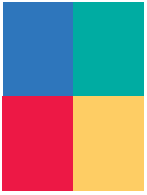




BREAKFAST: MOST IMPORTANT MEAL OF THE DAY



**TEACHER'S
GUIDE**



INTRODUCTION

This Teacher's Guide provides information to help you get the most out of *Breakfast: Most Important Meal of the Day*. The contents of this guide will allow you to prepare your students before using the program, and to present follow-up activities to reinforce the program's key learning points.

The evidence is overwhelming that breakfast is the most important meal of the day. Yet it is the meal most often skipped by people of all ages. This program explains the mental and physical benefits of eating a nutritious breakfast. The relationship between blood-sugar levels and metabolism is also discussed. Students will learn how best to fuel their bodies in the morning in order to improve their performance throughout the day.

LEARNING OBJECTIVES

After viewing the program, users will be able to...

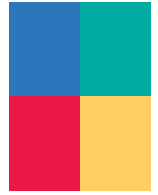
- Understand the importance of eating a nutritious breakfast.
- Understand the mental and physical benefits of eating a nutritious breakfast.
- Identify foods that make up a healthy breakfast.
- Understand the importance of replenishing blood glucose, especially in the morning.
- Understand the relationship between eating and metabolism.

EDUCATIONAL STANDARDS

National Standards

This program correlates with the National Standards for Family and Consumer Science from the Family and Consumer Science Education Association and the National Health Education Standards from the Joint Committee on National Health Education Standards. The content has been aligned with the following educational standards and benchmarks from these organizations.

- Integrate knowledge, skills, and practices required for careers in food science, dietetics, and nutrition.
- Demonstrate food science, dietetic, and nutrition management principles and practices.
- Evaluate nutrition principles, food plans, preparation techniques, and specialized dietary plans.
- Demonstrate nutrition and wellness practices that enhance individual and family well-being.
- Evaluate the impact of science and technology on food composition, safety, and other issues.
- Demonstrate ability to acquire, handle, and use foods to meet nutrition and wellness needs of individuals and families across the life span.
- Evaluate the nutritional needs of individuals and families in relation to health and wellness across the life span.
- Analyze factors that influence nutrition and wellness practices across the life span.
- Demonstrate the ability to use goal-setting and decision-making skills to enhance health.
- Analyze the influence of culture, media, technology, and other factors on health.
- Demonstrate the ability to practice health-enhancing behaviors and reduce health risks.



- Comprehend concepts related to health promotion and disease prevention.

This represents the work of the Joint Committee on National Health Education Standards. Copies of National Health Education Standards: Achieving Health Literacy can be obtained through the American School Health Association, Association for the Advancement of Health Education or the American Cancer Society. Reprinted with permission.

The National Standards for Family and Consumer Science reprinted with permission.

English Language Arts Standards

The activities in this Teacher's Guide were created in compliance with the following National Standards for the English Language Arts from the National Council of Teachers of English.

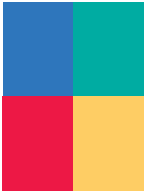
- Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.
- Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).
- Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.
- Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.
- Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.
- Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries.

Standards for the English Language Arts, by the International Reading Association and the National Council of Teachers of English, Copyright 1996 by the International Reading Association and the National Council of Teachers of English. Reprinted with permission.

Technology Standards

The activities in this Teacher's Guide were created in compliance with the following National Education Technology Standards from the National Education Technology Standards Project.

- Students are proficient in the use of technology.
- Students practice responsible use of technology systems, information, and software.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.



- Students use technology resources for solving problems and making informed decisions.
- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use technology to locate, evaluate, and collect information from a variety of sources.

The National Education Technology Standards reprinted with permission.

PROGRAM OVERVIEW

Greater physical stamina, better concentration at school or work, a more efficient metabolism—the evidence is overwhelming that a healthy breakfast is the key to a productive day. Yet it's the meal most likely to be skipped by children, teenagers, and adults alike. This video brings home the importance of the day's first meal by exploring the numerous mental and physical benefits of a nutritious breakfast. Viewers will understand the relationship between eating and metabolism, specifically between breakfast and blood-sugar levels. The kinds of foods that best fuel the body in the morning are also listed.

MAIN TOPIC AREAS

Topic 1: Breakfast Is Important

This section of the program discusses a variety of research findings that confirm the importance of breakfast. Research shows that eating breakfast makes for improved concentration and mental and physical performance, as well as a positive attitude and even better weight control.

Topic 2: The Physical Effects of Breakfast

This section of the program explains why breakfast is so important to our bodies and how it is physically necessary for our bodies to function properly. The relationship between blood glucose, breakfast, and energy is discussed.

