



FOR YOUTH DEVELOPMENT®
FOR HEALTHY LIVING
FOR SOCIAL RESPONSIBILITY

Lesson 3: The Big Dish

Quick Glance

In this lesson, campers will:

- ✓ Discuss what protein is and what makes it healthy
 - ✓ Identify the types of food with protein
 - ✓ Discuss the best source of healthy carbohydrates (whole grains)
 - ✓ Recognize what a whole grain is
 - ✓ Make a meal that combines the **Healthy Eating Plate** food groups
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Tasks:

- ✓ Exploration of protein and its sources
- ✓ Exploration whole vs. refined grains
- ✓ Preparation of a combo meal that contains most elements of the **Healthy Eating Plate** diet

Lesson 3: The Big Dish

About:

In this lesson, campers explore whole grains and protein in greater depth. Campers build on their understanding of the **Healthy Eating Plate** to explore combo meals that bring together grains/healthy carbs, proteins and other items that make for a comprehensively healthy meal. Campers will make the main meal of the Frost Valley menu.

Achievement-Based Objectives:

At the end of this lesson, campers will have:

Named sources of protein
Identified the health value of protein
Determined healthy and less healthy sources of carbohydrates
Described whole grains
Determined what is and is not a whole grain food product
Prepared a combo meal that reflects the Healthy Eating Plate diet, with a focus on protein and whole grains

Lesson Focus:

Proteins and Whole grains; Combo Meals (Vegetables, Protein, Whole Grains)

Grade Level	Time	Menu Item
4-8	60 minutes	The Big Dish

Materials and Prep:

- Make sure the following materials are prepared ahead of the class.
- Items to duplicate and/or enlarge are in **Lesson Docs** at the end of the lesson.
- Recipe ingredients and equipment/utensil materials are in the **Recipes** section at the end of the lesson.

Task	Items	Preparation
Start	<ul style="list-style-type: none"> ✓ Doc 1: What campers will learn ✓ Self-adhesive chart paper ✓ Markers 	<ul style="list-style-type: none"> ✓ Write and post the camper-friendly objectives on chart paper.
Protein and Grain Power	<ul style="list-style-type: none"> ✓ Doc 2: Protein Sources ✓ Doc 3: Whole Grains 	<ul style="list-style-type: none"> ✓ Review the modified list to select an array of items for campers to examine. Choose those that are more likely to be familiar to campers.
Extended Tasks	<ul style="list-style-type: none"> ✓ Doc 4: Whole Grain and Fiber Activities 	<ul style="list-style-type: none"> ✓ If there is time, these two activities help campers become more familiar with whole grains and the importance of fiber that is typically found in whole grains

Procedures Part I

Time: 15 Min.

What to Emphasize: Protein

Protein builds, maintains and replaces tissues in the body. Our bodies need protein to build strong muscles and organs, including our hearts, and to help our immune system fight disease.

Protein helps our blood cells carry oxygen to every part of the body.

Protein can come from animal sources, like fish, poultry, meat, eggs, and dairy, or plant sources like beans, peas, lentils, and nuts.

The best animal sources of protein are fish, lean meats, like chicken or turkey, egg whites, and low-fat milk, yogurt, and cheese.

Beans, peas and lentils are excellent choices because they are naturally low in fat and contain fiber to help keep us fuller longer and keep us "regular" (helps with waste removal).

Nuts contain protein and healthy fats for our bodies but should be eaten in small amounts.

Step	Task1 : Lesson Start
1	Welcome the campers back to Day 3 of <i>Incredible Edibles</i> .. Ask campers whether they made any new food choices.
2	Share the camper-friendly objectives, listed on Doc 1: What campers will learn.

