



Photo by Jeff Kubina

Standard Benchmarks and Values

English Language Arts

Speaking and Listening

SL.7.1 - Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.

SL.7.3 - Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.

Math

RP.7.1 - Ratios and Proportional Relationships:

Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.

NS.7.1 - Number Systems: Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

EE.7.3 - Expressions and Equations: Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Nā Honua Mauli Ola (NHMO) Cultural Pathways:

- Ike Pilina - Relationship Pathway
- Ike Mauli Lāhui: Cultural Identity Pathway
- Ike Na auao - Intellectual Pathway
- Ike Ho okō - Applied Achievement Pathway
- Values: kuleana (responsibility) and Laulima (working together)

General Learner Outcomes

- Community Contributor
- Complex Thinker
- Quality Producer
- Effective Communicator

VOYAGER MEAL PLANNING

Shari Jumalon

7th Grade

Three 85 minute class period

What kinds of meals are appropriate for a long distance voyage?

1. Since students explored cultural dishes at the beginning of the year, I thought this would be a natural extension to the lesson that was done during first quarter.
2. After doing a Healthy Eating unit during the 2nd quarter students still struggled with understanding the concept of eating enough from each food group throughout the course of a day to have a well-balanced diet.

This lesson provided my students another opportunity to practice creating a well-balanced culturally-based menu while considering storage and preparation of meals aboard a canoe.

Enduring Understandings

- To keep a crew healthy on a canoe, nutritious meals need to be prepared.
- Enough provisions (non-perishable food and water) needs to be transported on a canoe with the crew while considering the of weight of these items.

Critical Skills and Concepts

- Create a cultural recipe for a crew of 12 for a long distance voyage.
- Calculate the serving amount & weight of ingredients needed to feed a crew of 12 for ONE day of a long distance voyage.
- Collaborate with a small group to create a culture-based recipe for a long distance voyage.

Authentic Performance Task

- Students will collaborate in teams of four to design a culture-based nutritionally balanced recipe for a crew on a long distance voyage using the following two worksheets.
 - *see examples of a nutritious meal:
http://www.choosemyplate.gov/downloads/mini_poster_English_final.pdf
 - *document on attached worksheet called: Meal Plan
- Students will calculate the weight per serving and amount of ingredients needed to sustain a crew of 12 for a day in a long distance voyage.
 - *see resource attached called: Calculations

Authentic Audience

- Students will share the recipe/s with crew of the Hōkūle‘a, Hikianalia or Makali‘i.

Learning Plan

1. **Starter Activity:** In watch groups (student chosen groups of four with a leader-watch captain) students will “talk story” about the following questions:
 - What are some special foods you eat for the holidays or special occasions (birthdays, celebrations, etc.)
 - How are some foods similar or different from your other group members’?
 - Do any of your family’s foods have a family story behind it? What are these stories?
 - Are any of the foods you eat from your family’s cultural heritage? Which ones?

After 10-15 minutes have one student per group share a highlight from their group’s “talk story” session in a whole group setting.

2. (10-15 minutes) Discuss the idea of non-perishable as a class. What is perishable? What makes a food item non-perishable? Have non-perishable food items grouped by different categories such as: grains, fruit, vegetables, meat/protein, dairy, etc.

(Have canned items, dried, or preserved food available-grab items from your pantry to serve as examples).

Grains-rice, pasta, crackers, cereal

Fruit-canned peaches, canned fruit cocktail, dried fruit

Vegetable-canned veggies, nori, soup

Protein-Spam, corned beef, Vienna Sausage, tuna, sardines, beans

Dairy-Parmesan cheese, Evaporated milk

- have the items organized beforehand and covered with a table cloth or sheet so students do not get distracted during the starter activity.
3. Propose the question: “What kind of meals are appropriate for a long distance voyage?”
 4. Using the non-perishable items available combine items to create a cultural recipe (i.e.-corned beef hash using corned beef and Okinawan sweet potato or spaghetti sauce with Spam and pasta). 5-10 minutes

LESSON

5. Have students revisit their “talk story” session about special foods. How can they recreate those cultural dishes by supplementing some of the items for non-perishable items like Italian Spam-gehetti or recreating a special dish but supplementing an item to make it cultural like Okinawan corned beef hash. Give more examples based on the ingredients provided. (Have recipes in mind beforehand-see <http://www.exploratorium.edu/neverlost/#/canoe/provisions/recipes> for examples. (5-10 minutes)
6. Since most of my classes contained about 24 students I had my students create 6 watchgroups.
 - These 6 watch groups then decided which meal they would like to plan-breakfast, lunch and dinner. Two groups planned breakfast, two groups planned lunch and two groups planned dinner. (5 minutes)
 - The watch groups then decided which breakfast, lunch and dinner watch groups would collaborate to plan a balanced meals for either day 1 or day 2. (5 minutes)
7. Introduce the one-page handout-What’s On Your Plate? to provide students with an example of a well-balanced meal (print on the back My Daily Food Plan_3200 to give them an example of serving size).
8. Students will then create in their watch group 5 cultural non-perishable nutritious recipe using the What’s On My Plate? guidelines based on the meal they chose to prepare (breakfast, lunch, dinner).
 - Have students brainstorm for homework potential meals that they can share with their group.(End of Day 1 lesson)
9. (Day 2 lesson)

