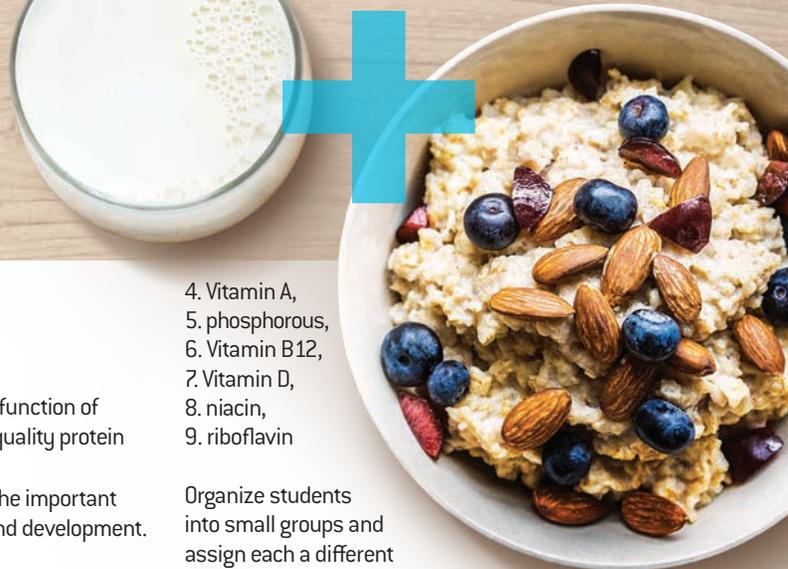


MILK POWERS YOUR POTENTIAL!



Dear Educator,

Help your students celebrate National Nutrition Month in March by learning how **Milk Powers Your Potential!** This free standards-based educational program for grades 4-6 will help students learn how protein works in the body and why high-quality protein is vital to boosting energy and maintaining health.

Created by the dairy professionals at the Milk Processor Education Program and the award-winning curriculum experts at Young Minds Inspired (YMI), **Milk Powers Your Potential!** engages students in classroom activities and a digital whiteboard game that focus on the essential nutrients found in milk, with special emphasis on the high-quality protein that makes milk such an important part of a balanced diet. The program also provides you with a reproducible take-home letter that informs parents about the importance of protein in their child's growth and development.

We hope that you will share this program with other teachers in your school. Although the materials are copyrighted, you may make as many copies as needed for educational purposes.

Please use the enclosed reply card to let us know your opinion of this program, or comment online at ymiclassroom.com/feedback-milklife. We look forward to hearing from you.

Sincerely,
Dominic Kinsley, Ph.D.
Editor in Chief
Young Minds Inspired

 For questions, contact us toll-free at 1-800-859-8005 or by email at feedback@ymiclassroom.com.

milk life



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TARGET AUDIENCE

Students in grades 4-6 and their parents

PROGRAM OBJECTIVES

- Educate students on the importance and function of protein in their diets, especially the high-quality protein found in milk.
- Engage parents in better understanding the important role protein plays in their child's growth and development.

PROGRAM COMPONENTS

- This one-page teacher's guide
- Three reproducible activity sheets*
- A colorful classroom wall poster
- A reproducible parent letter in PDF at ymiclassroom.com/milklife*
- A **Milk Powers Your Potential!** digital whiteboard activity, available at ymiclassroom.com/milklife
- A reply card for comments, or comment online at ymiclassroom.com/feedback-milklife

*Also available in Spanish at ymiclassroom.com/milklife

HOW TO USE THIS PROGRAM

Photocopy the teacher's guide and activity sheets before displaying the poster. Schedule the activities and have students share their sheets with parents, along with a copy of the parent letter. Students can engage the smoothie idea from the poster by sharing their wildcard ideas; writing, illustrating, and naming their recipe creation; and/or enlisting parent help in hosting a classroom smoothie day. To review alignment with national health standards, visit ymiclassroom.com/milklife.

HOW TO USE THE WHITEBOARD ACTIVITY

Milk Powers Your Potential! (available at ymiclassroom.com/milklife) is an interactive quiz about the nine essential nutrients in every glass of milk. Students can share the activity on your digital whiteboard or explore on a home computer.

