

*Children's Power Play! Campaign*



# School Idea & Resource Kit

Helping Students Power Up with  
Fruits, Vegetables, and Physical Activity

# POWER PLAY



# INTRODUCTION

## About the *Children’s Power Play! Campaign*

The *Network for a Healthy California—Children’s Power Play! Campaign (Campaign)* inspires and empowers California’s low-income 9- to 11-year-old children to eat 3 to 5 cups of fruits and vegetables and get at least 60 minutes of physical activity every day. This statewide social marketing initiative is led by the California Department of Public Health’s *Network for a Healthy California* to improve children’s short-term health and reduce their long-term risk of serious health problems like obesity, type 2 diabetes, heart disease, hypertension, and certain types of cancer. The *Campaign* was developed in collaboration with the California Department of Education and California Department of Food and Agriculture.

The *Campaign’s* components include educational lessons in school classrooms and community youth organizations; promotional activities in schools, youth organizations, and the community; and media and public relations activities in the community. These activities are implemented through the 11 *Regional Networks for a Healthy California (Regional Networks)*. The *Regional Networks* offer free training, support, and materials to eligible local organizations and help bring together agencies and resources within the region. Find your *Regional Network* by visiting [www.networkforahealthycalifornia.net/rn](http://www.networkforahealthycalifornia.net/rn). Organizations based outside California and those that do not serve children from low-income families can download the *Idea & Resource Kits* by visiting [www.networkforahealthycalifornia.net/powerplay](http://www.networkforahealthycalifornia.net/powerplay). A variety of materials are also available to order at-cost from the *Network for a Healthy California’s* online catalog at [www.championsforchangematerials.net](http://www.championsforchangematerials.net).

## Overview of the *School Idea & Resource Kit*

You’ve probably noticed that kids today are more likely to be overweight, eat unhealthy foods, and be inactive. This may impact how ready they are to learn or how they feel about themselves. You can help change that! The *School Idea & Resource Kit (Kit)* helps you become a Champion for Change in your school. Using the *Kit*, you can make a positive impact on your students’ health while teaching your core academic subjects. The *Kit* features 10 activities focused on fruits, vegetables, and physical activity. The activities are linked with California’s Content Standards in English-Language Arts, Mathematics, and Health (see page 3). They align with the California Department of Education’s Nutrition Competencies for California’s Children. The *Kit* has been evaluated and proven to improve kids’ knowledge, skills, and confidence related to fruits, vegetables, and physical activity.

The *Campaign* offers both a fourth-grade and a fifth-grade *Kit*. The two *Kits* are designed to complement one another, with the fifth-grade *Kit* introducing new concepts while reinforcing the concepts in the fourth-grade *Kit*. Other materials available to schools include student workbooks, *Power Up for Learning: A physical activity supplement to the School Idea & Resource Kits*, the *Children’s Power Play! Campaign’s* parent brochure, *Kids...Get Cookin’!* cookbook, posters, *Harvest of the Month*, and more.

You do not need to be a nutrition expert to use the *Kit*. Simply review the background information and, if necessary, take advantage of the additional resources referred to in the Appendix. Before you begin using the *Kit’s* activities, take a look at the tips in Create a Healthy Classroom on page 6 to learn how you can support the health of your students through your words and actions.

# BACKGROUND

## The Basics of Nutrition and Physical Activity

You don't need to be an expert to convey the importance of eating healthfully and being physically active to your students! Here are a few basics that will give you a general understanding of these concepts as they relate to both adults and children. This overview will help you to be more comfortable conducting nutrition education and physical activity lessons. To learn more about the 2005 *Dietary Guidelines for Americans* and find ways to make healthy food and physical activity choices, go to [www.health.gov/dietaryguidelines](http://www.health.gov/dietaryguidelines) and [www.mypyramid.gov](http://www.mypyramid.gov).