Revisit guidelines for meals: Cultural & non-perishable (10 minutes)

Introduce nutritionally well-balanced daily food intake. Share Meal plan worksheet. Explain that each column represents the food group and in the heading it states how many servings per day is required per day per person.

 - Students will be meeting in their watch groups to share their homework-recipes they created that are cultural and non-perishable based on the meal they chose either breakfast, lunch, or dinner. (15-20 minutes)
10. After meeting with their watch group to share their 4-5 recipes the watch captains will be meeting in their designated Day (Day 1 or 2) along with a meal plan worksheet to ensure the Day’s menu is well-balanced (enough grains, vegetables, fruit, protein and dairy) for the crew. If the day is not balanced it is the 3 watch captain’s duty to determine which meal will add the missing component (15 minute).
11. While the watch captain’s are meeting the rest of the watch is responsible to brainstorm complementary items that can be added to the recipe to make it well-balanced or added as a side dish. (i.e.-adding parmesan cheese to the Spam-ghetti to add a dairy component to create a nutritionally well-balanced recipe.
12. Once the menu for the Day has been determined, each group is responsible to find the weight of each serving size per ingredient and total it on the Calculations sheet and deciding who will be bringing which item to the presentation (30 minutes).
13. As an exit pass each Day (Day 1 & Day 2) is required to turn in 1 completed meal plan sheet per day. On this sheet it should contain who will be bringing in each of the ingredients and supplies for the presentation. I provided the plates, napkins and utensils for the samples prepared by the students on presentation day.

(End of Day 2)
14. (Day 3)

The classroom will be divided into 6 working stations. Each station should contain a 2 burner stove and students were required to bring in their own supplies such as pots, pans, tongs, seasoning, and ingredients.
15. Reminders...In the watch groups students have 45 minutes to prepare their cultural recipe using non-perishable items, turn in their Calculations for their Day (Day 1 or Day 2), and their recipe sheet. (5 minutes)
16. Each watch group should have members preparing the recipe, recording/ calculating the weight and serving size, or documenting the recipe on the Recipe Sheet.

LESSON

17. After 45 minutes students will be presenting their recipe to the class by:
 - a) displaying the samples
 - b) explaining the ingredients, and
 - c) identifying which culture it came from.(approx 20 minutes- 3 minutes per group to share).
18. Have students rotate around the room and collect samples of the various recipes. (10-15 minutes)
19. Debrief - What was challenging for the watch groups? What will you do differently? Why are these recipes appropriate for a long distance voyage?
20. Bind the recipes in a booklet and share with crew members.

Extension activities:

1. Plan meals for a week with a daily cultural theme.
2. Calculate all the items on a voyaging canoe (not to exceed 4000 lbs.). See Never Lost website for a list of items, don't forget to calculate crew member weight.
3. Covert the weight from pounds to kilograms.

**Please note that this lesson was adapted to a lesson provided by Na Kalai Wa'a-E Lauhoe Wa'a Teacher Training curriculum.*

Resources

Examples of Canoe recipes:

<http://www.exploratorium.edu/neverlost/#/canoe/provisions/recipes>

See attached documents:

1. What's on Your Plate-mini_poster_English_final.pdf-use only front of poster (back has only daily allowance of 2000 calories per day (crew members need at least 3000-4000 calories per day)
2. MyDailyFoodPlan_3200_18plusyr.pdf
- 3.Meal Plan-Worksheet to document balanced daily meal plan
4. Calculations-Worksheet to document weight of meals for the Day
- 5.Procedure-Canoe-Worksheet to document recipe
6. voyagemeal-rubric

Voyager Meal Planning-Scoring Rubric

Day: 1 2 Watch Group Meal: Breakfast Lunch Dinner

Watch Group Members: _____

Rating Scale: 4-All 3-Most 2-Some 1-None

The Watch Group's Recipe:

- | | | | | | |
|----|--|-----|------|------|------|
| 1. | Is Culture- based: | Yes | | No | |
| | Which culture: _____ | | | | |
| 2. | Contained non-perishable items: | All | Most | Some | None |
| 3. | Day's meals were well-balanced: | All | Most | Some | None |
| | The Watch Group Collaborated: | | | | |
| 4. | To design their recipe: | 4 | 3 | 2 | 1 |
| | To Present their Recipe: | 4 | 3 | 2 | 1 |
| 5. | To Calculate the Weight of their Meal: | 4 | 3 | 2 | 1 |

