

Portion Investigators

WIN Kids Curriculum for 5th and 6th grade

Designed for classrooms, community youth groups, and other educational settings



Lesson Objectives

- Recognize normal versus outrageous portion sizes.
- Describe how super-sized portions can contribute to overeating.
- Discover ways to order, select, and/or serve portions that are appropriate for our hunger.



Wellness IN (WIN) the Rockies Principles

- Follow the Food Guide Pyramid.
- Take control - eat when hungry and stop when satisfied.
- Take pleasure in eating.



Health Standards

Content Area - Nutrition and Dietary Behavior

National Health Standards 1 (concepts), 6 (decision-making) and 7 (advocacy)

Wyoming Health Content and Performance Standards 1, 6 and 7

Montana Health Enhancement Content Standards 1 and 5

Idaho Grade 5 Health Performance Standards 941 and 942

Idaho Grade 6 Health Performance Standards 951 and 952

Note: Suggested standards can be met depending upon lesson components selected and assessed. Potential assessment tools are designated with a ✓.



Approximate Length

- 30 minutes



At the rate of increase since 1950, super-sized French fries will have 341 fries in 2050!

Materials and Preparation

Handout: WIN the Home: Home Investigations
(1 per student)

Portion Investigators video tape (approximately 10 minutes, see Sources and Materials)
VCR and television

Measuring cups and spoons

Food items to measure: cold cereal, cooked pasta, fruit juice, potato chips, ice cream, bread

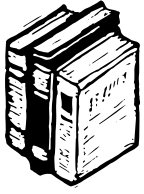
Packaged food items to measure: mega-muffin, monster cookie, large bagel, bottle of juice, 20-ounce bottle of pop, microwave popcorn bag

Additional food or beverage items as desired

Serving dishes: large and small bowl, large and small glass, large and small plate

Copy the chart from the top of page 4 onto the chalkboard





Background for Educator

We are an expanding nation – at least in terms of our body sizes. The rising incidence of obesity in the United States is well documented. In 1999, an estimated 61 percent of U.S. adults were overweight, along with 13 percent of U.S. children and adolescents. Obesity among adults has doubled since 1980, while overweight among children has doubled and overweight among adolescents has tripled.

“Overweight and obesity are among the most pressing new health challenges we face today,” Health and Human Services Secretary Tommy G. Thompson said (2001). “Our modern environment has allowed these conditions to increase at alarming rates.”

The National Institutes of Health defines obesity and overweight in terms of a Body Mass Index (BMI). BMI is calculated by dividing a person’s weight in kilograms by the square of her/his height in meters. Overweight in adults is defined as having a BMI between 25 and 29.9, and obesity in adults is defined as having a BMI of 30 or higher. For children and adolescents, the definition for overweight is tied to gender- and age-specific percentiles.

Why are we becoming heavier as a nation? Over-consuming food and decreasing physical activity are at the core of our rising obesity. One factor is excess energy intake – and growing portion sizes play a role in overeating. The movie theater popcorn portion has increased from 3 cups in the 1950s to 16 cups today. If this rate continues, in 2050 we will see 85-cup portions of popcorn! Large portions not only contain many calories; studies show that when people are served more food, they eat more.

To add more *weight* to this issue, the types of food we most commonly see super-sized are high-calorie foods that provide few nutrients. French fries, pop, chips, cookies and muffins are some of these foods.

Today, youth are growing up with 20-ounce bottles of pop coming out of vending machines – in the 1950s the “family size” bottle of Coke was 26 ounces! The 12-ounce pop served 50 years ago at fast food restaurants is now called “child size.” A 64-ounce container sold in many convenience stores holds over five 12-ounce cans – nearly a 6-pack in a single-serving container.

Outrageous portions can be found nearly everywhere. Did you know a convenience store mega-muffin is four or sometimes even six servings in one sealed package? But there is more: At sit-down restaurants and all-you-can-eat buffets, we want value for our money so we often eat much more than we need to feel that we are getting our money’s worth. At home, large plates and bowls encourage us to serve and eat larger portions. In addition, we serve ourselves more from larger containers. All these factors lead to bigger portions. And research has shown that the bigger the portion, the more we eat.

This lesson and video send an S.O.S. message – Stop Outrageous Super-sizing!



