

# **KALE HERO TOOLKIT**


## **NATIONAL KALE DAY**

**OCTOBER 7, 2015**



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# Welcome to National Kale Day!

**We are thrilled you are a part of this initiative to improve the health and wellness of communities by celebrating and eating kale.**

This Kale Hero Toolkit is designed to help you enhance your community by sharing and enjoying kale on National Kale Day. We look forward to celebrating with you this October 1! Our aims are simple: to increase awareness of kale's health benefits, enjoy kale's culinary versatility, and celebrate farmers growing kale. We depend on Kale Heroes like you to make National Kale Day a success by organizing a kale celebration in your community and helping to spread the word.

Please use the resources that follow: lesson plans, fact sheets, National Kale Day posters, a kale prescription, and, of course, delicious recipes. You can host a kale party at your home, make kale the subject in the classroom, or work with your school cafeteria to serve kale on October 1st.

**Along with a Kale celebration, you can also help National Kale Day by:**

- Joining the National Kale Day podcasts
- Spreading the word about National Kale Day events
- Tweeting, posting on Google+, Facebook, Instagram, and Pinterest
- Encouraging others to sign the National Kale Day petition on Change.org

We will be in touch as October 1 approaches with updates and news. Please share your kale photos, stories, and tips with us by posting on the National Kale Day Facebook page or the National Kale Day Google community.

Welcome to Team Kale!

Drew Ramsey, MD, Chef Jennifer Iserloh, and the National Kale Day Board

# 2015 SPONSORS

National Kale Day proudly announces the support of the following organizations:



Makers of





# KALE HERO CREDO

**HAVE COURAGE:** Kale heroes are brave because they speak out about the importance of nutrition in the face of negative attitudes towards healthy eating and a food culture dominated by processed goods.

**MAKE SACRIFICES:** Heroes sacrifice a little of their time for the big reward of helping their children, community, farmers, and the environment.

**BE DETERMINED:** Kale heroes are unflinching in their desire to make the world better because they walk the walk - or rather "eat the kale" - and always find a way to cook, grow, and eat better.

**BE RESPONSIBLE:** Kale heroes care about what happens to their loved ones, future generations, and the health of the planet. By eating a more plant-based diet, shopping at local farmers markets, and teaching kids to grow, eat, and cook their own food, they can save people and our environment one step at a time.

**BE KNOWLEDGEABLE:** Kale mixed with other super foods arm the kale hero with a world of nutrition and plenty of energy to support the cause



**TOGETHER, WE CAN BRING COMMUNITIES TOGETHER, BE KIND TO THE EARTH, & BUILD A HEALTHIER TOMORROW BY CELEBRATING NATIONAL KALE DAY 2014!**

# SUPER FOODS = SUPER KIDS

Parents can be Kale Heroes too!

PUT KALE IN YOUR SALAD TONIGHT AND CHECK OUT THIS NIFTY GUIDE TO GET YOUR KIDS TO EAT MORE KALE!

- 1 Show instead of tell.** Start eating kale yourself if you're a kale newbie. Kids always notice what their parents are eating, and eating habits are formed at home, around a communal dinner table from an early age onward.
- 2 Use our resources to teach your kids about kale** and have fun using leftover kale for arts and crafts like kale leaf prints!
- 3 Swap out potato chips, crackers, or cookies** for homemade kale chips.
- 4 Start your own school-wide kale eating contest!**
- 5 Adapt your children's favorite recipe** to include kale.
- 6 Plant kale together** in your garden or yard.
- 7 Take your kids to the farmers market** and let them do some shopping. No farmer's market in your town? Plan a family road trip to a local farm to pet the cows, eat fresh foods, and take in some country air.



# Summer Farmer's Market Salad

Summer farmer's markets across the US are filled with a bounty of fresh produce including ripe peppers, corn on the cob, and fresh herbs to top nutritionally dense kale. Start this salad with any kale variety including Lacinato, curly, or Red Russian.

## Serves 4

- 8 cups baby kale or thinly sliced kale, any varietal
- 1 15-oz can of low-sodium beans, any type, drained and rinsed
- 1 tablespoon olive oil
- 2 teaspoons red wine or apple cider vinegar
- 1/4 teaspoon salt
- 1 chopped bell pepper, any type
- kernels from 2 ears of corn
- 1/4 cup fresh basil, tarragon, or parsley

## Directions

Toss all the ingredients in a large bowl. Rest overnight then serve immediately.



