

# Greens Over Grains

## *Communication*

Students collaborate to prepare a meal, set the table, eat, have conversation and then cleanup.

## *Academics*

This lesson fulfills History-Social Science Standards for describing hunter-gatherer societies; discussing the climatic changes and human modifications of the physical environment that gave rise to the domestication of plants and animals; Common Core State Standards for integrating information; collaborative discussions; interpreting information; presenting claims and findings; adapting speech; standard English grammar; knowledge of language; and acquiring words and phrases.

## *Sustainability*

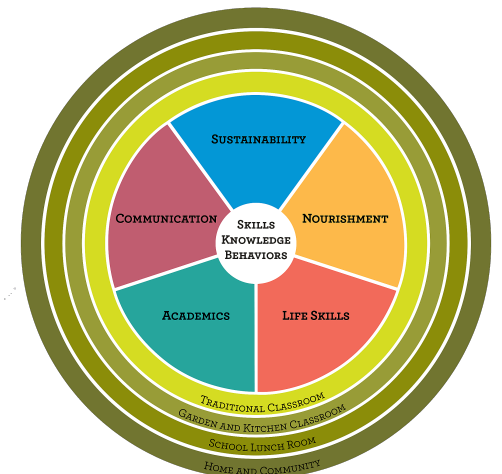
Cooking with grains and greens grown in the Edible Schoolyard garden represents the final stage of the seed to table cycle, which students learned about earlier in the year during garden class.

## *Nourishment*

Students cook and eat a simple recipe for sautéed greens and whole grains that is made from scratch.

## *Life Skills*

Students learn basic knife techniques of mincing, chopping and slicing, and learn how to peel fresh ginger with a spoon.



## Greens Over Grains Abstract

### Summary

In this 6th grade humanities lesson, students complete the seed to table cycle by preparing sautéed greens and serving them over grains that have been grown in the Edible Schoolyard garden.

### Objectives

After this lesson, students will be able to:

- Identify steps within the **seed to table cycle**
- Practice basic knife skills while demonstrating proper knife safety and care
- Articulate the importance of the domestication of plants

### Assessments

During this lesson, students will:

- Explain how the **seed to table cycle** relates to the kitchen, the garden, and the environment.
- Properly **mince** or slice ingredients as directed
- Describe the process of domesticating plants

**Communication** is strengthened by collaborating to prepare a meal, set the table, have conversation while eating and then cleanup. **Sustainability** is highlighted by cooking with greens and grains grown in the Edible Schoolyard garden, which represents the final stage of the **seed to table cycle**. **Nourishment** is acquired by cooking and eating a simple recipe for greens and **whole grains** that is made from scratch. **Life Skills** are sharpened as students learn basic knife techniques of **mincing**, **chopping** and **slicing**, and learn how to peel fresh ginger with a spoon.

**Academics** fulfill History-Social Science Standards for California Public Schools for describing hunter-gatherer societies; discussing the climatic changes and human modifications of the physical environment that gave rise to the domestication of plants and animals; Common Core State Standards in ELA for integrating information presented in different media; engaging effectively in a range of collaborative discussions; interpreting information presented in diverse media; presenting claims and findings; adapting speech to a variety of contexts and tasks; demonstrating command of standard English grammar; using knowledge of language and its conventions; and acquiring words and phrases. See **Connections to Academic Standards** below

for details.

*Edible Schoolyard* curriculum emphasizes developing community and personal stewardship, along with skills that will help students navigate different situations throughout their lives; identify different **knives**; identify **ingredients** by name; and use basic **techniques** as instructed. See **Connections to *Edible Schoolyard* Standards** below for details.

This lesson follows the BEETLES Project's *Learning Cycle* (Invitation-> Exploration -> Concept Invention -> Application -> Reflection) and uses their *Discussion Routines* (Think-Pair-Share, Whip-Around). All are highlighted in *Green*\* with an asterisk for easy identification. See the documents BEETLES\_Discussion\_Routines.pdf and BEETLES\_Learning\_Cycle.pdf included in **Resources** below for more information. Games and activities from other sources are also identified in *Green*, without an asterisk.