Step	Task 2: Protein and Grain Power
3	As you and the campers prepare in the kitchen, ask campers what a PROTEIN is and to give examples. Many campers are likely to indicate meat as a protein source.
4	Affirm responses. Explain what a protein is and what its health benefits are. Use the sidebar What to Emphasize: Protein to explain more about protein.
5	Ask campers to name other sources of protein that are not meat. Use Doc 2 Protein Sources to confirm responses, pointing out which group the items named fit into.
8	Ask the group what other foods they would add to their favorite protein meal to make it more balanced. Have them look at the Healthy Eating Plate to decide. Ask them to identify which food group/plate section the foods belong in.
9	Tell campers that whole grains are good with a protein. Grains are good carbohydrates (carbs). Ask campers what kinds of carbs people usually eat.
10	Probe with campers why the typical carbs (bagels, crackers, bread, cereal, etc.) are not as healthy as whole grains. Refer to the sidebar What to Emphasize: Carbohydrate .
11	Explain that whole grains, like brown rice, whole wheat bread and oatmeal, have several layers of important nutrients. These layers contain fiber, B vitamins, minerals, carbohydrates, Vitamin E, antioxidants, protein, and healthy fats. Have campers name whole grains they like. Refer to Doc 3: Whole Grains to affirm and add to the list.
12	Tell campers that whole grains are usually BROWN , but not all brown grains are whole grains. The way to know for sure when shopping is to check and see if the word "whole" is listed in the ingredients list on the back of the package.
13	Tell campers they will make a combo meal: a dish that includes most or all of the food groupings on the Healthy Eating Plate, and that includes the protein and whole grains.)

What to Emphasize: Carbohydrates

Carbohydrates are the quickest source of energy for our bodies because we can digest these nutrients the fastest. The energy we get from carbohydrates allows our bodies to move, our brains to think, and our organs to work.

The best sources of carbohydrates include whole grains, fruits and vegetables. These foods contain a variety of vitamins and essential minerals as well as fiber, which helps us to stay fuller longer, provides a steady stream of energy, and is important for a healthy heart.

It is important to limit carbohydrates that come from foods made with refined grains such as white bread, pasta, rice, and crackers. It is also important to avoid highly processed foods containing a lot of sugar with little or no fiber, such as sugary cereals, soda and other sugar sweetened beverages, cakes, cookies, and candy.

These foods typically lack vitamins & minerals and can harm our bodies by giving our bodies us too much energy too quickly, which increases the risk of weight gain and diabetes.

Procedures Part II

Time: 15 Min.

Step	Task 3: Cooking
14	Introduce the selected recipe to the campers. If you prepared a sample dish, show it to the campers. Point out serving size. Use the Serving Size diagram from the overview packet.
15	Focus on the key ingredient, referring to the nutritional items noted in the recipe. Follow the Cook n' Chat to probe with campers what they know about the ingredient. Provide basic background.
16	Ask students to match the recipe item to the Healthy Eating Plate .
17	Show campers how to properly use a knife. Refer to the knife tips in the overview packet. Begin cooking, continually modeling tasks where appropriate.
18	After the cooking is done, and the dish is ready to go, campers try it out (they can also assist in clean up if there is time) and then "critique" it using the Doc 6: Critique Cards . Ask students to raise the card that best represents their take on the recipe. If time permits, they can discuss their choices and offer suggestions for making the dish more to their liking.
19	CLOSING: Ask campers: <i>Name one amazing thing you learned about proteins, whole grains or another food item. Why is it so amazing?</i>

RECIPES

Stir-Fry Fajita Chicken

This is a good combo meal as it has chicken as a protein source, brown rice for the whole grain, some fresh vegetables, and canola oil as the healthy fat. If desired, substitute chicken with a soy-based protein, like tofu.

Mini Pizzas

A camper-friendly favorite that uses whole grain English muffins and lots of fresh vegetables. This recipe has lots of room for "customization" as campers can use any seasonal vegetable of their choice, can add meat and poultry, and maybe want to get creative with other ingredients. This might involve some pre-cutting of some ingredients while campers focus on others. (Good for younger campers.)

Cauliflower Mac and Cheese

This is a vegetable-based version of a favorite dish among young people. The cheese represents a protein source.(Good for younger campers.)

Cook 'n' Chat

About chicken

Chicken is one of several types of poultry, which are birds that people keep for their eggs and meat. Other examples include turkeys and ducks.

What's healthy about it?

Chicken is a great source of protein because it is low in fat and contains essential minerals. Avoid the skin and choose skinless white meat over dark meat, which contains more fat.

Healthy Eating Plate

Chicken meets the healthy protein portion of the Healthy Eating Plate. Avoid deep-fried chicken and instead choose baked, grilled, or boiled chicken. If you stir fry chicken, use healthy oil, such as canola oil or peanut oil.

Chicken trivia

With 25 billion chickens in the world, there are more of them than any other bird species.

About brown rice

Brown rice is unpolished whole grain rice that is produced by removing only the outer husk. It becomes white rice when the bran layer is stripped off in the milling process. When grains are processed much of the fiber, vitamins, and minerals are lost.

