

Training

---

3

# ***Eat Well & Keep Moving***

By Lilian W.Y. Cheung, DSc, RD,  
Hank Dart, MS, Sari Kalin, MS,  
and Steve Gortmaker, PhD

# *Eat Well & Keep Moving* Introductory Workshop Agenda Topics

- I. Introductions
- II. What is *Eat Well & Keep Moving*? (**Presentation**)
- III. Are You Concerned About Your Students' Nutrition and Physical Activity Habits? (**Discussion**)
- IV. The Health of Young People: Alarming Trends in Nutrition, Physical Activity, and Inactivity (**Presentation**)
- V. Turning the Tables: Why Schools Need to be Part of the Solution (**Presentation**)
- VI. *Eat Well & Keep Moving* Curriculum Overview (**Presentation**)
- VII. *Eat Well & Keep Moving's* Nutrition and Physical Activity Messages (**Demonstration Lessons**)
- VIII. Talking to Youth About Nutrition and Physical Activity Habits (**Role Play, Discussions**)

# ***Eat Well & Keep Moving*** **Demonstration Lessons**

- Healthy Living: Lesson 1 (4th grade)
- Chain Five: Lesson 10 (4th grade)
- Hunting for Hidden Fat: Lesson 17 (5th grade)
- Beverage Buzz: Lesson 18 (5th grade)
- Thinking About Activity, Exercise, and Fitness: Lesson 42 (physical education lesson)
- The Safe Workout: An Introduction: Lesson 3 (4th grade)
- Freeze My TV: Lesson 27 (promotional campaign)

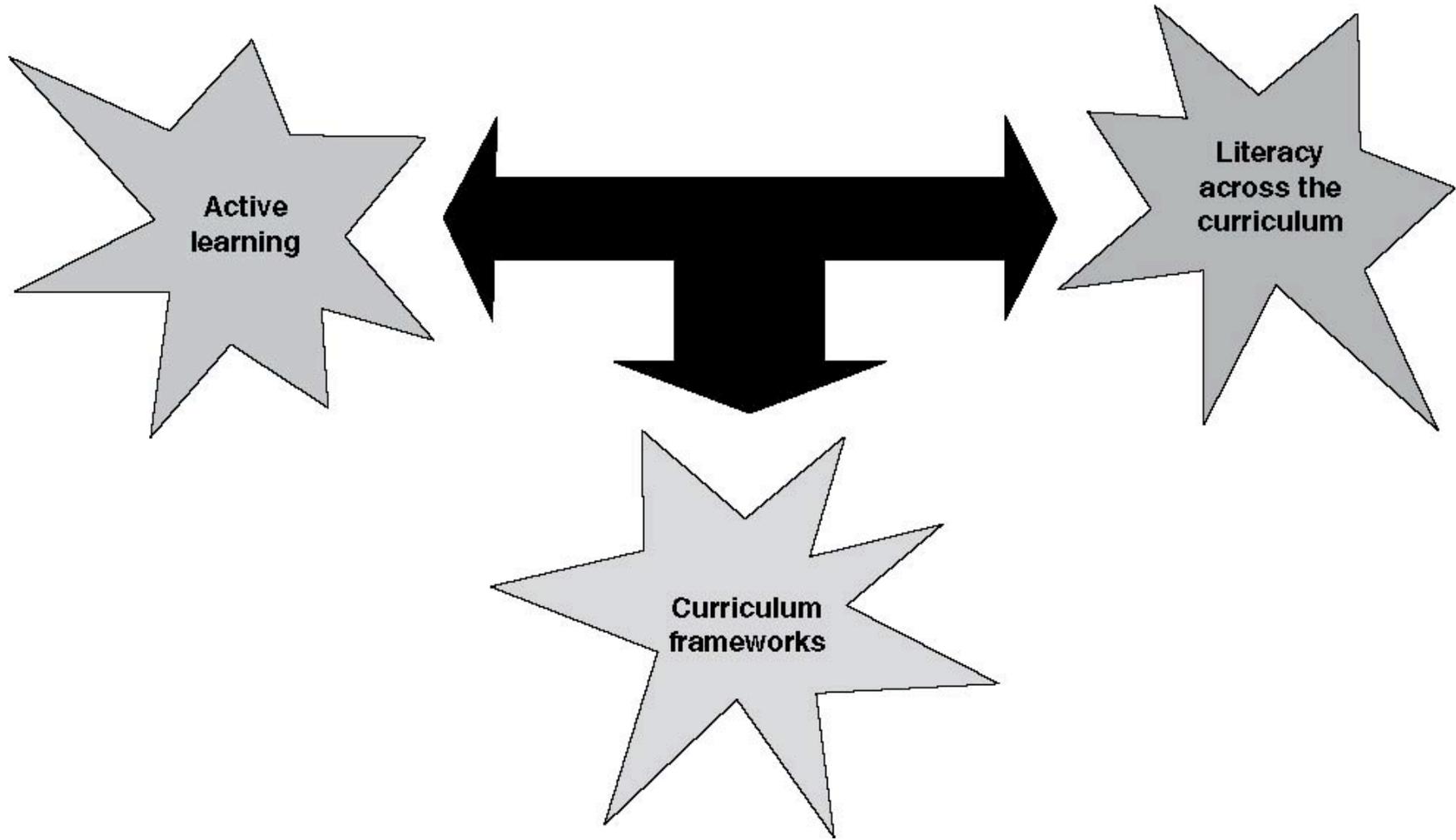
## What Is *Eat Well & Keep Moving*?

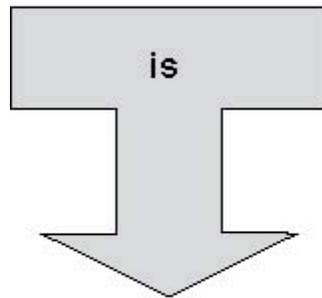
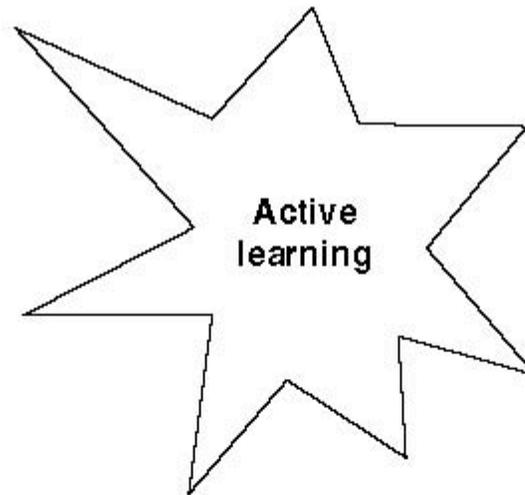
- It's an interdisciplinary health program for 4th- and 5th-grade students that teaches students about nutrition and physical activity.
- It builds skills and competencies in language arts, math, science, social studies, and physical education.

# ***Eat Well & Keep Moving* Goals: The Principles of Healthy Living**

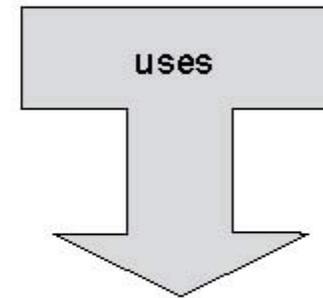
- Eat 5 or more servings of fruits and vegetables each day.
- Choose whole-grain foods and limit foods and beverages with added sugar.
- Choose healthy fat, limit saturated fat, and avoid trans fat.
- Eat a nutritious breakfast every morning.
- Be physically active every day for at least an hour per day.
- Limit television and other screen time to no more than 2 hours per day.

