



Lesson 5: Dairy and Good Nutrition

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Standards:

These lesson tools meet the following Common CORE and PA educational standards.

Grade 3:

Common Core — CCSS.ELA-LITERACY.RI.3.4, CCSS.ELA-LITERACY.RI.3.8, CCSS.ELA-LITERACY.RF.3.3, CCSS.ELA-LITERACY.RF.3.4, CCSS.ELA-LITERACY.SL.3.1, CCSS.ELA-LITERACY.L.3.4.d, CCSS.MATH.CONTENT.MD.3.3, 4-LS1-1, CCSS.MATH.CONTENT.MD.3.2; PA Standards Math 2.6.3, Health 10.1.3, 10.2.3, Family Sci: 11.3.3; Reading: 1.1.3, 1.2.3, 1.3.3, 1.6.3

Grade 4:

Common Core: CCSS.ELA-LITERACY.RI.4.4, CCSS.ELA-LITERACY.4.10, CCSS.ELA-LITERACY.RF.4.4, CCSS.ELA-LITERACY.SL.4.1, CCSS.ELA-LITERACY.L.4.4, CCSS.ELA-LITERACY.L.4.5, SCIENCE 4-LS1-1, CCSS.MATH.CONTENT.MD.4.2; PA Standards — Math (Anchors: S4.A.3, S4.B.3), Assessment Anchors: R4.A.1.1, R4.A.1.2., R4.A.1.3, R4.A.1.4, R4.A.1.6, R4.A.2.1, R4.A.2.2, R4.A.2.3, R4.A.2.4, R4.A.2.5, R4.A.2.6, R4.B.3

Grade 5:

Common Core: CCSS.ELA-LITERACY.RI.5.4, CCSS.ELA-LITERACY.RI.5.10, CCSS.ELA-LITERACY.RF.5.4, CCSS.ELA-LITERACY.SL.5.1, CCSS.ELA-LITERACY.L.5.4, CCAA.ELA-LITERACY.L.5.6, PA Standards: Health 10.1.6, 10.2.6, Family & Consumer Sciences 11.3.6; Reading 1.1.5, 1.2.5, 1.3.5, 1.6.5

“CHOOSIN’ KEEPS YOU CRUISIN’!”

Objectives:

- Students will state how good choices affect their diet, health and nutrition.
- Students will identify the food groups included in the MyPlate Food Guide.
- Students will list the number of servings needed from each food group.
- Students will state how physical activity plays a role in maintaining a healthy life.

Approximate Lesson Length: 50 minutes

Materials Needed:

- A copy of the “Choosin’ Keeps You Cruisin’” worksheets for each student
- A copy of “Choosin’ Keeps You Cruisin’” guided reading pamphlets for each student
- “Discover Dairy . . . and Nutrition” video (available for download from www.discoverdairy.com) and projection device for showing it to the class
- Overhead or image of “Nutrients in Milk” listing included in this lesson plan
- Overhead projector or White Board
- “MyPlate” poster (available to order at <http://www.fns.usda.gov/tn/myplate-posters>)
- Two calcium tablets
- Two clear glasses — one filled with milk and one filled with a dark cola
- Food supplies for guided reading pamphlet (string cheese, pretzel sticks, peanut butter, celery sticks, raisins)

Lesson Components:

Component	Time	Component	Time
Video Motivator & Discussion	10 min.	Lesson & Classroom Activity	15 min.
Guided Reading & Relevant Vocabulary	15 min.	Classroom Worksheet & Writing Assessment	10 min.

Motivator:

Introduce the “Discover Dairy . . . and Nutrition” video by asking students what they ate for breakfast. Let them call out items, and then say that the video they are about to see will show them how those foods fit into the “MyPlate” Food Guidelines.

Write the following questions on the chalkboard, overhead or white board. Ask students to listen for answers while watching the video, and encourage them to write down the answers on a piece of paper as they hear them.