The food and physical activity choices you make every day affect your health—how you feel today, tomorrow, and in the future. The science-based 2005 *Dietary Guidelines for Americans* highlight how to make smart choices from every food group, get the most nutrition out of your calories, and find your balance between food and physical activity. The best way to give your body the balanced nutrition it needs is by eating a variety of nutrient-packed foods every day and staying within your daily calorie needs. A healthy eating plan is one that:

- Emphasizes fruits, vegetables, whole grains, and fat free or lowfat milk and milk products.
- Includes lean meats, poultry, fish, beans, eggs, and nuts.
- Is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars.

Regular physical activity is important for your overall health and fitness, and helps you manage your body weight. Here are a few physical activity recommendations that pave the way to a healthier you:

- Do a minimum of 150 minutes of moderate-intensity aerobic activity a week.
- Also do muscle strengthening activities on two or more days a week.
- Increasing the intensity or the amount of time that you are physically active can have even greater health benefits and may be needed to manage body weight.
- Children and teenagers should be physically active for at least 60 minutes every day.

A healthy, balanced diet that includes plenty of fruits and vegetables and regular physical activity are major investments in your life. In fact, healthy eating and physical activity may reduce your risk of many serious health problems like obesity, type 2 diabetes, osteoporosis, heart disease, hypertension, and certain types of cancer, and increase your chances for a longer life.

## The Importance of Fruits and Vegetables

Fruits and vegetables give you many of the nutrients that you need for good health: vitamins, minerals, dietary fiber, water, and healthy phytochemicals. Some are sources of vitamin A, while others are rich in vitamin C, folate, or potassium. Almost all fruits and vegetables are naturally low in fat and calories, and none have cholesterol, making them a sensible part of your daily meals and snacks.

For children, fruits and vegetables are sources of nutrients that are essential for growth and development, such as vitamin A, vitamin C, folate, and dietary fiber. By establishing the habit of eating fruits and vegetables early in life, children can get a head start in reducing their future risk of serious health problems, especially obesity, type 2 diabetes, heart disease, stroke, and certain types of cancer.

## The Importance of Physical Activity

Physical activity helps you feel good, be more productive, and sleep better. Physical activity is also good for your health. It helps you achieve and maintain fitness and lowers your chronic disease risk. Children and adolescents benefit from activity, too. It is recommended that they get at least 60 minutes of moderate to vigorous physical activity every day.

Regular physical activity in childhood and adolescence builds strength and endurance, helps build healthy bones and muscles, helps manage weight, reduces anxiety and depression, and improves blood pressure and cholesterol levels. Positive experiences with physical activity at a young age help lay the foundation for being regularly active throughout life.

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Adapted from: "Finding Your Way to a Healthier You: Based on the *Dietary Guidelines for Americans*," U.S. Department of Health and Human Services, U.S. Department of Agriculture; available at [www.health.gov/dietaryguidelines](http://www.health.gov/dietaryguidelines) and *2008 Physical Activity Guidelines for Americans*, U.S. Department of Health and Human Services; available at [www.health.gov/paguidelines](http://www.health.gov/paguidelines).

## Consider These Facts

### Children are not eating enough fruits and vegetables or engaging in enough physical activity.

- In California, 9- to 11-year-old children eat an average of 3.0 servings or 2.2 cups of fruits and vegetables on a typical school day, significantly below recommended consumption levels (3-5 cups of fruits and vegetables).<sup>1</sup>
- More than half (55 percent) of California's 9- to 11-year-old children fail to meet the daily physical activity guideline (60 minutes or more of moderate and vigorous physical activity).<sup>2</sup>
- Fewer than one in three (28.5 percent) California fifth graders achieved the Healthy Fitness Zone in all six areas measured by the 2007-2008 California Physical Fitness Test.<sup>3</sup>

### Poor nutrition and low levels of physical activity have significant consequences among children.

- Inadequate nutrition and poor diet are major causes of impaired cognitive development, are associated with poor educational performance among low-income

children, and also contribute to obesity, anemia, and susceptibility to lead poisoning.<sup>4</sup>