# ***Eat Well & Keep Moving Promotes...***

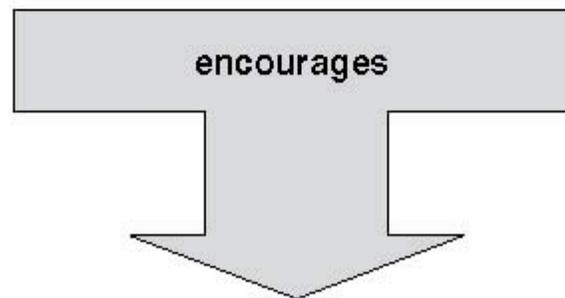




Student centered



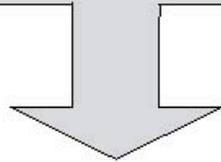
Constructivist approach



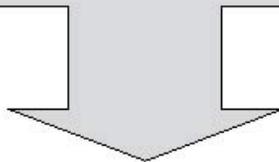
Critical thinking, problem solving, inquiry, cooperative learning, a variety of learning styles

Constructivist Approach

Get them thinking

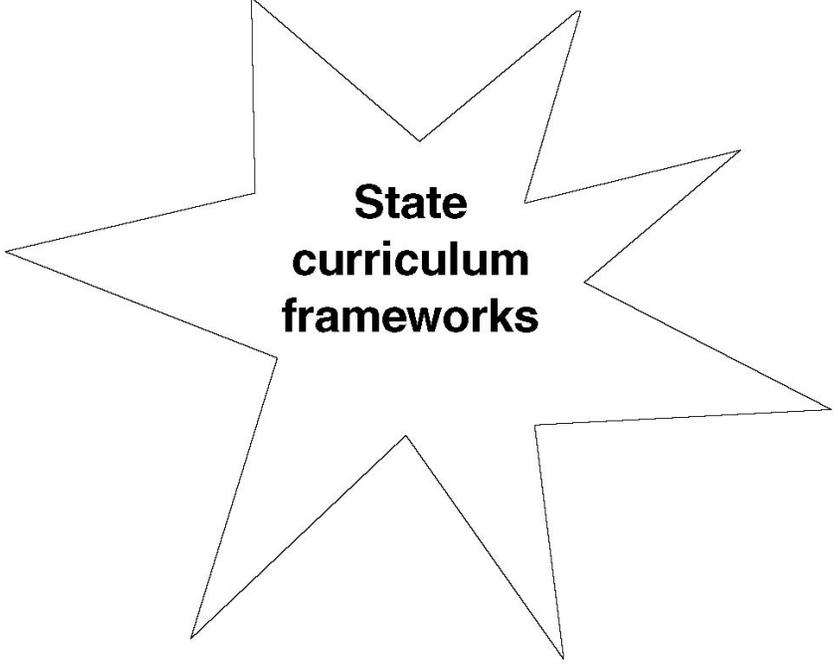


Find out what they know



Use active learning to  
Build on what they know



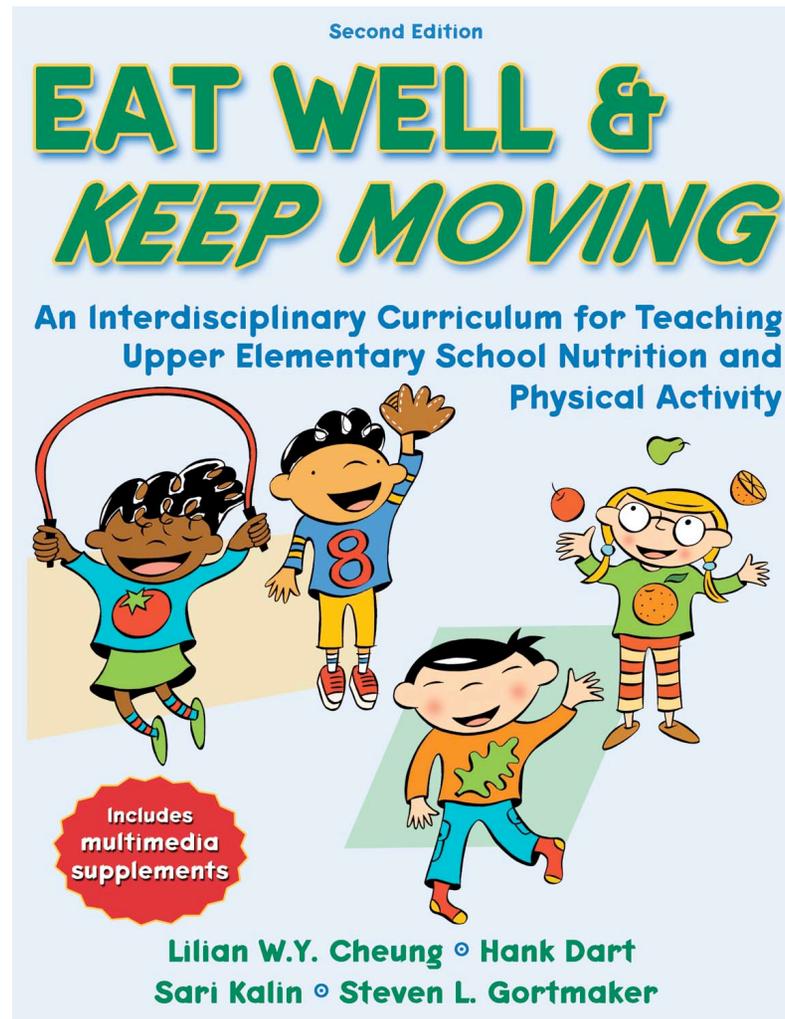


**State  
curriculum  
frameworks**

***Eat Well & Keep Moving* classroom lessons**

- **address learning standards in core subjects,**
- **use content and skills specific to one of the academic subject areas,**
- **address one or more of the health learning standards, and**
- **incorporate language skills.**

# Why Use This Program?



Available at [www.HumanKinetics.com](http://www.HumanKinetics.com)

## Research on *Eat Well & Keep Moving*

- **4th- and 5th-grade students in 14 Baltimore public schools**
- **Program is designed to meet these goals:**
  - Increase fruit and vegetable consumption
  - Reduce fat and saturated fat intake
  - Reduce TV watching
  - Increase moderate and vigorous physical activity
- **Classroom, food service, school-wide campaign and community components**

# ***Eat Well & Keep Moving*** **Has Been Evaluated and Shown to Be Effective**

Effective in

- reducing total fat and saturated fat intake,
- increasing fruit and vegetable intake,
- increasing fiber and vitamin C intake, and
- reducing TV viewing.

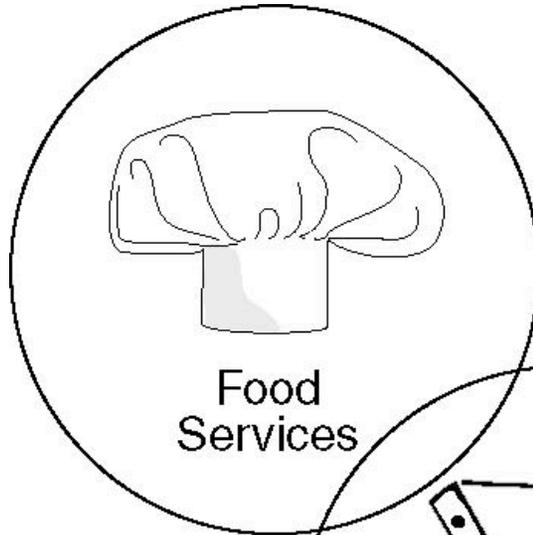
It was well received by school staff and students.

## **Acceptability of *Eat Well & Keep Moving***

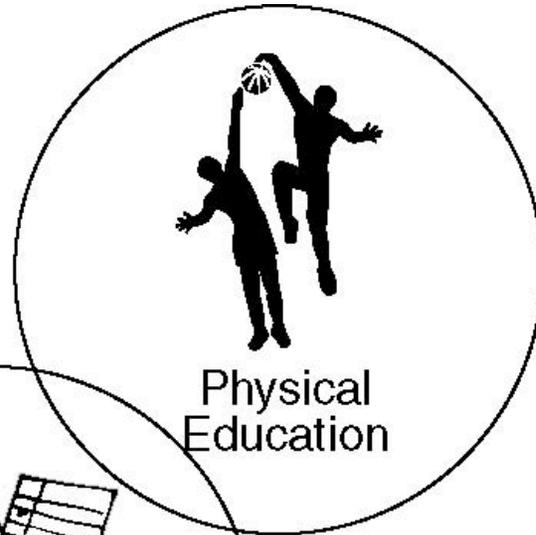
100% of responding teachers said they would teach the curriculum again.

“What impresses me most about this program is its integrative quality.... Principals, teachers, students, food staff, and parents benefit from increased knowledge and awareness of issues that are fundamental to improving one’s life.”