**Nutritional Stats Per Serving (about 2 cups):**  
211 calories, 10 g protein, 40 g carbohydrates, 4 g fat (0 g saturated), 0 mg cholesterol, 10 g fiber, 445 mg sodium.

Recipe courtesy of Skinny Chef Jennifer Iserloh, <http://skinnychef.com/>

Copyright © NationalKaleDay 2014

# Winter Pom Cashew Crunch

Juicy antioxidant rich pomegranate seeds and crunchy cashews make this sautéed kale tasty and unique. Pomegranates are in season from October to January making them a winter immune boosting delight.

## Serves 4

- 1 tablespoon olive oil
- 8 cups slice kale, any variety
- 1/4 teaspoon salt
- 1 cup pomegranate seeds, also called arils
- 1/3 cup toasted salt cashews

Heat a large stockpot over medium heat. Add the kale and the salt. Cook 3 to 4 minutes, stirring often until the kale wilts. Transfer to a platter, and sprinkle with the pomegranate seeds and cashews. Serve immediately.



**Nutritional Stats Per Serving (about 2 cups):**  
197 calories, 6 g protein, 25 g carbohydrates, 9 g fat (1 g saturated), 0 mg cholesterol, 4 g fiber, 276 mg sodium.

Recipe courtesy of Skinny Chef Jennifer Iserloh, <http://skinnychef.com/>

Copyright © NationalKaleDay 2014

# Spring Kale & Bok Choy with Peanut Sauce

Prevalent in Asian cooking, bok choy is a juicy cabbage that adds texture and body to this easy stir-fried meal. Bok Choy, like kale, comes from the cruciferous family, and contains a good dose of vitamin A and C. If you can't have peanuts, replace with cashew or almond butter.

## Serves 4

- 1 tablespoon olive oil
- 4 cups chopped bok choy
- 4 cups chopped kale, any varietal
- 2 tablespoons peanut butter
- 1 tablespoon water
- 1 tablespoon reduced-sodium soy

## Directions

Heat a large skillet over medium heat. Add the olive oil along with the bok choy and kale. Cook 2 to 3 minutes, stirring occasionally until both vegetables soften. Turn the heat off and stir in the peanut butter, water, and soy sauce, toss well. Serve immediately.



**Nutritional Stats Per Serving (about 1 1/2 cups):**  
123 calories, 5 g protein, 10 g carbohydrates, 8 g fat (1 g saturated), 0 mg cholesterol, 2 g fiber, 286 mg sodium.

Recipe courtesy of Skinny Chef Jennifer Iserloh, <http://skinnychef.com/>

Copyright © NationalKaleDay 2014

# Fall Cheddar Apple Kale

Apples are a heavy hitter when it comes to heart disease and cancer fighting compounds like quercetin, which helps deter arterial plaque formation. Apples are also low in calories, about 90 per medium-sized fruit.

## Serves 4

- 4 cups kale
- 4 large soft whole grain tortillas
- 2 apples, cored, cut into wedges
- 4 slices cheddar or soy cheese, any flavor

## Directions

Heat a large, dry skillet over high heat. Add the kale and 1 tablespoon of water. Toss and cook about 30 seconds until the kale wilts. Transfer to a plate and wipe out the skillet. Place over high heat. Add one tortilla and warm over medium heat. Add a quarter of the apple slices and kale, and top with one slice of the cheese. Fold over and cover.



**Nutritional Stats Per Serving (1 filled quesadilla)**  
350 calories, 15 g protein, 48 g carbohydrates, 12 g fat (5 g saturated), 20 mg cholesterol, 24 g fiber, 759 mg sodium.

Recipe courtesy of Skinny Chef Jennifer Iserloh, <http://skinnychef.com/>

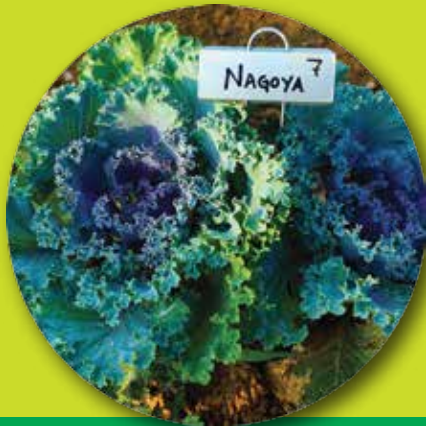
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# KNOW YOUR KALE

**Kale comes in dozens of colorful varieties, each with its own unique attributes**

**BELOW ARE SOME OF TEAM KALE'S FAVORITE VARIETALS**



Nagoya kale is an ornamental variety whose beautifully fringed leaves turn red in fall.



