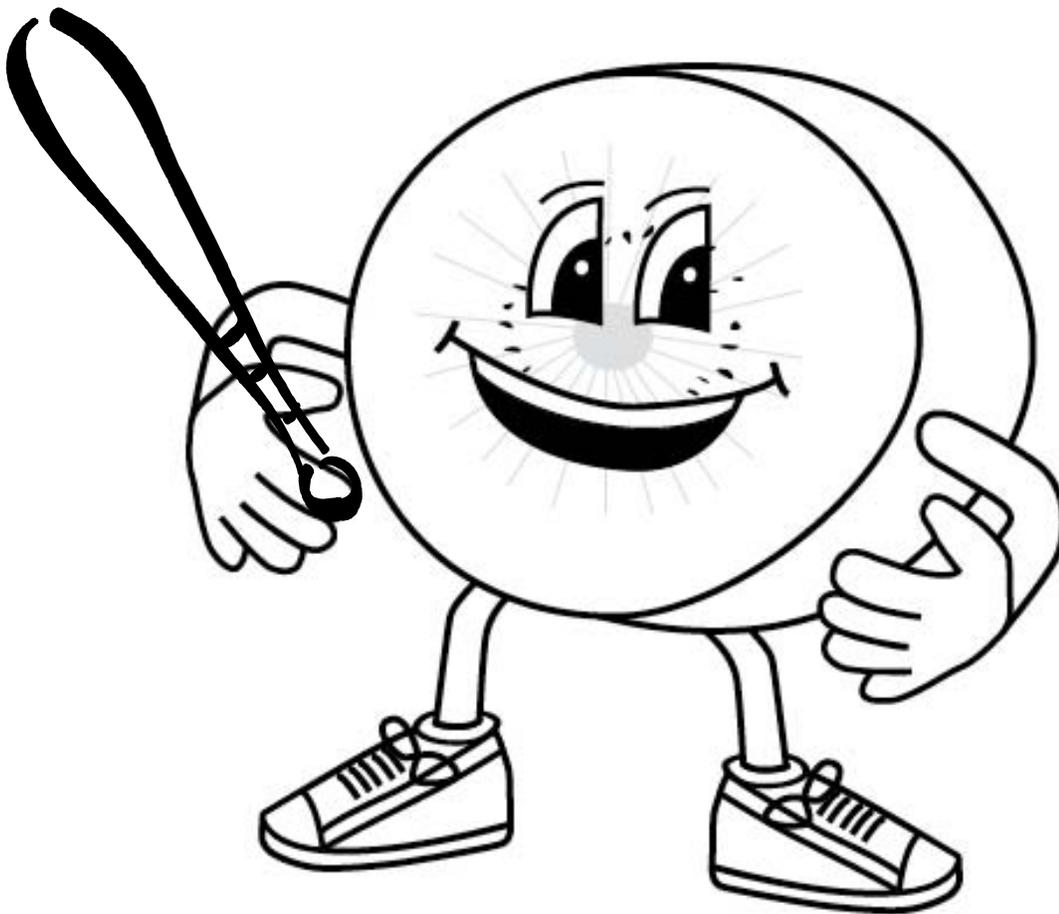
I am high in vitamin C and a good source of folate. I am available all year round, so try me soon in your next pasta dish!



Hi! I am an eggplant!
I taste yummy when
I am baked!

I provide your body with potassium and fiber. Did you know I am really a fruit, actually a berry? I am related to the tomato and potato family.

Hello! I am a fuzzy kiwifruit!
Remove my fuzzy skin and
enjoy my tasty green flesh
inside.



I am a good source of fiber, potassium and vitamin C. Try me in a fruit salad
or in a fruit smoothie.

Hi! I am a peach and peaches are tasty! Slice me up, throw away the pit, and enjoy! I am also very good in a smoothie or right out of the can!



I am round, fuzzy and an orangy-yellow color. I am a good source of vitamin C which is important to keep you healthy!



Hi there! I am a pineapple! You can eat me in chunks, slices, fresh, dried, or straight out of the can!



I am good for you! I am a good source of vitamin C and I make a great snack any time of day!

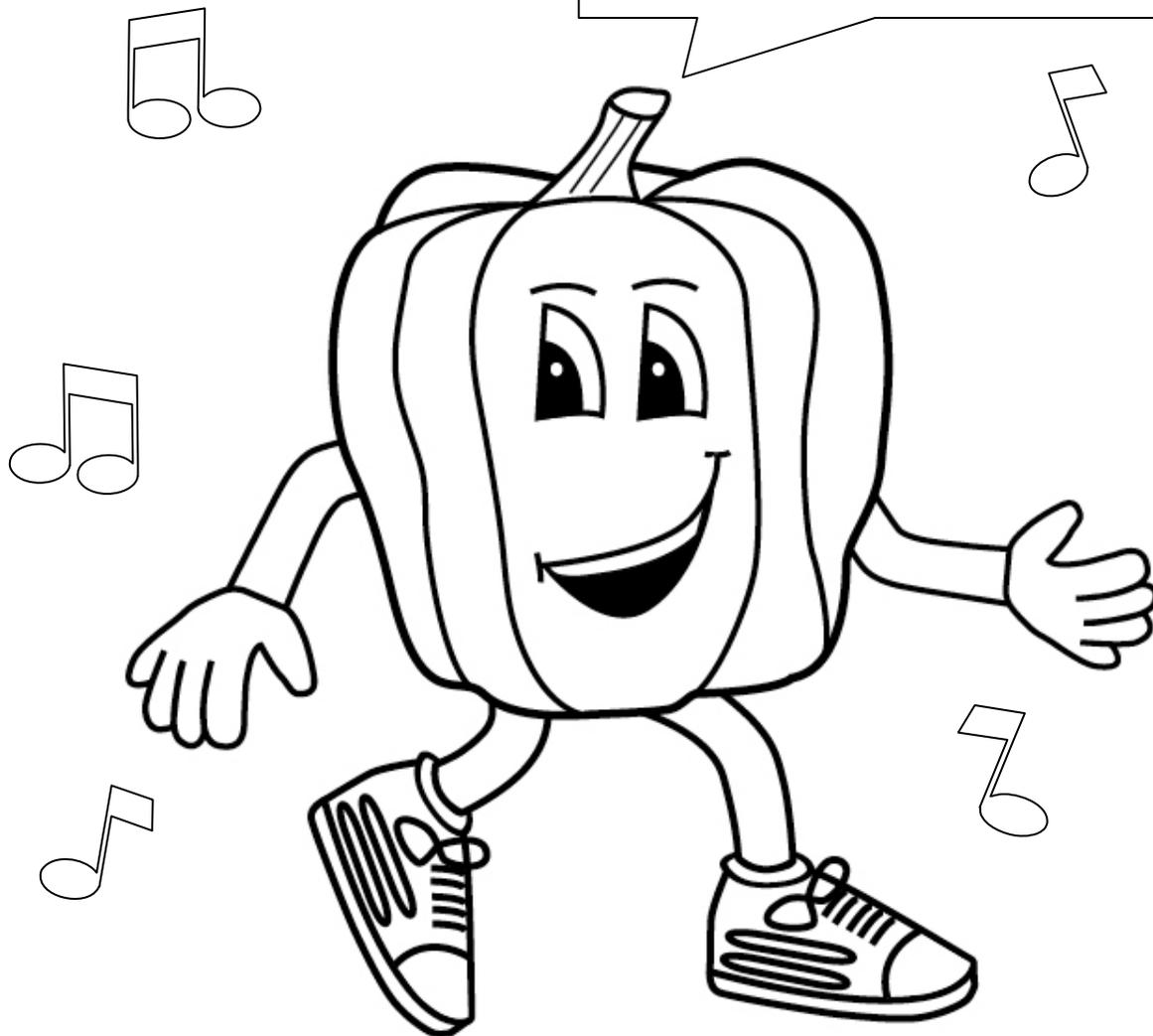
nebraska
Community Nutrition
C·N·P·C
Partnership Council

This institution is an equal opportunity provider and employer.

