



**EDIBLE  
SCHOOLYARD  
NYC**

# November in the Kitchen: Greens Two Ways

**Aim:** See appendix A for lesson objectives.

**Summary:** Students will learn how to make green leafy vegetables into both a raw salad and sauteed dish. They will make connections to the water cycle and use mathematical reasoning to understand how much the greens reduce when cooked.

Agenda: 50 minute period	Agenda: 90 minute period
<ul style="list-style-type: none"> <li>★ Handwashing (5 min)</li> <li>★ Opening (3 min)</li> <li>★ Food Prep (20 min)</li> <li>★ Clean up/ Set Table (2 min)</li> <li>★ Eating/ Discussion (15 min)</li> <li>★ Clean Up (5 min)</li> </ul>	<ul style="list-style-type: none"> <li>★ Handwashing (5 min)</li> <li>★ Opening (5 min)</li> <li>★ Food Prep (45 min)</li> <li>★ Clean up/ Set Table (10 min)</li> <li>★ Eat/ Discuss (15 min)</li> <li>★ Clean Up (10 min)</li> </ul>

## Academic Standards and Skills Practiced

Academic Standards	Culinary
<p><u>CCSS.ELA. CCRA.SL.1:</u> Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</p> <p><u>CCSS.Math.Practice.MP4:</u> Model with mathematics.</p> <p><u>CCSS.Math.Practice.MP5:</u> Use appropriate tools strategically.</p>	<p>knife safety, chopping, chiffonade, saute, recipe reading; measurement: spoon, liquid cup, and solid cup</p>

**Prep. Work:**

- wash all the produce
- halve the oranges
- lay out a variety of edible leaves for the leaf exploration activity and label them

**Hand washing (5 minutes)**

See Appendix B for notes.

**Opening (3 minutes)**

**Introduce today's lesson:** *Today we are going to eat green leafy vegetables that are growing this time of year. We are going to eat them in two ways: raw and cooked.*

*What are some leaves we eat?*

**Briefly review kitchen safety:** *elicit student responses about the importance of walking, oven/stove/ safety lines, hand hygiene in the kitchen.*

**\*Cook and Leaf Exploration**

20 minutes for a 50 minute period- rotate through table 1 and 3, skip table 2.  
45 for 90 minute period- rotate through all three tables.

**Table 1: Cutting Greens (10 minutes)**

- Demonstrate and explain chiffonading: de-stem two leaves, stack them on each other, roll into a tube, slice the tube into thin ribbons.
- Have ½ of the table remove the large woody stems. Compost the stems. They they should stack leaves and roll them into a "caterpillar."
- Then the other half of the students slices the rolls into thin strips add the strips to the large liquid measuring cup.
- Have the students switch jobs so everyone gets to roll and slice.
- Younger (pre-K and K?) students can just de-stem and rip up the leaves if slicing is too hard for them.
- Put half of the cut or ripped greens into a large measuring cup to be sauted. Set aside.
- Put the other half in a small bowl for raw salad. Set aside.

**Table 2: Leaf Exploration (10 minutes)**

- Students take time to check out the edible leaves and their names on the table.
- Each students gets a grade-appropriate worksheet and chooses a leaf to explore.

- **For 3-5th grade:** show students how to use the leaf exploration diagrams to identify the shape types of their leaf.
- If students finish an entire worksheet before the activity is over, they can share with a partner or start another exploration sheet on a different leaf.

### Table 3: Making Dressing (10 minutes)

- Make two batches, each in its own jar. Give each student a task card to do one job--there should be two students doing each job but for different batches of dressing. For example, Jenny and June each peel 1 clove of garlic. Jenny's is for the first jar. June's is for the second jar.
- 2 grate 1 clove garlic each
  - 2 students measure 2 TBSP olive oil each
  - 4 students juice  $\frac{1}{2}$  an orange each
  - 2 students 1 pinch of salt
  - Everyone shakes the jars

After all the groups have rotated through:

- Split the greens into two groups: raw and saute.
- Dress each bowl of greens with one jar of dressing