### Connections to *Academic Standards*

History-Social Science Standards for California Public Schools, Grade 6

- 6.1 Students describe what is known through archaeological studies of the early physical and cultural development of humankind from the Paleolithic era to the agricultural revolution.
  - 6.1.1 Describe the hunter-gatherer societies, including the development of tools and the use of fire.
  - 6.1.3 Discuss the climatic changes and human modifications of the physical environment that gave rise to the domestication of plants and animals and new sources of clothing and shelter.

Common Core State Standards, English Language Arts and Literacy, Grade 6

- RH.6.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
- RI.6.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- RST.6.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
- RST.6.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
- SL.6.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher- led) with diverse partners on *grade 6 topics, texts, and issues*, building on others' ideas and expressing their own clearly.

- SL.6.1.b Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.
- SL.6.1.c Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
- SL.6.1.d Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.
- SL.6.2 Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
- SL.6.4 Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.
- SL.6.5 Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
- SL.6.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language standards 1 and 3 on page 53 for specific expectations.)
- L.6.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
  - L.6.1.a Ensure that pronouns are in the proper case (subjective, objective, possessive).
  - L.6.1.b Use all pronouns, including intensive pronouns (e.g., *myself*, *ourselves*) correctly.
  - L.6.1.c Recognize and correct inappropriate shifts in pronoun number and person.
  - L.6.1.d Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).
- L.6.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.
  - L.6.3.a Vary sentence patterns for meaning, reader/ listener interest, and style.
  - L.6.3.b Maintain consistency in style and tone.
- L.6.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

### Connections to *Edible Schoolyard* Standards

Edible Schoolyard 3.0

In the Edible Schoolyard Program

- 1.0: Students work with each other and teachers to develop community and personal stewardship, along with skills that will help them navigate different situations throughout their lives.
- 1.1.1 - 1.3.12: This lesson fulfills all Edible Schoolyard Program standards, numbers 1.1 through 3.12. See *The Edible Schoolyard Berkeley Standards* for details.

In the Kitchen Classroom, 6<sup>th</sup> grade

- Tools 2.1.3: Identify different **knives** from the ESY Toolbox and demonstrate basic knife skills, safety, and care with guidance.
- Techniques 2.2.4: Identify **ingredients** by name, and discuss them using descriptive words in conversation.
- Techniques 2.2.5: Use basic **techniques** as instructed, and refer to them by name in conversation.

## Greens Over Grains Lesson

### Materials

#### For the Chef Meeting

- K6-2 Visual Aid
- Sautéed Greens Recipe
- Millet & Quinoa Recipe
- Ingredients and tools for demonstration

### Ingredients

- Millet
- Quinoa
- Barley

#### For the Sautéed Greens

- Assorted greens (Dinosaur kale, bok choy, rainbow chard)
- Olive oil
- Ginger
- Garlic
- Soy sauce
- Toasted sesame oil
- Rice vinegar

### Tools

- Cast iron skillet
- Garlic peeler
- Wooden spoon
- Chefs' knives
- Paring knives

- Cutting boards
- Measuring cups
- Measuring spoons

### Equipment

- Stove

### Timeline Overview

Total Duration: 90 minutes

#### At the Chef Meeting:

1. *Invitation\** (5 minutes)
2. *Concept Invention\** (10 minutes)
3. *Application\** (60 minutes)
4. *Reflection\** (15 minutes)

#### Before you Begin

- Collect all the tools and ingredients, and then distribute them to the tables
- Gather supplies for the Chef Meeting
- Create the Visual Aid
- Copy the Sautéed Greens Recipe to hand out
- Copy the Millet & Quinoa Recipe to hand out
- Cook the millet
- Cook the quinoa
- Cook the barley

### Procedures

#### At the Chef Meeting

1. *Invitation\**: (5 minutes)
  - a. Welcome students to the kitchen and introduce the Greens over Grains lesson as a chance to prepare greens from the garden while learning basic knife skills, safety, and care.

2. **Concept Invention\***: (10 minutes)

Students review the **seed to table cycle** and discuss **domestication**.