Pick a **better** snack™



Hello! I am a red bell pepper! Just slice me up and toss me in your favorite pasta or chicken dish or try me raw with low-fat dip.



I am very good for you! I am full of Vitamin C! When you eat me raw, I am very crunchy. I taste very sweet, not spicy! I am the sweetest of all the bell peppers.

Hi there! I am a
strawberry! You can
have me for
breakfast, lunch, or
even a dessert!



I am high in folate and vitamin C, and a good source of fiber. Don't forget to toss me in your morning cereal!

Blue & Purple

Activity Sheet

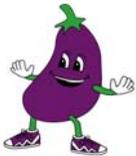
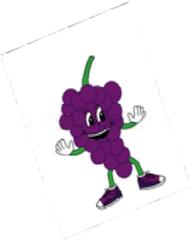
Hi there!



I am from the **BLUE** and **PURPLE** fruit and vegetable color group. I am full of many important nutrients you need to stay healthy! Try to eat at least one fruit or vegetable from my color group every day! This is easy to do because we all taste great! You'll see! Find the **BLUE** and **PURPLE** fruits and vegetables in the puzzle!



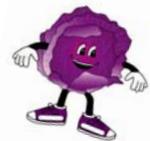
B S F R U I T S E A N N D V E
 L G N E T A B G L E I S M A K
 A E A A T A G S T Y S S N A C
 C K T A E P X Q A H I F P T N
 K M C N L B I B G R A P E S X
 B W L A B O K Y I K R E R A F
 E X N E L M W C X L G I A Q S
 R T I V U B F R A A G M D S X
 R K X Y E Y U W B L P L U M E
 Y E H Y B I S B A Y B X N K T
 D K G V E G A G G F Z M O O H
 R S I N R C O S P K H M P V W
 L B S M R E V I L O L Z T C L
 X S Q X Y M H D X K D B Z S Q
 N X D E S G P O L R Y V Z E Z



BLACKBEANS
CABBAGE
OLIVE

BLACKBERRY
EGGPLANT
PLUM

BLUEBERRY
GRAPES
RAISIN



Blue and Purple Answer Key

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | S | F | R | U | I | T | S | E | A | N | N | D | V | E |
| L | G | N | E | T | A | B | G | L | E | I | S | M | A | K |
| A | E | A | A | T | A | G | S | T | Y | S | S | N | A | C |
| C | K | T | A | E | P | X | Q | A | H | I | F | P | T | N |
| K | M | C | N | L | B | I | B | G | R | A | P | E | S | X |
| B | W | L | A | B | O | K | Y | I | K | R | E | R | A | F |
| E | X | N | E | L | M | W | C | X | L | G | I | A | Q | S |
| R | T | I | V | U | B | F | R | A | A | G | M | D | S | X |
| R | K | X | Y | E | Y | U | W | B | L | P | L | U | M | E |
| Y | E | H | Y | B | I | S | B | A | Y | B | X | N | K | T |
| D | K | G | V | E | G | A | G | G | F | Z | M | O | O | H |
| R | S | I | N | R | C | O | S | P | K | H | M | P | V | W |
| L | B | S | M | R | E | V | I | L | O | L | Z | T | C | L |
| X | S | Q | X | Y | M | H | D | X | K | D | B | Z | S | Q |
| N | X | D | E | S | G | P | O | L | R | Y | V | Z | E | Z |

BLACKBEANS
CABBAGE
OLIVE

BLACKBERRY
EGGPLANT
PLUM

BLUEBERRY
GRAPES
RAISIN

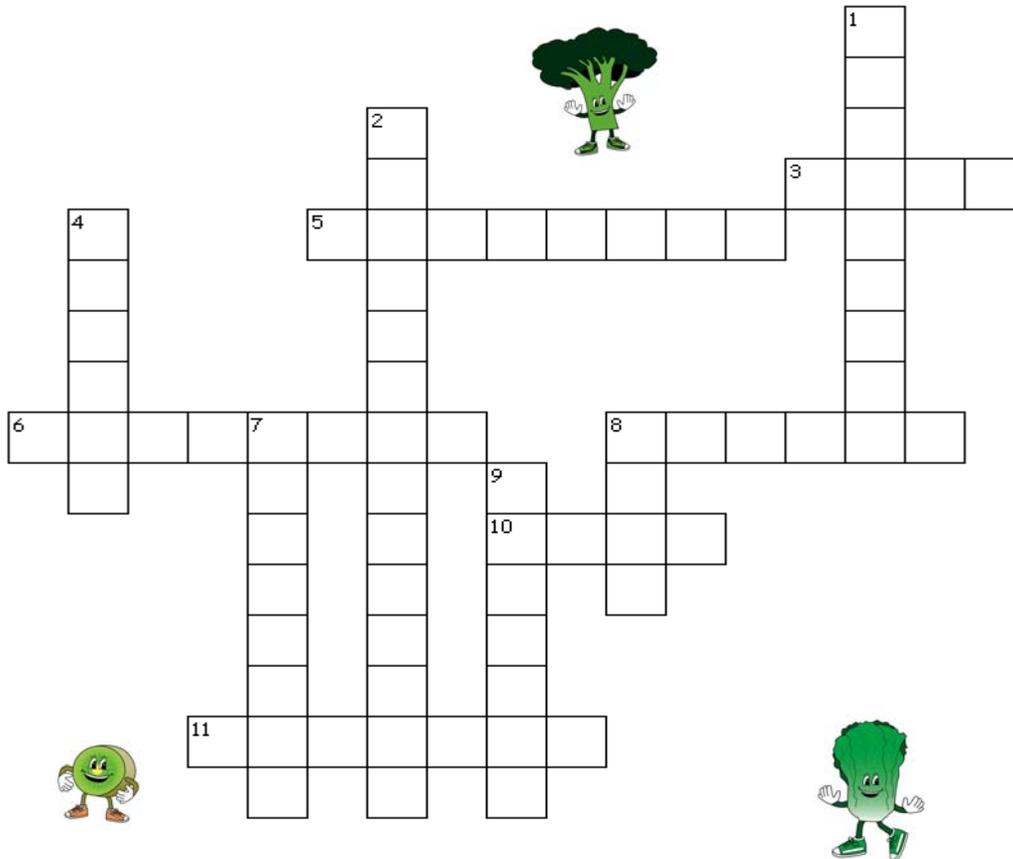
Green

Activity Sheet

Hello, I am
Romaine
Lettuce!



I am from the **GREEN** fruit and vegetable color group. There are a lot of **GREEN** fruits and vegetables that are tasty and can be enjoyed any time of the day! We call ourselves the **GREEN TEAM** because we are packed full of important vitamins, minerals, and fiber and we make a great team to keep you healthy! See if you can answer the clues below to figure out some of the members of the **GREEN TEAM**! Good Luck!



