

ESY Pittsburgh Winter Cooking Program

Rice Noodle Salad

Food History Lesson

February



Focus Region

Asia
Japan

Materials Needed:

- World Map
- Pictures: rice varieties, grain layers, and terraces (digital or paper)
- Induction Burner
- 1 Saucepan (2 qt)
- 1 cup uncooked rice
- 2 cups water
- Plate + Fork for each student
- Serving Spoon

Prepare Before Lesson:

- Prepare cooking table and locate electrical outlet
- Write agenda on board
- Hang up world map

Objectives:

1. Reinforce “all food begins with a plant” garden knowledge.
2. Introduce students to rice: grain, production methods and ecosystems.
3. Practice map skills focused on Asia (continent) and Japan (country).
4. Introduce the four main components and tenants of the healthy Japanese diet.

Lesson Flow

o Engage (5 min)

Display photo of rice varieties. “Think for a moment about what this picture is showing. Hint: All the boxes are filled with a different variety of the same crop. When you think you know, whisper your idea to a buddy.” *Give students a moment to think, then share.* “Did you know there were so many varieties of rice in the world? Which ones do you usually see? During today’s class we’re going to cook rice. Will someone help me to add the rice to the water? Notice the sound the rice makes now, it’s hard and uncooked. Let’s use our nose to help figure out when the rice is cooked.” *Keep an eye on rice during class, smell with students occasionally.* “Let’s look at today’s agenda.” *Agenda: map skills, talk about the Japanese diet, explore rice ecosystems, taste test and food journal.*

o Map Skills (5 min)

-“Let’s begin by finding all the continents and countries we have focused on so far. Today, using our world map, we are going to find and focus on the **continent of Asia**. Can you help me locate Asia on our map/globe? Within this continent, we’re going to focus on the **country of Japan**.” *Ask 1-3 students to find Asia and Japan.*

-“The **Japanese** have one of the healthiest **diets** in the world. What is a diet?” *Discuss the different meanings of the word and how we are focused on diet= the foods we eat.*

“Japanese people live longer than most, and have very little heart disease. What foods do you think would be part of a Japanese diet?” *Discuss.* “The four main parts of their diet are rice, noodles, vegetables, and fish.”

-“Japanese students are also taught to eat 30 different foods each day, and 100 different foods each week. Why do you think they are challenged to do this? How many different foods did you eat today?”

o **Food History (15 min)**

-“Rice, just like wheat, is a cereal grain. A **cereal grain** is a grass grown for its edible seeds. Rice is the most widely consumed staple food in the world. That means it’s the most common food in the world! Many people eat rice 2-3 times a day.”

- o –“Rice is grown in amazing ways! It requires that the rice plants be flooded, so rice-fields often look like big puddles with grass growing in beautiful rows. These are often called ‘rice paddies’. In some places in Asia, rice paddies are on terraces, like stairs of rice! Let’s look at it together.” *Display photos or draw pictures.*

o **Garden Connections (10 min)**

-“Just as we learned that bulgur wheat has many layers, rice, too, has layers. Let’s use our hands to represent the layers of the wheat just like we did during our Tabbouleh Food History lesson. Who can try to explain some similarities between wheat and rice?” *Take answers.* “They are both grains. The seeds of the rice plant are processed to remove the chaff on the outside. This is ‘brown rice’. If you remove the bran (germ + husk), then you have ‘white rice’. What are the nutritional differences between brown and white rice?” *Display photos, discuss health benefits of brown rice: fiber, carbs, protein, Vitamins B and E and more.* “Fiber helps food to move through our gut and clean out what we can’t process. The carbohydrates in rice give us instant energy to do our work and play. There’s also protein to keep us strong and energetic. Rice is a very healthy food!”
-“Soon, we’re going to taste cooked rice. Do you smell it? Have any of you ever eaten rice in other forms?” *Take answers, prompt as needed: crackers, milk, cakes, flour, and noodles.* “To make rice into a ____, what do the workers/cooks need to do?” *Discuss.*

o **Tasting and Journaling (10 min)**

-“Rice is the most common food in the world, and today we’re going to join the other millions of people eating this cereal grain. Let’s recap, who can tell me what we did to change this rice from hard, uncooked rice into soft rice?” *Discuss.*

-“Can I have two students raise their hands politely to help me dish out and serve the rice, please?” Choose helpers, put a small amount of rice on each plate, serve. Sample together once everyone has rice.

-*As students finish sampling, talk to them about what to look forward to next week and encourage them to begin Food Journaling.*

Food Journal

Prompt: What are the 4 main parts of the Japanese diet? Describe and draw.

Challenge Prompts: 1. Why do you think Japanese people live longer and have a lower rate of heart disease than other cultures? 2. Why do you think many rice growers terrace their fields? 3. Define our key words: ‘diet’ and ‘cereal grain’.

Recommended Resources

1. Photo of Rice Varieties: http://en.wikipedia.org/wiki/File:Rice_diversity.jpg
2. Photo of Rice Terraces: <http://photobento.blogspot.com/2011/01/jatiluwh-rice-terraces.html>
3. Photo of Patties: http://commons.wikimedia.org/wiki/File:Rice_plantation_in_Java.jpg
4. Photo of Rice Grain Layers: http://www.risprotein.com/rice_protein.html

Additional Content Information and Activities

Rice-Duck-Azolla Farming: Another interesting tie-in for this lesson is the way in which some farmers grow rice without the use of pesticides using this integrated organic system. A link to more info can be found at: http://www.tgtrust.com/html/agri_project.html

Rice- Duck-Azolla Farming Lesson Activities:

“Today we’re going to learn an example of **companion planting** with Rice. Can anyone think of other examples of companion planting?”

Depending on time, perform one or more of the following activities:

- Display pictures of Ducks eating Azolla in Rice paddies (http://www.tgtrust.com/html/agri_project.html). What’s in this picture? Explain that Azolla or ‘Duck Weed’ is a plant that the ducks like to eat. It helps the rice by outcompeting other weeds—it prevents them from growing because it is already growing there—and by adding more nutrients to the soil (nitrogen-fixation).
- Bring in large, laminated images of Azolla-Rice-Duck system with arrows (<http://tclocal.org/images/vis/fig05.jpg>). Have students stick image to board to build system. Let’s look at how this system works for everyone: who feeds who in this system? Duck eats insects (pests) and Duck Weed. Duck waste adds nutrition to the soil (feeds the rice), etc.
- Break into groups to develop Azolla-Ducks-Rice play; have one group present to class.
- Sing a song to the tune of “The neckbone is connected to the shoulder bone” substituting the words, “The duck in the system eats the duckweed, the...”

Note: The ‘Azolla-Duck-Rice’ system consists of three main components: Azolla, Duck, and Rice. Additionally, one may add ‘Insect’, ‘Fish’ and ‘Person’ to this system. If using laminated images, one need only add an ‘Insect’ image, as a student may be able to act out ‘Person.’ *Water* (the background) and *arrows* may be drawn on the board, and therefore laminated images or posters need not be made for these. For more information, see: http://en.wikipedia.org/wiki/Azolla#Companion_plant