### Saute: (10 minutes)

- split the class into two groups and have the students practice sauteeing.
- Have students examine the raw greens. Ask students to share observations about the greens and why they might be hearty throughout the winter. Help them understand that tough greens can stand the cold.
- Point out the same characteristics that keep plants healthy through the winter can also keep us healthy when we eat those plants.
- Student will think about the transformation greens go through as they go from raw to cooked.
  - **Pre-K and 1st grade:** Ask the students, what might happen to greens when they get cooked? Accept all answers. Help students understand that they will get softer and smaller. That is why we have to cut or rip up a lot of greens to have everyone have one small serving.
  - Explain that greens, oranges, and garlic also keep us healthy during the winter.
  - **2nd - 5th grade:** *Like a water balloon popping, the leaf's tough parts break down and the water comes out. This makes them small and soft.*
    - Have students tell you the amount of raw greens they have.
    - Ask them to predict the amount of cooked greens they will end up with, trying some age-appropriate math:
      - Calculate the ratio--how many raw greens do we need for every cup of cooked greens?

- Or, if we start with 2 cups of raw greens, how many cooked greens will we have?
  - Or, have them write a word problem that represents what happened to the greens.
- Explain that greens, oranges, and garlic help keep us from getting sick during the winter.
- Add the dressed leaves to pot. Have one student at a time practice sauteing by carefully stirring the greens. Cook until all the greens are bright and starting to soften. Remove from heat and split into a small bowl for each group.
  - *Leaves are like a water balloon because they are full of water. When a they touch the heat, they pop and the water comes out.* Have them act out bring a water balloon/ leaf a full of water and then popping and letting it's water out. When the water has come out, the leaf is wilted.
  - Explain that the water turns into steam in the pan and evaporates.
    - For 3-5th grade sing the Water cycle song
    - For K-2nd grade sing the "soup is steaming up song with greens instead of soup.

See Appendices C, D, E for notes.

<b>Eat/Discuss (15 minutes)</b>
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<b>Clean Up (2 minutes)</b>
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<b>Wrap Up (5 minutes)</b>
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- If time allows, have a closed eyes vote on which recipe they like best. Tally their votes on the board.

See Appendix F for notes

<b>Supporting Documents:</b>
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| <ul style="list-style-type: none"> <li>● Supplies List</li> <li>● Tray Set Up Guide</li> <li>● Take Home Recipe</li> <li>● Pre-K - 1<sup>st</sup> Grade task cards</li> <li>● 2<sup>nd</sup> - 3rd Grade task cards</li> <li>● 4-5th Grade recipe check list</li> <li>● Leaf exploration worksheet k-2nd grade</li> <li>● Leaf exploration worksheet 3-5th grade</li> <li>● 2 copies of each leaf exploration example diagram</li> </ul> |
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**Vocabulary:**

- Sauté: To cook in a pan over high heat with a small amount of fat. From French “sauter” meaning to jump.
- Raw: Uncooked
- Chiffonade: to slice into thin ribbons

**Attributions:**

Leaf Exploration diagrams by from the Eat Think Grow curriculum by the Portland partners for School Food and Garden Education, available at:  
<http://eatthinkgrow.org/wp-content/uploads/2012/04/2S11.pdf>

"Leaf morphology" by derivative work: McSush  
(talk)Leaf\_morphology\_no\_title.png: User: Debivort -  
Leaf\_morphology\_no\_title.png. Licensed under CC BY-SA 3.0 via Wikimedia  
Commons -  
[http://commons.wikimedia.org/wiki/File:Leaf\\_morphology.svg#/media/File:Leaf\\_morphology.svg](http://commons.wikimedia.org/wiki/File:Leaf_morphology.svg#/media/File:Leaf_morphology.svg)

## **Supplies List**

### **Tools and Equipment**

- 5 cutting boards
- 5 knives (plastic for pre-k - 3rd grade, paring for 4-5th grade)
- 3 small bowls
- 3 large liquid measuring cups
- Plates/bowls for every student
- Water glasses for every student
- Water pitcher
- Forks for every student
- 2 wooden spoons
- 2 large sauté pans
- 2 lids for the pan
- 2 induction burners or stove
- 1 fine grater
- 6 sets of tongs
- 6 jars with tight fitting lids
- 2 citrus reamers
- 2 small strainers
- 2 drinking cups for juicing
- 2 copies of each leaf exploration diagram
- a leaf exploration worksheet for each student
- pencils for each student
- colored pencils
- 2 pairs hot mitts

