Title: Power Up with Protein

Objectives								T	Time frame to Complete														
To look at how different foods can supply us with the									1 hour														
protein we need for optimal health and use math to calculate intake from various food sources.																							
NRS EFL																							
																	4	4					
Stackable Cert. Documentation	Technology	Study / Life skills	EL-Civics	Career Pathways	Police	Paramedic	Fire Rescue	Medical Asst.	EKG / Cardio	Phlebotomy	Practical Nursing	Healthcare Admin	Pharmacy Tech	IMT	AMT	HVAC	Moldisc	weiging	Other:	Nutrition and	dietetics		
×		×						×	×	×	×	×	×							×			
Standard(s) Addressed in Lesson																							
Use Math to Solve Problems and Communicate																							
Benchmark(s) Addressed in Lesson																							
 M.4.1 Connect a wide range of number words and numerals, including fractions, decimals and whole numbers, to the quantities they represent. M.4.25 Solve multi-step problems. M.4.28 Confirm results with a calculator. 																							
M.4.34 Apply mathematical ideas across a variety of settings (community, family, work).																							
Materials Food Guide handout Power Up with Protein worksheet Paper and pencils Calculators																							
Learner Prior Knowledge																							
Activities																							
Step 1 Teacher discusses the importance of protein for a healthy diet.																							
<u>Step 2</u>	<u>P 2</u> Teacher reviews multiplication of fractions and demonstrates use of fraction key on the calculator.																						
<u>Step 3</u>	Step 3 Students read <i>Food Guide</i> and complete worksheet.																						
<u>Step 4</u> Teacher goes over results with the class.																							
Assessment/Evidence																							
Students will correctly calculate fraction problems to determine protein levels.																							
Adaptations for Beginning Students																							

Individual assistance

Adaptations for Advanced Students Further research: <u>www.mayoclinic.com</u>, <u>www.sciencedaily.com</u>, <u>www.nih.gov</u>

Teacher Reflection/Lesson Evaluation

This lesson was created by Middletown ABLE.

To maintain nutritional health and muscle mass, especially as we get older, it is important to eat enough protein. According to the American College of Sports Medicine, eating extra protein is necessary for very physically active persons. As a general guide, eat at least three fourths your body weight in grams of protein a day. Try to get one fourth of your daily calories from protein. This is not as difficult as it might seem IF you make the right food choices. Look at the examples below:

Seafood,(salmon or tuna), 6 oz.	40 grams				
Yogurt, 10 oz.	30 grams				
Beef, 4 oz.	30 grams				
Poultry, no skin, 4 oz.	30 grams				
Cottage Cheese, nonfat, ½ cup	15 grams				
Cereal with milk	15 grams				
Nuts or sunflower seeds, 1 oz.	7 grams				
Kidney beans, ½ cup	7 grams				
Egg, I whole	6 grams				

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Solve Using the Food Guide

- Todd weighs 200 lbs. and ate the recommended amount of yogurt, cereal with milk, and an egg for breakfast. How many grams of protein did he eat?
- 2. Did he get ³/₄ of his weight in protein?
- 3. How much protein does he still need?
- 4. Carrie eats no meat or dairy. She weighs120 lbs. Using the guide, if she eats the listed amounts of tuna, nuts, and beans will she reach her protein goal?
- 5. How many grams of protein does she still need?
- 6. Dan eats 2500 calories a day. If he attempts to get the correct amount of calories from protein, how many protein calories does he need?
- 7. Figure the amount of protein grams <u>you</u> need a day. How many protein calories will you need if you eat 1800 calories a day? Using the guide, design an eating plan to meet <u>your</u> protein needs. (Answers will vary. You can keep this information to yourself if you choose).

Answer Key

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- 1. 51 grams
- 2. No
- 3. 99 grams
- 4. No
- 5. 36 grams
- 6. 625 calories
- 7. 450 calories