ACTIVITY 1 THE PROTEIN ADVANTAGE

This activity introduces students to the functions of protein within the body and the importance of high-quality protein in a balanced diet. To explore this topic in more depth, visit <http://askabiologist.asu.edu/venom/what-are-proteins> for more background on proteins and amino acids.

PART 1 Answers: Structure: keratin, collagen; Transport: hemoglobin, channel proteins; Protection: antibodies; Catalyst: enzymes, hormones, actin.

PART 2 Students can explore the Foods High In Protein section at <https://milklife.com/high-protein-morning> to get breakfast ideas with foods that are good sources of protein. Check out choosemyplate.gov/protein-foods for more information.

ACTIVITY 2 PROTEIN PLUS

Scramble Answers: 1. protein, 2. potassium, 3. calcium,

4. Vitamin A,
5. phosphorous,
6. Vitamin B12,
7. Vitamin D,
8. niacin,
9. riboflavin

Organize students into small groups and assign each a different nutrient to research and record their information on the sheet. Students can find nutrient information at:

- <https://milklife.com/articles/nutrition/9-nutrients-milks-periodic-breakfast-table>
- <https://milklife.com/articles/nutrition/why-drinking-milk-meals-can-help-you-eat-better>

Nutrient Benefits:

Protein – builds and maintains lean muscle and other tissue

Potassium – helps regulate the balance of fluids in the body, plays critical role in maintaining healthy blood pressure and in smooth and skeletal muscle contraction

Calcium – helps build strong bones and teeth, helps with muscle contraction, nerve function, and blood clotting

Vitamin A – important for eye health and helps maintain a healthy immune system

Phosphorus – along with calcium and Vitamin D, helps maintain bone health

Vitamin B12 – helps build red blood cells, helps maintain the central nervous system

Vitamin D – promotes calcium absorption, helps build strong bones and teeth, and nerves need it to carry messages between the brain and every body part

Niacin and riboflavin – B vitamins that help convert food into energy

Now have student groups create a slogan, short poem, or rap about their nutrient, along with an animated character that represents what that nutrient does to help the body function — e.g., since potassium is important for heart function, students might create a heart character that serves as the drummer for the body "band." Have students use additional paper if needed. Plan a day for student presentations, and post student work so all can share.

Answer to Challenge Question: calcium, potassium, and Vitamin D

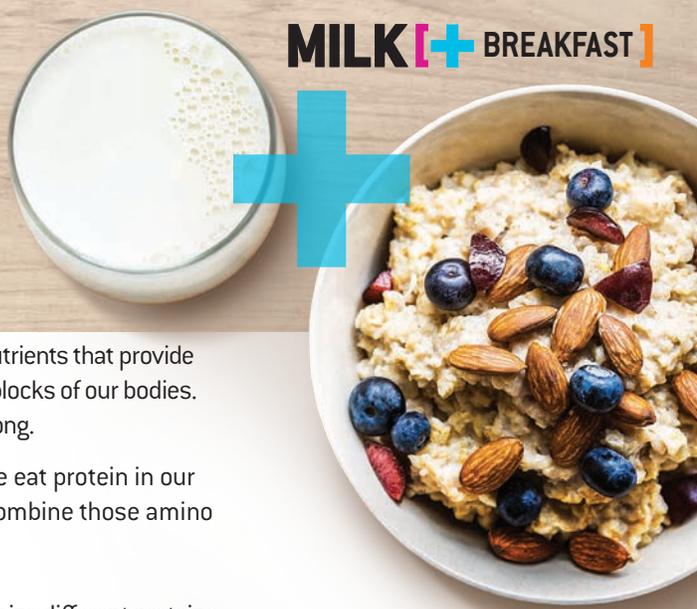
ACTIVITY 3 ENERGIZE YOUR MORNING

Have students complete their breakfast combination and share as a class before sending it home to share with parents. Then challenge students to create a nutrition-themed acrostic for one of these words: milk, protein, nutrient. Post student work alongside the program poster.

