

# Devour Cauliflower

[20-30 minute lesson]

**Objectives:** *Students will be able to...*

1. Express appreciation for eating flowers.
2. Describe some dips, sauces or cooking methods to use with cauliflower.
3. Articulate a desire to encourage their families to purchase and eat more cauliflower.

**Step 1: Review "Did you know...?" Fun Facts on the Back of the *Devour Cauliflower* Trading Card**

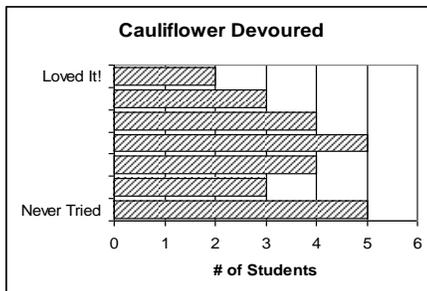
**Step 2: Discuss "Why-to" Devour Cauliflower; Focus on the Coolness of Eating Flowers**

IT'S COOL AND IT'S HEALTHY! Discuss with the students that although cauliflower has *flower* right in the name, we might not always think about the fact cauliflower is a flower, but it is! We often eat other parts of the plant such as roots, stems, leaves, fruit and seeds. Eating flowers is less common. Plants make flowers to help make seeds; since this is a very important job for a plant, the plant sends lots of "good stuff" to the flowers. For us, that good stuff is the vitamins and phytochemicals that help to keep us healthy now and help to keep us from getting diseases in the future.

Cauliflower is high in vitamin C that can make our immune system strong, help us heal cuts, and helps prevent cancer. That makes it both *cool* and *healthy* to eat flowers. Ask students if they can think of any other flowers that we eat (example: broccoli, artichokes, and squash blossoms).

**Step 3: Gather Some Flower Eating Data**

HAVE THEY EATEN IT? Ask students to raise a hand if they have eaten a vegetable flower in the last week, and to raise both hands if they have eaten cauliflower. On the board, make tally marks to represent how many students have eaten any vegetable flower, how many have eaten cauliflower and how many had no hands up (had not eaten a flower). Congratulate the students who have eaten cauliflower or any vegetable flower and encourage the rest to give it a try when it is in season (August - December)!



DID THEY LIKE IT? Poll the students to find out how much they like cauliflower. Have the students hold up a fist if they have never tried cauliflower; 1 finger if they have tried it but did not really like it; on up to 5 fingers if they really, really like cauliflower. Tally the data and make a bar graph that illustrates how many students have never tried cauliflower, next to those who raised 1, 2, 3, 4, or 5 fingers.

**Step 4: Have Students Break into Groups to Discuss Ways They Might Try Cauliflower in the Future**

1. What kind of dips do they like with cauliflower? (such as: ranch style, yogurt herb, honey mustard)
2. What kinds of sauces are good on cooked cauliflower? (such as: soy sauce, with pasta and tomato sauce)
3. What other ways can they think of to have cauliflower? (such as: pureed and put in soup, baked with bread crumbs and a bit of cheese on the top, in a quiche)

**Ask students to raise their hands if they will encourage their families to devour more NYS cauliflower.**

# Munch on Apples

[20-30 minute lesson]

**Objectives:** *Students will be able to...*

1. Describe why apples make a good anytime snack.
2. List adjectives that describe the taste and texture of apples.
3. Commit to eating apples as a snack.

**Step 1: Review the "Did you know...?" Fun Facts on the Back of the *Munch on Apples* Trading Card**

**Step 2: Discuss "Why-to" Munch on Apples; Focus on Why Apples are a Super "Anytime" Snack**

Ask the students to think of reasons why apples are a super anytime snack. Accept all reasonable answers.

Here are some good reasons to add to the class list:

1. Apples are an easy snack to carry around, whether whole or in slices, they are great any time of day.
2. Apples are available from New York State farmers almost the whole year round! Apples are picked in the summer and fall and can be stored in cold temperatures to keep them crisp and great tasting all year. Are there any apple orchards near you?
3. New York State has many, many varieties of apples that differ in taste, color and textures. With so many varieties to choose from, it is easy to have lots of different apple experiences (including eating apple sauce or apple pie and drinking apple cider!). It is possible to have apples everyday without getting tired of them.