Extra hardy and flavorful, Vates is ideal for grilled side dishes or kale chips.



A hybrid, this multicolor kale loves the cold and is even more winter hardy than regular Lacinato.



Wonderfully curled and milder in flavor, the young leaves of True Siberian are superb for salads.



Also known as Lacinato, Tuscan, and Dinosaur kale, Cavolo is a little sweeter in flavor.



Perfect for indoor urban gardens, the Starbor variety produces finely curled leaves year round when planted near a window.

## HOW MANY HAVE YOU TRIED?



# KALE ANATOMY

## OBJECTIVES:

At the conclusion of this lesson, students will have the ability to identify different parts of a kale plant and discuss the function of each. Students will also be able to use the following vocabulary words: leaf, stem, roots, flower, seeds, xylem, phloem, and photosynthesis.

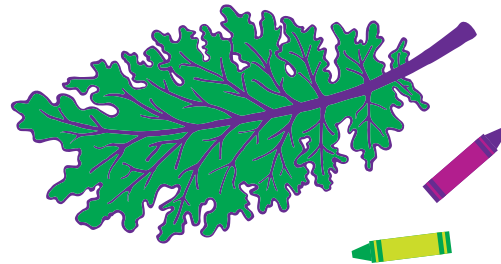
## REQUIRED MATERIALS:

Plant diagram (see below)

Kale plant or flowering kale plant and kale seeds

Index cards: 5 per student

Crayons or markers



## ACTIVITY: PART 1

1. Using the diagram, kale plant, and seeds, point to and identify each part of the plant. Ask the class to repeat each term as you go through the diagram.
2. Repeat the name of each part of the kale plant and explain its function.

## PLANT PARTS & FUNCTIONS

**Roots** help hold the plant upright and absorb water and nutrients from the soil. The kale plant needs water and nutrients to help it grow, develop, and make food. Roots are also used to store extra food in the form of sugars and starches, which allows them to have food during the winter when it is harder to conduct photosynthesis. However, kale is one of few vegetables that thrives in cold weather.

The **stem** allows water and nutrients to move from the roots to other parts of the plant and works much like a bundle of drinking straws. Some of these straws carry food to other parts of the plant and they are referred to as **phloem**. The other straws carry water and nutrients from the roots and these straws are called the **xylem**. The stem is also where leaves grow from.

**Leaves** are green because they have a chemical called chlorophyll inside them. Plants use their leaves to make food by conducting **photosynthesis**, a chemical reaction that occurs in the leaves when water, sunlight, and the chlorophyll all combine together. The food produced is sugar and the sugar is moved to all parts of the plant using the stem.

# KALE ANATOMY

**Flowers** are very pretty and they produce seeds that make new plants (show the students the kale seeds and refer to the flowering kale photo if a flowering kale plant is unavailable). Flowers are also bright to attract birds and insects because these animals help spread pollen between different flowers and plants, which helps the plant make seeds.

**Seeds** are very important because they produce new plants. Each one of these tiny seeds will one day grow into an entire kale plant!

## ACTIVITY: PART 2

1. Pass out the crayons, markers, and index cards. Each student should have an index card for each plant part (roots, stem, leaves, flowers, seeds) for a total of five cards.
2. Demonstrate how to write one plant word on each index card. Ask the class to do the same.
3. Illustrate the plant part. Ask the class to do the same. Do this for each plant part.
4. Ask the class to use the cards to create a picture of a kale plant (bottom to top: roots, stem, leaves, flower, seeds).
5. Arrange students into partners.
6. Instruct pairs to make a list of one describing word and one action word for each plant part under the picture or on the back of the card (10 – 15 minutes).
7. Ask the class to share action words and discuss the new vocabulary terms.