Resources

- [Milklife.com](http://milklife.com)
- <http://askabiologist.asu.edu/venom/what-are-proteins>
- ymiclassroom.com/milklife

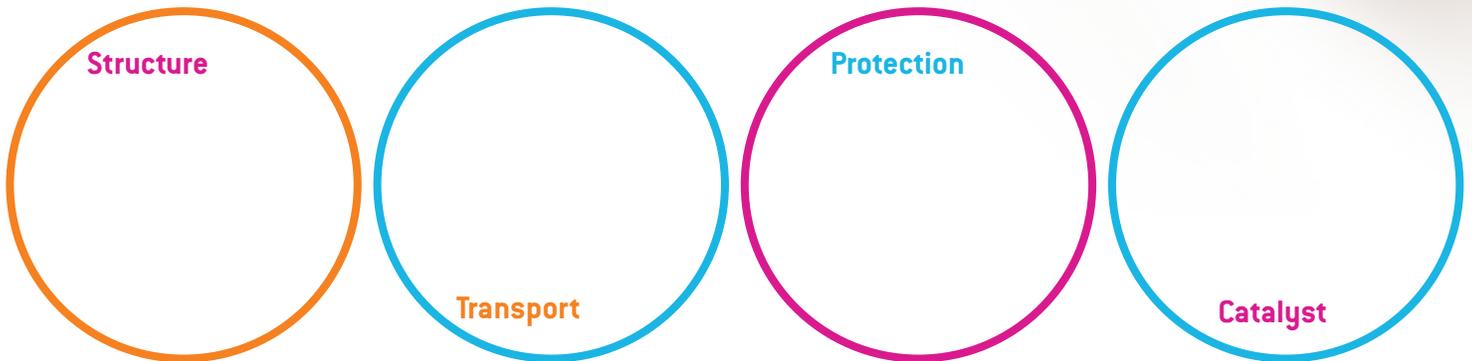
THE PROTEIN ADVANTAGE



Along with carbohydrates and fats, protein is one of the three macronutrients, or nutrients that provide energy (or calories), in your diet. You may not know that proteins are the building blocks of our bodies. From muscles to hair, bones to teeth, the body needs protein to be healthy and strong.

PART 1 Our bodies need protein in our diets in order to make protein. When we eat protein in our food, our bodies break it down into molecules called amino acids and then recombine those amino acids to produce the different kinds of protein we need to be healthy.

Read about how different proteins function in the body. Then use this chart to organize different proteins based on the type of function each performs. Write the name of each protein into the appropriate circle.



Keratin forms fingernails and toenails.

Hemoglobin helps carry oxygen throughout the body.

Antibodies fight infections caused by bacteria and viruses.

Enzymes carry out most of the chemical reactions in our cells.

Hormones help regulate our growth and development.

Actin helps muscles contract.

Collagen holds our muscles, bones, organs, and skin together.

Channel proteins let molecules into and out of cells.

PART 2 All the proteins in your body are made from different mixtures of just 21 kinds of amino acids. Your body can produce most of these amino acids on its own, but there are 9 amino acids that we must get from the protein we eat. These are called the *essential amino acids*, and when all 9 are found together in a particular protein, that protein is called a *complete protein*.

Complete proteins primarily come from animal sources, like milk, eggs, fish, and meat. The quality of a protein is evaluated based on the mix of amino acids and how easily it can be digested and absorbed. To be considered “complete,” a protein must contain a full mix of the essential amino acids our bodies need. Most plant-based protein sources are not considered complete protein, which means you may miss some of the building blocks your body needs, but vegetarians who mix different plant foods, like whole grains and nuts, or choose foods like milk and eggs, can get the 9 essential amino acids they need.

Are you getting the right amount of protein in your daily diet? On the back of this sheet, list the foods and portions you eat in a typical day, then based on your list, see whether you’re getting your recommended daily amount of protein.



Our bodies can store carbohydrates and fats, but not proteins. That’s why it is important to make protein part of every meal. And milk’s 8 grams of high-quality protein in every 8-ounce glass makes it a perfect protein partner, so drink milk with every meal to help get the protein your body needs!



PROTEIN PLUS

MILK [+ BREAKFAST]



Milk gives you complete protein to help power your potential every day. But that's not all! One 8-ounce serving of milk gives you protein *plus* 8 other essential nutrients. Unscramble the words below to identify all 9 essential nutrients found in milk.