Across

3. I am a fuzzy fruit grown in New Zealand
5. My name starts with the last letter of the alphabet
6. I am green and I have a cousin named cauliflower
8. Peter Piper picked a peck of these
10. I can have a green or yellow skin
11. I am good in a salad or on a sandwich

Down

1. I am a green vegetable with a green heart
2. I look like a miniature cabbage
4. I am tasty with peanut butter and raisins
7. You can make me into a pickle
8. I grow in the garden in a pod
9. Popeye eats me to get strong

Green Answer Key

Across

3. I am a fuzzy fruit grown in New Zealand **KIWI**
5. My name starts with the last letter of the alphabet **ZUCCHINI**
6. I am green and I have a cousin named cauliflower **BROCCOLI**
8. Peter Piper picked a peck of these **PEPPER**
10. I can have a green or yellow skin **PEAR**
11. I am good in a salad or on a sandwich **LETTUCE**

Down

1. I am a green vegetable with a green heart **ARTICHOKE**
2. I look like a miniature cabbage **BRUSSEL SPROUTS**
4. I am tasty with peanut butter and raisins **CELERY**
7. You can make me into a pickle **CUCUMBER**
8. I grow in the garden in a pod **PEAS**
9. Popeye eats me to get strong **SPINACH**

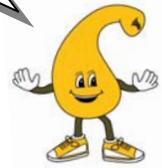
Orange & Yellow

Activity Sheet



I am from the **ORANGE** and **YELLOW** fruit and vegetable color group and I provide you with lots of good stuff like vitamin C, which helps to keep you healthy so you won't get sick! I am having a bit of a problem, my friends are all scrambled up and I need help finding them! Can you help me to unscramble my **ORANGE** and **YELLOW** friends?

- 1. Ctpiora _____
- 2. tulepaanoc _____
- 3. mleno _____
- 4. ogmna _____
- 5. oanrge _____
- 6. hcpae _____
- 7. pplepnaie _____
- 8. COarrt _____
- 9. ppuinkm _____
- 10. ronc _____
- 11. ssaquh _____
- 12. atswoottepe _____

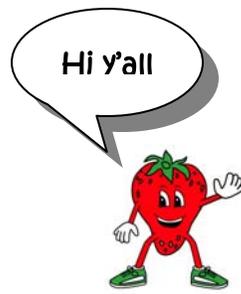


Orange and Yellow Answer Key

1. apricot
2. cantaloupe
3. lemon
4. mango
5. orange
6. peach
7. pineapple
8. carrot
9. pumpkin
10. corn
11. squash
12. sweet potato

RED

Activity Sheet



I am from the **RED** fruit and vegetable color group and I am full of flavor and nutrients! Unfortunately, I have lost my friends in the puzzle below and need your help to find them. Can you help me find my **RED** fruit and vegetable friends?



| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | N | D | G | E | B | C | A | E | I | U | M | S | R | O |
| I | H | O | Q | Q | F | E | W | E | F | P | E | R | A | Q |
| V | L | E | L | P | R | X | T | X | C | P | S | E | D | K |
| X | Z | R | R | E | W | O | R | J | A | T | S | P | I | B |
| E | D | S | X | R | M | I | F | R | R | T | P | P | S | S |
| U | W | R | T | A | Y | R | G | B | R | O | K | E | H | O |
| G | W | H | T | E | U | D | E | A | Z | O | Q | P | R | S |
| N | Q | O | G | P | E | F | W | T | U | M | C | D | K | M |
| S | E | I | R | R | E | B | P | S | A | R | S | E | L | J |
| V | K | R | C | L | E | Z | Q | C | A | W | F | R | O | V |
| N | M | L | G | R | H | U | B | A | R | B | H | Q | F | T |
| S | U | Q | R | Z | T | S | X | N | K | C | C | D | I | K |
| F | X | I | E | L | P | P | A | A | T | F | X | Z | C | O |
| B | E | J | T | P | E | N | A | S | G | G | F | I | C | W |
| S | V | G | F | X | Y | O | S | R | A | C | T | N | V | B |



APPLE
RADISH
REDPEPPERS
TOMATO

BEETS
RASPBERRIES
RHUBARB
WATERMELON

CHERRY
REDGRAPES
STRAWBERRIES

Red Answer Key

C N D G E B C A E I U M S R O
 I H O Q Q F E W E F P E R A Q
 V L E L P R X T X C P S E D K
 X Z R R E W O R J A T S P I B
 E D S X R M I F R R T P P S S
 U W R T A Y R G B R O K E H O
 G W H T E U D E A Z O Q P R S
 N Q O G P E F W T U M C D K M
~~S E I R R E B P S A R S E L J~~
 V K R C L E Z Q C A W F R O V
 N M L G R H U B A R B H Q F T
 S U Q R Z T S X N K C C D I K
 F X Y E L P P A A T F X Z C O
 B E J T P E N A S G G F I C W
 S V G F X Y O S R A C T N V B

APPLE
 RADISH
 REDPEPPERS
 TOMATO

BEETS
 RASPBERRIES
 RHUBARB
 WATERMELON

CHERRY
 REDGRAPES
 STRAWBERRIES

White

Activity Sheet



I am from the **WHITE** fruit and vegetable color group and I have lots of tasty friends. Can you name some of your favorite **WHITE** fruits or vegetables?

I like to eat:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____



I was building a puzzle to tell you an important message and I dropped all of my tiles onto the floor. Can you help me unscramble the tiles to reveal this important message?

T A B A R R M E G E T E D V F R U E G
A N F O I T S O O D L E S W H I E

| | | | | | | | | |
|--|--|--|--|--|--|--|--|--|
| | | | | | | | | |
| | | | | | | | | |

White Answer Key

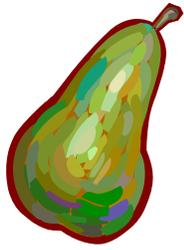
I was building a puzzle to tell you an important message and I dropped all of my tiles onto the floor. Can you help me unscramble the tiles to reveal this important message.

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T | A | B | A | R | R | M | E | G | E | D | V | F | R | U | E | G |
| A | N | F | O | I | T | S | O | O | D | L | E | S | W | H | I | E |

| | | | | | | | | |
|--|--|--|--|--|--|--|--|--|
| | | | | | | | | |
| | | | | | | | | |

White Fruits And Vegetables Are Good For Me

W H I T E F R U I T S A N D V E G E T A B L E S A R E G O O D F O R M E



Fruit and Veggie Classroom Activities

| Activity | What You Need | What You Do |
|--|--|--|
| Fruit and Veggie Mystery Box/Bag/Can | <ul style="list-style-type: none"> • Cardboard box, “feely” bag or large can with a hole just big enough for child’s hand • Fruit and veggie items | Place a produce item in the box, bag or can. Pass it around and have children guess what the item is. |
| Fruit and Veggie Picnic Basket | <ul style="list-style-type: none"> • Plastic food modules - fruits, vegetables and others if desired • Small picnic basket | First child puts in an item and says “I’m going on a picnic and I am taking an apple.” Next child says I’m taking an apple and a pear.” Game continues with children adding items and repeating all foods. |
| Fruit and Veggie Circle Markers | <ul style="list-style-type: none"> • Pictures of fruits and vegetables • Tape | Use pictures of fruits and vegetables as markers for circle area or put them on nametags. Assign children to an item or let them choose different produce items. |
| Fruit and Veggie Flannel Board Sorting | <ul style="list-style-type: none"> • Flannel board • Fruit and vegetable flannel pieces | Let children sort pieces into fruits and vegetables on different sides of board, or sort produce pieces, by color, shape or texture. |
| Fruit and Veggie Identification | <ul style="list-style-type: none"> • Food models, food cards or stickers (e.g., 3-D plastic, flannel board or cards from Dairy Council) | Work with children to name all the different fruits and vegetables. Discuss different forms of same item (e.g., apples, apple sauce and apple juice). |
| Fruit and Veggie Finger Puppets | <ul style="list-style-type: none"> • Fruit and vegetable finger puppets • Paper • Crayons or markers | Use puppets to introduce new foods in a circle and let children see puppets sing songs, do plays and make up stories about fruits and vegetables. |

Promoting Fresh Fruits and Veggies: Story Time Follow-up Activities

Children learn in a variety of ways. Following fruit and veggie story time with an activity enhances student learning by going beyond listening comprehension alone. For educators, follow-up activities reinforce key story messages and can be used to complement lessons in math, art, science and more. Included below are ideas for story time follow-up activities. A multitude of other activities and resources also can be found at www.fruitsandveggiesmorematters.org, www.fruitsandveggiesmatter.gov, www.pbhfoundation.org and www.dole5aday.com.