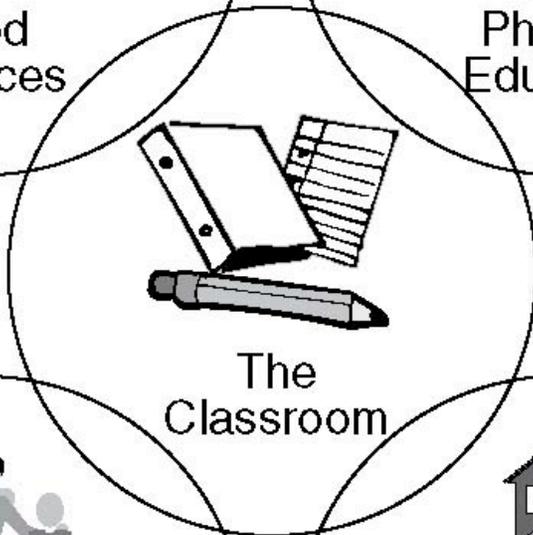
Principal, elementary school



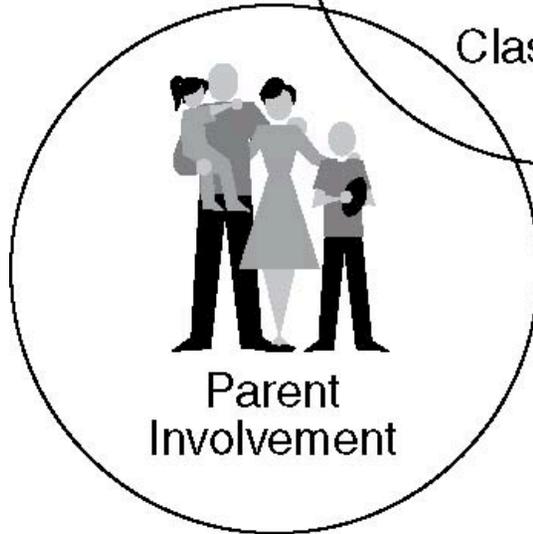
Food  
Services



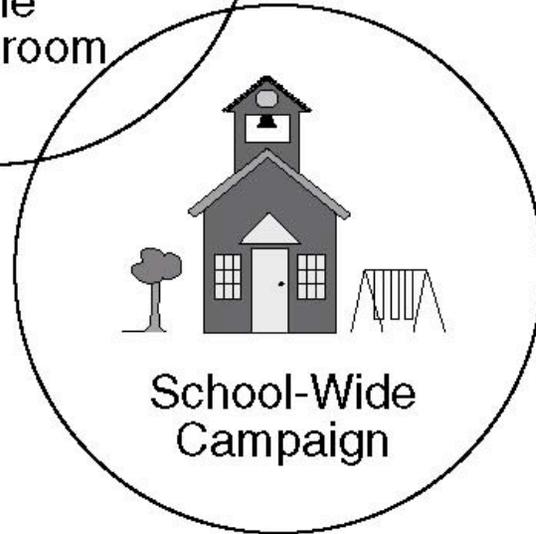
Physical  
Education



The  
Classroom



Parent  
Involvement



School-Wide  
Campaign

# **What Are the Benefits of Good Nutrition and Physical Activity ?**

# Healthy Eating and Active Living...

- Promote normal physical growth and development.
- Prevent childhood and adolescent health problems such as obesity, dental cavities, iron-deficiency anemia, and even diabetes.
- Provide nutrients for brain development, immunity, healing, and healthy skin and eyes, among other functions.
- Lower the risk of chronic diseases such as heart disease, diabetes, osteoporosis, and some cancers.

*(continued)*

# Healthy Eating and Active Living... (continued)

- Make you strong and fit.
- Brighten your mood and build a positive self-image.
- Help you maintain a healthy weight.
- Are important for learning.
- Are fun!

**Are You Concerned About Your  
Students' Nutrition and Physical  
Activity Habits?**

# **The Health of Young People**

**Trends in Nutrition,  
Physical Activity, and Inactivity**

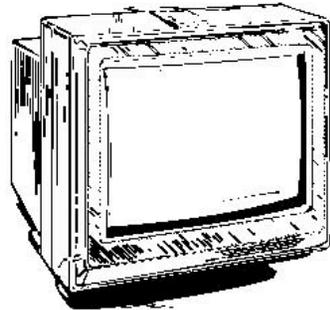
# **Children Are at Risk!**

## **Trends in Nutrition**

- **Youth drink twice as much soft drink as milk**
- **Children and youth still consume too much saturated fat**
- **Four out of five children do not eat enough fruits and vegetables**
  - 1/3 of children eat less than a serving of vegetables a day
  - Half of children eat less than a serving of fruit a day

# Children Are at Risk! Trends in Screen Time

Amount of time youth spend  
watching TV, DVDs, videos,  
and movies



4 hrs. 15  
min./day

Amount of  
time youth  
spend doing  
homework



50 min./  
day

Generation M, Kaiser Family Foundation, 2005

# **Children Are at Risk!**

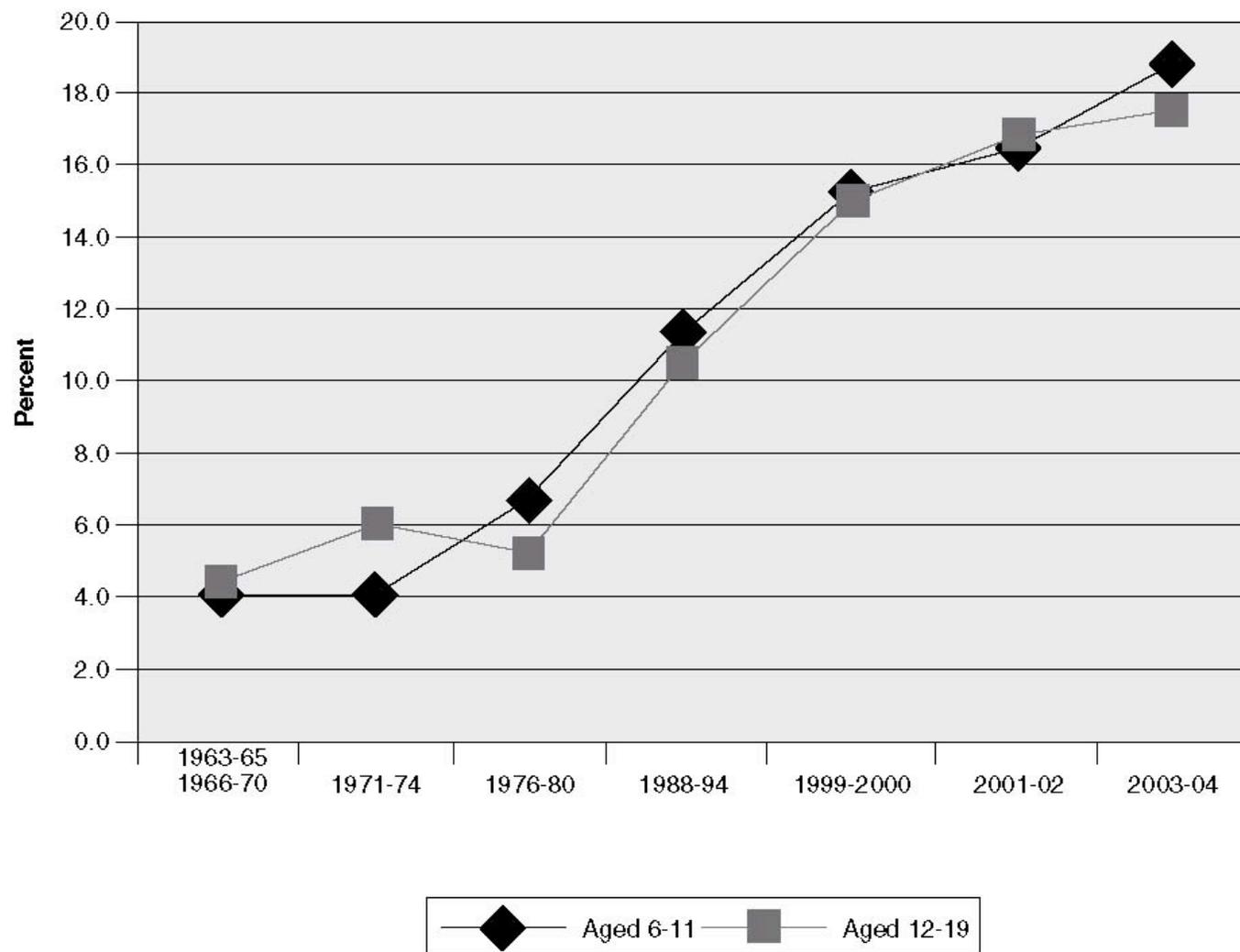
## **Trends in Physical Activity**

- **Only 8% of elementary schools provide daily physical education for all grades.**
- **20% of children do not participate in any free-time physical activity.**
- **Nearly 66% of children do not participate in any organized physical activity outside of school.**

# **Children Are at Risk! Trends in Overweight**

- **The percentage of children who are overweight has risen dramatically over the past 30 years.**
- **More than 12 million children aged 2 to 19 were overweight in 2003 to 2004.**

# Trends in Child and Adolescent Overweight



# Health Consequences of Overweight

**Overweight and obese people are at increased risk for the following:**

- **Type 2 diabetes**
- **Heart disease**
- **Depression**
- **High blood cholesterol**
- **Premature death**
- **Stroke**
- **Hypertension**
- **Asthma**
- **Some cancers**