### **Groceries**

- salt in a ramekin
- 2 bottles of olive oil
- 6 bunches of kale (about 4 leaves per student)
- 6 cloves garlic
- 3 oranges
- 3-6 leaves of at least 5 varieties of edible leaves, labeled

## **Greens Two Ways Tray Setup**

### **Cutting Station (3 trays of the below)**

- 5 cutting boards
- 4-cup liquid measuring cup for to-be-sauteed greens
- 2 pairs tongs
- 1 fine hand grater
- 2 bunches kale (lacinato is best) or about 4 leaves per student
- 1 small bowl for raw greens

### **Dressing Station (1 tray of the below)**

- 6 half pint jar with lids
- 3 oranges, halved (6 halves)
- 2 bottles olive oil
- 6 garlic cloves
- 1 ramekin salt
- 2 TBSP measuring spoons
- 2 citrus reamers
- 2 small sieves
- 2 drinking cups for juicing into

### **Leaf Exploration Station**

- worksheets for every student
- pencils for every student
- colored pencils
- 3-6 leaves of at least 5 different kinds of edible leaves, labeled

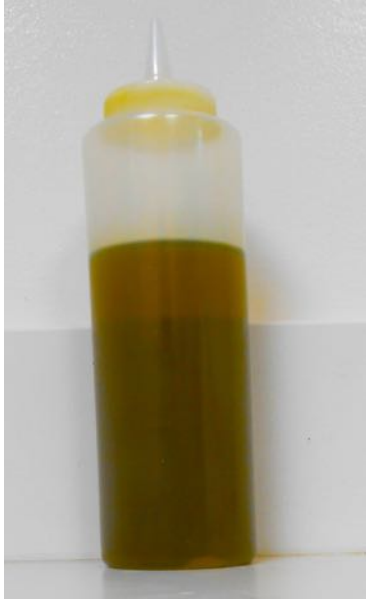
### **On Tables or counter by stove (2 trays of the below)**

- 1 wooden spoon
- 1 large saute pan and lid
- 1 burner
- 1 pair hot mitts

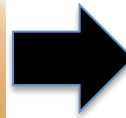
# Greens 2 Ways Task Cards Pre-K – 1<sup>st</sup> Grade

(cut these out and laminate)

## Olive Oil

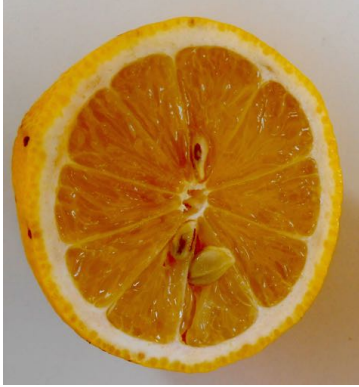


## Orange

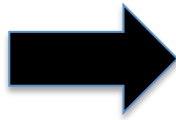




# Orange



## Salt



## Garlic



# Greens 2 Ways Task Cards 1<sup>st</sup> – 2<sup>nd</sup> Grade

(cut these out and laminate)

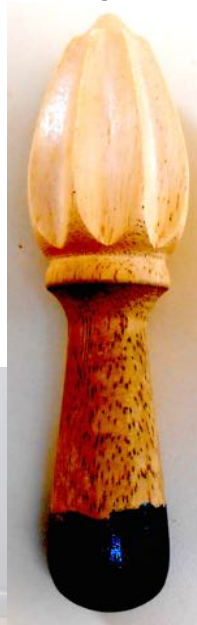
## Olive Oil

Measure **2 TBSP** of olive oil. Put it in the jar.



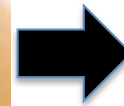
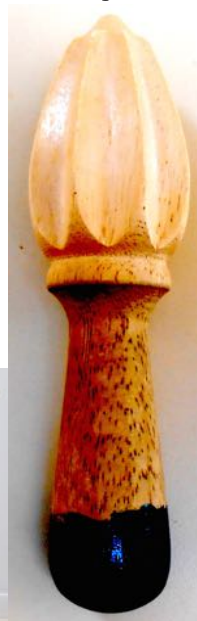
# Orange

Juice  $\frac{1}{2}$  an orange of the strainer with the citrus reamer.  
Add the juice to the jar.