1. rpoeitn _____
2. soptasuim _____ a _____ u _____
3. cialmuc c _____ c _____
4. atiVimn A _____ t _____
5. hpsorophsu _____ s _____ o _____
6. matiVin 12B _____ m _____
7. tamniiV D _____ n _____
8. cianin _____ i _____
9. obirvalfni _____ o _____ v _____



WHY NUTRIENTS MATTER

Nutrients matter when it comes to keeping your body strong and healthy for school and play. It's important to choose foods that are nutrient-dense, or foods that offer a lot of nutrients, more often than foods like soda, junk food, and desserts, which provide calories with few or no nutrients. Milk, fruits, vegetables, and whole grains are examples of nutrient-dense foods. Kids ages 9 and up should get three 8-ounce servings of milk or dairy foods each day. Pairing each meal with a glass of milk makes it easy to get 9 essential nutrients!



Challenge Question:

According to the Dietary Guidelines for Americans, most Americans – including kids – fall short on four essential nutrients of concern, meaning they are most likely to be missing in our diets. Three of those nutrients can be found in milk. What are they?

1. _____
2. _____
3. _____

Now follow your teacher's directions to complete a group project that will help you learn more about each of the 9 essential nutrients found in milk.

Our Group's Nutrient: _____

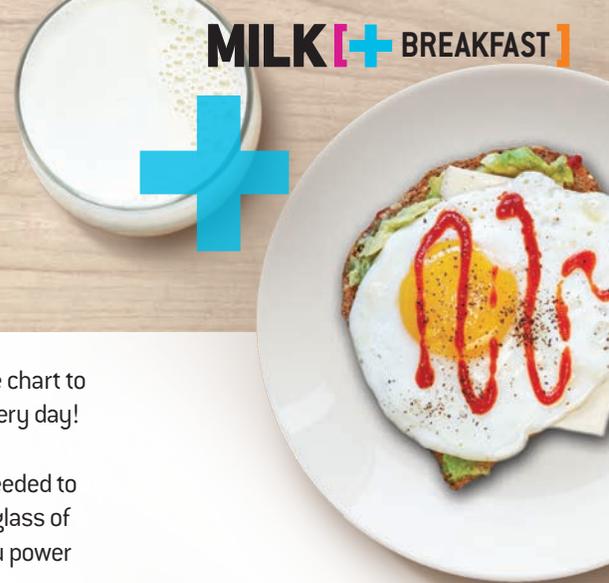
Nutrient Benefit: _____

Use the other side of this sheet and additional paper as needed to create a slogan, poem, or rap that describes your nutrient's role in keeping you healthy, as well as an animated character that brings your nutrient's role to life. For example, a nutrient that is important for heart function might be portrayed as a heart-shaped drummer keeping the beat for the body "band"!

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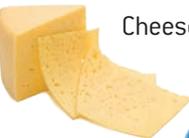
ENERGIZE YOUR MORNING



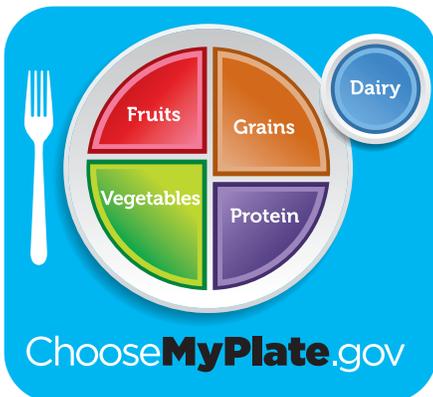
MILK [+ BREAKFAST]

Build your own high-protein breakfast by choosing items from the chart below. Then use the chart to ask your parents to help you put your food plan into action for a protein-packed morning every day!

And remember, milk is a complete protein because it contains all 9 essential amino acids needed to meet your body's protein needs. Pairing your meals, especially breakfast, with an 8-ounce glass of milk (including lowfat flavored milk, like chocolate or strawberry), is a great way to help you power your potential with protein all morning long!

<p>Grains Make half your grains whole.</p>	<p>Fruits/Vegetables Choose a variety of colors to get a mix of nutrients.</p>	<p>Protein Select lean or lowfat proteins.</p>	<p>Dairy Focus on fat-free or lowfat dairy products.</p>
<p>  Toast  English Muffin  Bagel  Oatmeal  Tortilla  Crackers  Cereal  Waffle  </p>	<p>  Apple  Banana  Berries  Orange  Carrot  Tomato  Celery  Spinach </p>	<p>  Eggs  Ham  Turkey  Chicken  Beans  </p>	<p>  Milk (includes flavored, organic, and lactose-free milk)  Yogurt  Cottage cheese  Cheese </p>

My Protein-Powered Breakfast



Kids ages 9-12 should get 5 ounces of protein a day, according to the USDA **MyPlate**. Our bodies can only use so much protein at a time, so it's a good idea to make high-quality protein part of every meal to help your body better process all of its health benefits.