Topic 3: A Balanced Breakfast

This section describes the essential nutrients, including proteins, carbohydrates, fats, vitamins, minerals, and water, necessary for good nutrition. It defines each nutrient, where it can be found, and how it affects the body. How to use the food pyramid to balance a diet is also discussed.

Topic 4: Making and Breaking the Breakfast Habit

This section explores the different reasons why people skip breakfast, and then offers solutions for breaking these bad habits.

FAST FACTS

- People who eat breakfast are more likely to have better diets, less excess body fat, a higher dietary fiber intake, and to feel and perform better.
- Regular breakfast-eaters are more health and diet-conscious than breakfast-skippers, and have significantly better overall diets.



- For children aged 4 to 7 years, breakfast is especially valuable, providing over 40% of the RDI for protein, vitamins A, B1, B2, B3, and C, iron, and magnesium, and 30% or more of the RDI for folate and calcium.
- Children who skip breakfast often do not get enough vitamins A, E, B6, and C, folate, calcium, or iron.
- For men, breakfast cereals provide around 6% of their total daily energy intake, and are an important source of thiamin, riboflavin, and iron, as well as being a source of protein and magnesium.
- For women, breakfast cereals provide around 6% of their total daily energy intake, and are an important source of iron, protein, magnesium, and calcium.
- A high fiber, high carbohydrate breakfast helps you feel full and satisfied, making you less likely to snack.
- Our bodies burn energy from food more efficiently in the morning than later in the day.
- It is recommended that adults eat at least 30 grams of dietary fiber each day to help maintain good health.
- Eating breakfast is associated with a more positive mood, greater calmness, and lower levels of stress. Taking time out to eat breakfast gives you a chance to relax and prepare for the day.
- School children who eat a good breakfast make fewer mistakes in problem-solving, and perform better on creativity tests.
- Studies show that eating breakfast improves alertness, which may help with memory and learning.
- In school children, studies suggest that skipping breakfast interferes with cognition and learning.
- Several studies have shown that consuming high levels of carbohydrates is associated with better mood.
- Memory and the capacity to learn are significantly improved by glucose.
- Carbohydrate foods such as cereals and breads are digested to produce glucose for the body.

VOCABULARY TERMS

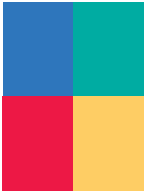
breakfast: The first meal of the day, especially when taken in the morning; to “break a fast.”

calories: A unit of food energy; an amount of food having an energy-producing value.

carbohydrates: Mainly sugars and starches, together constituting one of the three principal types of nutrients used as energy sources (calories) by the body. Carbohydrates can also be defined chemically as neutral compounds of carbon, hydrogen and oxygen.

cholesterol: Cholesterol is a fatty substance (a lipid) that is an important part of the outer lining (membrane) of cells in the body of animals. Cholesterol is also found in the blood circulation of humans. The cholesterol in a person’s blood originates from two major sources: dietary intake, and liver production. A pearly, fat-like, steroid alcohol, cholesterol crystallizes in the form of leaflets or plates from dilute alcohol, and is found in animal fats and oils, in bile, blood, brain tissue, egg yolk, myelin sheaths of nerve fibers, the liver, kidneys and adrenal glands.

complex carbohydrates: The combination of carbohydrates and fiber.



fat: Also known as lipid, is one of the three types of nutrients used as energy sources by the body.

fat, saturated: A fat that is solid at room temperature and comes chiefly from animal food products. Some examples are butter, lard, and meat fat; saturated fat also comes from palm oil, and coconut oil. These fats tend to raise the level of cholesterol in the blood.

fat, unsaturated: A fat that is liquid at room temperature and comes from a plant such as olive, peanut, corn, cottonseed, sunflower, safflower, or soybean. Unsaturated fats tend to lower the level of cholesterol in the blood.

fiber: Indigestible material in human food that stimulates the intestines; the parts of plant materials in the diet which are resistant to digestion by human enzymes.

fortified: Food to which some essential nutrients have been added.

glucose: The end product of carbohydrate metabolism and the chief source of energy for living organisms. Its utilization is controlled by insulin.

glycogen: Stored glucose.

hemoglobin: The oxygen-carrying pigment and predominant protein in the red blood cells.

insulin: A natural hormone made by the pancreas that controls the level of the sugar glucose in the blood. Insulin permits cells to use glucose for energy. Cells cannot utilize glucose without insulin.

metabolism: The transformation by which energy is made available for the uses of an organism.

protein: A large molecule composed of one or more chains of amino acids in a specific order. Proteins are required for the structure, function, and regulation of the body's cells, tissues, and organs. Protein is one of the three types of nutrients used as energy sources by the body.