From Field to Plate



- Develop a class plan for growing a garden as you read along with *Blue Potatoes*, *Orange Tomatoes*. Students also will be motivated to garden after listening to *No More Vegetables!*, *From Seed to Plant*, *Vegetable Dreams*, or *How Does Your Salad Grow?*
- Discuss what part of the plant we are eating when we crunch and munch on fruits and veggies. Is it the flower, stem, fruit, root, leaves, seeds, seed pods or tuber?
- Have each student bring in a designated fruit or veggie to make a salad or soup after reading *The Ugly Vegetables*, *Growing Vegetable Soup* or *How Does Your Salad Grow?* Salads can be made using virtually any veggie or fruit. A soup recipe can be found in *Growing Vegetable Soup*.
- Bring in different fruit and veggie seed packets purchased at a store or have students bring in the washed seeds of fruits and veggies they have eaten. Discuss how to care for a seed so that it grows into a plant and produces fruit. Use *The Carrot Seed* or *How Does Your Salad Grow?* for younger students and *Blue Potatoes*, *Orange Tomatoes* or *From Seed to Plant* for older students. Compare and contrast the seeds' shapes and sizes.
- After reading *Apples, Apples, Apples* or *Picking Apples & Pumpkins*, have students bring in different varieties of apples. How many varieties can they find as a class? Make an apple snack, such as apple slices with peanut butter, apple slices with cheese cubes or homemade applesauce*. The possibilities are endless – students also could sing an apple song*, make apple prints* or go apple picking as part of a field trip to a local orchard!
- Arrange for a local farmer to speak to the class about his or her role in sustaining our communities with fruit and veggie production.

* Found in *Apples, Apples, Apples*

Play on Words



- Try a “story starter” with older students. Have them write their own story ending based on an introductory sentence from the book read during story time. Offer a sentence from *The Little Mouse*, *the Red Ripe Strawberry*, and *the Big Hungry Bear*, for example.
- Have students write an acrostic or create rhymes or riddles about their favorite fruit or veggie in a story.
- Ask students to write a summary about the main character in a story, such as Erin in *Vegetable Dreams* or the old landlord in *Under the Cherry Blossom Tree*.
- As a class, design a class book of “Our Favorite Fruits” or “Our Favorite Veggies”. Have each student describe and draw their favorite fruit, then compile and bind the work of all the students.
- After reading *I Will Never NOT EVER Eat a Tomato*, have students create their own euphemisms for fruits and veggies they do AND do not like.

Eating Smart, Moving More

- After reading *School Lunch* or *Why Should I Eat Well?*, have students talk about what foods make them feel good after eating them? Are there other foods that make them feel bad?
- Photocopy for students a copy of the school cafeteria menu. What foods would Monica have chosen before she met Rachel (from *Why Should I Eat Well?*). What foods would she have chosen after meeting Rachel? Similarly, use the cafeteria menu to select the foods that Harriet would or would not have cooked for her students (from *School Lunch*).
- Pick out several fresh fruits and veggies for students to pass around and touch. Use the vivid photos and graphics of *An Alphabet Salad* or *Fruits and Vegetables* to highlight the fruits and veggies in the classroom. How does the fruit or veggie feel? Is it soft? Hard? What does it smell like? Ask the children which fruits and veggies are new to them. After story time, wash and eat!
- Invite the school cafeteria manager into the classroom. Have students tell her/him why they like certain fruits and veggies.
- After reading *Eat Your Peas, Louise!, I Will Never NOT EVER Eat a Tomato* or *Why Should I Eat Well?*, ask students if anyone has ever tried to make them eat a fruit or veggie that they did not want to eat? What is one new fruit or veggie they are willing to try? Have students bring in that fruit or veggie. How does it taste? Is it sweet? Crunchy? Juicy?
- Promote movement in the classroom. Have students sing and dance to the song in *Apples, Apples, Apples*, or look for other fruit and veggie songs at www.dole5aday.com.



Arts and Crafts



- Following story time with *Fruits and Vegetables*, have students draw and color their favorites.
- Have students make puppets using pre-printed cartoons of fruits and veggies. They will need white paper, crayons, scissors, a craft stick and glue.
- *Why Should I Eat Well?* inspires children to think about their own meal habits. Have them draw and describe their favorite meal. Does their meal include any fruits or veggies?
- Build familiar objects, such as animals, out of fruits and veggies. This activity could be completed as a contest between classes competing against each other to make one designated object.
- Create a kid's coloring and activity sheet that promotes fruits and veggies and doubles as a placemat. Or, have students create their own using a fruit or veggie print, such as that demonstrated in *Apples, Apples, Apples*. Use the placemats during the fresh fruit and veggie snack time, or when students make a salad or soup as a class.
- Make felt cut-outs of fruits and veggies. Use them on a felt board during story time to emphasize the colors and shapes of the fruits and veggies that appear in the story.
- Use the inspiration of story time books to design fruit and veggie baskets for other classes. *An Alphabet Salad* offers colorful ideas!

Numbers and Counting

- After reading *From Seed to Plant*, cut open different fruits and veggies and have students count the number of seeds they see. How are seeds' shapes and sizes different? How are they similar? Try using watermelons, peaches, strawberries, oranges and cucumbers, for example, to demonstrate a variety of seed types.
- Use fruit and veggie story time as the motivation for fruit and veggie tracking. Tracking sheets are available at www.fruitsandveggiesmorematters.org or www.pbhfoundation.org. After students have tracked their intake for one week, have them count up the number of servings they have eaten. Award a prize to the student with the most servings!
- Coordinate a counting lesson with *Eating Pairs*, or a more complicated math assignment with *The Grapes of Math*.
- Have students count the number of fruits or veggies it takes to fill up measuring cups to their personal fruit and veggie goal. Use melon balls, grapes, blueberries, peas or corn, for example. Girls and boys four to eight years old need 1½ cups of fruit and 1½ to 2 cups of veggies each day. Girls nine to 13 years old need 1½ to 2 cups of fruit and 2 to 2½ cups of veggies each day. Boys nine to 13 years old need 1½ to 2 cups of fruit and 2½ to 3 cups of veggies each day.





Fruit and Veggies with Art and Music

| Activity | What You Need | What You Do |
|----------------------------|---|---|
| Fruit and Veggie Placemats | <ul style="list-style-type: none"> • Blank paper placemats or paper cut to placemat size • Sponges cut into various fruit and veggie shapes • Paint • Laminating machine (optional) | Have children create a placemat for themselves or a family member with sponges and paint. Let paint dry and laminate (if desired) for longer use. |
| Design-A-Meal Plates | <ul style="list-style-type: none"> • White paper plates • Pictures of foods from magazines or other sources • Glue | Have children design a meal on their plate. See how many fruits and veggies they can find to fit into their meal. |
| Fruit and Veggie Stamps | <ul style="list-style-type: none"> • Fruit and veggie stamps • Non-toxic stamp pads • Paper | Allow children to create designs with stamps for an art project. Stamp kids' hands whenever they taste a new fruit or veggie item. |
| Fruit and Veggie Collage | <ul style="list-style-type: none"> • Old magazines, seed catalogs or garden catalogs • Paper • Scissors • Glue | Cut out pictures of fruits and veggies. Make a collage. |
| Fruit and Veggie Rainbow | <ul style="list-style-type: none"> • Old magazines, seed catalogs or gardening catalogs • Paper • Glue • Scissors | Find pictures of all yellow, green, red, orange, blue, purple and white fruits and veggies. Make a rainbow with all the colors found in the fruits and veggies. |
| Fruit and Veggie Mobile | <ul style="list-style-type: none"> • Cut-out pictures of fruits and veggies that children have drawn • String or yarn • Plastic hangers or wooden dowels • Glue | Cut various lengths of string or yarn. Glue the cut out pictures at the end of each string. Tie the other end of the string to the hanger or wooden dowel. |