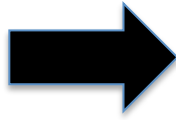
## Orange

Juice  $\frac{1}{2}$  **an orange** of the strainer with the citrus reamer.  
Add the juice to the jar.



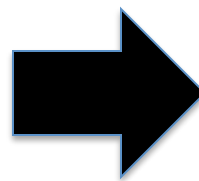
## Salt

Take a **pinch of salt**. Put it in the jar.



## Garlic

Grate **1 clove of garlic** on the grater.  
Stop when your fingers are get in the way.  
Then use your finger to scrape it off the back of the grater  
into the jar.



**Greens 2 Ways Task Cards 3<sup>rd</sup> Grade**  
*(cut these out and laminate them)*

**Orange**

Juice the **½ of an orange** over the strainer. Put the juice in the jar.

**Orange**

Juice the **½ of an orange** over the strainer. Put the juice in the jar.

**Garlic**

Grate **1 clove of garlic** on the grater.  
Stop when your fingers are get in the way.  
Then use your finger to scrape it off the back of the grater into the jar.

**Salt**

Take a **pinch of salt**. Put it the jar.

**Olive Oil**

Measure **2 TBSP of olive oil**. Put it in the jar.

## Greens 2 Ways Dressing Recipe

### Ingredients

### Directions

1) 1 orange



- Juice the **orange** over the strainer. Put the juice in the jar.

2) 2 TBSP olive oil



- Measure the **olive oil**. Put it in the jar.

3) 1 clove garlic



- Peel **1 clove garlic**.
- Grate garlic on the grater. Stop when you feel your fingers are in the way.
- Use your finger to scrape the garlic off the back of the grater. Put it in the jar.

4) 1 pinch salt



- Take a large **1 pinch salt**. Put it in the jar.



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

## K - 2nd Grade Leaf Exploration

Leaves fall from trees in the fall. We also eat lots of other leaves too! Pick a leaf to explore and fill in the boxes.

My leaf is named: \_\_\_\_\_

Here is a picture of it:

Here is a leaf rubbing of it:

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

## 3 - 5th Grade Leaf Exploration

In the fall, many leaves fall from trees. There are also lots of other kinds of leaves that we eat as vegetables or herbs. Our garden has diverse leaves. We grow many kinds that have different kinds of shapes. Pick a leaf to explore and fill in the boxes.

My leaf is named: \_\_\_\_\_. This is how we eat it: \_\_\_\_\_.

Here is a picture of it:

Here is a leaf rubbing of it:

Here are some facts about my leaf's shape:

Leaf Type: \_\_\_\_\_

Leaf Shape: \_\_\_\_\_

Leaf Margin: \_\_\_\_\_

Leaf Arrangement: \_\_\_\_\_

## Greens, Two Ways:

This recipe is for both sauteed and raw greens. Any dark, leafy green vegetable works well with this recipe. Try it with spinach, collards, cabbage, or kale. See which your family likes better, cooked or raw!

**(Makes 4-6 servings)**



### Ingredients

2 bunches greens  
1 orange  
2 garlic gloves  
4 TBSP olive oil  
2 pinches salt

### Steps

1. If the stems of the greens are hard, take the leaves off of the stems. Discard the stems. Roll up the leaves.
2. Slice the roll into thin strips.
3. Add the strips to a big bowl.
4. Measure the olive oil. Put it in a jar with a tight-fitting lid.
5. Cut the orange in half and juice it. Add the juice to the jar.
6. Grate the garlic. Add it to the jar.
7. Put two pinches of salt in the jar.
8. Put the lid on the jar tightly and shake it to make the dressing!
9. Add the dressing to the strips of greens in the bowl. Mix.
10. Take half of the greens out of the bowl and saute them in a large pan for a few minutes, until the leaves are soft and dark.

## Greens, Two Ways:

This recipe is for both sauteed and raw greens. Any dark, leafy green vegetable works well with this recipe. Try it with spinach, collard, cabbage, or kale. See which your family likes better, cooked or raw!

**(Makes 4-6 servings)**



### Ingredients

2 bunches greens  
1 orange  
2 garlic gloves  
4 TBSP olive oil  
2 pinches salt

### Steps

1. If the stems of the greens are hard, take the leaves off of the stems. Discard the stems. Roll up the leaves.
2. Slice the roll into thin strips.
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