# What Is Causing This Epidemic of Poor Lifestyle?

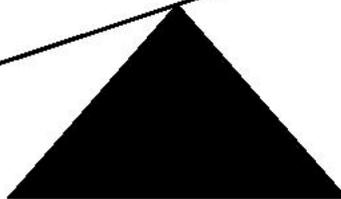
**Environmental  
and social  
changes**

- More food available
- More foods with high calories
- Growth of the food industry and advertising
- More meals away from home
- Extraordinary serving size
- More sugar-sweetened beverages

- More TV/video games
- Fewer PE classes
- Fewer options for after-school programs
- Fewer students walking/biking to school
- Lower perception of safety

**Decreased energy  
expenditure**

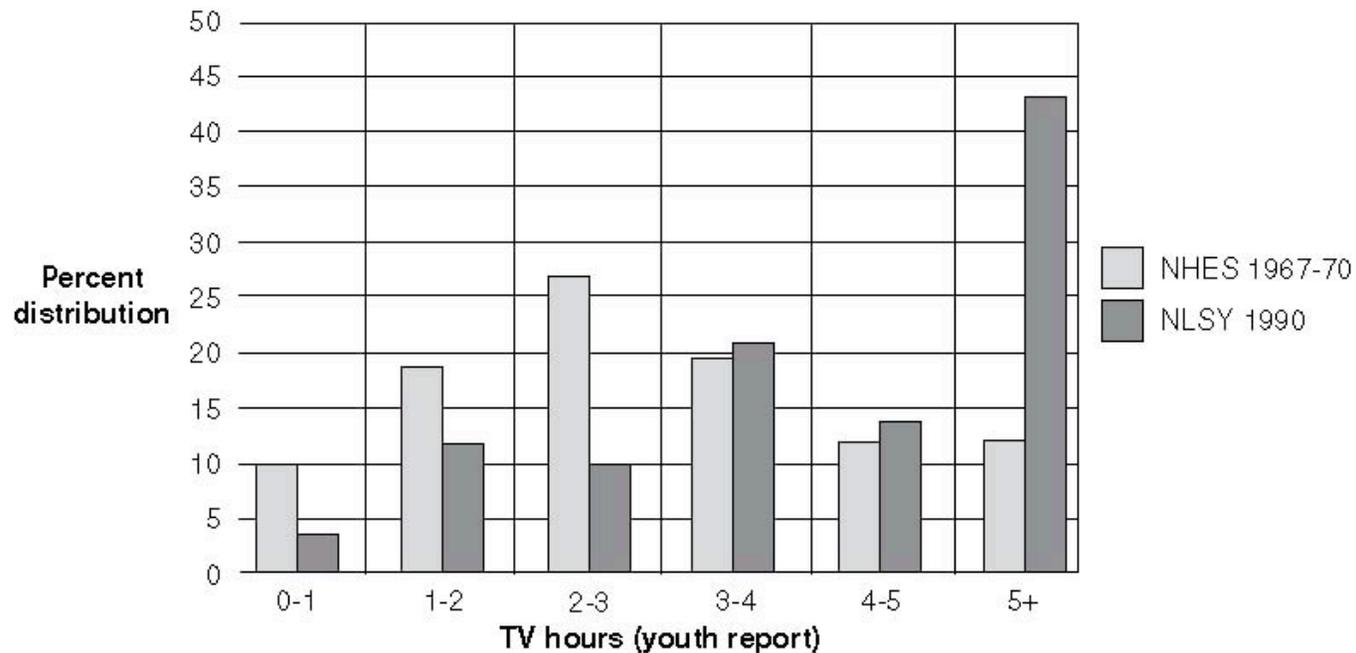
**Increased energy  
intake**



**What Do TV Viewing and Sugar-Sweetened Beverage Consumption Have to Do With It?**

# Distribution of Hours of TV per Day

NHES Youth Aged 12-17 in 1967-70 and NLSY Youth Aged 12-17 in 1990

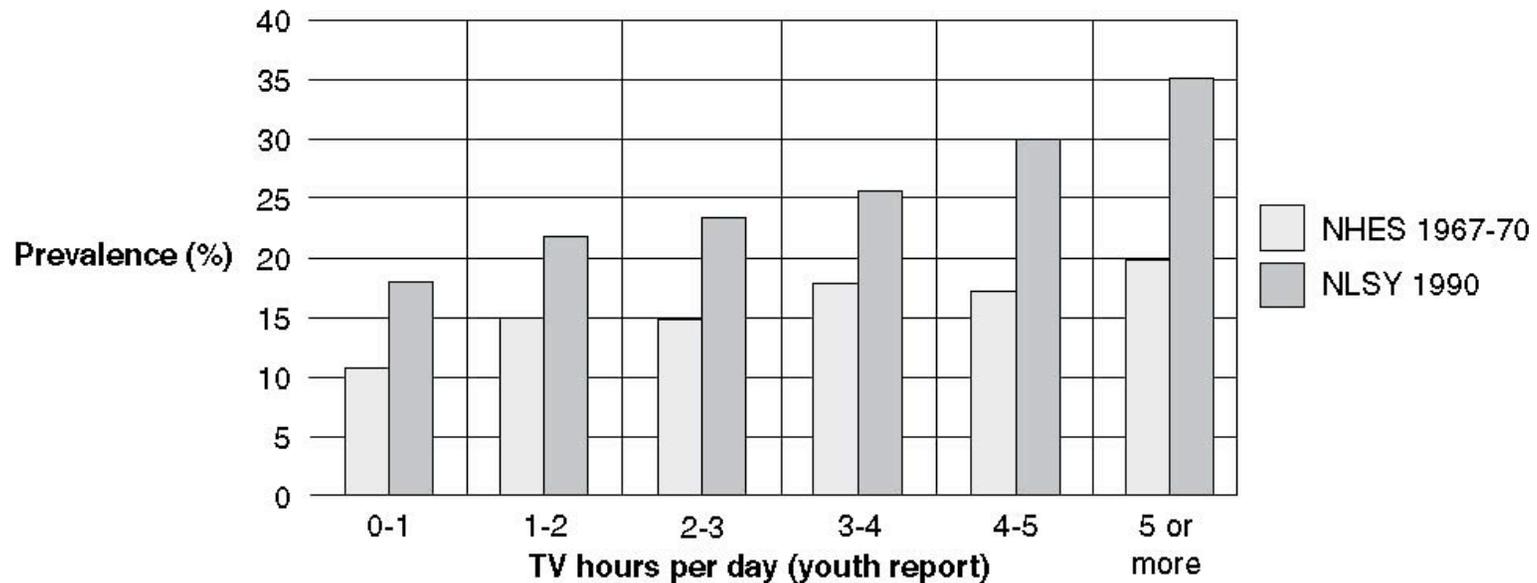


NHES = National Health Examination Survey  
NLSY = National Longitudinal Survey of Youth

Data from W.H. Dietz and S.L. Gortmaker, 1985, "Do we fatten our children at the television set? Obesity and television viewing in children and adolescents," *Pediatrics* 75: 807-812.

# Prevalence of Obesity by Hours of TV per Day

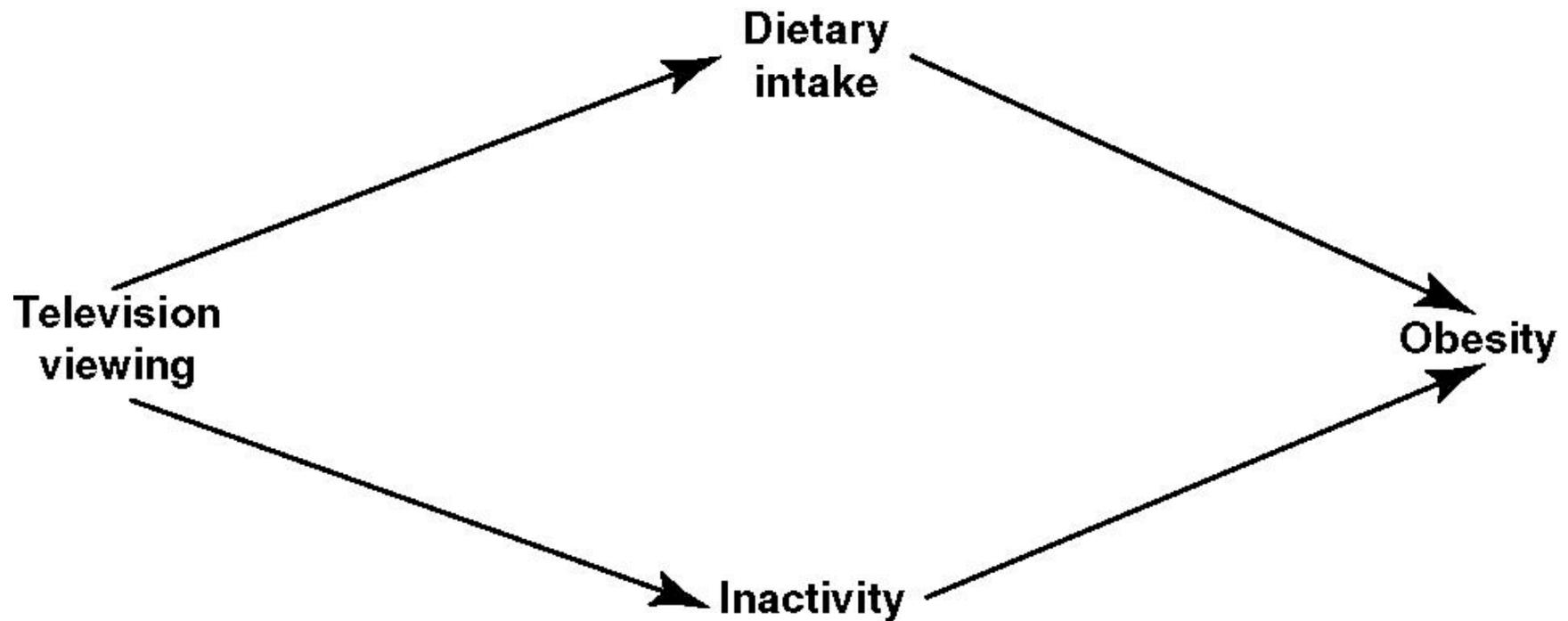
NHES Youth Aged 12-17 in 1967-70 and NLSY Youth Aged 10-15 in 1990