What's healthy about it?

Compared with white rice, brown rice is more nutritious because it contains bran, which is a source of fiber, oils, B vitamins, and important minerals.

Healthy Eating Plate

Brown rice is an excellent choice of whole grains.

Stir-Fry Fajita Chicken

Good combo meal as it has chicken as a protein source, brown rice for the whole grain, some fresh vegetables, and canola oil as the healthy fat.

Ingredients

3 cups brown rice, cooked
2 tablespoons canola oil
½ cup diced onion
1 pound of cooked chicken strips
1 pound squash, diced
½ cup red pepper, diced
8 ounces frozen corn
4 ounces canned diced green chili pepper
4 ounces canned diced tomato (with juice)
½ teaspoon black pepper
½ teaspoon cumin
½ teaspoon garlic powder

Directions

1. Prepare rice in advance.
2. Add oil to skillet and heat on stovetop. Add onions to skillet and sauté until softened and translucent (you can kind of see through them).
3. Add chicken and squash to onions.
4. Stir-fry mixture until squash is barely tender.
5. Add red pepper, corn, green chili, tomato, and spices.
6. Mix and stir until well combined. Do not boil.
7. Reduce heat and let mixture simmer 2-3 additional minutes. Don't overcook or the dish will be more like stew.

Serve each portion over ½ cup rice. Serves 6

Source: Kids' Health

http://kidshealth.org/kid/recipes/recipes/fajita_chicken.html

Cook 'n' Chat

About English muffins

English muffins are flat rounds of yeast-raised rolls that are produced in much the same way as the English crumpet. The muffins should be chewy, with light air pockets.

Says the North Dakota Wheat Commission: *"An English muffin is a true English muffin only when it is torn apart to be toasted. Never cut it with a knife. It should be pulled apart and laid open to reveal an interesting array of irregular air pockets. Part of the enjoyment of English muffins comes from toasting the rough peaks and valleys to various degrees of golden brown."*

What's healthy about it?

Whole grain English muffins, and breads, in general, are low in fat and cholesterol free, have some protein, and are rich in fiber and other vitamins and minerals.

Healthy Eating Plate

Whole grain English muffins meet the recommended whole grain portion of the Healthy Harvard Healthy Eating Plate diet. At least ½ of all grains should be from whole grains.

English muffin trivia

The origin of English muffins is not clear, but at least one of the antecedents may have been "Bara Maen," a yeast leavened cake baked on hot stones in 10th century Wales. A similar cake or muffin baked on griddles was popular in 19th century England. The hot fresh muffins were peddled door to door in the early morning, hence the "muffin man."

Source:

www.ndwheat.com/uploads%5Cresources%5C407%5Cenglish-muffins.pdf

Mini-Pizzas

Any seasonal vegetables can be used, as well lean meat protein (ground meat, chicken, etc.)

Ingredients

1 medium red or green bell pepper
8 ounces button mushrooms
1 large tomato
1 (4-ounce) chunk mozzarella cheese
6 whole grain English muffins
1 Tablespoon canola oil
½ teaspoon dried oregano
½ teaspoon dried basil
1 (8-ounce) can tomato sauce, no salt added

Instructions

1. Preheat oven to 450°F.
2. Rinse bell pepper, mushrooms, and tomato.
3. Remove core and cut pepper into thin slices. Slice mushrooms ¼-inch thick. Remove core and dice tomato into ¼-inch pieces.
4. In a small bowl, grate cheese.
5. Split English muffins in half. Place them on a baking sheet. Bake until edges are lightly browned, about 10 minutes. Prepare sauce while muffins cook.
6. In a large skillet over medium heat, heat oil. Add peppers and mushrooms. Cook for 5 minutes. If needed, use a colander to drain vegetables.
7. Transfer veggies to a medium bowl. Add tomatoes. Stir to combine.
8. Stir spices into tomato sauce. Do this directly in the can.
9. When muffins are lightly browned, spoon 1 Tablespoon sauce over each muffin half. Coat evenly.
10. Layer veggies evenly over sauce. If using pepperoni, place one slice on each muffin half. Top with shredded cheese.
11. Bake muffins until cheese is melted and bubbly, about 6–8 minutes.
12. Let pizzas cool for 2 minutes before serving.