- How many servings do we need of each food group each day? (*Elementary school-aged children need three servings of milk and dairy products a day.*)
- What nutrients are found in milk and dairy products? (*calcium, magnesium, phosphorus, potassium, protein, riboflavin, Vitamin A, Vitamin B12 and Vitamin D*)
- Why is it important to make good choices when it comes to the foods we eat? (*Because a well-balanced diet that includes the recommended daily servings from each food group helps keep us healthy and strong.*)

Video:

Show the “Discover Dairy . . . and Nutrition” video and then summarize it with the class. Review the questions above.



Discover Dairy is an initiative of the American Dairy Association North East, Center for Dairy Excellence, Midwest Dairy Council and the Pennsylvania Dairy Promotion Program, and, funded in part by the Center for Dairy Excellence Foundation of Pennsylvania.





Lesson 5: Dairy and Good Nutrition

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Lesson:

Introduce the concepts of the *MyPlate Food Guide* and balanced diet. Using the *MyPlate Food Guide* poster as a visual in your discussion, begin to talk about choices. How do choices the students make each day affect their health and nutrition? For instance, when students want an after-school snack, what do they choose to eat? Instead of choosing chips, they could choose a drinkable yogurt with carrot sticks, or a slice of cheese with an apple.

Your diet is an important part of keeping you healthy and active. By knowing about the Five Food Groups, you can help make sure you feed your body right.

Each of the Five Food Groups — Grains, Vegetables, Fruit, Dairy and Proteins — work together to help you balance your nutrition. *Ask students to share ways they can make sure to incorporate all five food groups in their daily eating habits.*

Whether you enjoy playing soccer or playing in the band, you need nutrients and minerals every day to help your body grow and develop. Dairy products play an important role in keeping your bones strong and healthy.

Emphasize that eating the right foods is just one part of staying healthy. Another good choice is to make sure you get at least 60 minutes of physical activity every day.

Classroom Activity:

Create an overhead transparency of the diagram on page 5 and use it to review the nutrients found in milk and how they support the body.

- **Calcium and Vitamin D** are both necessary for building strong bones. Your body has 206 bones. Together your bones form your skeleton. Your skeleton helps you stand up straight and tall. Without bones, your body would be like gelatin. Most school-aged children do not get enough calcium. If you don't get enough calcium, your bones don't get the calcium they need to stay strong. If kids get enough calcium when they are young, they will have a better chance of avoiding the bone-thinning disease osteoporosis when they are older.
- **Vitamin D** helps our bodies take in calcium. Our bodies need it to absorb the calcium. Vitamin D also helps our skin stay healthy.
- **Potassium** helps keep our fluids balanced and blood pressure normal.
- **Magnesium** helps give us dense bones and muscles.
- **Phosphorus** gives us strong bones and teeth.
- **Protein** helps build and repair everything in our bodies.
- **Riboflavin** helps our bodies change food into energy.
- **Vitamin A** found in milk helps with our eyes and our vision.
- **Vitamin B12** helps our bodies make red blood cells & carry oxygen to where it's needed.

Additional Classroom Activity: (Takes about 20-30 min. of classroom time)

This experiment reinforces how the choices we make affect our body. This will help the students understand the effects of milk and soda on the calcium in their bones. You will need two drinking glasses. You will need 8 ounces of soda, 8 ounces of water and two calcium tablets. This can be done in a small group setting or as a class. Follow the directions below.

1. Measure 8 ounces of soda and pour it into one of the drinking glasses.
2. Measure 8 ounces of milk and pour it into the other drinking glass.
3. Drop a calcium tablet in each of the drinking glasses. Explain to the class that the tablets are made from calcium, just like our bones are.

Enrichment:

Choose a selection from the children's literature book list online at www.discoverdairy.com or visit www.operation-dairy.com to play an interactive game about the dairy farm. Adopt A Cow for a year-long dairy discovery!



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Teaching Tip:

Using the Worksheets and Reading Guides enables you to reinforce lesson content while teaching to specific math and reading standards. Options for writing assessment are also included within the worksheet.