**\*SUPPLEMENT\*** Use the enclosed *A to Z History of New York State Apples* or if you have a computer in your classroom visit [www.nyapplecountry.com/varieties.htm](http://www.nyapplecountry.com/varieties.htm) to see pictures of varieties of New York State apples and learn a lot more about New York State apples.

**Step 3: Apple Adjectives from A-Z**

APPETIZING APPLES! Write the letters A-Z on the blackboard. Ask the students to think of adjectives that can describe the taste, color, texture or anything about apples that begin with each letter of the alphabet. Encourage the students to think creatively and to fill in at least one adjective for as many letters of the alphabet as possible. If available, use chart paper that can be kept posted in the classroom.

**Step 4: Making a Commitment to Eat Apples**

I WILL! Ask each student to get out a piece of paper and write down a time of day they will try to eat apples. Here are some examples:

- I will bring sliced apples to eat with my lunch.
- I will carry a whole apple with me to eat after school.
- For a snack at home, I will try dipping apples slices in a mixture of vanilla yogurt and peanut butter.
- Instead of cookies, I will snack on apple slices with a little honey and cinnamon on top.

**Remind the students that Munching on Apples will help them stay healthy and strong!**

# Crunch Carrots

[20-30 minute lesson]

**Objectives:** *Students will be able to...*

1. Explain that carrots help the eyes adjust to decreased light.
2. Describe the carrot root system and how to eat a carrot to the core.
3. List ways to add shredded raw carrots and cooked carrots to their diet.

**Step 1: Review the “Did you know...?” Fun Facts on the Back of the *Crunch Carrots* Trading Card**

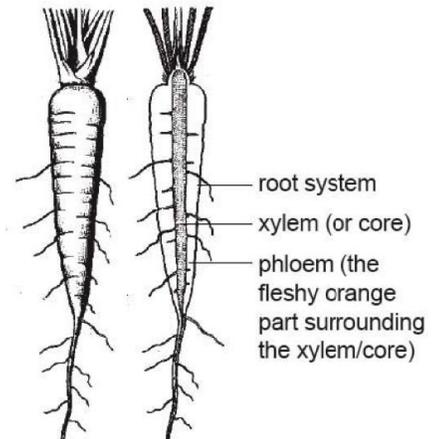
**Step 2: Discuss “Why-to” Crunch Carrots; Focus on Vitamin A Which Improves Night Vision**

Read the following scenario to the students: *Juan and Sasha are twins who are 12 years old. They were outside on a very sunny day swimming at the city pool. The sun was very bright and seemed even brighter with the light reflecting off the water of the pool. After they had swum for a while they decided to get something to eat at the snack bar, which was inside a building. The lights were off in the building. Although it was not completely dark inside, it was much darker than by the pool. When Juan and Sasha first went inside they stopped short and put their hands out in front of them — they could not see a thing! In a few seconds, their eyes adjusted and they could see just fine. The employee working at the snack bar saw what happened and said to Juan and Sasha, “it is a good thing you eat your carrots or else your eyes would not have been able to adjust so quickly.” She then explained that carrots have vitamin A that helps us with night vision, or any time our eyes have to adjust from a place with a lot of light to a place with much less light. She told Juan and Sasha she sells bags of New York State carrot slices. Juan and Sasha decided it was a good idea to crunch on delicious and nutritious carrots with their lunch!*

Has anything like this happened to any of the students? Explain that when a person does not have enough vitamin A, making the adjustment to decreased light takes a long time.

**Step 3: Eat Carrots to the Core**

Use the diagram to the right to draw a carrot whole and then draw a carrot with the root system, xylem and phloem labeled on the black board or chart paper in the front of the room. Explain to the students that they can carefully eat a carrot around the edges to eat off all the phloem so that only the xylem is left. Encourage the students to try this at home. In a few days ask them to share their experiences.



Source: <http://etc.usf.edu/clipart>

**Step 4: The Raw vs. Cooked Challenge**

Carrots can be enjoyed both raw and cooked. Divide the students into small groups and name half of the groups *RAW* and half of the groups *COOKED*. Have the groups list as many ways as they can think of to have carrots either raw or cooked based on their group name. Allow three minutes. *RAW* can include items that shredded carrots are added to such as coleslaw and salads. *COOKED* can include adding carrots to entrees or baked items, like bread, pancakes or soup. Have the groups share their lists and see which list has more items, raw or cooked.

