Are you smarter than a 5th grader?

Martha Raidl, PhD, RD
Rhea Lanting, MS
The Healthy Idaho Potato Education Program

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Components of our Potato Education Program

• Targets 4th – 5th graders
• Interdisciplinary: history, geography, nutrition, health, math, science, technology
• Uses the Ipad
• Provides information in class and ‘beyond’ the classroom
• Possible careers
Lesson Schedule

• #1: History of Potatoes

• #2: Types of Potatoes and Potato Products

• #3: Are Potatoes a Super food?

• #4: Potatoes on MyPlate
Lesson 1 Overview

• History of potatoes *

• Potatoes in Idaho

• From field to table
On which continent were potatoes first grown?
Question 1: On which continent were potatoes first grown?

A. North America
B. South America
C. Asia
D. Africa
E. Australia
F. Europe
If you said South America, you are correct!
Potatoes were first grown in the beautiful Andes Mountains.
Question 2: When were potatoes first grown in the Andes Mountains?

A. 500 years ago
B. 1000 years ago
C. 2000 years ago
D. 4000 years ago
E. 8000 years ago
F. 10,000 years ago
Follow the path of potatoes from South America to the U.S.
Question 3: In which state were potatoes first grown in the U.S.?

A. New Hampshire
B. Virginia
C. New York
D. Idaho
How potatoes spread across the U.S.

- Idaho: 1836
- Virginia: 1621
- South Carolina: 1719
Lesson 2 Overview

• Potatoes
  – Potato Color Groups

• Potato Products
  – Fresh, Frozen, Chips
Fruits and Vegetable Color Groups

• Eat a rainbow of fruits and veggies: red, yellow/orange, green, white/tan/brown, blue/purple
Question 4: Which of the following color groups do not contain potatoes?

A. Red
B. Yellow/orange
C. White/tan/brown
D. Green
E. Blue/purple
Idaho potatoes are in four color groups

- **#1 = Red**: Cal Red
- **#2 = Blue/Purple**: Purple Peruvian
- **#3 = White**: Russet Burbank
- **#4 = Yellow**: Yukon Gold
Potato Products

- Frozen Fries: 36%
- Fresh Potatoes: 26%
- Potato Chips and Shoestrings: 15%
- Dehydrated: 11%
- Other Frozen Products: 4%
- Seed: 6%
- Potato Starch and Flour: 2%
- Canned: 1%
Three Potato Products

• Frozen

• Potato Chips* and Shoestrings

• Dehydrated Potatoes*
Potato Chips

• >150 years old
• #1 snack food in USA
• We eat 19 lbs/year
• Eaten World Wide
Q5: Approximately how many 1 ounce bags of potato chips do Americans eat annually?

A. 100
B. 200
C. 300
D. 400
E. 500
Popular potato chip flavors around the world

- USA: Sour cream, onion, barbeque
- Germany: Paprika
- India: Masala, Coriander and Red Chili
- Greece: Oregano
- Japan: Seaweed, Wasabi, and Soy Sauce
Q6: Taste and rate these potato chips made with South African seasoning

A. Terrible
B. Poor
C. Fair
D. Good
E. Excellent
What are Dehydrated Potatoes?

Types of dehydrated potatoes
- Flakes
- Granules
- Flour
- Pieces
  - Slices
  - Dices
  - Shreds
Ingredient list activity (Handout)

- Find the dehydrated potato product(s) in this King’s Hawaiian Bread

- ENRICHED FLOUR (WHEAT FLOUR, ENZYME, NIACIN, REDUCED IRON, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID), WATER, SUGAR, LIQUID SUGAR (SUGAR, WATER), BUTTER (PASTEURIZED CREAM, SALT), EGGS, CONTAINS LESS THAN 2% OF EACH OF THE FOLLOWING: YEAST, POTATO FLOUR, WHEY, NONFAT MILK, SALT, DATEM, SOY FLOUR, YELLOW CORN FLOUR, SODIUM STEAROYL LACTYLATE, INACTIVE YEAST, WHEAT GLUTEN, SORBIC ACID PRESERVATIVE, MONOCALICUM PHOSPHATE, WHEAT FLOUR, CALCIUM SULFATE, SODIUM SILICOALUMINATE, AMMONIUM SULFATE, ASCORBIC ACID ADDED AS A DOUGH CONDITIONER, WHEAT STARCH, SORBITAN MONOSTEARATE, MONO- & DIGLYCERIDES, ENZYMES, CALCIUM SILICATE, MICROCRYSTALLINE CELLULOSE.

- CONTAINS: WHEAT, MILK, EGGS, SOY
Lesson 3 Overview
Are Potatoes a Super Food?

• Consumption of Potatoes*

• Nutritional Value*

• Health Benefits*
Q7: How many potatoes do 5th and 6th grade girls eat daily?

A. <1
B. 1
C. 2
D. 3
E. 4
F. >4
Amount of potatoes consumed daily

1 potato
0.7 potato
0.6 potato

Boys age 2-19
Girls age 2-19

Sources: Food intakes converted to retail commodities databases (ARS) and National Health and Nutrition Examination Survey (CDC), 1999-2012.
Nutritional Value – Use the Nutrition Facts label (handout) to answer questions

• Calories

• Carbohydrates, Protein, Fat, Fiber

• Vitamins * and Minerals
Q8: How many vitamins are found in potatoes?