- a. Introduce the Greens Over Grains lesson as the completion of the **seed to table cycle**.
  - i. Ask students to explain the **seed to table cycle** from the garden in their own words.
  - ii. Review the **seed to table** lesson.
- b. Ask students to recall the name of the era in which people were hunters and gatherers (Paleolithic).
- c. Ask students to recall the name of the era in which people began to domestic animals and crops (Neolithic).
- d. Ask students what it means to **domesticate** grains.
- e. Remind students that the crops people **domesticated** thousands of years ago still determine what we eat every day.
- f. Ask students to identify the greens by name.

**At the Table**

Students prepare the recipe, eat and clean up.

3. **Application\***: (60 minutes)

- a. Meet with the table groups to review the recipe, check in, and assign jobs.
- b. Describe each step of the recipe, as well as the tools necessary to complete each job.
- c. Demonstrate **mincing**, **chopping**, and **slicing**, and encourage students to cut with intention.
- d. Prepare the recipe.
- e. Set the table; eat; clean up.

**At the Closing Circle**

4. **Reflection\***: (15 minutes)

- a. Ask each student to name one new skill or fact that they learned in the class today.

**Vocabulary:**

Sauté

Mince

Slice

Chop

Fibrous

Whole grain

Domesticate



Seed to table

### **Contributors**

All lessons at the Edible Schoolyard Berkeley are developed in collaboration with the teachers and staff of the Edible Schoolyard and Martin Luther King Jr. Middle School.

Learning Cycle and Think-Pair-Share discussion routine © The Regents of the University of California. All materials created by BEETLESTM at The Lawrence Hall of Science.

### **Resources**

K6-2\_Visual\_Aid.pdf

Sauteed\_Greens\_Recipe.pdf

Millet\_Quinoa\_Recipe.pdf

BEETLES\_Learning\_Cycle.pdf (See lesson G6-0)





COLLARD GREENS



Rainbow chard

Bok choy



Dino Kale



Red Russian Kale

OVER

GRAINS



Millet



Quinoa





# Sautéed GREENS

3 bunches greens, sliced or chopped  
(kale, collards, chard, bok choy)

3 Tablespoons olive oil

1 inch piece ginger, minced

8 cloves garlic, minced

4 Tablespoons soy sauce

2 Tablespoons sesame oil

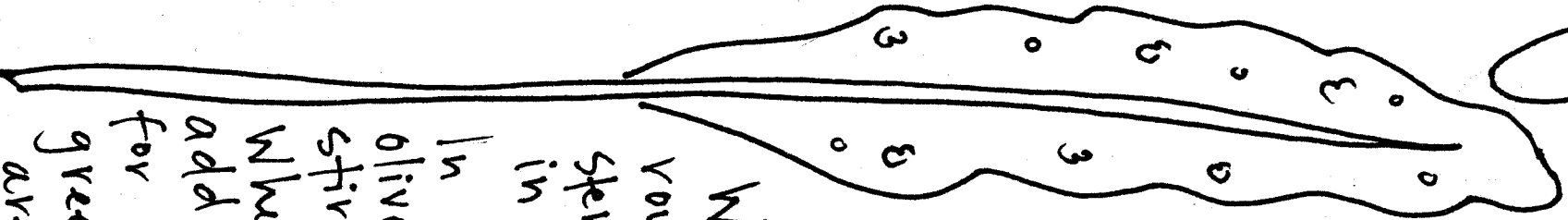
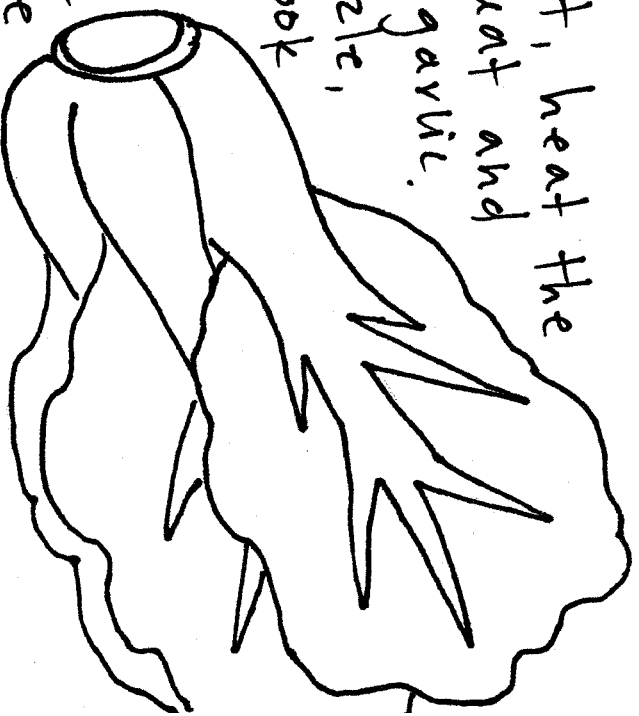
1 Tablespoon rice vinegar (optional)