- Children engaged in daily physical education show a more positive attitude toward school as compared to their counterparts who do not.<sup>5</sup>
- Obesity rates have doubled for children and tripled among adolescents over the last two decades and continue to rise.<sup>6</sup> In California, the rise in overweight among 9- to 11-year-old children parallels the national trend, increasing from 15 percent in 1999 to 22 percent in 2005.<sup>7,8</sup>
- Obesity increases the risk of high blood cholesterol, high blood pressure, asthma, and type 2 diabetes while still in childhood.<sup>9</sup>

### Establishing healthy eating and activity habits in childhood can help prevent problems in adulthood.

- About half of overweight children or teens will be obese in adulthood.<sup>10,11</sup>
- Physical activity tends to decline with age, with the steepest decline between the ages of 13 and 18.<sup>12</sup>

<sup>1</sup> California Department of Public Health. (2007). *California Children's Healthy Eating and Exercise Practices Survey: 2005 Data Tables* (Table 2 & 2a). Retrieved February 6, 2009 from <http://www.cdph.ca.gov/programs/cpns/Pages/2005CalCHEEPSDataTables.aspx>

<sup>2</sup> California Department of Public Health. (2007). *California Children's Healthy Eating and Exercise Practices Survey: 2005 Data Tables* (Table 54). Retrieved February 6, 2009 from <http://www.cdph.ca.gov/programs/cpns/Pages/2005CalCHEEPSDataTables.aspx>

<sup>3</sup> California Department of Education. (2009). 2007-2008 California Physical Fitness Report. Retrieved August 26, 2009 from <http://www.cde.ca.gov/ta/tg/pf/pftresults.asp>

<sup>4</sup> Center on Hunger, Poverty and Nutrition Policy. (1998). *Statement on the link between nutrition and cognitive development in children 1998* (4th edition). Medford, Mass: Tufts University, School of Nutrition.

<sup>5</sup> Pollatschek J.L. & O'Hagen F.J. (1989, September). An investigation of the psycho-physical influences of a quality daily physical education programme. *Health Education Research*, 4, 341-350.

<sup>6</sup> National Center for Health Statistics. *Health, United States, 2006: With chartbook on trends in the health of Americans*. (Table 74). Hyattsville, MD: 2006.

<sup>7</sup> Keihner A, Foerster S, Sugerman S, Oppen M, Hudes M. *A Special Report on Policy Implications from the 1999 California Children's Healthy Eating and Exercise Practices Survey*. Sacramento, CA. Available at <http://www.cdph.ca.gov/programs/cpns/documents/cpns-reu-policyreport72502.pdf>: The California Endowment; 2002.

<sup>8</sup> California Department of Public Health. (2007). *California Children's Healthy Eating and Exercise Practices Survey: 2005 Data Tables* (Table 66). Retrieved February 6, 2009 from <http://www.cdph.ca.gov/programs/cpns/Pages/2005CalCHEEPSDataTables.aspx>

<sup>9</sup> U.S. Department of Health and Human Services (2001). *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General.

<sup>10</sup> Whitaker, R.C., Wright, J.A., Pepe, M.S., Seidel, K.D., & Dietz, W.H. (1997). Predicting obesity in young adulthood from childhood and parental obesity. *The New England Journal of Medicine*, 337, 869-873.

<sup>11</sup> Dietz, W.H. (1998). Childhood weight affects adult morbidity and mortality. *The Journal of Nutrition*, 128, 411S-414S.

<sup>12</sup> Sallis JF. Age-related decline in physical activity: a synthesis of human and animal studies. *Med Sci Sports Exerc*, 2000 Sep; 32 (9): 1598-600.

## LEARNING OBJECTIVES

After completing this activity, students will be able to:

- Define “fruit,” “vegetable,” and “physical activity.”
- State the recommended cups of fruits and vegetables children should be eating and the recommended minutes of physical activity they should engage in every day.
- Identify and graph the current nutrition and physical activity related habits and attitudes of the class.