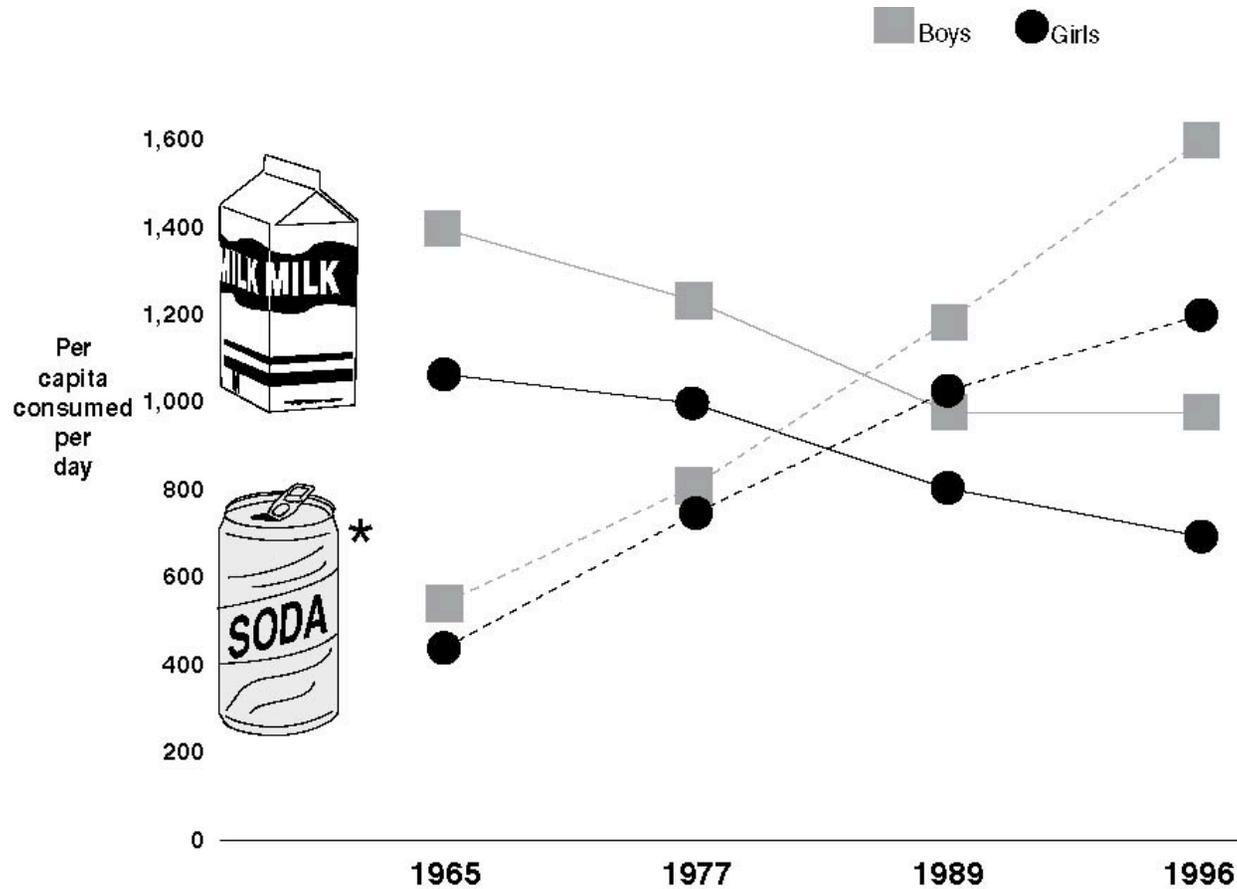
NHES = National Health Examination Survey  
NLSY = National Longitudinal Survey of Youth

Data from W.H. Dietz and S.L. Gortmaker, 1985, "Do we fatten our children at the television set? Obesity and television viewing in children and adolescents," *Pediatrics* 75: 807-812.

# Hypothesized Impact of Television Viewing on Obesity



# Beverage Intake Among Adolescents Aged 11 to 18, 1965-1996



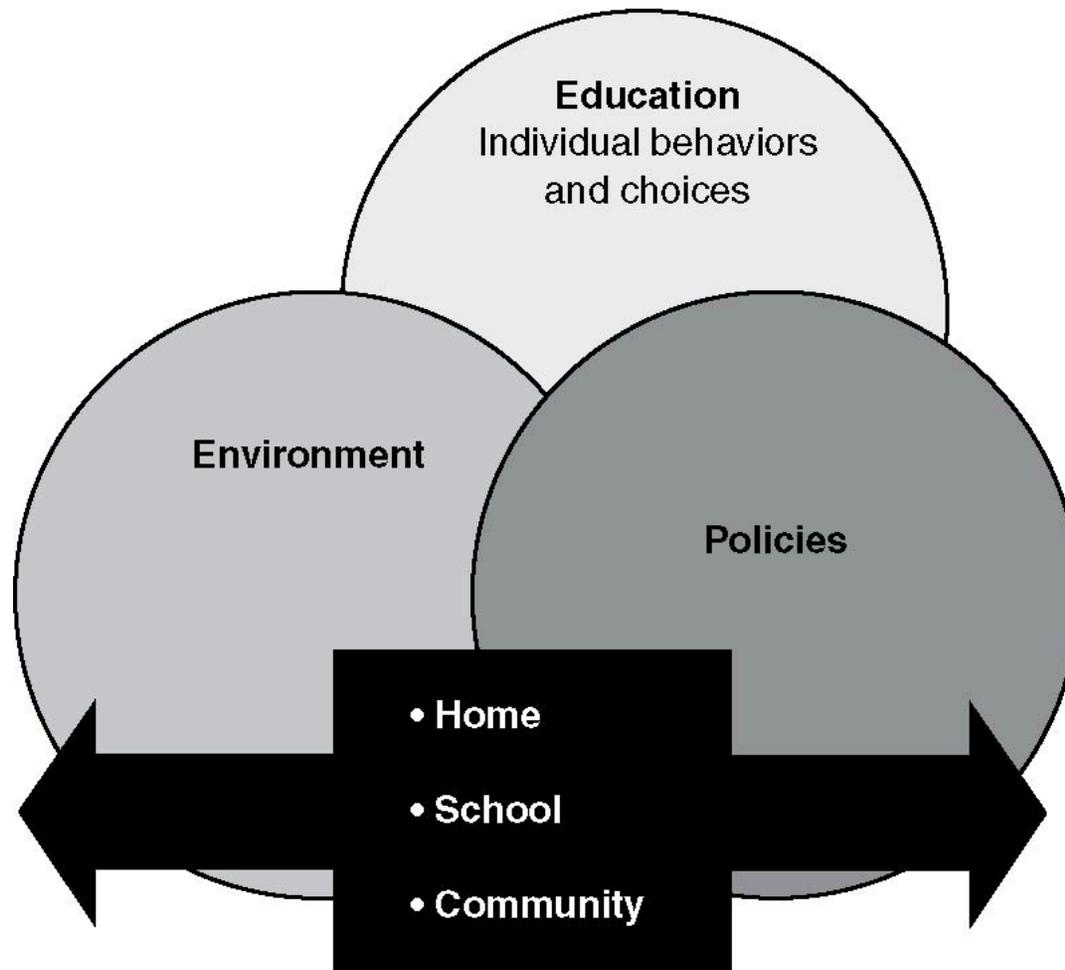
\* Soda represents soft drinks, diet soft drinks, and fruit drinks

# Sugar-Sweetened Beverage Consumption and Overweight

- Sugar-sweetened beverages contribute to childhood obesity and to adult obesity and type 2 diabetes.
- Reducing intake of sugar-sweetened beverages can reduce the prevalence of overweight among youth.