Lesson Script

Team Huddles

1. We are going to watch a short video about three kids who become Portion Investigators to complete a class assignment. Watch and see what they have learned. (*Watch the video **Portion Investigators**, approximately 10 minutes.*)

2. Get into teams of three to five people. Stand and huddle. As a team, come up with some of the main points shared in the video. Think about the times Kelly said, “That’s a good point, write that down.” Each team will share one point, and we will continue until all ideas are on the board. ✓ (*Teams remain standing.*)

3. (*As teams share their point, record it on the board. Discuss. The following are the main points from the video, but students may note additional points they learn.*)

- * Watch for outrageous serving sizes that encourage us to eat more than we need.
- * Titanic-sized portions are found not only at fast food restaurants but also at convenience stores and movie theaters.
- * Fast food meals often provide lots of calories without a lot of nutrients. They tend to be low in fruits, vegetables, milk and whole grains.
- * Fast food meals are all right once in a while.
- * Slow down, use all your senses and enjoy every bite of food. See the food, feel the temperature, smell the aroma, hear the sounds, and enjoy the taste. Ask yourself if the last French fry tastes as good as the first one.
- * Choose smaller portions or get the larger size and share it.
- * Listen to your body – eat when you are hungry and stop eating when you are satisfied or when the food doesn’t taste good anymore.
- * Be aware of what you serve yourself at home. The larger the original container, the more you are likely to eat.
- * There may be other reasons people are heavier today than in the past – for example decreased physical activity.

The Assignment

1. In the video, Cruz, Kelly and Otto had a class assignment to explore why people are heavier today than in past generations. They decided to investigate increasing portion sizes and found the following information. (*Write on board. Note: the French fries and hamburger portions for 2050 were not shared in the video.*)

Date	Movie Theater Pop	Movie Theater Popcorn	Fast Food French Fries	Fast Food Hamburger
1950	12 ounces	3 cups	27 fries	1.6 ounces
Today	48 ounces	16 cups	96 fries	4 ounces
2050	200 ounces	85 cups	341 fries	10 ounces

2. As a class, discuss these questions.

- * What is your reaction to the future portion sizes?
- * Fifty years ago, if someone saw our current portion sizes, how would they react?
- * Why do we accept huge portions today?
(*Portions have increased gradually; there has been relatively little increase in cost; we want value for our money so we believe more food is better, even though it is worse for our health.*)
- * What are some healthful choices at fast food restaurants?
- * Do bigger portions make bigger bodies?
(*Studies show we eat more when we are served more.*)

But this is just one part of the picture. Other factors include the following:

Decreased physical activity.

More time spent watching TV or sitting at computer.

Modern-day conveniences – like remote controls, garage door openers, riding lawn mowers – that do the work for us.

Automobiles, loss of sidewalks, and few bike lanes – we drive almost everywhere!

Portion Investigators in Action

1. With your same group from the **Team Huddles**, become portion investigators to learn more. (*Distribute materials including questions they will address.*)

a) Fill the container and measure the portion. How does it compare with what you usually serve yourself? (*Two groups.*)

Station One

Cold cereal (small bowl)

Cooked pasta (large plate)

Glass of juice (6-ounce glass)

Station Two

Cold cereal (large bowl)

Cooked pasta (small plate)

Glass of juice (12-ounce or larger glass)

b) Measure one serving according to the Food Guide Pyramid. How does it compare with what you usually serve yourself? (*One group.*)

Cold cereal = 1 cup	Glass of juice = 3/4 cup
Cooked pasta = 1/2 cup	Bread = 1-ounce slice
Ice cream = 1/2 cup	Potato chips = 1 ounce (approximately 10 chips)

c) (*Split among remaining groups.*) Answer the two questions about each product. Then, divide each product into the serving sizes according to the package label.

Mega muffin

1. According to the label, how many servings are in the muffin?
2. Based on a 1-ounce Food Guide Pyramid bread serving, how many servings are in the muffin?

Monster cookie

1. According to the label, how many servings are in the cookie?
2. Based on a 1-ounce Food Guide Pyramid bread serving, how many servings are in the cookie?

Large bagel

1. According to the label, how many servings are in the bagel?
2. Based on a 1-ounce Food Guide Pyramid bread serving, how many servings are in the bagel?