## LINKS TO CONTENT STANDARDS

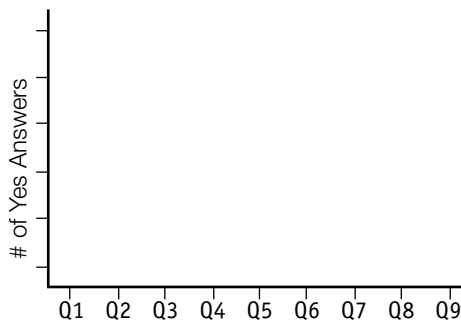
- Statistics, Data Analysis, and Probability 1.0
- Listening and Speaking Strategies 1.0
- Nutrition and Physical Activity 1.0

### READY

Working in small groups, students survey one another about their nutrition and physical activity related habits and attitudes. Then students work as a class to graph and analyze the results.

### SET

- Review Power Survey, Worksheet 1.
- Create a blank graph on the board. Title the vertical axis “# of Yes Answers.” On the horizontal axis, create a space for each question from the survey, as shown below.



# Power Survey



### TIME

- Prep — 10 minutes
- Activity — 50 minutes

### MATERIALS

- Student workbooks

Deciding whether something is a fruit or a vegetable can be tricky, since they can be defined by their botanical parts or their common culinary usage. This explains why a tomato is technically a fruit (it has seeds), but is usually thought of as a vegetable.

These are the simple definitions based on plant parts:

- A fruit is the part of a plant that you can eat that contains seeds, such as an apple, pear, or strawberry.
- A vegetable is the stem, leaf, or root of a plant that you can eat, such as lettuce, carrots, or asparagus.

The following are fruits by botanical definition, but we call them vegetables in the *Children's Power Play! Campaign*: tomatoes, avocados, pumpkin, squash, cucumber, green beans, peppers, and eggplant.

- Physical activity is a game, sport, exercise, or other action that involves moving your body, especially when it makes your heart beat faster. The *Children's Power Play! Campaign* calls this “power play.”



# Power Survey

## GO

### 1. Review survey process.

- Explain to students that this activity will help them learn more about their own and their classmates' nutrition and physical activity related habits and attitudes.
- Briefly discuss the basic definitions of fruit, vegetable, and physical activity on the previous page.
- Tell your students that children their age should eat 3 to 5 cups of fruits and vegetables and get at least 60 minutes of physical activity every day.
- Create small groups of 6-7 students.
- Ask students to turn to the Power Survey activity on Worksheet 1 of their workbooks. Review the directions at the top of the worksheet with students.

### 2. Students survey classmates.

- Allow students about 10 minutes to conduct the surveys in their groups. When students have completed the survey, ask the *Recorder* to add the number of “yes” answers for each question.

### 3. Chart student responses.

- Have each *Recorder* report the number of “yes” answers for each question. Add each group's findings together to come up with a total number of “yes” answers for each question.
- Complete the graph that you prepared on the board using this data.

### 4. Discuss students' findings.

- When the graph is completed, review the results. Then lead a discussion.
  - According to the graph, do most of you think fruits and vegetables give you energy (Q3)? Why or why not?
  - According to the graph, do most of you think that eating 3 to 5 cups of fruits and vegetables every day is easy (Q8)? Why or why not?

- According to the graph, do most of you think that eating 3 to 5 cups of fruits and vegetables every day can help you do better in school (Q9)? Why or why not?
- According to the graph, were most of you physically active during your last recess (Q2)? Why or why not?
- According to the graph, do most of you think being physically active for at least 60 minutes every day is easy (Q4)? Why or why not?
- Conclude the activity by explaining that in the upcoming weeks students will be learning new ways to eat more fruits and vegetables and get more physical activity every day and why both are important.
- You may want to revisit this activity at a later date and compare the results with today's results. Be sure to save these results, so that you can compare them when you repeat the activity later.