SEEDS



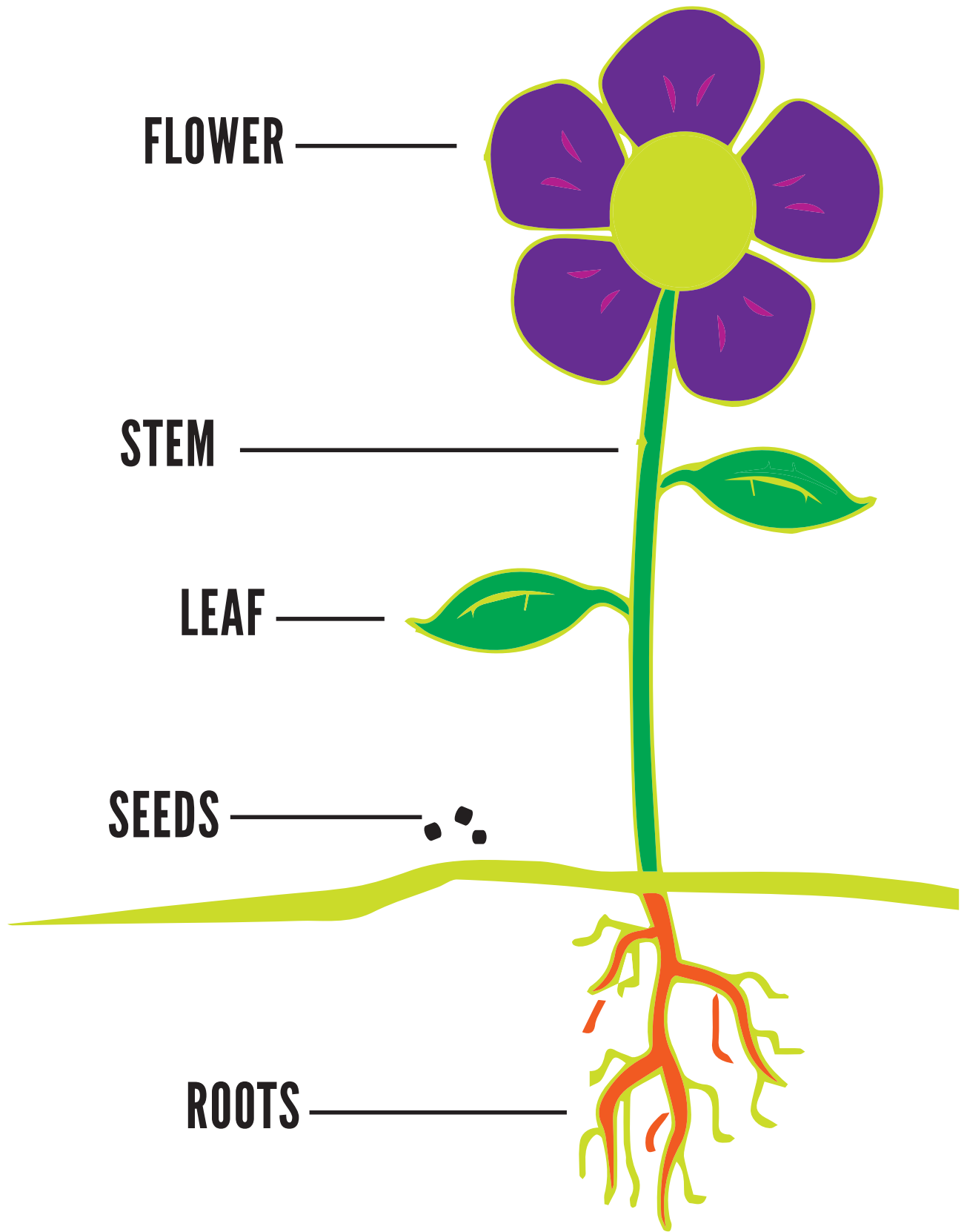
ROOTS



LEAVES



FLOWERS



**FLOWER** —————

**STEM** —————

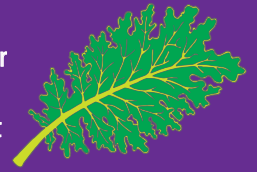
**LEAF** —————

**SEEDS** —————

**ROOTS** —————

# KALE CHROMATOGRAPHY EXPERIMENT

Plants use light energy from the sun to produce the food they need to survive. This process is known as photosynthesis, and it relies on special chemicals called pigments that capture sunlight. The pigment responsible for giving leaves their green color is called chlorophyll. Chlorophyll appears green because it reflects green light while absorbing all the other colors. But plants have even more colors to capture the light that chlorophyll misses. In fact, some leaves have different amounts of these pigments which is why Red Russian kale leaves are red! In this experiment, we'll use a technique called chromatography to see the different color pigments in kale leaves!