Additional Classroom Activity (continued):

4. Let the two tablets sit in the glasses for at least a half hour.
5. Wait one half hour and observe the tablets in each of the glasses. The tablet in the soda glass will dissolve, while the tablet in the milk should stay the same.
6. Have the students record their results on Worksheet 5.2 to show what happened to both.
7. Ask them to compare and contrast what the respective effects of soda and milk would be on their bones and teeth, which are made of calcium.
8. Discuss as a class.

Guided Reading Lesson:

Hand out the reading pamphlets to review the lesson. This reading pamphlet reinforces students' ability to read and follow directions. For added fun, have the students work in small groups to make the bugs described in the pamphlet. Relevant vocabulary is listed on back of the pamphlet.

Evaluation:

Remind students how important it is that we make good choices regarding the foods we eat and the activities we choose in our daily lives. Revisit the concept of a balanced diet.

- Ask students to name the daily serving recommendation for the Dairy food group.
- Ask students how many vitamins and minerals are in a glass of milk.
- Ask students which nutrient helps prevent osteoporosis.
- Ask students to name three dairy products.

If desired, use Worksheets 5.1 and 5.2 that accompany this lesson to evaluate whether the students have comprehended the lesson and can meet the stated objectives.

Additional Activities:

This lesson fits in with most School Wellness programs. Engaging students in additional activities can reinforce wellness concepts introduced in lesson.

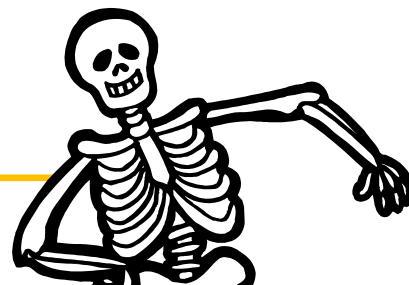
- Invite the local dairy princess into your classroom to talk to the students about milk's role in good nutrition or ask your school nurse to lead your class through a discussion on making good choices for your health and wellness.
- Encourage students to learn more about the "Fuel Up to Play 60" program. This year-long effort would engage the entire student body in making good choices for their health and wellness. Learn more at <http://www.fueluptoplay60.com/>.
- Have a discussion in your class about ways to get 60 minutes of physical activity every day. Have the students brainstorm ideas, such as riding bike, jogging, playing tag, etc., and list them on a chalkboard or white board. See how many activities you can list.
- Allow students to track their eating habits for a designated period of time (a week, for example). Compare their diets to the *MyPlate Food Guide*.
- Allow students to analyze the cafeteria lunches for one week and discuss the foods served and what groups they fall into on the *MyPlate Food Guide*.
- Challenge each student to try one new activity each day for a week and keep a journal on their experience that they could share with the class.

Dairy & Good Nutrition

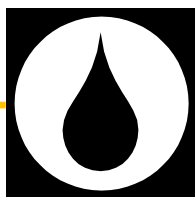
What nutrients are found in milk?

CALCIUM

VITAMIN D



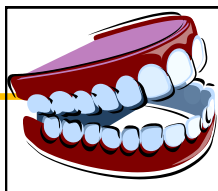
POTASSIUM



MAGNESIUM



PHOSPHORUS



PROTEIN

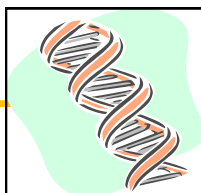


RIBOFLAVIN

VITAMIN A



VITAMIN B¹²





Worksheet 5.1: Dairy and Good Nutrition

Complete the answers below.

1. List four nutrients found in milk:

2. List one way each of the following nutrients help our bodies:

Calcium: _____

Protein: _____

Riboflavin: _____

3. Why it is important that we make good choices when it comes to choosing which foods we eat?

Fill in the missing blanks: Write down the correct number of servings you should eat from each of the five food groups every day and write down a food you like to eat from each particular food group.