Did you know that milk is a nutrient powerhouse and includes 8g of protein in every 8-oz. glass?




THE PROTEIN ADVANTAGE

MILK **[+]** BREAKFAST



MILK IS A PROTEIN ALL-STAR, WITH 8G OF HIGH-QUALITY PROTEIN IN EVERY 8-OZ. GLASS.

Power your potential for school, play, and sports! Get the protein advantage. Start your day with a protein-rich breakfast.

- Build strong muscles and bones.
- Stay focused and energized.
- Maintain a healthy weight.

USE IT TO MAKE A PROTEIN-POWERED SMOOTHIE!

1. CHOOSE YOUR LOWFAT MILK



chocolate milk



white milk



strawberry milk



organic milk



lactose-free milk

2. CHOOSE YOUR FRUITS AND VEGGIES



banana



avocado



mango



strawberry



carrot



blueberry



peach



spinach



blackberry

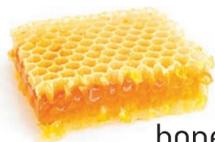


kiwi

3. FLAVOR IT UP



vanilla



honey



ginger



cinnamon

4. YOUR WILDCARD!



Own this smoothie!
Add something nutritious of your choice!



orange



yogurt



peanut butter

1. lowfat milk
2. fruits & veggies
3. flavor
4. wildcard

milk life®



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MILK POWERS YOUR POTENTIAL!

MILK  BREAKFAST



DEAR PARENT,

To celebrate March as National Nutrition Month, your child is participating in a special nutritional program at school titled **Milk Powers Your Potential!** The program, provided by the nutrition experts at the Milk Processor Education Program and the award-winning curriculum specialists Young Minds Inspired (YMI), is designed to help kids learn more about the vital role of protein in good health.

PROTEIN AT BREAKFAST — MORE IMPORTANT THAN YOU THINK...

The latest research shows that *when* your child gets protein is just as important as *how much* he or she gets. Most Americans back-load their protein, consuming most of it at dinner while eating mostly carbohydrates at breakfast. But take a look at the benefits of a high-protein breakfast to find out what your child may be missing with a carb-based breakfast.

A PROTEIN-POWERED BREAKFAST...

It's important that kids get protein at every meal, including breakfast, to help maximize how their bodies use it. In fact, protein at breakfast helps kids feel fuller longer so they won't feel hungry by mid-morning. If they aren't hungry, they can focus on the things they want to accomplish. Plus, getting enough protein as part of a healthy breakfast can also help build lean muscle, maintain bone health, and maintain a healthy weight.

MILK, A PERFECT PROTEIN PARTNER

From muscles to hair, bones to teeth, the body needs protein to be healthy and strong. And, a recent study found that kids who ate a high-protein breakfast (18 grams) felt fuller and burned more energy compared to when they ate a carbohydrate-rich breakfast, low in protein.¹ So pair milk with other protein-rich breakfast foods to ensure that your child starts the day like a pro – with protein!

Packed with 9 essential nutrients in each 8-oz. glass, milk is a delicious, easy way to give your kids 8 grams of high-quality protein plus other nutrients they need. It's the top food source for three of the four nutrients most likely to be missing from kids' diets – calcium, vitamin D, and potassium.



RECIPES FOR YOUR PROTEIN-PACKED MORNING



PB&J Protein Power Muffins



Blackberry-Hazelnut Power Bowl



Vegetable and Sausage Mini Protein Quiche

For more ideas, visit the Milk Life recipe page at milklife.com/healthy-breakfast-recipes.

¹ Baum JI, Gray M, Binns A. Breakfasts higher in protein increase postprandial energy expenditure, increase fat oxidation and reduce hunger in overweight children from 8 to 12 years of age. *Journal of Nutrition*. 2015;145:2229-2235.

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