Serves -2 muffin halves per serving

Source, with permission: No Kid Hungry Cooking Matters
<http://cookingmatters.org/recipes/mini-pizzas>

Cook 'n' Chat

About cauliflower

Cauliflower, a cruciferous vegetable, is in the same plant family as broccoli, kale, cabbage, and collards. It has a compact head of undeveloped flower buds. The flowers are attached to a central stalk.

What's healthy about it?

Cauliflower is fat free, very low in sodium, cholesterol free, and low calorie. It is high in vitamin C and a good source of folate (a B vitamin).

Healthy Eating Plate

Cauliflower is a good choice for fulfilling a portion of the recommended amount of vegetables.

Cauliflower trivia

Not all cauliflower is white: Some can be purple or orange, too.

Cauliflower is a member of the cabbage family, which includes Brussels sprouts, collards, mustard, turnips, kohlrabi, kale, and watercress.

Cauliflower Mac and Cheese

Ingredients

1/2 pound whole-wheat penne pasta
1/4 head cauliflower, cut into florets
8 ounces sharp cheddar cheese, shredded
1 ounce Parmesan cheese, grated
1/2 cup 1% or 2% milk
Salt and freshly ground black pepper
1 1/2 teaspoon chopped fresh flat-leaf parsley

Instructions

1. Bring a large pot of salted water to a boil and cook the pasta according to the package directions until al dente. Drain and set aside.
2. Bring a medium pot of salted water to a boil, add the cauliflower and cook for 5-7 minutes, or until soft. Drain. Place the cauliflower in a blender and puree.
3. In a medium pan over medium heat, place the pasta, the cauliflower puree, the cheeses and the milk. Stir gently to combine and continue stirring until the cheese is melted.
4. Season with salt and pepper. Sprinkle the chopped parsley over the mac and cheese and serve immediately.

Source: American Grown: The Story of the White House Kitchen Garden and Gardens Across America by Michelle Obama)

LESSON DOCS

Doc 1: What campers will learn

Doc 2: Protein Sources

Doc 3: Whole Grains

Doc 4: Whole Grains and Fiber Activities

Doc 1: What campers will learn

Reproduce the following on a sheet of self-adhesive chart paper. Post so campers can see the list. Modify accordingly.

You, the campers, will learn:

- ✓ What a protein is and what makes it healthy
- ✓ About the types of food with protein
- ✓ About the best source of healthy carbohydrates (whole grains)
- ✓ What a whole grain is
- ✓ How to make meal that combines the Healthy Eating Plate food groups

Doc 2: Protein Sources

<p>Meats</p> <p><i>Lean cuts of</i> Beef Ham Lamb Pork Veal</p> <p><i>Lean Ground Meats</i> Beef Pork Lamb</p> <p>Lean luncheon or deli meats</p>	<p>Beans and Peas (legumes) Bean burgers Black beans Black-eyed peas Chickpeas (garbanzo beans) Falafel Kidney beans Lentils Lima beans Navy beans Pinto beans Soy beans Split peas White beans</p>	<p>Processed soy products Tofu Veggie burgers Tempeh</p> <p>Poultry Chicken Duck Turkey Ground chicken and turkey</p> <p>Eggs Chicken eggs Duck eggs</p>																																				
<p>Seafood</p> <table border="1" data-bbox="131 926 594 1402"> <tbody> <tr><td>Catfish</td><td>Cod</td></tr> <tr><td>Flounder</td><td>Haddock</td></tr> <tr><td>Halibut</td><td>Herring</td></tr> <tr><td>Mackerel</td><td>Salmon</td></tr> <tr><td>Sea bass</td><td>Snapper</td></tr> <tr><td>Swordfish</td><td>Trout</td></tr> <tr><td>Tuna</td><td>Clams</td></tr> <tr><td>Crab</td><td>Lobster</td></tr> <tr><td>Squid (calamari)</td><td>Shrimp</td></tr> </tbody> </table>	Catfish	Cod	Flounder	Haddock	Halibut	Herring	Mackerel	Salmon	Sea bass	Snapper	Swordfish	Trout	Tuna	Clams	Crab	Lobster	Squid (calamari)	Shrimp	<p>Nuts and Seeds (unsalted) Almonds Cashews Hazelnuts Mixed nuts Peanuts Peanut butter Pecans Pistachios Pumpkin seeds Sesame seeds Sunflower seeds Walnuts</p>	<p>Veggies (NOTE: Veggies have low levels of protein, and are not recommended as a primary protein source.)</p> <table border="1" data-bbox="909 993 1487 1440"> <tbody> <tr><td>Sun-dried tomatoes</td><td>White mushroom</td></tr> <tr><td>Soybean sprouts</td><td>Peas and carrots</td></tr> <tr><td>Lentil sprouts</td><td>Kale</td></tr> <tr><td>Baby lima beans</td><td>Broccoli</td></tr> <tr><td>Garlic</td><td>Cauliflower</td></tr> <tr><td>Green peas</td><td>Asparagus</td></tr> <tr><td>Portabella mushroom</td><td>Artichokes</td></tr> <tr><td>Spinach</td><td>Parsley</td></tr> <tr><td>Brussels sprouts</td><td>Dried seaweed</td></tr> </tbody> </table>	Sun-dried tomatoes	White mushroom	Soybean sprouts	Peas and carrots	Lentil sprouts	Kale	Baby lima beans	Broccoli	Garlic	Cauliflower	Green peas	Asparagus	Portabella mushroom	Artichokes	Spinach	Parsley	Brussels sprouts	Dried seaweed
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<p>Dairy</p> <p>(REMEMBER: The Healthy Eating Plate recommends limited dairy. Low-fat is OK as long as it doesn't eliminate essential healthy fats that actually benefits children.)</p> <p>Yogurt (low-fat, watch the sugar content) Cheese (low-fat, low sodium) Milk (Reduced fat or skim) Cottage cheese</p>																																						