RDA: See *RDIs*.

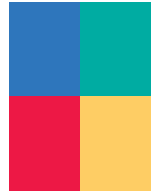
RDIs: (Reference Daily Intakes): A set of dietary references based on the Recommended Dietary Allowances for essential vitamins and minerals and, in selected groups, protein. The name "RDI" replaces the term "U.S. RDA."

PRE-PROGRAM DISCUSSION QUESTIONS

1. If you had to skip one meal a day, which meal would you choose and why?
2. What types of foods make a nutritious breakfast?
3. How does skipping breakfast affect your body, mind, and attitude throughout the day?
4. Do you think it is more important to have breakfast on some days rather than on others? On which days would it be more important to eat breakfast, and why?
5. Should you eat breakfast even if you're not hungry?

POST-PROGRAM DISCUSSION QUESTIONS

1. What are some of the research findings that support the idea that breakfast is a very important meal?
2. How would you convince a friend who skips breakfast everyday, because she wants to lose weight, that she is doing more harm than good?
3. Explain the meaning of the following statement: "Your stomach may not need breakfast, but your brain does."



4. Why would someone who has a doughnut for breakfast be more hungry an hour later than someone who doesn't eat breakfast?
5. What does it mean to eat a balanced diet?

GROUP ACTIVITIES

Food Relay Race

Create a food relay race. The race should be to create a team of foods for breakfast that contain simple carbohydrates, complex carbohydrates, protein, fiber, and some fat. The best team will have a combination of all of these foods so that a person could realistically eat all of the portions in a one hour time frame, and not eat a meal or snack again until about four hours later.

Breakfast of the Month

Divide the class into four groups. Each group should plan a nutritious breakfast for every day of the week. Have the class then compile their breakfast menus into one big breakfast calendar for a month. Ask students to use the calendar as a guide to eating breakfast for one month. After a month of eating healthy breakfasts, ask the students if they notice a change in their physical and mental well-being.

INDIVIDUAL STUDENT PROJECTS

The Breakfast Balance

Have students write down what they have for breakfast every day for a week (include Saturday and Sunday). After one week, each student should take the list and divide the foods into the different groups found on the food pyramid. A balanced diet means balancing your eating habits through the course of a few days to a week. How close did students come to eating balanced meals? Student who fell short should adjust their meals so that they can begin to eat healthier.

Commercializing Breakfast

Have students watch television on Saturday morning for one to two hours, keeping track of all the commercials related to breakfast. Then, have them write a short paper describing what kind of message these commercials send about breakfast and nutrition to kids.

INTERNET ACTIVITIES

The School Breakfast Program

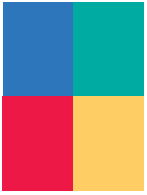
Use the Internet to research the School Breakfast Program. (<http://www.fns.usda.gov/cnd/Breakfast/Default.htm>). Find out what the program is and how it helps students of all ages to perform their best in school.

ASSESSMENT QUESTIONS

Q: Research has shown that eating a nutritious breakfast is linked to _____.

- (a) improved concentration
- (b) improved physical performance
- (c) better weight control
- (d) all of the above

A: (d) all of the above



Feedback: Studies have linked breakfast with improved concentration and mental performance in school and on the job. Research has also found that students who ate breakfast improved their physical performance and could better control their weight.

Q: If you are on a diet and don't eat breakfast, you are more likely to _____.

- (a) lose weight faster
- (b) gain more muscle mass
- (c) feel tired, drained, and ravenously hungry
- (d) eat healthier foods

A: (c) feel tired, drained, and ravenously hungry

Feedback: When you don't eat breakfast, by mid-morning your energy stores are exhausted. You feel tired, drained, and ravenously hungry. As a result, you tend to overeat or eat foods that are not healthy.

Q: Eating a good breakfast can affect how you feel, resulting in a more positive attitude.
(True or False)

A: True

Feedback: A study by researchers at Harvard Medical and Boston Medical Center showed that students who eat a good breakfast are less likely to suffer from depression, irritability, and anxiety. They generally feel more upbeat, concentrate better, and are more at ease socially.

Q: Your _____ has no way to store energy and won't function at its best if you don't replenish its energy supplies in the morning.

- (a) brain
- (b) heart
- (c) liver
- (d) blood

A: (a) brain

Feedback: Your brain runs on the glucose circulating in your blood. It has no way to store energy and won't function at its best if you don't replenish its energy supplies in the morning.

Q: What is the major energy source for most of the cells in your body?