**Turning the Tables:  
Why Schools Need to Be Part of  
the Solution!**

# Promoting Healthy Eating and Active Living



# Surgeon General's Recommendation: School-Based Action

- Effective health education for all.
- Nutrition: Ensure availability of healthy foods at every eating occasion at school, limit access to vending machines, provide adequate time to eat meals.
- Physical activity: Daily physical education, recess, extracurricular physical activity, community use of facilities.

*A Call to Action to Reduce Overweight and Obesity: Report of the Surgeon General. December 2001.*

# Healthy Eating and Physical Activity Are a Critical Part of Learning and Achievement

- Brain development and function require an adequate supply of nutrients.
- Eating breakfast increases academic test scores, daily attendance, concentration, and class participation.
- Children learn through movement.
- Physical activity increases alertness.
- Schools that offer intensive physical activity programs see no negative effects on academic achievement scores even when time for physical education is taken from the academic day.
- Children spend more time reading and doing homework when parents set limits on TV viewing.

***Eat Well & Keep Moving***  
**Curriculum Overview and  
Educational Approach**

# ***Eat Well & Keep Moving Lessons***

Principles of healthy living:

- Eat 5 or more servings of fruits and vegetables each day.
- Choose whole-grain foods and limit foods and beverages with added sugar.
- Choose healthy fat, limit saturated fat, and avoid trans fat.
- Eat a nutritious breakfast every morning.
- Be physically active every day for at least an hour per day.
- Limit television and other screen time to no more than 2 hours per day.

**Classroom  
lessons**

**Physical education  
lessons**

**13  
fourth-  
grade  
lessons**

**13  
fifth-  
grade  
lessons**

**5 PE  
lessons**

**FitCheck +  
4  
microunits  
and 5 PE  
microunits**

# Contents

Preface **vii** • Acknowledgments **xi** • Introduction **xv**

## Section 1 **Nutrition and Physical Activity** **Classroom Lessons and Promotions . . . . . 1**

▶ <b>PART I</b>	<b>Classroom Lessons for Fourth Graders . . . . . 3</b>
Lesson 1	Healthy Living . . . . . 5
Lesson 2	Carb Smart . . . . . 25
Lesson 3	The Safe Workout: An Introduction . . . . . 47
Lesson 4	Balancing Act . . . . . 65
Lesson 5	Fast-Food Frenzy . . . . . 81
Lesson 6	Snack Attack . . . . . 95
Lesson 7	Sugar Water: Think About Your Drink . . . . . 109
Lesson 8	The Safe Workout: Snacking's Just Fine, If You Choose the Right Kind . . . . . 125
Lesson 9	Prime-Time Smartness . . . . . 135
Lesson 10	Chain Five . . . . . 151
Lesson 11	Alphabet Fruit (and Vegetables) . . . . . 161
Lesson 12	Brilliant Breakfast . . . . . 175
Lesson 13	Fitness Walking . . . . . 187
▶ <b>PART II</b>	<b>Classroom Lessons for Fifth Graders . . . . . 199</b>
Lesson 14	Healthy Living, Healthy Eating . . . . . 201
Lesson 15	Keeping the Balance . . . . . 225
Lesson 16	The Safe Workout: A Review . . . . . 237
Lesson 17	Hunting for Hidden Fat . . . . . 249
Lesson 18	Beverage Buzz: Sack the Sugar . . . . . 263
Lesson 19	Snack Decisions . . . . . 281
Lesson 20	Snacking and Inactivity . . . . . 295
Lesson 21	Freeze My TV . . . . . 307
Lesson 22	Menu Monitoring . . . . . 321
Lesson 23	Veggiomania . . . . . 331
Lesson 24	Breakfast Bonanza . . . . . 339
Lesson 25	Foods From Around the World: Italy, China, Mexico, and Ethiopia . 349
Lesson 26	Fitness Walking . . . . . 361
▶ <b>PART III</b>	<b>Promotions for the Classroom . . . . . 375</b>
Lesson 27	Freeze My TV . . . . . 377
Lesson 28	Get 3 At School and 5+ A Day . . . . . 397
Lesson 29	Class Walking Clubs . . . . . 405
Lesson 30	Tour de Health . . . . . 415



**Section 2 Nutrition and Physical Activity  
Physical Education Lessons and Microunits . . .445**

▶ PART IV	<b>Physical Education Lessons . . . . . 447</b>
Lesson 31	Three Kinds of Fitness Fun: Endurance, Strength, and Flexibility . .449
Lesson 32	Five Foods Countdown . . . . .461
Lesson 33	Musical Fare. . . . .473
Lesson 34	Bowling for Snacks. . . . .485
Lesson 35	Fruits and Vegetables . . . . .497
▶ PART V	<b>FitCheck Guide . . . . . 513</b>
Lesson 36	Teachers' Guide to the FitCheck . . . . .515
Lesson 37	Students' Guide to the FitCheck . . . . .525
▶ PART VI	<b>FitCheck Physical Education Microunits . . . . . 527</b>
Lesson 38	Charting Your FitScore and SitScore . . . . .529
Lesson 39	What Could You Do Instead of Watching TV? . . . . .533
Lesson 40	Making Time to Stay Fit . . . . .537
Lesson 41	Setting Goals for Personal Fitness . . . . .541
▶ PART VII	<b>Additional Physical Education Microunits . . . . . 545</b>
Lesson 42	Thinking About Activity, Exercise, and Fitness. . . . .547
Lesson 43	Be Active Now for a Healthy Heart Later . . . . .551
Lesson 44	Be Active Now for Healthy Bones Later. . . . .555
Lesson 45	Let's Get Started on Being Fit . . . . .559
Lesson 46	More on the Three Areas of Physical Fitness . . . . .563

Appendix A: Stretch and Strength Fitness Diagrams. . . . .	<b>565</b>
Appendix B: Eat Well Cards and Keep Moving Cards. . . . .	<b>571</b>
About the Authors. . . . .	<b>595</b>
CD-ROM Contents . . . . .	<b>597</b>
CD-ROM User Instructions and System Requirements . . . . .	<b>601</b>

# Lesson Components

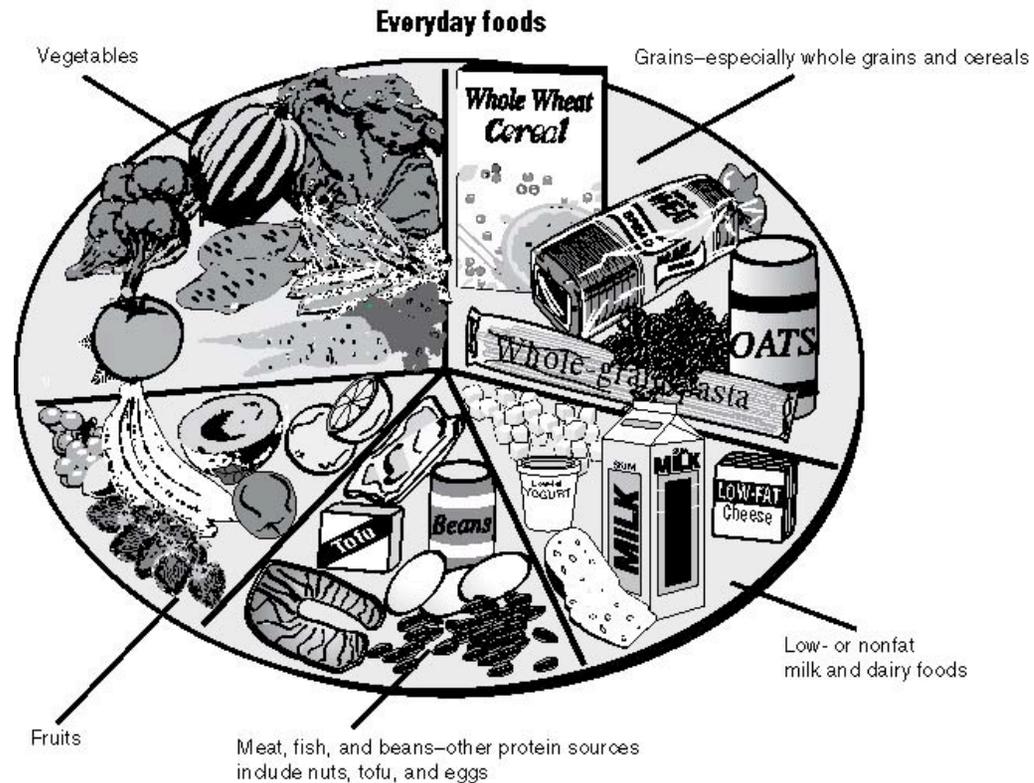
- **Teacher resource pages**
- **Lesson procedures**
- **Worksheets and activities**
- **Illustrations**
- **Charts and tables**
- **Eat Well cards and Keep Moving cards  
(appendix B)**
- **Strength and stretching diagrams  
(appendix A)**

# ***Eat Well & Keep Moving Goals:*** **The Principles of Healthy Living**

- Eat 5 or more servings of fruits and vegetables each day.
- Choose whole-grain foods and limit foods and beverages with added sugar.
- Choose healthy fat, limit saturated fat, and avoid trans fat.
- Eat a nutritious breakfast every morning.
- Be physically active every day for at least an hour per day.
- Limit television and other screen time to no more than 2 hours per day.