**Encourage students to look for the many varieties of fresh NYS carrots at a farmers' market!**

# Gobble Grapes

[20-30 minute lesson]

**Objectives:** *Students will be able to...*

1. Define the phrase, "eat like a rainbow" and list the pigments that give fruits and vegetables their colors.
2. Explain why we preserve grapes.
3. Make a commitment to eat more fresh and preserved grapes.

**Step 1: Review the "Did you know...?" Fun Facts on the Back of the *Gobble Grapes* Trading Card**

**Step 2: Discuss "Why-To" Gobble Grapes; Focus on the Richness of Their Colors**

THE FOOD RAINBOW! Has anyone ever heard the phrase "eat like a rainbow"? This is a fun way to eat a variety of colors of fruits and vegetables. The colors can make the fruits and vegetables visually appealing and eating our colors (fruits and vegetables) provides us with many needed nutrients. These nutrients help our bodies do what we need them to do now (such as help our bodily processes work; keep us from getting sick and help us get better faster; heal our cuts; and make our skin clear) and eating our colors helps us stay healthy long into the future (help decrease our risk of cancer, heart disease and gaining extra weight). Grapes can come in a deep purple and many different colors; they are a fun way to eat parts of the rainbow.

**Step 3: What Gives Fruits and Vegetables Their Colors?**

Have a discussion with students about plant pigments that give plants their colors. **Chlorophyll** is the primary pigment in plants giving them their green color. **Anthocyanin** is the pigment that gives purple grapes, and other dark red (such as apples) or blue (such as blueberries) fruits and vegetables their rich color. **Carotene** is an orange pigment, **lutein** is yellow pigment, and **lycopene** is a red pigment, it gives tomatoes their color. Have the students write down the names of the different color pigments. Next to each they can write fruits and vegetables they think have that pigment. Many fruits and vegetables have a combination of these pigments, as well. The students can go home and impress their families by knowing the names of the pigments that give fruits and vegetables their rainbow of colors.

**Step 4: Fresh and Preserved Grapes**

Fresh grapes are available from New York State farmers in the fall (mid-August through October) (see the supplemental *Pride from A to Z* chart) when they are *gobble-icious!* We can also preserve the great grape flavor so that they can be available throughout the year. Grapes are made into **jelly, jam or preserves**. The grapes are mixed with pectin and/or a sweetener, heated to a high temperature and sealed into a container (canned). The heating kills all the microorganisms, and since no new microorganisms can get in, this preserves the grapes. Grapes can also be dried; we call dried grapes (ask students) **raisins!** Drying grapes, or any other fruit or vegetable, allows the water to evaporate out. Once the water is removed from the grapes, bacteria, mold and other microorganisms cannot grow on them. Imagine what would happen to a bunch of grapes if you left them in your cabinet for a month. They would get moldy and are not edible. But, raisins can be safely stored in a cabinet for a long time. When grapes are made into **grape juice** and the juice is put into a sealed container, this is a form of preserved grapes too.

**How do your students like best to gobble up great New York State grapes? Fresh, preserved, dried like raisins or in juice?**

# Nosh on Squash

[20-30 minute lesson]

**Objectives:** *Students will be able to...*

1. Describe the meaning of winter storage crops.
2. Create a Nosh on Squash Poem.
3. Make a commitment to eating squash and squash seeds.

**Step 1: Review the "Did you know...?" Fun Facts on the Back of the *Nosh on Squash* Trading Card**

**Step 2: Discuss "Why-to" Nosh on Squash; Focus on Nutrition in the Winter from Storage Crop**

FRUITS and ROOTS in the CELLAR? We all know that when it is cold in the winter, plants don't grow well. In places like New York State where the winter is very cold, we rely on foods that can be stored for a long time without spoiling. Many root vegetables store well. You may have even heard of a "root cellar" a cool place to store root crops such as potatoes, carrots and onions. Winter squashes with their tough outside skin, like pumpkin, acorn, butternut, spaghetti, delicata, and carnival also store well in root cellars or a kitchen pantry.