TOTAL _____/20

Comments: _____

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The Watch Group's Recipe:

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|----|--|-----|------|------|------|
| 1. | Is Culture- based: | Yes | | No | |
| | Which culture: _____ | | | | |
| 2. | Contained non-perishable items: | All | Most | Some | None |
| 3. | Day's meals were well-balanced: | All | Most | Some | None |
| | The Watch Group Collaborated: | | | | |
| 4. | To design their recipe: | 4 | 3 | 2 | 1 |
| | To Present their Recipe: | 4 | 3 | 2 | 1 |
| 5. | To Calculate the Weight of their Meal: | 4 | 3 | 2 | 1 |

TOTAL _____/20

Comments: _____

My Daily Food Plan

Based on the information you provided, this is your daily recommended amount for each food group.



GRAINS
10 ounces



VEGETABLES
4 cups



FRUITS
2 1/2 cups



DAIRY
3 cups



PROTEIN FOODS
7 ounces

Make half your grains whole
Aim for at least **5 ounces** of whole grains a day

Vary your veggies
Aim for these amounts **each week:**
Dark green veggies = 2 1/2 cups
Red & orange veggies = 7 1/2 cups
Beans & peas = 3 cups
Starchy veggies = 8 cups
Other veggies = 7 cups

Focus on fruits
 Eat a variety of fruit
 Choose whole or cut-up fruits more often than fruit juice

Get your calcium-rich foods
 Drink fat-free or low-fat (1%) milk, for the same amount of calcium and other nutrients as whole milk, but less fat and Calories
 Select fat-free or low-fat yogurt and cheese, or try calcium-fortified soy products

Go lean with protein
 Twice a week, make seafood the protein on your plate
 Vary your protein routine—choose beans, peas, nuts, and seeds more often
 Keep meat and poultry portions small and lean

Find your balance between food and physical activity
 Be physically active for at least **150 minutes** each week.

Know your limits on fats, sugars, and sodium
 Your allowance for oils is **11 teaspoons** a day.
 Limit Calories from solid fats and added sugars to **600 Calories** a day.
 Reduce sodium intake to less than **2300 mg** a day.

Your results are based on a 3200 Calorie pattern.

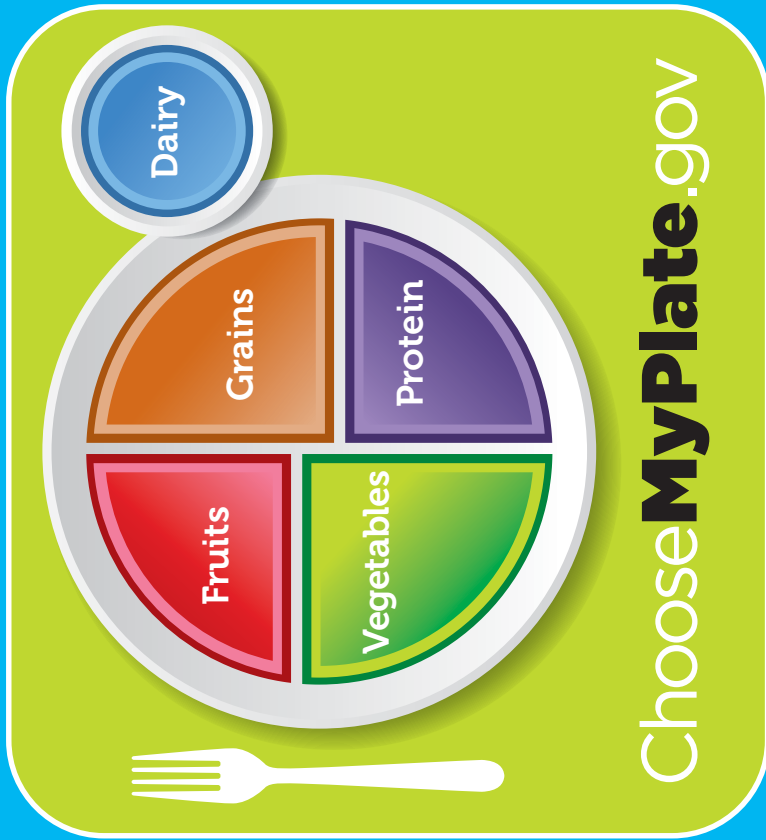
Name: _____

This Calorie level is only an estimate of your needs. Monitor your body weight to see if you need to adjust your Calorie intake.

Calculate Total Weight of Food Items for 1 day in a Long Distance Voyage
 Day_____

	Serving size	Amount of	Serving size
	oz or grams	crew members	multiply by crew members
Ingredients			
Breakfast			
Lunch			
Dinner			
Snack			
TOTAL WEIGHT:			
All calculations need to be either in pounds or grams.			