# The Balanced Plate for Health

## *A Balanced Plate for Health*



The key to a balanced diet is to recognize that grains (especially whole grains), vegetables, and fruits are needed in greater proportion than are the foods from the meat, fish, and beans and milk groups.

### **“Sometimes” foods**



# *Eat Well & Keep Moving* **Fruits and Vegetables Message**

---

**Eat 5 or more servings of fruits  
and vegetables each day.**

---

- More is always better.
- Choose fruits and vegetables in a rainbow of colors, especially dark-green and orange vegetables.

Name \_\_\_\_\_

## Vitamins and Minerals Chart

► TABLE 10.2 Vitamins and Minerals Chart

What's the nutrient?	Where can I get it?
Vitamin A	Carrots, sweet potatoes, greens, kale, spinach, cantaloupes, papayas, mangoes
Vitamin C	Oranges, grapefruits, tangerines, broccoli, bell peppers, tomatoes, sweet potatoes
Vitamin D	Vitamin D fortified low-fat or skim milk, vitamin D fortified soy milk and rice milk, salmon, egg yolks
Vitamin E	Seed oils, corn oil, almonds, sunflower seed kernels
Vitamin K	Green leafy vegetables, broccoli, cabbage, turnip greens, kale, sardines
Folate	Dried beans, green leafy vegetables, kale, spinach, yeast, soybeans, wheat germ, orange juice, most commercial breakfast cereals and breads
B vitamins such as B <sub>1</sub> (thiamine), B <sub>2</sub> (riboflavin), B <sub>3</sub> (niacin)	Liver, whole-grain breads and cereals, whole grains (such as barley, quinoa, whole wheat), lean meat, low-fat or fat-free yogurt, low-fat or skim milk, eggs
Calcium	Low-fat or nonfat milk, low-fat cheese, low-fat or nonfat yogurt, low-fat or nonfat cottage cheese, fortified soy milk and rice milk, fortified orange juice, broccoli, tofu, black-eyed peas, baked beans, collard greens, bok choy, kale
Potassium	Bananas, oranges, apricots, avocados, sweet potatoes, bran, peanuts, dried beans, and lean meat
Iron	Lean meat, whole wheat bread, spinach, lentils, kidney beans, lima beans, tofu, liver
Zinc	Lean meat, seafood, whole wheat bread, eggs, liver, beans, nuts
Iodine	Seafood



## Punch Out Fruit Punch—Pick Whole Fruit



It's easy to tell the difference between fruit punch and 100% fruit juice. Only the pure juice will say "100% juice" right on the label—this goes for orange juice, grapefruit juice, or any kind of juice. It is even better to eat whole fruit instead of juice. While 100% juice is packed with vitamins and minerals, whole fruit has that and more!

Whole fruit can have up to three times the fiber that juice has, and it is easy to grab on the go.

Other fruit drinks and colored punches that don't say "100% juice" on the label may look like pure juice, but they usually contain very little juice (often none at all) and a lot of sugar. When in doubt, grab a whole piece of fruit instead of juice!



## ***Eat Well & Keep Moving*** **Carbohydrate Message**

---

Choose whole-grain foods and limit foods and beverages with added sugar.

---

- Make at least half of your grains whole grains.
- Sugar-sweetened beverages and high-sugar snacks are “sometimes” foods, not everyday foods.

# Worksheet 1: Where's the Sugar?

► **TABLE 18.1 Beverage Count**

	<b>Soft drink—12 oz. (375 ml) can (10 tsp. of sugar)</b>	<b>Sports drink—16 oz. (500 ml) bottle (7 tsp. of sugar)</b>	<b>Fruit punch—7 oz. (210 ml) pouch (7 tsp. of sugar)</b>
How many did you drink yesterday?			
How many did you drink the day before yesterday?			
Total drinks			

# *Eat Well & Keep Moving* Fat Message

---

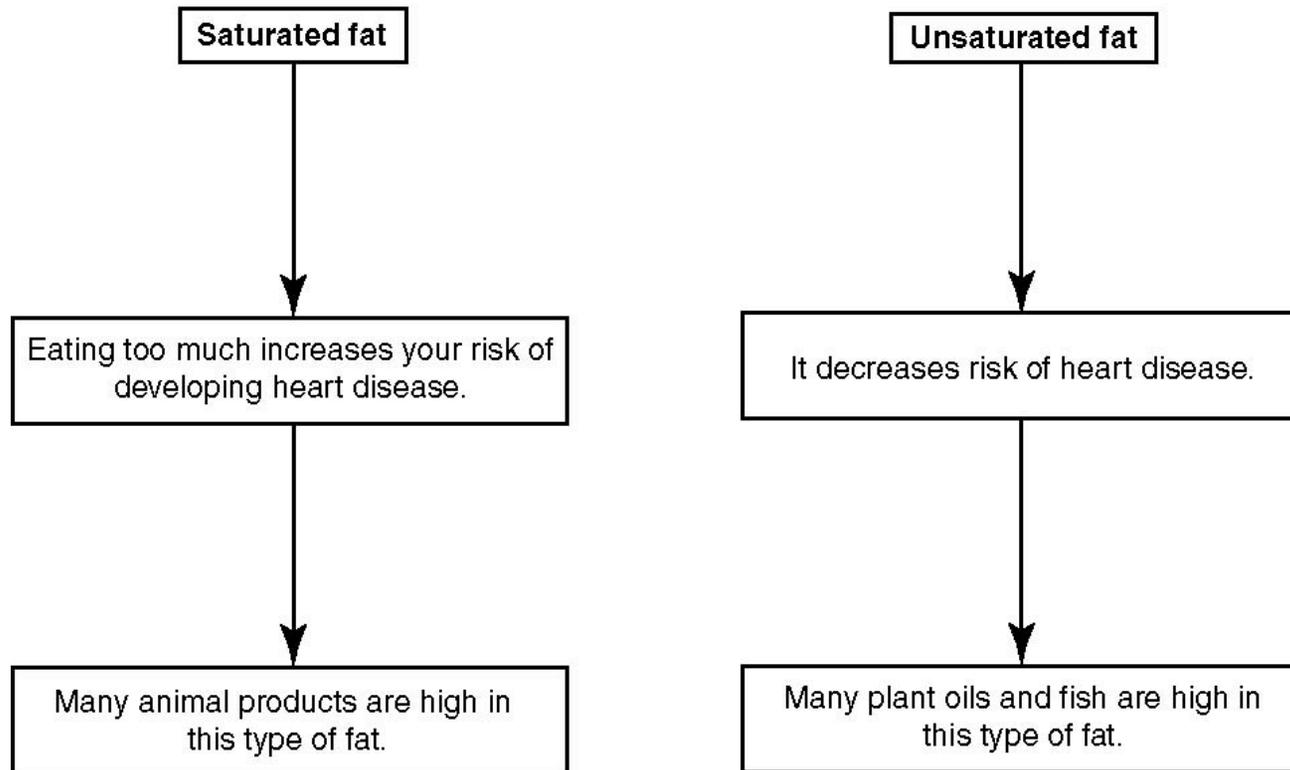
Choose healthy fat, limit saturated fat, and avoid trans fat.