Winter squash are the **fruit** of the plant. How do we know? Because they have seeds inside! Carrots, potatoes and onions are the **root** of the plant; they do not contain seeds inside. They are all nutritious!

**Step 3: Preparing and Eating Squash Seeds**

Ask students if they have had experience carving pumpkins or cooking squash; ask if they saved the seeds. When we cook squash we usually cut it in half length-wise into two halves. To prepare squash seed to eat: scoop the seeds out of the halves; rinse seeds with water until they are clean; spread seeds onto a shallow pan in a single layer, such as a cookie sheet; let them dry out for a few days; when dry, roast them in an oven set at 350°F until they are golden; if desired, sprinkle lightly with salt; and ENJOY!

**Step 4: Write a Nosh on Squash Poem**

Ask the students to write a simple poem about noshing on squash. They can write a limerick (five lines, last words of lines one, two and five rhyme and last words of lines three and four rhyme), haiku (three lines with five syllables in the first, seven in the second and five in the third), or another type of poem, such as a free verse poem (visit [www.kathimitchell.com/poemtypes.html](http://www.kathimitchell.com/poemtypes.html) for ideas on types of poems) and share with the class. For example:

**Haiku:** A long winter day  
It is cold, I am hungry  
Bake a squash for lunch

**Limerick:** Mother calls, "Stop your playing and come on in,  
For dinner tonight we'll be serving pumpkin.  
And acorn, butternut, spaghetti too-  
We surely have a lot to do!  
Wash, cut, season, then put it on a baking tin.

**Ask the students to raise their hands if they will encourage their family to try some noshing on some different varieties of squash and raise two hands if they will try roasting squash seeds too!**

# Graze on Green Bean

[20-30 minute lesson]

**Objectives:** *Students will be able to...*

1. Explain that nutrients give our body the tools to do what we want them to do, now and as we get older.
2. Create a picture that will convince other students their age of why it is important to eat vegetables.
3. Commit to eating raw or cooked green beans in the future.

**Step 1: Review the "Did you know...?" Fun Facts on the Back of the *Graze on Green Beans* Trading Card**

**Step 2: Discuss "Why-to" Graze on Green Beans; Focus on Green Beans Giving Our Body Needed Tools**  
**WHAT'S IN YOUR TOOLBOX?** Ask the students to list reasons why vegetables, such as green beans, are good for us. List the students' responses on the board or on a sheet of chart paper. Accept all reasonable answers. Explain that the nutrients in vegetables are resources for our body. The many, many nutrients in fresh vegetables and fruits give our body the tools we need to fight off microorganisms that cause us to get sick. The nutrients are tools that help us think clearly; help us perform well in sports or other activities; help keep our hair and skin healthy; and help prevent us from getting diseases when we get older.

**Step 3: Draw a Picture that Shows: Why Vegetables, Such as Green Beans, are Important to Eat**  
**HOW COLORFUL ARE YOU?** Have the students draw a picture that could convince other students their age why vegetables are important, using one of the reasons listed in "Step 2". The catch is that to make their picture they can *only use one color* (pencil, pen or one color crayon or marker). Have students describe their pictures to the class. Explain that with one color they can get their message across, but that it may not be as clear to understand, or done as well as it could have been. Now have the students *re-draw their pictures using a wide variety of colors*. Have the students show their new picture and contrast the **multi-color** picture with the **monochromatic** picture; note how they are able to make the message come across clearer by using more colors.

Explain that if we don't eat vegetables or fruit, it is similar to our body trying to perform its jobs using just one color. It can do what we want it to do, but it may not be done as well as we would like or be as clear or effective as we would like. **Eating a variety of vegetables is like a multi-color drawing;** it will give our bodies a wide range of tools to help make it perform really well.

If possible, hang up the students' colorful pictures in a place where the entire school can view them.