## MATERIALS:

Kale leaves, coffee filters, coin, rubbing alcohol, jar, scissors, tape, pencil, aluminum foil

1

Take a coffee filter & cut a 1 inch wide strip. Cut one end into a point.



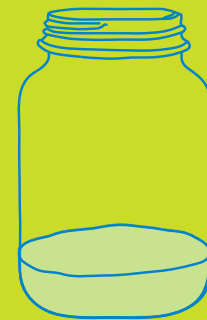
2

Grab a kale leaf & place it about an inch from pointed end of the strip. Roll the coin over your kale to transfer a line of leaf pigments onto the paper. Repeat step 1 & 2 using different color kale leaves. Let strips dry.



3

Pour rubbing alcohol into a jar to a depth of 1/2 inch.



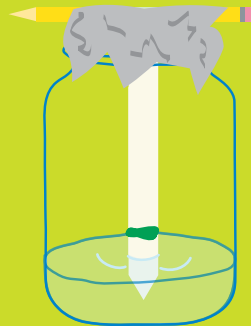
4

Tape the top of the strip to a pencil. Only the tip of the pointed end should touch the rubbing alcohol. The band of leaf pigments should not touch the alcohol.



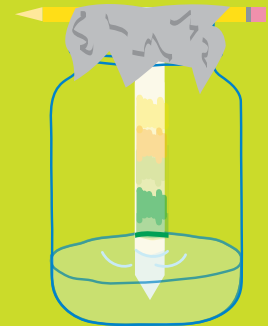
5

Cover the jar with aluminum foil to prevent evaporation of the alcohol.



6

Observe. Over the next 15 - 20 minutes the alcohol will travel up the paper & the pigments should separate. How many different colors can you see?



## BONUS!

Allow the strip to dry. The finished strip is called a chromatograph. Cut a 1 inch strip of construction paper & glue your chromatograph on for a handy bookmark!

Note: try several varieties of kale like red russian!

# KALE LEAF RUBBING

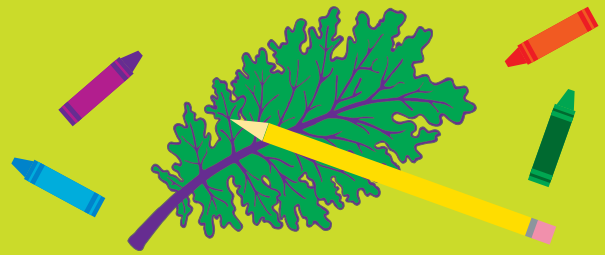
TRY THIS FUN AND SIMPLE CRAFT TO GET HANDS ON WITH KALE!

## MATERIALS:

Crayons, pencils, or colored pencils

Plain white or colored paper

Several kale leaves from your favorite varieties




## INSTRUCTIONS:

1. Collect several leaves of different shapes and sizes to use as patterns for your picture.
2. Put a leaf of your choice underneath a piece of paper.
3. Gently rub a crayon or pencil across the top, and you will see the pattern of the leaf appear!
4. Use different leaves with different shapes and sizes to make a beautiful collage of rubbings.
5. Hang up your new kale rubbings and have an adult show off your artwork to the kale community via Facebook, Google+, and Twitter!



# KALE FACTS

## 1 SERVING = 33 CALORIES!

**Brain** 


Kale is loaded with antioxidants that may protect the brain against Alzheimer's disease and depression

The generous vitamin K content in Kale helps fight free radicals in the brain

**Blood** 


High in iron, kale is great for preventing anemia for vegetarians

Vitamin K is essential in the production of clotting factors

**Bone** 


Get bone building synergy with calcium and vitamin K

The calcium in kale is absorbed better than milk

**Eyes** 

An amazing source of beta carotene, kale supports eye health

Kale is packed with the carotenoids lutein and zeaxanthin, which defend the eyes against oxidative damage

**Heart** 

Nutrient dense, low calorie foods like kale help fight diseases linked to heart health like diabetes, depression, and obesity

Plant based foods like kale promote vascular health

**Digestive Health** 

Fiber is both regulating and satiating, and plant based fiber promotes a healthy gut



**1 CUP RAW**



<b>VITAMIN A</b>	<b>206%</b>
<b>VITAMIN C</b>	<b>134%</b>
<b>VITAMIN K</b>	<b>684%</b>
<b>MANGANESE</b>	<b>26%</b>
<b>IRON</b>	<b>6%</b>
<b>CALCIUM</b>	<b>10%</b>
<b>FIBER</b>	<b>5 g</b>
<b>OMEGA-3s</b>	<b>121 mg</b>



# KALE FOR HEALTH

KALE QUIZ: TEST YOUR KALE & HEALTH KNOWLEDGE!