---

- Healthy fat = Unsaturated fat
- No more than 10% of calories from saturated fat
- Avoid trans fats from partially hydrogenated oils

# What's the Rap on Fat?

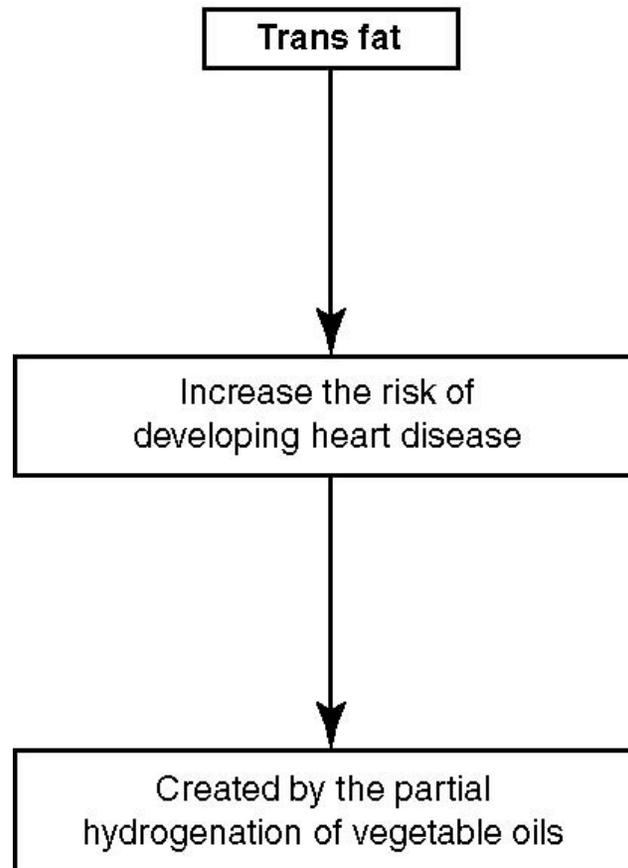
Not All Fat Is Created Equal



*(continued)*

# What's the Rap on Fat? (continued)

Not All Fat Is Created Equal





# ***Eat Well & Keep Moving*** **Activity Message**

---

Be physically active every day for at least  
an hour per day.

---

- Children should get at least 60 minutes of physical activity every day.
- This should include moderate- and vigorous-intensity activities, and it can be accumulated over the course of the day in sessions of 15 minutes or longer.

LESSON

42

# Thinking About Activity, Exercise, and Fitness



All or parts of this lesson are from J. Carter et al., 2007. *Planet Health*, 2nd ed. (Champaign, IL: Human Kinetics), microunit 1.

## ***Eat Well & Keep Moving*** **Inactivity Message**

---

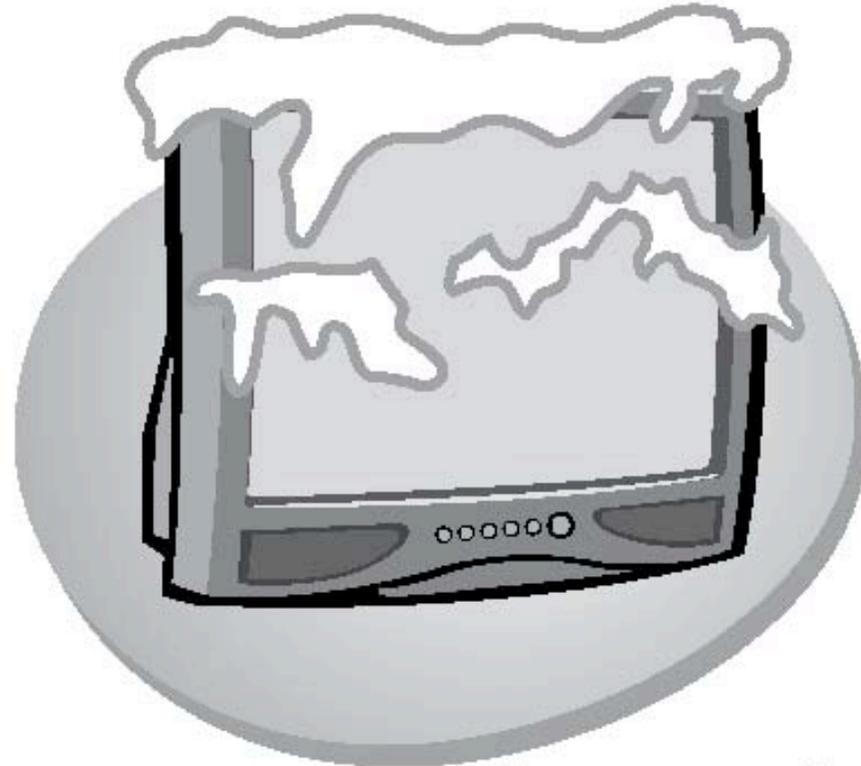
Limit total screen time to no more  
than 2 hours per day.

---

Screen time = TV + videos + movies +  
video and computer games

***Does not include school work completed  
on computer***

FREEZE



MV TV

1

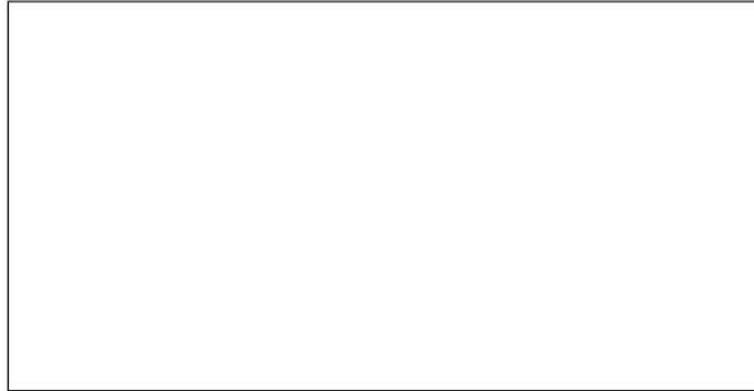
WORKSHEET

Name \_\_\_\_\_



## Graph-It Worksheet

1. Using the information from your Screen Time Chart, graph the number of hours you spent in screen activities each day.



2. Using the information from your Screen Time Chart, create a graph that compares the number of hours you spent in screen activities each day during the Freeze My TV week with the daily 2-hour (or less) goal.



From L.W.Y. Cheung, H. Dart, S. Kalin, and S.L. Gortmaker, 2007. *Eat Well & Keep Moving*, 2nd ed. (Champaign, IL: Human Kinetics).

*(continued)*

# **Talking to Youth About Nutrition and Physical Activity Habits**

## What would you say if your students said . . .

- Why do we need to do these *Eat Well & Keep Moving* lessons?
- Is fat bad for me?
- I don't like exercise. Why is it important?
- I like to watch TV. Why do I need to stop watching TV?

*(continued)*

## **What would you say if your students said . . . (continued)**

- **Are soda and candy bad for me?**
- **Vegetables are nasty! Why do I need to eat them?**
- **The cafeteria food is awful! How can I eat a healthy lunch at school?**
- **It's not safe to play outside where I live. My mom tells me to stay at home and watch TV. What can I do to get more physical activity?**

**Questions?**

# Planning the *Eat Well & Keep Moving* Implementation

►TABLE I.2 Fourth-Grade Implementation Grid

Classroom lessons	Promotions	Eat Well cards and Keep Moving cards	Physical education lessons*	Cafeteria activities	Parent involvement
1. Healthy Living	31. Tour de Health		32. Five Foods Countdown		
2. Carb Smart		The Power of Whole Grains	33. Musical Fare		<ul style="list-style-type: none"> <li>• Reprint the Eat Well card in the parent newsletter.</li> <li>• Send home the "Eat More Whole Grains" parent fact sheet.**</li> </ul>
3. The Safe Workout: An Introduction		Be Wise . . . Warm Up for 5 Before You Exercise			<ul style="list-style-type: none"> <li>• Reprint the Keep Moving card in the parent newsletter.</li> <li>• Send home the "Activate Your Family!" parent fact sheet.**</li> </ul>
4. Balancing Act					
5. Fast-Food Frenzy					<ul style="list-style-type: none"> <li>• Send home the "Dietary Fats" parent fact sheet.**</li> </ul>
6. Snack Attack			34. Bowling for Snacks		<ul style="list-style-type: none"> <li>• Reprint the "Super Snacks" article in the parent newsletter.</li> </ul>
7. Sugar Water: Think About Your Drink					<ul style="list-style-type: none"> <li>• Reprint the "Be Sugar Smart" article in the parent newsletter.</li> <li>• Optional: If the lesson will be taught during warm weather, include the "Stay Cool" article in the parent newsletter.</li> </ul>
8. The Safe Workout: Snacking's Just Fine, If You Choose the Right Kind			31. Three Kinds of Fitness Fun: Endurance, Strength, and Flexibility		<ul style="list-style-type: none"> <li>• Reprint the Keep Moving cards in the parent newsletter.</li> </ul>

(continued)