16-ounce bottle of juice (or larger)

1. According to the label, how many servings are in the bottle?
2. Based on a 6-ounce Food Guide Pyramid serving, how many servings are in the bottle?

20-ounce pop bottle

1. According to the label, how many servings are in the bottle?
2. Eight ounces equal once cup. How many cups of pop are in the bottle?

Microwave popcorn

1. According to the label, how many servings are in the bag?
2. Based on a 3-cup Food Guide Pyramid serving, how many servings are in the bag?

Other packaged foods with more than one serving.

2. Report to the class what your team measured and what they learned. ✓



WIN the Home: Home Investigations

(*Distribute WIN the Home: Home Investigations handout.*) Measure food and drinks served in your bowls, cups and glasses at home. Compare the amount they hold to the amount on the label. For example, a cereal bowl may hold 3 cups of cereal. If the label says a serving is one cup, your bowl holds three servings. Report results back to the class. ✓

Please note: pilot testing of lessons has determined that WIN the Home activities are most successful when students have time over a weekend to complete them, when a follow-up is conducted in class, and when students receive credit for completion.



WIN the Community: S.O.S.- Stop Outrageous Super-Sizing!

- **ENRICHMENT Option: S.O.S. - Stop Outrageous Super-Sizing!** Divide into several teams of 3 or 4 students each. Each team selects one point they learned from the video and/or from discussions and investigations. Create a short skit to teach others this point. Once teams have practiced, perform the skits. ✓ Arrange for presentations to other classes and community groups. If there is a high school class learning about videography, see if teachers and students are interested in taping skits for a locally-made educational video.
- **Thank you for Smart-Sizing** - Prepare thank you notes (sample below). When a restaurant offers a “smart-sized” choice (one that seems more normal than outrageous), leave a note thanking them. For example, they may include 1/2-size orders or smaller portions in their menus for everyone (not just for senior citizens or young children).

Eating is one of life’s great pleasures!

Your food is excellent and I want to thank you for offering smaller portions. Through WIN the Rockies, I have learned I don’t need outrageous serving sizes. I take pleasure in eating by enjoying every bite!



Additional Ideas

- **Hunt for Super-Sizes (and Smart-Sizes)** - Over a two-week period, ask students to note outrageous portion sizes they see. In addition, they can note how they shared the Smart-Sizing Thank You notes described in **WIN the Community**. They can use restaurant menus, convenience store selections, and food ads on the television or in newspapers. Create two posters and place them on the wall. Each day, students can add their findings of super-sized and smart-sized portions. Review at the end of the two weeks.
- **MATH Option: Cost Comparison** - Discuss why large food portions can be offered for little increase in cost.
 - Only about 20 cents of every food dollar goes to the producer. The rest is for packaging, transportation, advertising and marketing, and these costs increase very little with increased sizes.Conduct a cost comparison using local prices if available. If not, here’s a sample:
 - Fast Food meal - large burger, large French fries and large soft drink
1610 calories = **\$3.62**
Plus \$.80 to super-size = **\$4.42**
 - Fast Food individual items - Cheeseburger, small French fries, and small drink
690 calories = **\$2.97**Compare prices and discuss consequences of the different choices. What would it cost to choose milk instead of pop? Can you super-size and share?



Sources and Materials

“From Wallet to Waistline: The Hidden Costs of Super Sizing.” The National Alliance for Nutrition and Activity (NANA). Washington DC. June 2002.

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“Overweight and Obesity Threatens U.S. Health Gains.” United States Department of Health and Human Services. Press Release. December 13, 2001. Accessed Dec. 2002. <www.hhs.gov/news>.

Pelican, Suzanne. *How Big is BIG?* Educational Kit. University of Wyoming Cooperative Extension Service, Family and Consumer Sciences, 2001.

United States. Department of Agriculture and Department of Health and Human Services. *Food Guide Pyramid*. Accessed 14 Nov. 2002. <www.nal.usda.gov/fnic/>.

To obtain the **Portion Investigators** video, contact University of Wyoming Family and Consumer Sciences Department at 307-766-4145 or check the WIN the Rockies web site at <www.uwyo.edu/wintherockies>.

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