**Step 4: Make a Hand Contract**

On a large sheet of paper, write on the top: **I WILL GRAZE ON GREEN BEANS!** (they can substitute another green vegetable if desired). Have each student who would like to accept the challenge trace his or her hand onto the paper. Have the students use a wide variety of colors for their hands. Inside the palm of the hand have the students write their names and when and how they plan on eating green beans (such as: steamed with dinner; fresh snap beans with my lunch; mixed up in a three bean salad). It is fine if the hands overlap. Hang up the hand contract in the classroom. If you keep the hand contract hanging in the classroom you can have the students color in a finger each time they eat green beans.

**Ask the students to look for great NYS green, yellow and even purple beans in their local markets.**

# Chomp on Sweet Corn

[20-30 minute lesson]

**Objectives:** *Students will be able to...*

1. Tell others that in New York State corn is a crop to enjoy throughout the summer and into the fall.
2. List various fruits and vegetables available from New York State farmers in each season.
3. Commit to eating one current seasonal fruit or vegetable.

**Step 1: Review the "Did you know...?" Fun Facts on the Back of the Chomp on Sweet Corn Trading Card**

**Step 2: Discuss "Why-to" Chomp on Sweet Corn; Focus on Sweet Corn as a Summertime Favorite**

**EAT IN SEASON!** Explain to students that the more they learn about what foods are harvested from farms during the different times of the year, and the more they have opportunities to eat fresh New York State produce, the more they will connect the different foods to certain seasons.

Corn is one food that goes with summer! Actually, you can **chomp on fresh NYS sweet corn** from mid-July through mid-October. It can be roasted on the grill in the husk at cook-outs, or husked and steamed or boiled in water on the stove in just minutes.

**Step 3: Factors of 800 for 800 Average Kernels on an Ear of Sweet Corn**

**MATH CHALLENGE:** Since a cob of corn has on average 800 kernels, have the students try to list all the factors of 800 (1, 2, 4, 5, 8, 10, 16, 20, 25, 32, 40, 50, 80, 100, 160, 200, 400, 800). Now make a bar graph showing how many numbers it would take to get to 800 when counting by each of the factors. Make a bar graph to show this: 1=800, 2=400, 4=200, 5=160, 8=100, 10=80, 16=50, 20=40, 25=32, 32=25, 40=20, 50=16, 80=10, 100=8, 160=5, 200=4, 400=1, 800=1). Make the heading for your bar graph, "An average ear of sweet corn has 800 kernels, just how many is this?"

**Step 4: Seasonal Eats**

**\*SUPPLEMENTAL\*** Use the list below and the seasonality chart, *Pride from A to Z*, to learn about what is available in NYS seasonally. Some of the foods available from NYS farmers during different seasons are:

Winter	Spring	Summer	Fall
Apples	Asparagus	Blueberries	Apples
Beets	Lettuce	Cucumbers	Cauliflower
Carrots	Peas	Green beans	Celery
Cabbage	Rhubarb	Sweet Corn	Eggplant
Pears	Strawberries	Tomatoes	Grapes
Sweet potatoes	Spinach	Watermelon	Raspberries

**Step 5: The Seasonal Pledge**

Ask the students to each write a pledge to eat more seasonally fresh, nutritious, and delicious NYS vegetables and fruits. They can use a format like this:

*I [name] pledge to eat more \_\_\_\_\_. I will eat it \_\_\_\_\_ (at breakfast, lunch, dinner or as a snack).*

*I like to eat it \_\_\_\_\_ (raw, with dip, steamed, roasted, in a salad, on a sandwich, in soup, etc).*

Have each student have a witness sign his or her pledge. In a few days, ask the students how they are doing on their pledge.

# Ravage Cabbage

[20-30 minute lesson]

**Objectives:** *Students will be able to...*

1. Explain why cruciferous vegetables help our immune system.
2. List some cruciferous vegetables.
3. Try cabbage in new ways.



**Step 1: Review the "Did you know...?" Fun Facts on the Back of the *Ravage Cabbage* Trading Card**

**Step 2: Discuss "Why-to" Ravage Cabbage: Focus on Cabbage Helping the Immune System**

No one likes to be sick. You may have noticed that some vegetables, such as cabbage, cauliflower, kale, and brussel sprouts have a very strong smell or odor, especially when they are cooking. That odor comes from sulfur and it makes these vegetables particularly good at helping our immune system. Have some today to keep from getting sick tomorrow!