Doc 3: Whole Grains

Whole Grains

Wheat
Cornmeal & corn flour
Amaranth
Barley
Wheat Berries
Buckwheat
Bulgur
Flaxseed
Millet
Oats
Oatmeal
Rolled Oats
Popcorn
Quinoa
Rye
Spelt

Many foods can be made from either whole grains or refined grains. Make sure the food is brown in color, not white, and always look for the word **WHOLE** in the ingredients list. If it says "enriched" it is **NOT** a whole grain.

You can also check to see how many grams of fiber the food has on the nutrition label (should be at least 3 grams or more per serving), which is a good indication the food is made from whole grains. Examples of whole wheat foods to choose:

Whole Wheat Flour Tortillas
Whole Wheat Bread (loafs, buns, rolls)
Whole Wheat Pita Bread
Whole Wheat Pasta
Whole Wheat Couscous
Whole Wheat Crackers
Whole Wheat Cereal
Whole Wheat Pretzels

*Note on multigrain – multigrain products may include a variety of whole grains, such as oats, barley, spelt, etc.; however, the type of flour may still be refined white flour. Remember to always check the ingredients list for the word "whole".

Doc 4: Whole Grain and Fiber Activities

Whole Grain

Ask campers: How do you know if a grain is a whole grain. Answer: Because it is brown.

Explain that the layers containing these nutrients give whole grains their natural brown color. When whole grains become refined or processed, the layers containing fiber, protein, and many of the vitamins and minerals are lost, leaving only the basic carbohydrate without the beneficial nutrients. Ask campers what color refined carbohydrates are and to give some examples – white (white bread, white pasta, white rice, white crackers, etc.).

Explain to campers that they're going to see this process in action.

Turning Brown Rice into Milled White Rice

- Place 1 piece of sandpaper flat on the counter.
- Place several kernels of brown rice on the sandpaper and lay a second piece of sandpaper on top.
- Rub the 2 sheets of sandpaper together for 3-5 minutes.
- When finished, the students will be able to observe 2 distinct rice products, milled white rice and rice bran. Rice bran is used as an additive in several different food products.

Ask campers what they know about fiber. What do they think will happen when you dip the white and whole wheat bread into the water? Explain to campers that they are going to do an experiment and observe what happens.

Exploring Fiber & Digestion

- Place 2 bowls of water in front of the campers.
- Instruct campers to place 1 slice of white bread into a bowl and 1 slice of whole wheat bread into the second bowl.
- Explain to campers that fiber is found in whole grains, fruits, vegetables and beans. Fiber **KEEPS YOU FULL FOR LONGER** because it **CREATES BULK IN THE STOMACH** and ensures long-term digestive health.
- After 1 minute, ask the campers to remove the bread from the bowl and describe what happens (the white bread should fall apart easily, the brown bread should hold together).
- Explain that the whole grain vs. white grain demonstration shows that whole grains are digested (break down) **SLOWLY** in the body so they are able to keep you full **LONGER**. Also, when things are digested slowly, your body has more time to absorb more of the nutrients from the food.