A. 3
B. 6
C. 9
D. 12
E. 100
Six vitamins in potatoes

- Vitamin C
- Vitamin B6
- Folate
- Thiamin
- Niacin
- Riboflavin
How does your body use these nutrients to stay healthy?

HELP RELEASE ENERGY FROM FOOD
Thiamin, Niacin, Riboflavin

IMMUNE SYSTEM
Zinc, Vitamin C

HEART
Sodium, Potassium, Magnesium

BLOOD
Iron, Folate

MUSCLES
Potassium, Vitamin B6,

SKELETON
Calcium, Phosphorus
Lesson 4 Overview
Potatoes on MyPlate

• Where Potatoes Fit on MyPlate

• Potato Serving Sizes

• Building a Healthy MyPlate Potato Meal
Potatoes on MyPlate

• Healthy MyPlate Meals contain foods from the 5 food groups

• Which food group do potatoes fall into?
  – Fruits
  – Vegetables
  – Grains
  – Protein
  – Dairy
Potato Serving Sizes: What is one serving of:

- Fresh potatoes
- Fried potatoes
Three ways to determine potato serving sizes:

1. Nutrition Facts Label

2. Scale: Weigh the potato

3. Use a plate
**#1: Nutrition Facts Label**

- Fried potatoes = 70 gm prepared or 85 gm frozen
- Fresh potato = 148 gm/5.3 oz.

![Nutrition Facts Label Image]

<table>
<thead>
<tr>
<th>Nutrition Facts</th>
<th>Serving Size 1 potato (148g/5.3oz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Per Serving</td>
<td></td>
</tr>
<tr>
<td>Calories 110</td>
<td>Calories from Fat 103</td>
</tr>
<tr>
<td>Total Fat 11g</td>
<td>17%</td>
</tr>
<tr>
<td>Saturated Fat 0g</td>
<td>5%</td>
</tr>
<tr>
<td>Trans Fat 0g</td>
<td>0%</td>
</tr>
<tr>
<td>Cholesterol 0mg</td>
<td>0%</td>
</tr>
<tr>
<td>Sodium 161mg</td>
<td>7%</td>
</tr>
<tr>
<td>Potassium 620mg</td>
<td>18%</td>
</tr>
<tr>
<td>Total Carbohydrate 28g</td>
<td>9%</td>
</tr>
<tr>
<td>Dietary Fiber 2g</td>
<td>8%</td>
</tr>
<tr>
<td>Sugars 1g</td>
<td>8%</td>
</tr>
<tr>
<td>Protein 3g</td>
<td>8%</td>
</tr>
<tr>
<td>Vitamin A 0%</td>
<td>0%</td>
</tr>
<tr>
<td>Calcium 2%</td>
<td>0%</td>
</tr>
<tr>
<td>Iron 6%</td>
<td>0%</td>
</tr>
<tr>
<td>Thiamin 8%</td>
<td>0%</td>
</tr>
</tbody>
</table>

*Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

<table>
<thead>
<tr>
<th>Calories</th>
<th>Total Fat</th>
<th>Sat Fat</th>
<th>Cholesterol</th>
<th>Sodium</th>
<th>Total Carbohydrate</th>
<th>Dietary Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,000</td>
<td>Less than 4g</td>
<td>Less than 2g</td>
<td>Less than 300mg</td>
<td>Less than 2400mg</td>
<td>30g</td>
<td>25g</td>
</tr>
<tr>
<td>2,000</td>
<td>Less than 6g</td>
<td>Less than 2g</td>
<td>Less than 300mg</td>
<td>Less than 2400mg</td>
<td>37g</td>
<td>30g</td>
</tr>
</tbody>
</table>
#2: Weigh and #3: Plate

**Weigh**
- Fresh: ~150 gm or 5.3 ounces
- Fried: 70 gm prepared or 85 gm frozen

**Plate:**
- ¼ plate (9-inch)

(Handout or Plate)
<table>
<thead>
<tr>
<th></th>
<th>Fresh potato Red</th>
<th>Fresh potato Russet Burbank</th>
<th>French Fries (prepared)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight of one serving</td>
<td>148 gm</td>
<td>148 gm</td>
<td>70 grams</td>
</tr>
<tr>
<td>Weight (gm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How many servings is this potato?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1, 1, &gt;1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plate: how much of the plate is covered:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; ¼, ¼, ½, ¾, 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do the weight and plate servings match?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Potatoes on MyPlate

• Use MyPlate to rate one meal
  1 star = 1 food group
  2 stars = 2 food groups
  3 stars = 3 food groups
  4 stars = 4 food groups
  5 stars = 5 food groups
How many stars (food groups) are in this meal?
Rate this meal

How many stars should this meal receive?
1 star = 1 food group
2 stars = 2 food groups
3 stars = 3 food groups
4 stars = 4 food groups
5 stars = 5 food groups

What grain would you add to complete this meal?

ChooseMyPlate.gov
How many stars (food groups) are in this meal?

- Bacon wrapped turkey with mashed potatoes and green beans
- MyPlate

- Photo, courtesy of IPC
Summary

• Potatoes have a long and illustrious history

• Potatoes come in all sizes, shapes, and colors

• Potatoes can keep your body healthy

• One serving of potatoes = ¼ plate

• Try to include all food groups at meal time