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

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

Age: \_\_\_\_\_

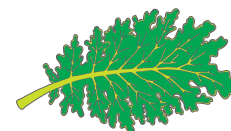
Male

Female

## CARDIOVASCULAR DISEASE

Rich in magnesium with great calcium absorption, Kale is an ideal food for inclusion in the DASH diet, and the fiber held in this leafy green combines with bile acids to capture excess cholesterol.

**Kale Quiz:** The DASH diet is a dietary plan to prevent and control \_\_\_\_\_.



## OBESITY

Copious amounts of health promoting anthocyanin flavonoids are found in kale, which may decrease fat accumulation

**Kale Quiz:** The \_\_\_\_\_ and \_\_\_\_\_ content in kale is responsible for this leafy green's powerful ability to satiate.

## CANCER

Kale is loaded with phytochemicals called flavonoids, and these nutrients are thought to help prevent cancer. It's also packed with vitamin K, and diets rich in vitamin K have been shown to reduce cancer risk.

**Kale Quiz:** Diets high in vitamin K reduce cancer risk, but if you take \_\_\_\_\_ medication eating too many foods high in vitamin K can be dangerous.

## ULCERS

In traditional Brazilian medicine, Kale has been used for years in the treatment of ulcers, and studies show that kale can put a stop to ulcer formation.

**Kale Quiz:** Name the bacteria responsible for causing the majority of stomach ulcers \_\_\_\_\_.

## MACULAR DEGENERATION

Kale is chock-full of the carotenoids zeaxanthin and lutein, which defend against macular degeneration. Lutein in particular is localized in the retina, where it protects the eyes by preventing oxidative damage.

**Kale Quiz:** Related to the carotenoids zeaxanthin and lutein, Kale is also loaded with \_\_\_\_\_ which is converted to vitamin A.

## DIABETES

Filled with fiber, kale is the ultimate low glycemic index food and ideal for sugar management.

**Kale Quiz:** There is more than sugar when it comes to dietary carbohydrates. Kale is rich in \_\_\_\_\_ and low in \_\_\_\_\_ and \_\_\_\_\_.

Answers: 1. Hypertension 2. Fiber, Protein 3. Warfarin, Coumadin, or Blood Thinners 4. Helicobacter pylori or H. pylori 5. Beta Carotene 6. Fiber, Starch, Sugar

# KALE ON CAMPUS

## CELEBRATE NATIONAL KALE DAY AT YOUR UNIVERSITY!

Universities are great places to celebrate this leafy green. Find a place for kale in your classroom! From lectures on nutrition, health, agriculture, and ecology, to the star of the campus cookout, please check out more ideas at [nationalkaleday.org](http://nationalkaleday.org)

## FACULTY & STAFF

Get the word out! Tell your class about National Kale Day!

Put kale in the curriculum.

Highlight local kale producers in class.

Conduct a kale related science experiment.

Describe the history of kale in the U.S. and around the world.

Prepare kale for lunch and share with students, faculty, and staff.

## NATIONAL KALE DAY EVENT IDEAS

Host a kale barbeque, potluck, or party on campus! Find great cooking tips on our website, and be sure to check out our tasty recipes!

Ask campus cafeterias and cafes to feature kale on their menus and try to go local! Think smoothies, salads, kale chips, and sandwiches.

Get creative! Hold a recipe or a local Kale Hero contest, and nominate the winner as a Kale Hero on our website!

Join the kale community on Google +, Facebook, and Twitter. Spread kale awareness by sharing your kale photos and stories!



# KALE ON CAMPUS



## CALLING ALL STUDENTS!

CELEBRATE NATIONAL KALE DAY AT YOUR UNIVERSITY!

### WHAT CAN YOU DO TO GET INVOLVED?

Approach your student union about hosting a National Kale Day event

Encourage your student group, club, or society to celebrate kale as it relates to their mission (e.g. health, wellness, nutrition, athletics, environmental sustainability, culinary exploration)

Write an article about kale for your campus paper

Bring kale to class and study groups

Share your kale knowledge with friends and share your kale stories on Facebook, Twitter, and Google+



## GET VECECATED!

Healthy eating is important for university students!