Fruit and Veggie Cooking and Tasting

| Activity | What You Need | What You Do |
|--------------------------------|--|--|
| Fruit and Veggie Meal Planning | <ul style="list-style-type: none"> • Pictures of fruits and veggies • Food models • Plastic or paper plates and cups | Encourage children to plan meals that include fruits and veggies. |
| Make Ants on a Log | <ul style="list-style-type: none"> • Celery • Peanut butter • Raisins • Plastic knives for children to spread peanut butter | Stuff celery with peanut butter and dot with raisins. Have an adult scoop the peanut butter out onto wax paper to keep children's hands out of the jar. |
| Make Citrus Juice | <ul style="list-style-type: none"> • Citrus fruit of choice (lemons, limes, oranges, grapefruits) • Fruit juicer • Knife for teacher's use | Squeeze citrus fruits. Look at seeds, drink the juice and talk about the taste. Each child must prepare his/her own. |
| Friendship Salad | <ul style="list-style-type: none"> • Each child brings in a piece of fruit • Knife for teacher's use • Large bowl • Small paper bowls • Spoons | Discuss the fruits, cut in pieces and put together to make a Friendship Salad. |
| Banana Crunch | <ul style="list-style-type: none"> • Bananas • Orange juice • Granola or crunchy cereal • Knife for teachers use • Individual bowl • Paper plates | Cut bananas in slices. Dip in orange juice and granola or cereal. Eat and enjoy. Be sure each child eats only his/her own creation. |
| Stuffed Cherry Tomatoes | <ul style="list-style-type: none"> • Cherry tomatoes • Small scoop or spoon • Stuffing of choice - cottage cheese, egg salad, yogurt dip, salad dressing • Plastic spoons and paper plates | Teacher scoops out hole in well-washed tomatoes. Each child puts in the stuffing. |
| Fruit Smoothies | <ul style="list-style-type: none"> • Fresh, frozen or canned fruit of choice. • Vanilla yogurt • Apple juice • Blender • Cups | Mix all ingredients in a blender. Pour into small paper cups for tasting. |
| Compare Textures | <ul style="list-style-type: none"> • Raw, diced carrots • Cooked, diced carrots • Paper plates | Present the two textures of carrots for the children to explore, touch and taste. Talk about how the same food can be prepared in different ways. Ask the children to volunteer other ways they might eat carrots. |



Fruit and Veggie Taste Testing

Often just one taste is enough to encourage someone to be a lifetime consumer of a fruit or veggie. Taste tests in classrooms or school cafeterias can be a simple way to introduce students and staff to new fruits and veggies. If you plan to hold a taste testing of new fruits and veggies, **please send a note home with students the week before a taste test is planned to avoid potential problems for children with allergies.**

Key Elements

- ◆ Capture the attention of students, teachers and staff
- ◆ Use colorful signs and have the servers wear colorful aprons
- ◆ Use simple messages - see below for quick themes and suggested activities
- ◆ Choose a location where students and staff can easily stop, sample and talk to the servers
- ◆ Give something to take home (recipes, tip cards or fruit and veggie promotional items)

Tips

- ◆ Consider the time of day/week/year when planning - offer seasonal produce
- ◆ Arrange the taste test during a time that fits best in the school day
- ◆ Decide on a memorable message and communicate it to every taster
- ◆ Show students and staff something new and different
- ◆ Tie it into a promotion in the cafeteria (such as a fruit or veggie of the week)
- ◆ Use the chart on the back to capture students' opinions

Supplies: serving dishes and utensils, napkins and toothpicks

Common Sense

- ◆ If experimenting with exotic fruits and veggies, always sample them yourself first
- ◆ Never leave the samples unattended
- ◆ Have individual servings so that tasters don't "double dip"
- ◆ Serve the food yourself; don't let tasters help themselves
- ◆ Be careful with electricity and cords
- ◆ Maintain cleanliness and proper sanitation

Quick and simple messages to encourage tasting

| Message | Suggested Activity |
|--|---|
| Try a new fruit or veggie in your salad | Sample a variety of new and different salad ingredients with low-fat dressings |
| Enjoy a healthy snack of fruits or veggies | Sample cut veggies with low-fat dip or dressing, exotic fruits: kiwi, mango, paypaya and star fruit |
| When you want something sweet for dessert, try fruit - it's naturally sweet | Sample a variety of fresh cut fruits, create a mixed fruit cup |

Fruit and Veggie Taste Testing

Name _____

Date _____

| Fruit or veggie to taste | I tasted it | What did I think of it | I will not taste it now |
|--------------------------|-------------|------------------------|-------------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



Fruit and Veggie Challenge

The *Fruit and Veggie Challenge* is an activity that encourages participants to eat more fruits and veggies each day. This activity could be done on many different levels, either as a challenge for one classroom at a time or as a competition (between classrooms, grades or even entire schools!). Don't forget to include parents, faculty and staff. The steps below would help organize a challenge for the entire school. Steps could be easily modified for fewer participants, such as a classroom-only activity.

Two months ahead

- ◆ Get the endorsement of the principal and administration.
- ◆ Designate a *Fruit and Veggie Challenge* coordinator.
- ◆ Develop a team: teachers, school nurse, foodservice director and staff, parents/PTA, community agencies (Cooperative Extension, local hospitals, health department staff). Include all school departments, especially physical education, the library/media center, music and art teachers.
- ◆ Brainstorm for ideas that focus on fruits and veggies.
- ◆ Schedule the event.
- ◆ Solicit participation from parents and community health organizations, such as the American Cancer Society, American Heart Association, YMCA or local hospitals.
- ◆ Arrange for prizes. Many local businesses are willing to donate prizes.
- ◆ Gather recipes, educational resources and other materials.

One month ahead

- ◆ Promote the challenge with posters and flyers distributed to parents, faculty and staff.
- ◆ Work with teachers to encourage students to create slogans.
- ◆ Elicit parent participation by inviting parents for a school lunch that features new fruits and veggies.

The week of the Challenge

- ◆ Provide students and staff with a copy of the *Fruit and Veggie Challenge* chart.
- ◆ Have students perform fruit and veggie-related songs during an assembly.
- ◆ Demonstrate ways to prepare fruits and vegetables that are easy and tasty.
- ◆ Set up a taste-test and/or other fruit and veggie activity in the cafeteria.
- ◆ Decorate the hallways with posters of fruits and vegetables.
- ◆ Guide the students through the *Fruit and Veggie Challenge* chart each day.
- ◆ Remind them to complete the form each night with their family.

After the Challenge

- ◆ Tally the results and recognize students' efforts.
- ◆ Give a certificate to each student/adult who participated. Consider recognizing the student/class/ grade/school that ate the most fruits and veggies or that did the most minutes of physical activity or that tried the most new fruits and veggies.

Fruit and Veggie Challenge

Name _____

Classroom _____

Daily Number of Fruit and Veggie Servings

| | Breakfast | Lunch | Snacks | Dinner | Total |
|-----------|-----------|-------|--------|--------|-------|
| Sunday | | | | | |
| Monday | | | | | |
| Tuesday | | | | | |
| Wednesday | | | | | |
| Thursday | | | | | |
| Friday | | | | | |
| Saturday | | | | | |

- ◆ Aim for 5-9 servings of fruits and veggies every day. That equals 2½ cups of veggies and 1½ cups of fruit.
- ◆ You can eat fresh, frozen, canned or dried fruits and veggies.
- ◆ Pick lots of different colors of fruits and veggies - red, green, yellow, orange, blue, purple and white.
- ◆ Here are some ideas about what counts as a serving of fruits and veggies.