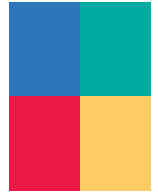
- (a) Fat
- (b) Glucose
- (c) Protein
- (d) Breakfast

A: (b) Glucose

Feedback: When you eat a meal, your digestive system converts much of the food you eat into glucose and releases it into the blood. This blood glucose is the major energy source for most cells in your body.

Q: What happens to your metabolism if you skip breakfast?

- (a) It slows down.
- (b) It speeds up.
- (c) It stays the same.



(d) All of the above.

A: (a) It slows down.

Feedback: When you skip breakfast your metabolism slows down to preserve what little fuel you have left for as long as possible.

Q: Name three of the six nutrients a body needs to stay healthy.

A: Protein, carbohydrates, fat, fiber, water, vitamins, and minerals

Feedback: Our bodies need six different nutrients to stay healthy: proteins, carbohydrates, fat, vitamins, minerals, and water. Having an adequate supply of these throughout the day ensures that your body will operate at peak efficiency.

Q: Simple carbohydrates, or sugars, can give you a quick jolt of energy. (*True or False*)

A: True

Feedback: Most simple carbohydrates (or sugars) are quickly digested, and their high sugar content is immediately released into the blood stream, giving you a quick jolt of energy.

Q: Easy-to-follow guidelines for eating a balanced diet can be found using the _____.

A: food guide pyramid

Feedback: The food guide pyramid is a graphic arrangement of the food groups we need to eat to stay healthy.

Q: Which of the following is a suggested way to improve your breakfast eating habits?

(a) Eat breakfast the night before.

(b) Don't eat anything until you are hungry.

(c) Eat breakfast on certain days of the week.

(d) Make breakfast the night before and take it with you to eat later.

A: (d) Make breakfast the night before and take it with you to eat later.

Feedback: If you don't have time to eat breakfast in the morning, try making something the night before (such as a peanut butter sandwich on whole grain bread), so that you can take it with you in the morning.

ADDITIONAL RESOURCES

BAM! Body and Mind. Centers for Disease Control and Prevention

www.bam.gov

Girl Power! Get Body Wise!

www.girlpower.gov/girlarea/BodyWise

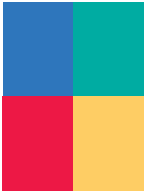
BrainPOP

Health, Science, Technology, Math, English Animation and Educational Site for Kids

www.brainpop.com

Kellogg's Nutrition Camp

www.kelloggs.com/nutrition/nutritioncamp



Kids Health and Fitness

www.kidshealthandfitness.com.au/kids

A Real American Breakfast: The Best Meal of the Day, Any Time of the Day, by Cheryl Alters Jamison, Bill Jamison. William Morrow & Co., 2002. ISBN: 0060188243

Let's Do Lunch, VHS/DVD, Meridian Education

"Who has time?" "I don't need the calories." "A double cheeseburger, fries...now that's a good lunch!" Sound familiar? Grab your students' attention with *Let's Do Lunch* and show them why that second meal of the day is vital to their health and academic performance. Covers childhood obesity and related conditions, the basics of balanced nutrition, good and bad cholesterol, types of fat, and how to start making healthier food choices. Dieticians and an athletic trainer add their stamp of authority, while savvy teens offer quick, delicious lunch and snack ideas.

Item no: 32741, www.meridianeducation.com, 1-800-727-5507

Nutrition and Menu Planner, CD-ROM, Meridian Education

This fun, interactive program allows the user to plan a day's menu including breakfast, lunch, and dinner by choosing foods from the nutrition pyramid groupings. Nutritional values of food items appear alongside each food selection as meals are planned for the day. Can be used with Windows or Macintosh.

Item no. 11055, www.meridianeducation.com, 1-800-727-5507

Contemporary Nutrition: An Interactive Look at the Food Guide Pyramid, CD-ROM, Cambridge Educational

This interactive multimedia CD-ROM highlights the foods from the major food groups and their relationship to the Dietary Guidelines for Americans. Students learn how to apply the principles shown in the food guide pyramid to their daily diets. In this interactive format, students view video clips packed with useful information and answer a series of related questions. Windows only.

Item no. 8460, www.cambridgeeducational.com, 1-800-468-4227

Healthy Eating Series, VHS/DVD, Meridian Education

This three-part series reviews federal guidelines for nutrition labeling and outlines the path to healthy eating. The series includes *The New Nutrition Pyramid*, *Eating Healthy: What is a Serving?* and *Read the Food Label*.

Item no. 25993, www.meridianeducation.com, 1-800-727-5507



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