Have more energy for studying, socializing, and athletic activities

Get better sleep

Improve your self-esteem

Boost your immune system and avoid getting sick

Begin practicing healthy eating habits by starting with kale



# CELEBRATE LOCAL!

Host a National Kale Day event at your local Farmer's Market

Producers, consumers, and passionate local foodies, all coming together in one place...your local farmers' market is a great place to celebrate National Kale Day

## WAYS TO CELEBRATE!

SET UP A KALE TASTING STALL

SPREAD THE WORD ABOUT LOCAL PRODUCERS WITH POSTERS & SOCIAL MEDIA

HOST A KALE COOK-OFF!

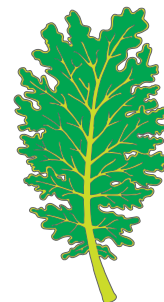
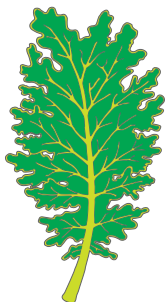
ORGANIZE A KALE TASTING TOUR AT YOUR LOCAL FARMERS MARKET

HAVE KALE COLORING PAGES IN YOUR CHILDREN'S CORNER

HAVE A RAFFLE FOR A KALE BASKET WITH COOKBOOKS, KALE BUNCHES, & KALE SEEDS

HOST A KALE SCAVENGER HUNT FOR KIDS!

INVITE YOUR LOCAL MEDIA TO SHOWCASE YOUR NATIONAL KALE DAY INSPIRED EVENTS



## LOCAL KALE FACTS

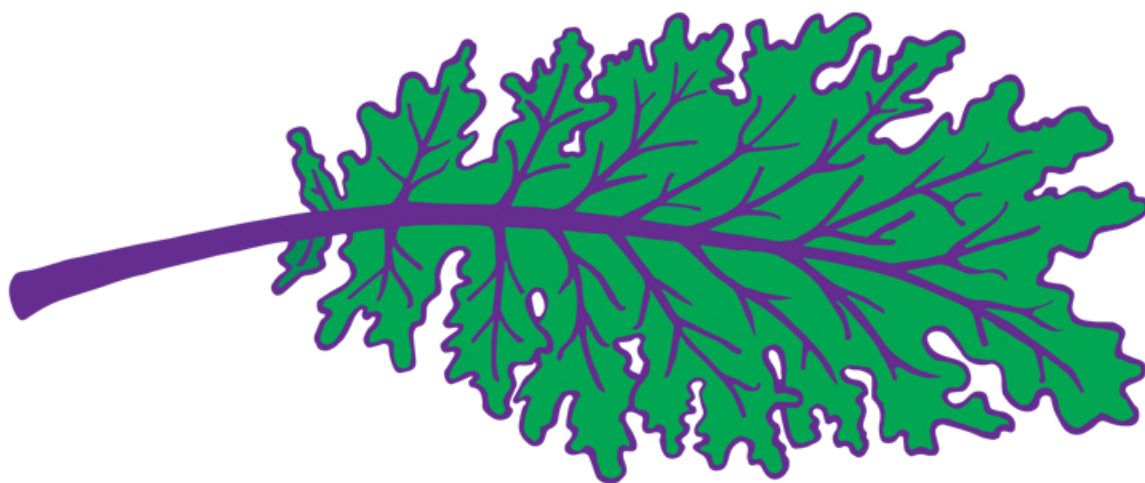
- Kale has been cultivated for more than 2,000 years.
- Popular in Europe during Romans times and the Middle Ages, it arrived in North America in the 17th century
- Kale with the best flavour is harvested after the first frost, which ensures some of the starches have been converted into sugars.





# **BUY LOCAL EAT KALE**

## **National Kale Day**



### **OCTOBER 7, 2015**

**Follow us on Facebook, Twitter & Google+  
& support National Kale Day**

Sign the petition at [Change.org](http://Change.org)



Join the movement by becoming a part of the National Kale Day community.  
Be a kale hero & share your tips, photos, recipes, & everything kale.  
Together, we can build a healthier America!

**[NationalKaleDay.org](http://NationalKaleDay.org)**

# KALE STICKERS!