1 medium-sized piece of fruit (e.g. banana, apple, orange, pear)



1 cup raw, leafy veggies (e.g. lettuce, spinach) or salad



1/2 cup cut-up fresh fruit or canned fruit, canned in its own juices



1/2 cup cooked or canned veggies



3/4 cup (6 fluid ounces) 100% fruit juice



3/4 cup (6 fluid ounces) 100% veggie juice



1/4 cup dried fruit (e.g. raisins, dried apricots, prunes)



1/2 cup cooked or canned beans, peas or lentils



Fruit and Veggie Field Trip

Visiting a farmers' market or county agricultural fair can be a fun way to get kids interested in fruits and veggies. This handout will help you to plan a field trip. Contact your local Cooperative Extension agency for information about fairs and markets or visit www.agr.state.nc.us/markets for links to information about farmers' markets in your area.

Before your visit

- ◆ Contact the director of a local farmers' market or county fair to find out the best times for a visit.
- ◆ Find out which farmers will be present with which fruits and veggies for sale or on display.
- ◆ Ask for a map or diagram of the market or fair.
- ◆ Have the director alert the farmers of your field trip.
- ◆ Arrange for plenty of chaperones (parents).
- ◆ Gather supplies for your trip: pens or pencils, crayons or colored pencils; and paper.

Pre-visit preparation ideas

- ◆ Discuss and make charts related to these questions:
 - What do we already know about specific fruits and veggies at the market?
 - What do we predict we'll see at the market or fair?
 - What do we wonder about farmers, farmers' markets and agricultural fairs?
- ◆ Brainstorm a list of questions that might be asked at the market or fair. In order to help the children think of the questions, give them categories and record their ideas under the separate headings. Examples include jobs, people, machines, fruits, veggies and seasons; or who, what, when, where and why?

Pre-visit guest ideas

- ◆ Invite a local farmer or local extension agent to speak to your class on crops in your immediate area.
- ◆ Have the class interview your guest speaker or host. Have students write their questions in advance as a writing assignment. Sample questions could be:
 - How did he/she start farming?
 - Why is he/she growing/raising that particular commodity(s)?
 - How much land do they have under production?
 - What machines does he/she use?
 - How do they sell their product?
 - How do they determine price?
 - What factors determine price?
 - After the interview, have them write articles on it as a newspaper reporter would.

At the farmers' market or fair

- ◆ Set up a scavenger hunt on paper based on the map/diagram that you received.
- ◆ List items students need to find (animals, crops, commodities) in each area or exhibit.
- ◆ Have them list how much the biggest watermelon/pumpkin weighed.
- ◆ Have students find out where the fruits or veggies on display were grown.
- ◆ Have students make drawings of the grounds and displays.

After your visit

- ◆ Compare pre-visit predictions with on-location discoveries.
- ◆ Locate where displayed fruits and veggies were grown on a North Carolina map.
- ◆ Discuss nutrients found in the fruits and veggies seen at the market.
- ◆ Categorize where items are grown by region.
- ◆ Give reasons why these fruits and veggies are grown in these regions.
- ◆ Compare characteristics of regions (soil type, climate).
- ◆ Make a Jeopardy-type game with the information everyone has gathered.
- ◆ Make up a quiz to give parents, another class or the chaperones.
- ◆ Have a parents' night for taste testing fruits and veggies sold at the market/fair.
- ◆ Make a mural of the market or fair based on sketches.
- ◆ Make a diagram of a fruit or veggie finding its way from a farm to a lunch box.
- ◆ Have students write reports, articles or stories about the trip and their discoveries.
- ◆ Have students write thank you notes to the director and any guest speakers.



Field Trip to a Farm

Consider a class trip to a farm. Children will get the opportunity to see where fruits and veggies are raised for distribution and sale. The following tips will help your tour go smoothly and will stretch the value of the time you spend "in the field."

Before your visit

- ◆ Call the farm to make a reservation. Ask if there is a fee and how long the tour lasts.
- ◆ Request teaching materials they may have to aid in preparation.
- ◆ If possible, go to the farm on your own before you bring the whole class. Introduce yourself, pick up relevant information and try to watch another class having the tour.
- ◆ Begin your farm unit one week ahead and plan to continue at least one week after the visit.
- ◆ Prepare your class for inclement weather and field conditions.
- ◆ Don't forget bee kits if you have students who are allergic.
- ◆ Inquire about places to eat lunch or snacks.
- ◆ Gather supplies for your trip: pens or pencils, crayons or colored pencils; and paper.

Pre-visit preparation ideas

- ◆ Discuss and make charts related to these questions:
 - What do we already know about the specific fruits and veggies being grown?
 - What do we predict we'll see at the farm?
 - What do we wonder about farmers, farms, and fruits and veggies?
- ◆ Brainstorm a list of questions that might be asked at the farm. In order to help the children think of the questions, give them categories and record their ideas under the separate headings. Examples include jobs, people, machines, fruits, veggies and seasons; or who, what, when, where and why?

Pre-visit guest ideas

- ◆ Invite a local farmer or local extension agent to speak to your class about crops in your area.
- ◆ Have the class interview your guest speaker or host. Have students write their questions in advance as a writing assignment. Sample questions could be:
 - How did he/she start farming?
 - Why is he/she growing that particular commodity(s)?
 - How much land do they have under production?
 - What machines does he/she use?
 - How do they sell their product?
 - How do they determine price?
 - What factors determine price?
 - After the interview, have them write articles on it as a newspaper reporter would.

At the farm

- ◆ Find the tour guides and let them know how you have prepared the students.
- ◆ The tour may include some of the following:
 - A walk or ride in the fields.
 - An explanation of the growing process.
 - Viewing (if possible) of the harvest, handling and storage techniques.
 - A chance for students to pick their own fruit or veggie (supervised).
 - Viewing of processing the harvest into another commodity (like apples into cider).
 - A visit to the farm store and discussion of the market.
- ◆ Have students make drawings of the farm.

Please remember

- ◆ A farm is a busy place! While your hosts have made a commitment to teaching children about farming, this is not their primary job. Please be active in the control of your class and careful of equipment and workers who are rushing to get the crop harvested and stored. To assure your safety and quality of experience, your hosts have planned a route and presentation within this busy context. There may be other schools or classes nearby who are in a different part of the tour. Please help your students to experience the beauty of the farm and to recognize that it is not a playground.

After your visit

- ◆ Compare pre-visit predictions with on-location discoveries.
- ◆ Discuss nutrients found in the fruits and veggies grown on the farm.
- ◆ Make a Jeopardy-type game with the information everyone has gathered.
- ◆ Make up a quiz to give parents, another class or the chaperones.
- ◆ Have a parents' night for taste testing fruits and veggies grown on the farm.
- ◆ Make a mural of the farm based on sketches.
- ◆ Make a maze using a tractor going through the fields.
- ◆ Make a diagram of a fruit or veggie finding its way from a farm to a lunch box.
- ◆ Have students write reports, articles or stories about the trip and their discoveries.
- ◆ Have students write thank you letters to the farm.



School Gardens

School gardens are effective learning tools that create opportunities for our children to discover fresh food, make healthier food choices and become better nourished. Gardens also offer dynamic, beautiful settings in which to integrate every discipline, including science, math, reading, environmental studies, nutrition and health. There are many types of plants that can be grown in a garden including those that produce edible fruits and veggies. The following tips will help you get started with your own project.

Organize a Garden Committee and Support Base

- ◆ Include administration, teachers, parents and students in the planning process.
- ◆ Get permission before planning to plant a garden on school property.
- ◆ Define specific talents and expertise of each member of the committee and support group. List specific needs/wants and have individuals commit to those areas.
- ◆ Establish a projects list, realistic timeline for completion of tasks and specific objectives for students in the garden. Visit successful school gardens to get ideas and ask questions.
- ◆ Enlist the expertise of your county's Cooperative Extension Service or a Master Gardener Program.

Select a Garden Site

- ◆ A good site is easily accessible, receives direct sunlight for 6 to 7 hours daily, is clear of trees and roots and has good water drainage.
- ◆ Check for the proximity of the water source.
- ◆ Call local utilities and the school district for existence and location of underground utilities.