Wash the greens in cold water - remove the round stems (kale, collards) and slice the flat stems (chard, bok choy). Put the leaves and stems in separate bowls.

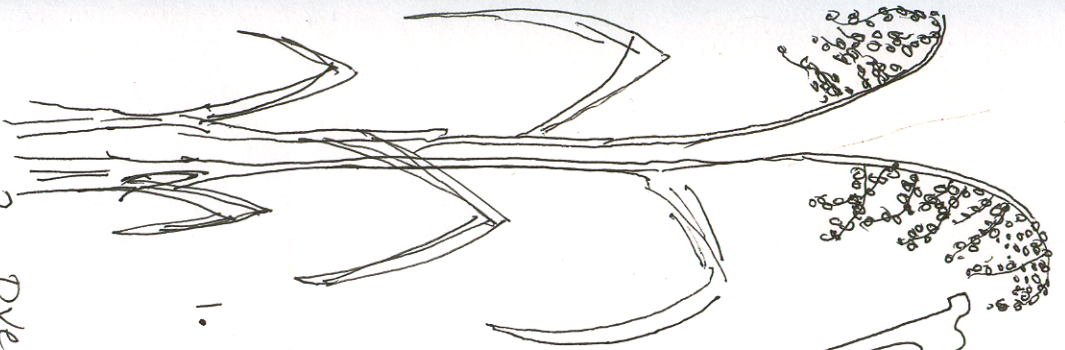
In a heavy bottomed pot, heat the olive oil over medium heat and stir in the ginger and garlic.

When they begin to sizzle, add the flat stems and cook for 1-2 minutes. Add the greens, and when they are half cooked, add the

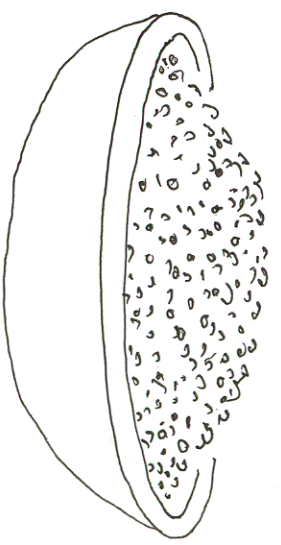
soy sauce, sesame oil, and rice vinegar. Cook until tender and serve over grains.



# millet & Quinoa



- 2 cups dry millet
- 1/4 cup dry quinoa
- 4 1/2 cups water
- Pinch of salt (optional)



1. Put millet, quinoa, water, and salt (if using) in a pot or rice cooker.
2. Over medium-high heat, bring to a boil, then reduce heat to low, cover pot, and allow to simmer until all the water has been absorbed by the grain - 15 to 20 minutes.
3. Remove the pot from the heat and let stand for 5 minutes, covered. Don't peek!
4. Remove the lid and use a fork to gently fluff the grain.
5. **EAT!** (delicious served under greens...)

## VARIATIONS:

- \* Stir in 2 tablespoons of butter or coconut oil during step 4, when fluffing.
- \* Substitute some or all of the water for stock in step 1.
- \* Toast the dry millet in a pan on the stove over medium heat for 5 minutes, or until golden-brown and fragrant, before adding the quinoa + water.