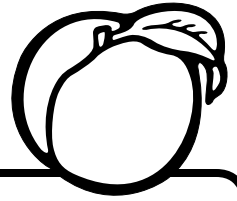
## GO FARTHER

- Students can use the survey questions with another class, create a new graph of the responses, and compare their class graph with the graph for the other class.
- Students can use the survey questions with family members and begin a discussion at home of why eating 3 to 5 cups of fruits and vegetables and getting at least 60 minutes of physical activity every day is important.
- If you have access to computers, show students how to create bar graphs on the computer.
- As an alternative to creating a bar graph, think of creative new ways to show the results of your class survey. For example, you may wish to create a “human bar graph” by having the children line up on the playground as “yes” or “no” responses. You also may wish to use stackable objects or paper clips to create a three-dimensional graph.



# Power Survey

- Pick one person in your group to be the *Surveyor*—the one who asks the questions.
- Pick someone else to be the *Recorder*—the one who keeps track of the answers.
- The *Surveyor* reads each question out loud. For each question, ask everyone in the group to raise their hands if they want to answer “yes.” Don’t forget to include the *Surveyor* and the *Recorder*. The *Surveyor* counts the number of hands that are raised.
- The *Recorder* writes the number of “yes” answers in the question’s box.
- Example: The *Surveyor* asks, “Did you try a new fruit or vegetable last month?” Four students raise their hands to say “yes.” The *Recorder* writes “4” in that question’s box.



**1** Did you try a new fruit or vegetable last month?

**2** Were you physically active during your last recess?

**3** Do you think fruits and vegetables give you energy?

**4** Do you think it’s easy to get at least 60 minutes of physical activity every day?

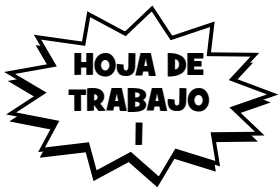
**5** Do you think being physically active can help you pay attention in school?

**6** Have you ever asked your parents to buy your favorite fruits or vegetables?

**7** Did you try a new physical activity last month?

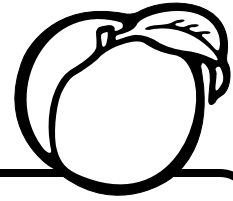
**8** Do you think eating 3 to 5 cups of fruits and vegetables every day is easy?

**9** Do you think eating 3 to 5 cups of fruits and vegetables every day can help you do better in school?



# Encuesta de Poder

- Selecciona una persona en tu grupo que sea el *Encuestador*—el que hace las preguntas.
- Selecciona a alguien que sea el *Contador*—el que mantiene el récord de las respuestas.
- El *Encuestador* lee cada pregunta a voz alta. Para cada pregunta, pide que todos los del grupo levanten la mano si desean contestar “sí”. No olviden de incluir al *Encuestador* y al *Contador*. El *Encuestador* cuenta el número de manos que se han levantado.
- El *Contador* escribe el número de respuestas “sí” en el cuadro de la pregunta.
- Por ejemplo: El *Encuestador* pregunta, “¿Probaste una nueva fruta o vegetal el mes pasado?” Cuatro estudiantes levantan la mano para indicar que “sí”. El *Contador* escribe “4” en el cuadro de esa pregunta.



**1** ¿Probaste una nueva fruta o vegetal el mes pasado?

**2** ¿Estuviste activo físicamente durante tu último recreo?

**3** ¿Crees que las frutas y vegetales te dan energía?

**4** ¿Crees que es fácil hacer al menos 60 minutos de actividad física cada día?

**5** ¿Crees que el estar físicamente activo te puede ayudar a poner atención en la escuela?

**6** ¿Alguna vez has pedido a tus padres que te compren tu fruta o vegetal favorito?

**7** ¿Intentaste una nueva actividad física el mes pasado?

**8** ¿Crees que es fácil comer de 3 a 5 tazas de frutas y vegetales cada día?

**9** ¿Crees que comer de 3 a 5 tazas de frutas y vegetales cada día te ayudan a tener mas éxito en la escuela?