Design Your Garden

- ◆ Start small to develop a general feel for the garden. Things to consider include: individual class beds, theme gardens, a tool shed, a greenhouse and fencing.
- ◆ Sketch out a plan for the entire area including: beds for annual crops of veggies and flowers; theme gardens for butterfly and larval plants; medicinal and culinary herbs; teas; edible flowers; an orchard area; and permanent areas to include native plants and berry patches (habitats for birds, insects, snakes and frogs).
- ◆ Be sure to include composting and worm bins, a tool shed, benches and a shaded outdoor classroom. If necessary, divide the project into phases as funds and energy permit.
- ◆ Make sure paths are wheelchair accessible - 36" wide.

Determine Cost of Labor and Materials

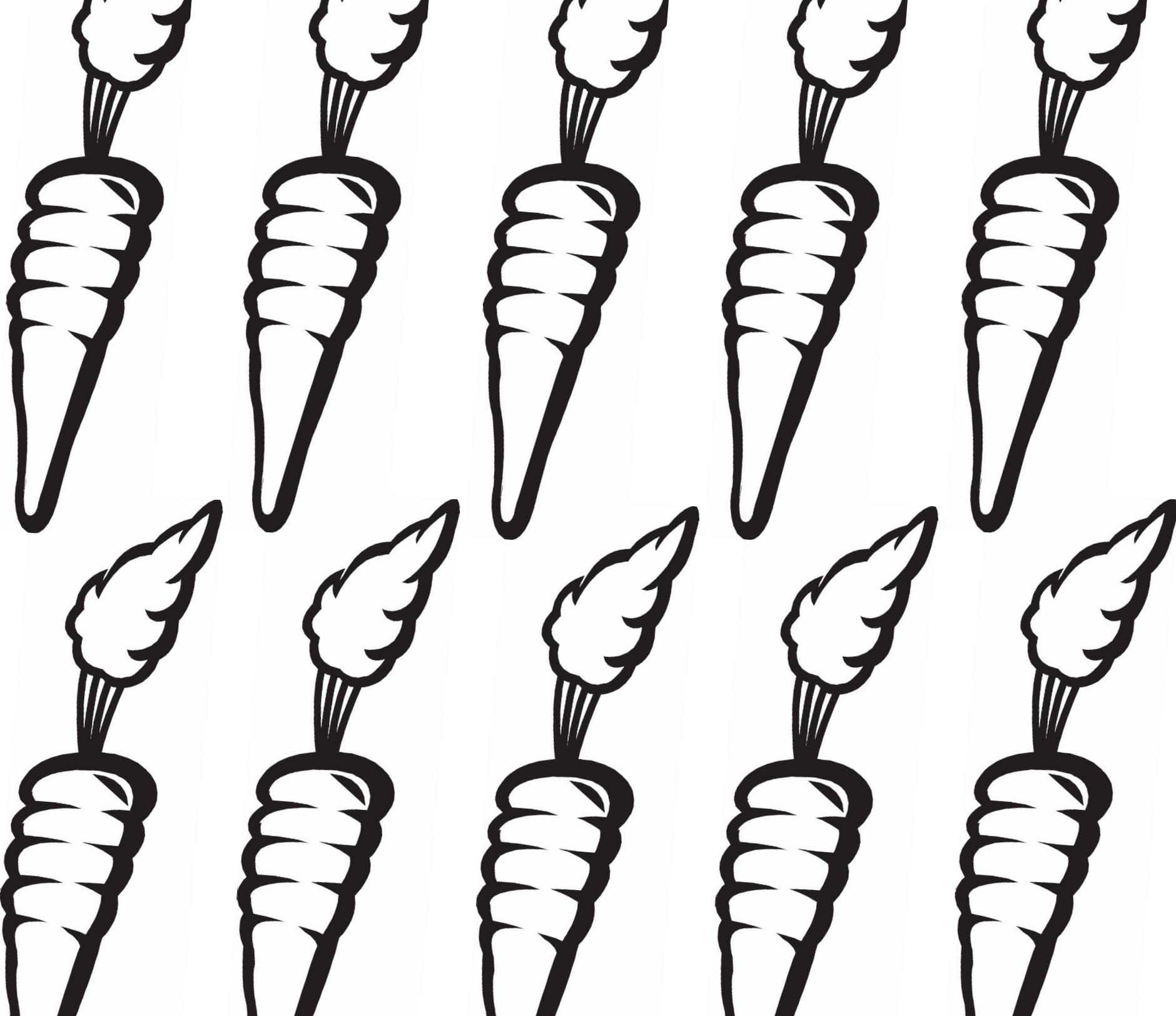
- ◆ Organic planting mix for raised planters. Multiply bed length times width times depth in feet and divide by 27 to get number of cubic yards of soil needed.
- ◆ Soil amendments for in-ground planting. Add 4 to 6 inches of compost to well-dug soil and mix with existing soil.
- ◆ Hardware cloth ($\frac{1}{4}$ inch wire mesh) to line raised beds where moles are a problem.
- ◆ Wood chips or other materials for garden paths. Most tree companies are glad to donate chips.
- ◆ Irrigation components and controllers. You can use simple, non-electrical timers, or battery operated controllers, costing \$20-\$30 and \$40-\$50, respectively.
- ◆ Seeds and plants.
- ◆ Suggested Tool List (minimum): small trowels - one per student; watering cans; 3-4 shovels; 3-4 turning forks; wheelbarrow; small buckets; 1-2 hoes; 1-2 rakes; plant labels are a good art project; hoses and gentle spray nozzles.

Fundraising

- ◆ Determine start-up and maintenance costs, and what funds are immediately available. Is there a system established with the school regarding accounting?
- ◆ Determine who will keep track of the budget.
- ◆ Make a list of needed items and a list of possible local resources - PTA, parents, local vendors.
- ◆ Obtain a list of grant proposals; determine who will research, write and facilitate the grant.

Garden

- ◆ Schedule and publicize community work days; follow up with a phone tree.
- ◆ Have students make posters to put around school with work dates.
- ◆ For building projects, identify an experienced carpenter or builder in the group to organize workers.
- ◆ Identify those with plumbing, electrical and irrigation knowledge and skills. Ask volunteers to bring needed tools, including saws, hammers, post hole diggers, wheelbarrows, shovels, spades, pickaxes, digging bars and spading forks (depending on tasks being done).
- ◆ Remove any unwanted current vegetation from the garden site. Move native plants or current landscaping to another appropriate site on school grounds. *DO NOT USE HERBICIDES* of any kind to kill weeds. They are toxic not only to weeds, but also to our watersheds and our children!
- ◆ If mole/vole control is needed, install ¼" hardware cloth 12 inches deep for in-ground planting or use raised planters with ¼" hardware cloth on bottom. If planting directly in the ground, turn over soil to a depth of 18", adding 4" to 6" of soil amendments as needed (based on soil type). If constructing raised planters, fill with organic planting mix.
- ◆ Install drip irrigation system and controller. Spread wood chips or other material on garden paths.
- ◆ Build fence and gate; install sign.
- ◆ Contact your local Cooperative Extension agency for advice on appropriate plants, planting schedules, seeds and seedling sources.
- ◆ Have students start planting. Make sure that the students are involved in each step of the process whenever possible!
- ◆ MOST IMPORTANT - Have Fun!