**VEGETABLES BELONG TO FAMILIES!** There is a family of vegetables, called **cruciferous**. What they have in common is they all produce a small, yellow, **cross-shaped** flower. There are many vegetables in this family (also known as *Brassica*) including, but not limited to:

- collard greens
- cabbage
- brussel sprout
- kohlrabi
- broccoli
- cauliflower
- bok choy
- mizuna
- Rapini (broccoli rabe)
- rutabaga
- Chinese or napa cabbage
- turnip root; greens radish

How many of these cruciferous vegetables are the students familiar with?

**COLESLAW: WHY SO POPULAR?** Coleslaw was probably created during the time of the ancient Romans and it has taken on different forms in different countries. Today, the most popular form of coleslaw is mayonnaise-based. This type could not have existed until the 1700s when mayonnaise was invented. Now, it has become a **very common side dish that can be full of nutrition**. Often, shredded carrots are in coleslaw, and some coleslaw even has pineapple added to it. Does pineapple grow in New York State? (No, but it is a good source of vitamin C.)

Poll the students to see how many have eaten coleslaw in the past week/month/year. Make tally marks on the blackboard for their answers. Continue to ask the students if they have eaten cabbage in other dishes recently, making tally marks for each. How many have had cabbage in a soup? How many have had cabbage roasted with other vegetables such as potatoes? How many have had shredded (purple) cabbage in a green salad? Ask the students to name other ways they have had cabbage; list them and make tally marks for each.

**Step 3: Ravage Cabbage in New, Different Way!**

From your list, ask the students to find a way they have not had cabbage before (or if they have had cabbage in every way listed, which way has been the least frequent). Call out the various preparation methods for cabbage (coleslaw, soup, roasted, green salad, etc.) and have the students raise their hands to vote for the preparation method they would like to try next. List the students' names under the preparation method. Keep the lists hanging in the class. Ask the students how they are doing every few days.

# Savor Spinach



[20-30 minute lesson]

**Objectives:** *Students will be able to...*

1. Discuss ideas for how to mix spinach into other foods.
2. Produce skits that can convince other students their age to eat spinach.
3. Create a list of ways they will add raw or cooked spinach to their diet.

**Step 1: Review the “Did you know...?” Fun Facts on the Back of the *Savor Spinach* Trading Card**

**Step 2: Discuss “Why-to” Savor Spinach; Focus on How Easy it is to Mix Spinach into Other Items**  
SAVOR SPINACH FOR BREAKFAST, LUNCH and DINNER! Ask the students to share different ways they have had spinach. Because spinach leaves are so thin, they can easily be mixed into salads and eaten raw. Also, when they are cooked they shrink down, making them a great addition to lots of dishes. Spinach leaves can be savored in **lasagna, topped on pizza, put over chicken, mixed into meatloaf, or combined into quesadillas**. Spinach is also delicious mixed with other cooking greens, such as kale or collards. Spinach is even great in an omelet for breakfast!

Being able to have spinach in so many ways is terrific because, as it says on the Savor Spinach trading card, calorie for calorie, leafy green vegetables like spinach have more nutrients than any other food, increasing the healthfulness of any dish that spinach is added to.

**Step 3: Skits on Spinach**

STRONG TO THE FINISH, BECAUSE HE EATS ALL HIS SPINACH! Ask the students if they are familiar with “Popeye the Sailor Man,” a 1930s cartoon about Popeye, a man who got his strength from eating spinach.

Divide the students into groups and explain that they are going to create a one minute skit about why it is important to eat spinach and how good it can be! Allow five minutes for them to prepare. Ask the students to try to make their skit convincing, so if other students their age saw the skit, they would be inspired to eat spinach. Once the students complete their skits, have them perform them for the rest of the class. If possible, you can have some of the best skits performed for others in the school community.

**Step 4: Create a Take-Home List of Creative Ways to Eat Spinach**

Ask the students to think of creative ways they could add spinach to their diet, whether raw or cooked. Record the list on the board or on chart paper. Have each student copy down the list and bring it home to share with their families.

Ask the students to raise their hands if they think their family will try adding some spinach to some of their meals at home.

**Encourage the students to look for fresh, NYS spinach in their local markets this summer!**