Grains:

- ♦ Servings: _____
- ♦ Choice: _____

Fruits:

- ♦ Servings: _____
- ♦ Choice: _____

Milk:

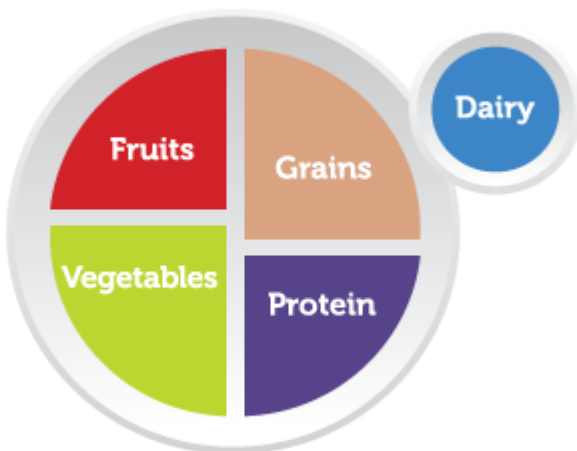
- ♦ Servings: _____
- ♦ Choice: _____

Protein:

- ♦ Servings: _____
- ♦ Choice: _____

Vegetables

- ♦ Servings: _____
- ♦ Choice: _____





Worksheet 5.2: Dairy and Good Nutrition

Additional Classroom Activity: Record your results and answer the questions below.

- Describe the appearance of the calcium tablets in each of the glasses:
— Soda Glass: _____
— Milk Glass: _____
- Describe how this experiment would translate to the contrasting effects that soda and milk would have on your bones, which are made of calcium. _____

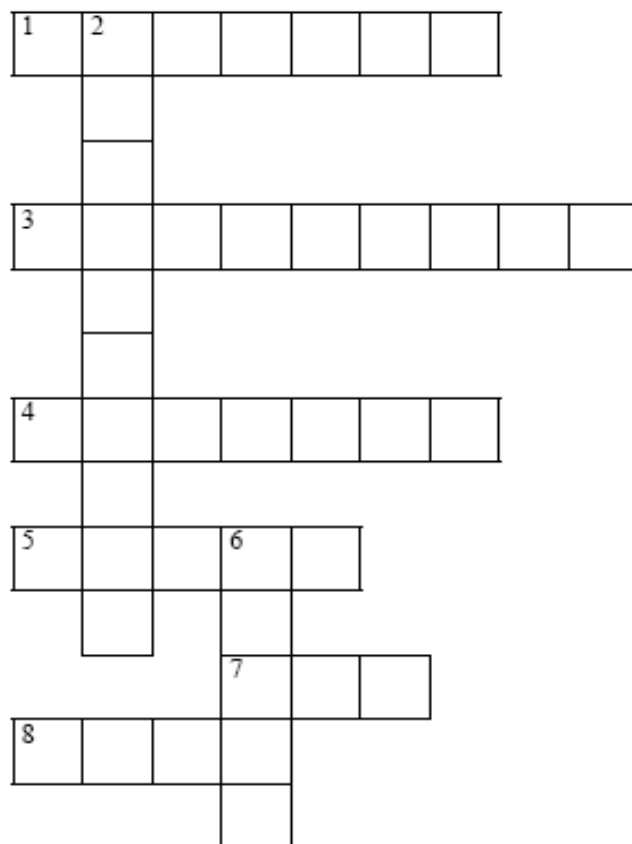
Complete the Crossword Puzzle:

ACROSS

- Helps build and repair everything in the body.
- Keeps fluids balanced and blood pressure normal.
- Builds strong bones and teeth.
- Number of minutes we need of physical activity daily.
- Vitamin B¹² helps the body make blood cells.
- Number of food groups listed in the “MyPlate” nutritional guidelines.

DOWN

- Helps body change food to energy.
- Number of dairy servings we need each day.



Writing Enrichment: On a separate piece of paper, describe a plan you could follow to make good choices for your health and wellness after school today. Include the foods you could eat and the physical activity you could engage in once you arrive home from school.

Note to Teachers: Answer keys to this worksheet are available on www.discoverdairy.com.



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