What's on your plate?



Before you eat, think about what and how much food goes on your plate or in your cup or bowl. Over the day, include foods from all food groups: vegetables, fruits, whole grains, low-fat dairy products, and lean protein foods.



Make half your plate fruits and vegetables.



Make at least half your grains whole.



Switch to skim or 1% milk.



Vary your protein food choices.

Cut back on sodium and empty calories from solid fats and added sugars



Look out for salt (sodium) in foods you buy. Compare sodium in foods and choose those with a lower number.

Drink water instead of sugary drinks. Eat sugary desserts less often.

Make foods that are high in solid fats—such as cakes, cookies, ice cream, pizza, cheese, sausages, and hot dogs—occasional choices, not every day foods.

Limit empty calories to less than 260 per day, based on a 2,000 calorie diet.

Be physically active your way

Pick activities you like and do each for at least 10 minutes at a time. Every bit adds up, and health benefits increase as you spend more time being active.

Children and adolescents: get 60 minutes or more a day.

Adults: get 2 hours and 30 minutes or more a week of activity that requires moderate effort, such as brisk walking.

Vegetables	Fruits	Grains	Dairy	Protein Foods
<p>Eat more red, orange, and dark-green vegetables like tomatoes, sweet potatoes, and broccoli in main dishes.</p> <p>Add beans or peas to salads (kidney or chickpeas), soups (split peas or lentils), and side dishes (pinto or baked beans), or serve as a main dish.</p> <p>Fresh, frozen, and canned vegetables all count. Choose "reduced sodium" or "no-salt-added" canned veggies.</p>	<p>Use fruits as snacks, salads, and desserts. At breakfast, top your cereal with bananas or strawberries; add blueberries to pancakes.</p> <p>Buy fruits that are dried, frozen, and canned (in water or 100% juice), as well as fresh fruits.</p> <p>Select 100% fruit juice when choosing juices.</p>	<p>Substitute whole-grain choices for refined-grain breads, bagels, rolls, breakfast cereals, crackers, rice, and pasta.</p> <p>Check the ingredients list on product labels for the words "whole" or "whole grain" before the grain ingredient name.</p> <p>Choose products that name a whole grain first on the ingredients list.</p>	<p>Choose skim (fat-free) or 1% (low-fat) milk. They have the same amount of calcium and other essential nutrients as whole milk, but less fat and calories.</p> <p>Top fruit salads and baked potatoes with low-fat yogurt.</p> <p>If you are lactose intolerant, try lactose-free milk or fortified soy milk (soy beverage).</p>	<p>Eat a variety of foods from the protein food group each week, such as seafood, beans and peas, and nuts as well as lean meats, poultry, and eggs.</p> <p>Twice a week, make seafood the protein on your plate.</p> <p>Choose lean meats and ground beef that are at least 90% lean.</p> <p>Trim or drain fat from meat and remove skin from poultry to cut fat and calories.</p>
<p>For a 2,000-calorie daily food plan, you need the amounts below from each food group. To find amounts personalized for you, go to ChooseMyPlate.gov.</p>				
<p>Eat 2½ cups every day</p> <p>What counts as a cup? 1 cup of raw or cooked vegetables or vegetable juice; 2 cups of leafy salad greens</p>	<p>Eat 2 cups every day</p> <p>What counts as a cup? 1 cup of raw or cooked fruit or 100% fruit juice; ½ cup dried fruit</p>	<p>Eat 6 ounces every day</p> <p>What counts as an ounce? 1 slice of bread; ½ cup of cooked rice, cereal, or pasta; 1 ounce of ready-to-eat cereal</p>	<p>Get 3 cups every day</p> <p>What counts as a cup? 1 cup of milk, yogurt, or fortified soy milk; 1½ ounces natural or 2 ounces processed cheese</p>	<p>Eat 5½ ounces every day</p> <p>What counts as an ounce? 1 ounce of lean meat, poultry, or fish; 1 egg; 1 Tbsp peanut butter; ½ ounce nuts or seeds; ¼ cup beans or peas</p>



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August 2011
CNPP-25
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Name of Group members _____

Watch Name _____

Pd _____

To assist in the planning of the meals for your group and to ensure the recommended servings from the major food groups are met for each crew member per day, use this worksheet to record what will be used from each food group for each meal.

Meal	Person responsible for item	Bread, Cereal, Rice or Pasta (6-11)	Vegetable (3-5 servings)	Fruit (2-4 servings)	Meat, poultry, fish, dry beans, eggs, & nuts (2-3 servings)	Milk, Yogurt, & cheese (2-3 servings)	Fats, oils & sweets
Breakfast							
Lunch							
Dinner							
Snack							
TOTAL							