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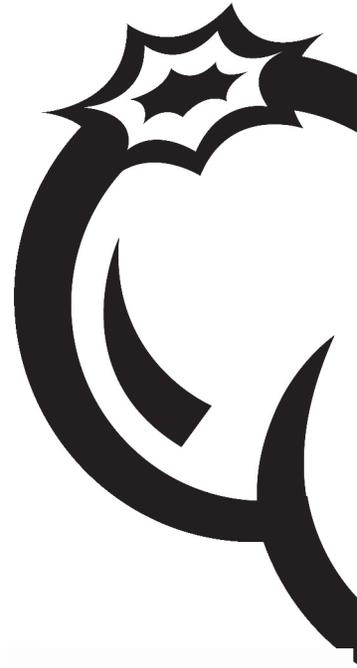
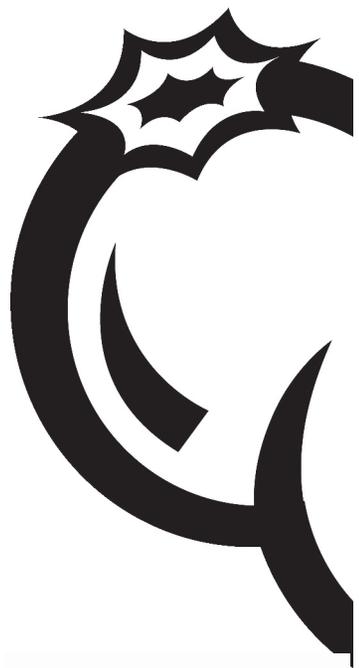
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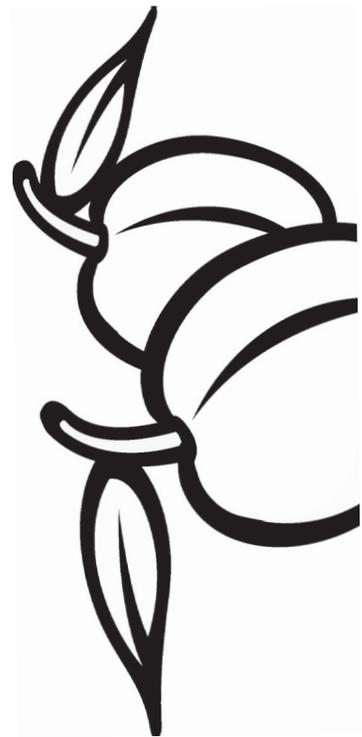
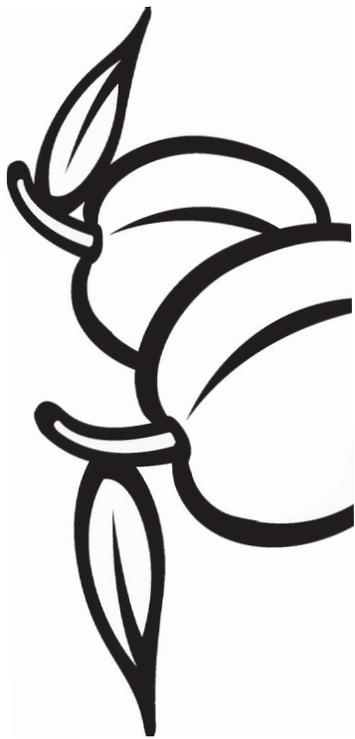
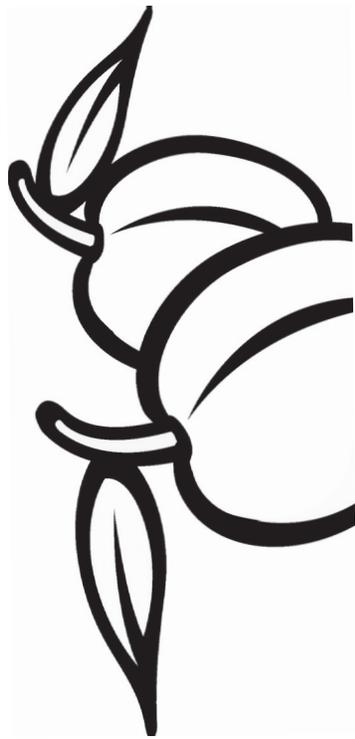


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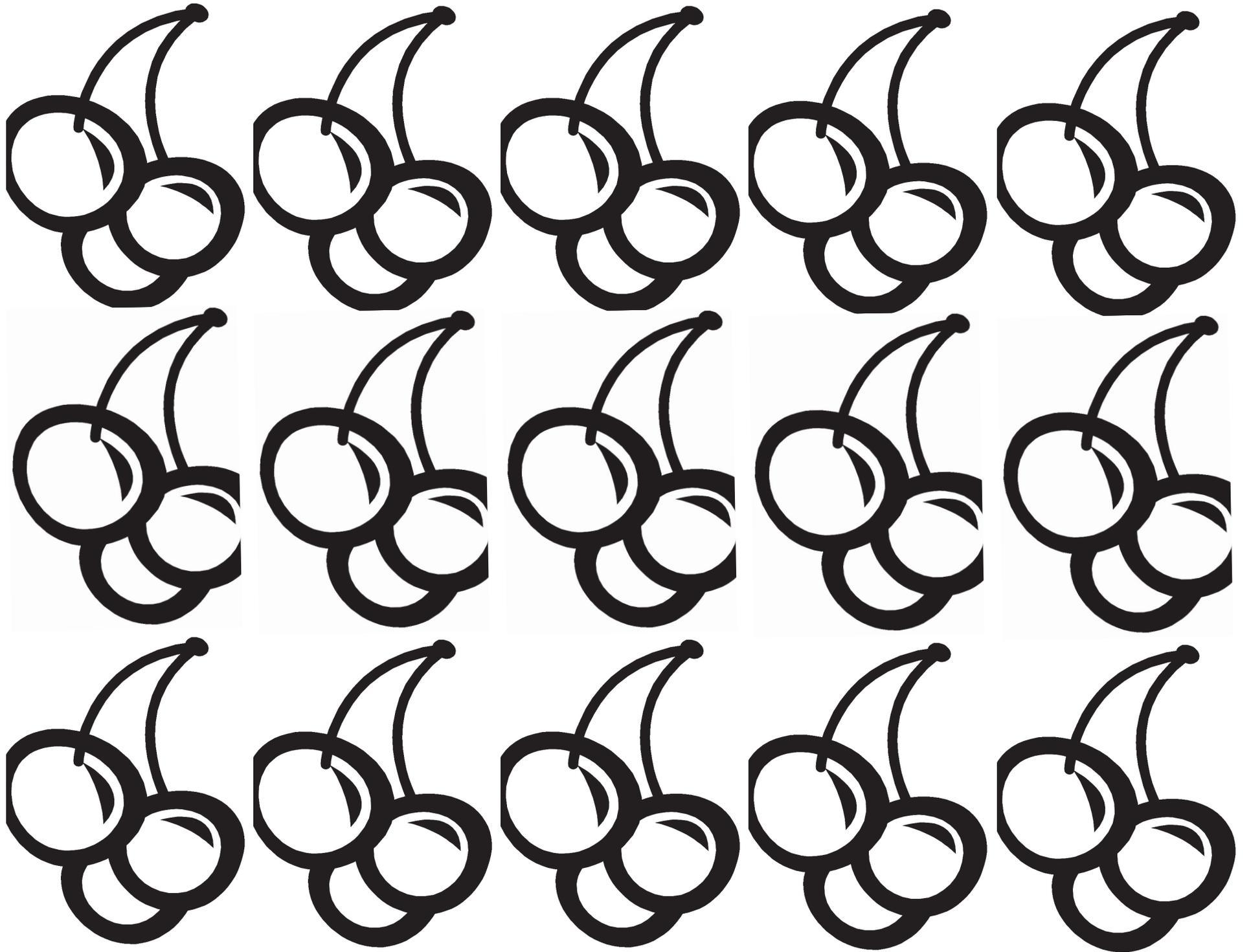


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Fruits and Veggies

They're sweet or tart. Crunchy or soft. Big or small. Fresh, canned, dried, or frozen.

They are easy to serve. And even easier to eat. Fruits and veggies - they make a better snack.

And you'll love them!

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